KUMAVISION Help

10/28/2022

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1. Docs

1.1 Welcome to KUMAVISION Help

With our online help we hope to provide you with the best possible guidance. If something should be unclear, please do not hesitate to contact our [support](#).

> Note

The content of the KUMAVISION Help reflects the latest versions of the KUMAVISION industry solutions and apps. If you are using a different version, some features and processes may not yet be available for the version you are using.

1.1.1 Verticals

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1.2 Verticals

1.2.1 base365 (BOOSTER)

KUMAVISION base365 (BOOSTER)

KUMAVISION base365 (BOOSTER) represents the basis of all KUMAVISION industry solutions. In this section, all KUMAVISION basic functionalities are explained to you in more detail.

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Link to Microsoft App Source "KUMAVISION BOOSTER"

Basic setup

Master vouchers

The master vouchers of KUMAVISION base365 (BOOSTER) are delivered in a uniform design taking into account all other relevant performance points as one package. The uniform design of the vouchers has, in addition to the uniform presentation, the advantage that changes are simplified across all vouchers.

- Purchasing - Inquiry
- Purchasing - Order
- Purchase - Invoice
- Purchase - credit note
- Purchasing - delivery bill
- Purchasing - blanket order
- Archived purchase request
- Archived purchase order
- Archived purchase complaint
- Purchasing - return delivery
- Complaint

Sales area:

- Sale - Offer
- Sale - Order confirmation
- Sale - blanket order
- Sale - Return
- Sale - Invoice
- Sale - credit note
- Sale - delivery bill
- Complaint confirmation
- Archived sale offer
- Archived sales order
- Archived sales complaint order
- Sale - pro forma invoice

Service area:

- Service order
- Service offer
- Service - Invoice
- Service - Credit note
- Service - Delivery
- Service work ticket
- Service contract
- Service contract - detail
- Service contract offer
- Service contract offer - detail

Dunning area:

- Reg. delivery reminder
- Reminder
- Interest calculation

Area rearrangement:

- Stock transfer order
- Stock transfer output
- Stock transfer receipt

Note

Please note that the documents must be stored in the appropriate report selections.

The KUMAVISION "VAT Amount Specification" area in the master documents *(for example in Sales: Quotation, Order, Invoice, Credit Note)* is configurable using the "VAT Code" field (standard Microsoft Dynamics Business Central™ field from the "VAT Entry Matrix". Posting Matrix No.").

General occupancy facilities

General voucher facilities can be set in the company data on the "Vouchers" info tab.

Field	Description
Letter window address	Enter here the address to be printed in the letter window of the address.
Document text length (header / lines)	These two fields have meaning only in the editor version without text formatting. In this editor, the width of the editor is set to this character length and the texts are stored on this text length in lines. In newer documents, however, these texts were then printed again contiguously using the complete document width, only the line breaks entered manually by the user were taken into account. In the new editor with text formatting, this facility no longer exists. The editor always has the same width at startup, but can be changed in width by the user. The texts are automatically wrapped and saved as 1 HTML text. When printing, the text field also uses the full width of the document, the user's manual line breaks are taken into account.
Indent line	Indent the rows to create a block representation (with bundle or from-sum blocks).
Print carry forward	If a carryover is to be printed on the document. You can select whether the carry forward is to be printed only in the document footer or both in the footer and in the header of the subsequent page.
Print company address on letterhead	Activate the switch if the company address is to be printed on letterhead.
Document standard font / size	The master document provides for a default font and font size: Segoe UI / 9 Centrally, this font and size can be changed for all documents using the master document. This change is valid for the whole document, i.e. for the header as well as for its lines. Another possibility to change the font for the document lines according to the line type is presented below under Document line formats.
Frame type document info right / document info line	The document info areas to the right of the address and the info block below the address can optionally (separately) be framed.
Document info representation	The contact information (seller and his contact details) can be displayed either in the top right block or as a separate 5 column block below the address.
Document line separation	The document lines can be optically better separated on the document either by a larger distance or a separator line.

Document line formats

For the documents, the formatting can be selected individually per line type (e.g. header line, alternative line, etc.). Basically, no entry has to be made in the table "Document line formats", in this case the standard formatting applies, i.e. as the documents were set up by the document designer. If you generally want a different formatting (e.g. a different font), this can be done with a setup line on Report ID = 0. Only if a special document is to receive a special formatting, then a setup must be entered explicitly for its report number.

The line type "Default" plays a special role here. If all line types are to have a uniform formatting, then this can be established quite comfortably with a line of the type Default.

In addition, the font style can be changed individually on each document line before printing in the document, where Default means that this formatting should be drawn from the document line format.

The formatting for document printing is determined in the following order:

1. Font style in the current sales line
2. Report ID of the document to be printed + line type to be printed
3. Report ID of the document to be printed + Line type = Default
4. Report ID = 0 + line type to be printed
5. Report ID = 0 + Line type = Default
6. Formatting according to document design

In addition to the font style, it is possible to define an individual page break on the document line, which is otherwise performed completely automatically. Only if the user wants to have a page break at a certain position, it should be set accordingly.

Setup

To set up the document line formats, first call up the company data via the user search.

Then call them up via the menu item "Document line formats".

On the voucher line format overview, you now have the option of setting up new voucher line formats or changing existing ones with the help of the table below.

Field	Description
Field	**Description**
Report ID	Select a Report ID for which the setting should apply. If no report ID is specified, the setting applies to all document reports.
Report description	This field contains the description of the Report ID and is automatically pre-populated.
Line type	Selection from line type for which you want to make a setting. The following options are available: • Standard • Document Pretext • Document Post text • Line Pretext • Line Post text • Line dimension • Standard line • Zero position line • Alternative line • Delivery information line • Comment line • Heading line • From subtotal • Bundle • End of subtotal/bundle • Attribute • Assembly line • Dunning line • Article tracking header • Article tracking line • Payment/delivery terms • Article surcharge/discount lines • Formatted text • Amount line
Font	Font specification
Font size	Specification of the font size
Font color	Specification of the font color **Note** Please note that the font color must be specified in English (e.g. "red")

Field	Description
Font style	Specification of the font style: • Standard • Normal • Bold • Italic • Bold Italic
Type effect	Specification of the font effect: • Standard • None • Underlined • Overstriked • Strikethrough

Note

Please note that this functionality is only possible with KUMAVISIONS' own reports (ID5XXXXXX) and that these are specified in the corresponding report selections.

If you have set up the basic setup for all line types, and if individual documents are to be set up differently from the basic setting, you can copy the line formats for further reports and enter only the deviations there. To do this, call up the "Copy formatting" function and enter both the source report ID and the target report ID.

Document text translations

To set up footer texts on all documents, you can use the "Document text translations", which you can define for different languages by assigning the corresponding language code. In the processes, the intended footer text information is printed depending on the language codes stored for a vendor / customer.

To perform this setup, first call up the company data via the user search.

On the company data card, you then have the option of calling up the facility provided for this purpose via the "Document text translations" menu item.

Via "New" you can create a new document text translation.

Should you set up a footer text in German, the assignment of the language code is not necessary. The "Standard language" checkbox is activated for this purpose.

If you want to set up a footer text in another language, it is necessary to assign the language code provided for this purpose.

Then you can specify the translations of the footer texts in the columns (Left column, Left middle column, Right middle column and Right column).

Style Definition

The Style Definition are used for the individual design of certain fields. Depending on the setup, output values of individual fields can be highlighted by colored / **bold** or *italic* font.

The setup is done in the "Style Definition". Which you can call up via the user search.

During an initial setup, the "Style Definition" must be initialized once. You can execute the initialization via "Actions" using the menu item "Calculate Style Definition".

Fields that are supported by the style definition are then displayed with the default "Standard".

Via the menu item "Edit List" you can make your desired setup via the field "Style" in the respective record.

Style	Description
Standard	Display in black font color
StandardAccent	Display in blue font color
Strong Display	in black font color, bold
StrongAccent	Display in blue font color, bold
Attention	Display in red font color, italics
Attention Accent	Display in blue font color, italics
Favorable	Display in green font color, bold
Unfavorable	Display in red font color, italic, bold
Ambiguous	Display in yellow font color
Subordinate	Display in gray font color
Detailed	Possibility to define a condition for the selected field in the "Detailed Style Definition" info tab.

Detailed style definition

The detailed style definition is only possible in connection with a record that has the "Detailed" selection in the "Style" field. This allows you to specify additional conditions for the display style of this field. This makes sense if you want to display different levels of a field in different colors.

Field	Description

Comparison type	The field "Comparison type" serves as a comparison operator, with which the value of the field in the data record is checked with the value from the fields "Comparison value" and / or "Comparison date". The following comparison operators are available here:
	
	`<>`
	`=`
	`>`
	`<`
	`>=`
	`<=`

Comparative value	The "Comparison value" field checks the value of the field in the record in dependence with the "Comparison type" field
Comparison date	The "Comparison date" field checks the value of the field in the record in dependence with the "Comparison type" field. The following selection options are available: • Today • Work date • Today with formula • Work date with formula
Comparison date formula	The Comparison Date Formula field checks the value of the field in the record against the Comparison Type field. For example, the date formula is specified as follows: (x)T = (x)day(s) (x)WT = (x)weekday(s) (x)W = (x)week(s) (x)M = (x)month(s) (x)Q = (x)quarter(s) (x)J = (x)year(s) *here (x) stands for a corresponding value of an integer e.g. 1,2,3, [....].

Field	Description
Style	Specification of the representation. The following selection is available • Standard • StandardAccent • Strong • StrongAccent • Attention • Favorable • Unfavorable • Ambiguous • Subordinate • Detailed Detailed information is provided in the previous table of style definitions setup

Mandatory field test

The mandatory field check allows to define customer-specific mandatory fields to support the creation of master or document data. Certain values are predefined, which are checked after the input is completed. Here a mandatory field can be defined in dependence to other fields with the result:

Cancel: The fields must be filled Note: The fields can be filled

You can set up mandatory field validation for the following data:

Master data:

- Article
- Debtor
- Vendor

Document data:

- Sales header & line
- purchase header & line
- Service header and line
- Goods receipt header and line
- Goods issue header and line

A "Variable mandatory field check" can be activated for the master data, e.g. of the articles. I.e. fields can be defined individually, which must be compellingly indicated by the user with new creation or change of master data. Only when all entries are complete, the master data record can be marked with "Maintenance completed" or the document can be "Released" and used in the system (e.g. when posting a delivery).

The check for completeness of the information is performed as soon as the user sets the Maintenance field in the respective master data card to the value "Maintenance completed", or via the "End article maintenance" function.

Alternatively, users can run the check via the master data lists article, customer or vendor for selected data records. To do this, execute the action "Mandatory field check" via the menu ribbon. Data records that can be released will be released. The others remain locked.

If not all mandatory fields have been filled in, an error message or a note appears, depending on the configuration of the individual mandatory field. After "Maintenance completed" has been entered, the fields of the master data record can no longer be changed. However, connected tables (e.g. remarks) can still be changed.

To be able to edit the master data record again, select the function - "Edit article".

Mandatory field check setup

The use of the mandatory field validation can be activated separately for the individual areas: For articles In stock facility For accounts receivable, sales header and lines In Accounts Receivable & Sales Setup For Accounts Payable, Purchasing Header and Lines in Accounts Payable & Purchasing Setup.

Setup mandatory fields

The mandatory fields are defined via the user search "Mandatory fields setup tables".

When called, the "Mandatory fields setup tables" are opened. In this list, the corresponding checks can be viewed per table

From the list of checks, the existing checks can be edited or new checks can be added.

This chapter explains how to create checks for a table and the parameters required for a check.

Click on "New" to create a new test record.

Field	Description
Table no.	This field contains the number of the table for which this check is intended.
Table name	This field contains the description of the table for which this check is intended and is automatically pre-populated.
Number of fields	Specifies the number of condition fields automatically

Via the menu item "Mandatory fields" you can define the mandatory fields for the corresponding test record.

Field	Description
Field no.	Specifies the field to be set up as a mandatory field.
Field name	Specifies the name of the field to be set up as a mandatory field.
Condition Field No.	If the mandatory field should only be checked in/for certain document types (e.g. document type order, customers with posting group foreign), a condition field can be selected in the field "Condition field no. ". Subsequently, the respective condition must be defined in the "Condition" field.
Condition field name	Specifies the name of the condition field.
Condition	Specifies the condition depending on the "Condition Field No." field.
Action	Indicates whether this is a hint only or a termination condition. If a termination condition is stored, the process cannot be terminated until the mandatory field check is positive. In the case of a note message, a note is displayed, but it is then possible to continue working, and it is also possible to release the document.

Note

For conditions on Boolean fields the values TRUE or FALSE should be used. For example, if the value 'Yes' (German language) is used, the condition will not work when the application language is changed. Date fields are not supported in the conditions.

Note

If you are using KUMAVISION factory365, the mandatory field validation is different from the one described above. You can find further information here.

For more information on checking for article attributes, see here.

Differentiated locking of master data

With the functionality "Posting block for articles" you have the possibility to define differentiated blocking options for an article on the article card.

To do this, first call up the desired article card. The following differentiation options are available on the "General" info tab:

Sale blocked:
If the field is set in the item master, the item cannot be entered in the sales and cannot be posted.

Purchasing locked:

If the field is set in the item master, the item cannot be entered in the purchase and cannot be posted. In addition, the system behaves during the order and planning proposal in the case of the procurement method Purchasing as if the article is blocked and brings an error message.

Production locked:

If the field is set in the item master, the item cannot be entered and posted in production.

Locked Prod. consumption:

If the field is set in the item master, the item cannot be consumed in production.

Locked Service:

If the field is set in the item master, the item cannot be entered and posted in the service.

If the item is locked, the user will see the corresponding message in the processes.

Inventory check:

Independent of the blocking indicators, it is checked whether the article is contained in an inventory line in an inventory order or inventory entry line. The check is made here on the fields (article, variant, storage location, storage bin). When posting, the message appears that the item is in an inventory.

Note

The indicators were defined only on the Article table and not on the Article Variant table. The checks are therefore always carried out on the article and not on the variant. If the item type Receipt or Issue is posted in the item book sheet, only a check for inventory is carried out. The blocking indicators are not taken into account here.

Assigned user ID

In the sales and purchasing documents there is a standard field "Assigned user ID". It is used to identify who has entered a sales or purchase document or to filter documents to a specific ID. In KUMAVISION base365 (BOOSTER) this field is automatically filled with the user ID of the currently logged in user.

Basics

Contact management (cockpit)

Based on the standard view of a contact in the Microsoft Dynamics Business Central™ marketing module, the KUMAVISION base365 (BOOSTER) clerk cockpit shows you all relevant information about a contact. Work steps can be taken directly from this view. The clerk cockpit can be used by the salesperson as well as by the purchaser. The information displayed can be configured by the user.

Establishment

Which information and functions are displayed in the clerk cockpit depends on the settings in the user setup.

To make these settings, click on the Application Search and open the User Setup.

Then open the user card for which you want to perform the setup.

On the "Cockpit display" info tab, you have the option of selecting which information the user should see in his cockpit. For example, if the user is a salesperson, you can assign the marketing functions and the sales documents to him.

On the "Cockpit Actions" info tab you can select which actions the user should have available in his cockpit, depending on whether he is a seller or a buyer.

Contact card

The configured cockpit display information and cockpit actions can be viewed on the contact card. To do this, call up the contact management overview.

Company contacts are displayed in bold in this view and the associated person contacts are displayed normally.

Double-click on the desired company contact to open the respective contact card.

The General, Lines, Communication, Segmentation and Foreign Trade info tabs are structured as in the standard contact card.

Information register contacts

The "Contacts" info tab has been added. All contact persons belonging to the company contact are displayed here.

Field	Comment
No.	Identifiable number of the respective person contact. By clicking in the No. field of the respective contact, the person contact card can also be opened directly.
Name	Name of the respective person contact
Phone no.	Phone number of the respective person contact - if the field is filled and the connection to a TAPI PBX exists, the number of the contact person can be dialed directly
Comment	If remarks have been stored for the respective person contact, this is indicated by "Yes". By clicking on "Yes", these will be displayed to you.
E-mail	E-mail address of the respective person contact - if the field is filled, you have the possibility to open the mail program directly by clicking on the e-mail icon and send an e-mail to the contact person.

Infobox contact statistics

The "Contact statistics" infobox shows you information about marketing activities and sales documents. You can open the records by clicking on the display.

Infobox Forecast

The "Forecast" infobox shows you the current sales opportunities and associated quotations.

Ribbon

In the ribbon you will find the function calls that you have defined in the user setup under Cockpit Actions. Here you have the possibility to perform these actions directly from the contact card.

> Note

The setup of the page in terms of showing and hiding function calls and details of the info boxes is the same as in Microsoft Dynamics Business Central™ Standard. The user setup is the basic setup that can be overridden by the custom setup.

Translation resources, work types

For customers operating internationally, it is mandatory that translations are also possible for resources and work types.

Besides the new table "Translations", the resources and work types translations are also supported on the purchase and sales documents.

Establishment

You can store the corresponding translations for resources and work types in the master data. To do this, call up the corresponding resources / work types card.

Via the menu item "Translations" you have the possibility to specify the translation in the field "Description" by entering the language code.

Usage

In the sales documents, when a resource is entered, it is checked whether a translation has been set up for the resource for the language code in the sales header. If a translation is found, then this is taken over as "Description" and "Description 2" in the sales line, if no translation is available for the language code, then the standard applies.

The same as with the resources also applies to the work types, if a work type is entered in a purchase or sales document with language code, then first an attempt is made to determine a translation, otherwise the designation from the master data table is used.

Continuous text editor

A convenient continuous text editor is available for editing long texts in text modules and document texts. In Microsoft Dynamics Business Central™, long texts must be broken down into several lines. Due to this structuring, it is not possible to insert long texts by copy & paste. This makes entering long continuous texts very cumbersome and tedious. In the text editor, the text can be entered without regard to breaks or the copy & paste function can be used here. When saving in the text editor, the text is automatically split into several lines.

> Note

The KUMAVISION base365 (BOOSTER) Editor must be installed on each client. If you cannot access the editor, please contact the system administrator.

In the following, the continuous text editor is explained using the example of a text module. For further information on creating a text module, please refer to the chapter of the same name.

As soon as you have created the text module with the necessary data, you have the option on the text module card to call up the text editor via the "Format Editor" menu item.

On the text module card, you have the option of calling up the "Format Editor" via the "Manage" menu item. The text editor opens.

The text editor opens. Enter your desired text in the text field manually or by copy & paste. Confirm your entry with "OK". By confirming with "OK", the text is transferred to the text lines in Microsoft Dynamics Business Central™ and the breaks are set automatically.

> Note

Formatting options such as bold, italic, underline or other fonts are not readily available in Microsoft Dynamics Business Central™. Therefore, the text editor does not offer these formatting options either. Formatting is controlled by the document design.

In the documents, texts can also be entered via the text editor in the form of a pre- or post-text per line.

In order to enter a pre- or post-text for a respective line, I first call up the "Lines" selection menu via the "Lines" info tab. Via the menu item "Document texts" you have the possibility to enter the document texts via Pretext / Posttext.

In the document text card, the "Format Editor" menu item provides you with the text editor in which you can enter your desired text manually or by copy & paste in the text field.

Confirm your entry with "OK". By confirming with "OK", the text is transferred to the text lines in Microsoft Dynamics Business Central™ and the breaks are set automatically.

By means of the fields "Print offer" / Print blanket order" etc. you can control on which documents the entered document text is to be printed in the respective process.

Additional texts

As an extension to the possibilities of using article text modules available in the standard system, it is possible to define both general header and footer texts as well as pre- and post-texts for the individual items in documents by using additional texts.

For the use of the document texts on line level (as line pre- or post text), general information can already be set up in the master data of the article, resource or G/L account.

For the use of the document texts on header level, pre and post texts for the documents can be defined at the customer or vendor.

Setup of the text modules

To store a text module, open the corresponding master data card and select the "Text modules" item in the menu ribbon.

In the "Start date/End date" fields, you can specify a period in which the text module is used. If you leave these fields empty, the text module will always be valid.

If you check the "All languages" checkbox, the system will ignore the stored language code of the customer/ vendor in the documents.

In the checkboxes, you can set a checkmark for which purchasing or sales documents this text module should be usable.

Under "Use in document text" you can choose between three options:

Yes: Can be called up manually under Line - Document texts - Pre/next text
No: Is used as a document line
Automatic: Automatic insertion of the text module

Under "Position" you can choose whether your text module should appear in the header (pre-text) or footer (post-text) of the document or above the description of the item / resource / G/L account (pre-text) or below the description (post-text).

To insert a text module in the documents, select the "Functions" menu item in the respective "Lines" info tab and execute the "Insert text modules" function.

Advertising groups

In addition to the use of text modules per vendor, article, customer, etc., these can also be used in advertising groups.

Advertising groups are used to store text modules for several vendors or customers up to all vendors/customers, e.g. to output a note on company vacations, inventory, trade fairs, or similar.

To set up advertising groups, call up "Advertising groups" via the user search.

The advertising group map opens.

You can create a new advertising group via the menu item "New" in the menu ribbon. Existing advertising groups can be edited via the "Edit list" menu item or deleted via "Delete". You can define the following for setting up a new advertising group:

Field	Comment
Code	Assign a meaningful "abbreviation" for the advertising group.
Description	In the Description field, you can define a more detailed description of the ad group and the text modules stored with it.
All debtors	If the checkmark is set, the advertising group will apply to all customers.
Number of debtors	Instead of selecting "All customers", you can define a customer group to which the advertising group should apply. A "LookUp" takes you to the "Advertising group members" view, where you can enter the corresponding customers.
All creditors	If the checkmark is set, the advertising group will apply to all vendors.
Number of creditors	Instead of selecting "All vendors", you can define a vendor group to which this advertising group should apply. A "LookUp" takes you to the "Advertising group members" view, where you can enter the corresponding vendors.
All contacts	If the checkmark is set, the advertising group will apply to all contacts.
Number of contacts	Instead of selecting "All contacts", you can define a contact group to which the advertising group should apply. A "LookUp" takes you to the "Advertising group members" view, where you can enter the corresponding contacts.
Quantity text module	Specifies the number of stored text modules for this ad group.

To store a text module for an advertising group, select the "Text modules" menu item in the menu ribbon.

The text module overview opens: You can create a new text module via the "New" menu item.

The text module card opens: Here you can enter the necessary data of the text module.

Further information on creating a text module can be found in the chapter provided for this purpose.

position numbering

Furthermore, it is possible to assign position numbers for the lines. The position numbers can be entered manually in the "Position number" column, or assigned automatically in the ribbon using the "Perform position numbering" function. In the Accounts Payable & Purchasing or Accounts Receivable & Sales setup, the basic behavior can be defined.

Field	Comment
Check item number in sales lines	**blank:** No effect **check:** Check for item numbering when the document is released. If no item numbering has been performed, a corresponding error message appears. **Auto-assign:** Check and perform automatically when the document is released.
Autom. Pos.-Numbering Type	**blank:** no effect **Numbering:** The position numbering is done numerically depending on the field "Autom. Pos.-Numbering Type" **Outline:** The position numbering is done via an outline 1st / 1.1. this is especially helpful of subtotals or bundle, because the position numbering determines the depth and displays it accordingly.
Check pos. no. in sales lines	Indicates the steps of the position numbering (10, 100 or 1000).

Print lines

To reduce paper in printouts, lines without price information can be excluded from printing the order. To do this, use the checkbox in the "Print line" column in the "Lines" info tab of the document.

Print line break

For the layout of the documents, a page break is to be added for printing by marking "Print line break" at the respective position.

Document structuring

The document structuring offers you the possibility to structure the documents in the purchase / sales more comfortably, as lines can be summarized to groups with subtotal calculation or bundle groups (whereby the individual prices of the lines are not shown). Furthermore, it is possible to assign position numbers for the lines.   The document structuring is controlled by the "Type" column in the "Lines" info tab of the document.

The subtotals are editable so that markups or markdowns can be added. The price difference is distributed evenly among the sales lines. For a bundle, the line prices, discounts and amounts are suppressed in a printout so that the recipient only sees the bundle price.

The following options are available:

Field	Comment
Headline	Formats the text entered in the description in bold type
From subtotal	Formats the text entered in the description in bold and forms the starting point for the following series of items, resources and/or G/L account items for which a subtotal is to be formed.
Bundle	Formats the text entered in the description in bold and is the starting point for the following set of items, resources, and/or G/L items to be bundled for.
End subtotal	Subtotal or Bundle Termination - formats the text entered in the description in bold and forms the end point for the preceding row for which a subtotal is to be formed.

Date of manufacture / External batch

In KUMAVISION base365 (BOOSTER), in addition to the conventional article tracking, you can also carry the manufacturing date of an article as well as the external batch.

Establishment

If an item has a manufacture date or you want to carry the external batch, you can define this with the item tracking code.

To do this, set up the appropriate article tracings. Call up "Article traces" via the user search.

You can define a new item tracking via "New" in the ribbon. Further information can be found in the [Microsoft Dynamics Business Central™ Helpsite (F1)](#).

Via the "Other" info tab you have to define by activating the fields "Date of manufacture - manual input" and "Ext. batch - manual input" whether a date of manufacture or an ext. batch has to be entered for the article tracking.

Allocation

The item tracking is defined directly when creating a new item (Item card - Item tracking info tab). Select the appropriate item tracking code.

In the processes you can assign the item tracking to any outgoing or incoming documents. In the corresponding posting items, the posted item tracking will be displayed in the follow-up. For further information, please refer to [Microsoft Dynamics Business Central™ Helpsite (F1)](#).

Article attributes

Item attributes are used to classify and retrieve articles based on their characteristics. Characteristics can be assigned to each article. Either individually or via the characteristics preassigned to the article category.

Establishment

Before working with the features (attributes), the required features and their characteristics must be set up.

To do this, call up the "Article attributes" via the user search. Via "New" in the menu ribbon you can define a new article attribute with the help of the tables below.

Field	Description
Name	In the Description field, the feature can be described in more detail. The field has 250 characters length
Type	This field defines the data type. Text, numbers, decimal numbers, dates, times and Boolean can be selected. The characteristic values on the
Values	For attributes of type Option the possible option values are specified here.
Locked	If attributes are no longer used, they can be locked by activating the switch.
Duty	Specifies whether this attribute is a required field when used in the item master
Print on sales slip	If the switch is activated, the respective attribute value of the article is printed in sales documents as well
Print on EK document	If the switch is activated, the respective attribute value of the article is printed in the purchase documents.
Print sequence	Defines the order in which attributes are printed, if several attributes are printed on one article.

Note

If the check mark "Mandatory" is set and the "Mandatory field check article" is active in the warehouse facility, then the check of the mandatory fields is carried out at the end of the maintenance. If the value of a mandatory attribute has not been maintained, the user will receive a corresponding message. The same behavior occurs when an article category with a mandatory attribute is assigned.

Assignment

Article

On the article card, you can assign the attributes for the article via the "Attributes" call in the menu ribbon. In the "Article attributes" info box on the article card, the data of the assigned attributes are displayed directly.

Article categories

On the article category card, you can use the "Attributes" call in the ribbon to assign the attributes for the article category. In the "Article attributes" info box on the article category card, the data of the assigned attributes is displayed directly.

If you assign this article category to an article, the attributes from the article category are transferred to the article.

If changes are subsequently made to the article category attributes, they will be inherited by the assigned articles.

Note

Please note that the attributes of the parent item categories inherit to the child item categories. However, the inherited attributes cannot be changed in the child item categories. Per article these can always be adjusted individually.

Define proficiencies

In the Value field, the predefined characteristic values can be selected by lookup. If there are no defined characteristics, a free value can be entered. The format of this value must correspond to the definition of the Type field. If this is not the case, the user receives an error message.

If a characteristic of the type "Mandatory" is not filled in, the article cannot be released.

Attribute search

To search for the attributes in the sales or purchasing process the attribute search is used. In Microsoft Dynamics Business Central™ Standard, it is only possible to filter by individual attributes in the item overview. Usually, however, attributes are searched for within the document entry in order to find the correct item.

In the sales as well as in the purchasing documents you can access the attribute search via the info tab "Lines" > "Manage" > "Attribute search".

Then enter the desired article category. The first attribute according to the article category is listed, with input of further attributes this list can be extended to max. 20 attributes. The user has the possibility to define his desired attribute value in the second column. It is important that in the document line the field Type is filled with "Article".

Once all the search criteria have been entered, the "Filter by attributes" function in the menu ribbon displays all the articles with the relevant attributes. Click OK to transfer the selected line to the document.

Note

If you are using KUMAVISION factory365, you can find further information on this topic at hier.

Compensation tracking

For easier traceability or to check the clearing chain for incoming or outgoing item items, there is a Clearing Tracking function in the Item Items window under Related > Clearing.

A page will open showing the complete compensation chain.

If the item is an incoming item (Receipt, Purchase, Actual Message), the page displays all item movements with proportional quantity and value up to the last outgoing ones (Departure, Sale, Consumption) including all stock transfers. If the item is an outgoing item, the form shows all item movements with proportional quantity and value up to the first incoming one including all stock transfers.

1.2.1 base365 (BOOSTER)

Purchasing

Hierarchy management

By using hierarchies, contacts, debtors and creditors can each be related to each other. Via views the relationship can be displayed top-down or button-up.

On both sides of the hierarchies, any number of entities can be related to each other.

Accounts payable hierarchies are discussed in detail below.

Hierarchy types facility

To be able to use hierarchies, the corresponding setup must be performed. If you get a message "Define at least one hierarchy type ..." when using hierarchies, proceed as follows:

To set up the necessary hierarchies, first call up the "Hierarchy types setup" via the application search.

Via "New" you can create a new hierarchy type using the table below:

Field	Comment
Code	Unique meaningful abbreviation
Description	Description of the hierarchy type
Standard	Standard hierarchy type
Origin table name	Customer / Vendor or Contact

Assign hierarchy

To adjust the hierarchy of a vendor, first call up the vendor overview via the user search. Then select the desired vendor and call up the vendor card.

For setting a top-down hierarchy: From the ribbon, select Belonging - Vendor - Hierarchy - Belonging Vendor to access the Hierarchy Relationships card.

In the opened form, check if the hierarchy type filter is correct.

In the table, enter the vendor number in the "Value" field or select from the list of vendors by clicking [...].

Click in the next line and repeat the input to assign another relation.

For setting a bottom-up hierarchy: From the ribbon, select Belonging - Vendor - Hierarchy - Belongs to Vendor to access the Hierarchy Relationships card.

In the opened form, check if the hierarchy type filter is correct.

In the table, enter the vendor number in the Value field or select from the list of vendors by clicking [...].

Click in the next line and repeat the input to assign another relation.

Show hierarchies

To view the hierarchies of a vendor, first open the desired vendor cards. You can call the hierarchy via the Ribbon - Belonging - Vendor - Hierarchy Usage.

Select the method of use

- Associated records (top-down)
- Belongs to (Bottom-Up)

Then click Calculate. The hierarchy will be displayed.

Via Manage -> Expand All/Collapse All, complex structures can be quickly displayed clearly.

Special notes

Remarks for vendors and articles can be marked as "Special note" via a code. In the purchasing documents, these remarks are then displayed directly in the info box.

Establishment

In the Accounts Payable & Purchasing setup, a code can be stored on the "General" info tab in the "Code for special notes" field that differentiates "special notes" from "normal" notes. It should be noted that this code can be stored differently for purchasing and sales notes and may result in a note only being displayed in the respective area.

The user can mark individual remark lines as special remarks for vendors and items in their remarks in the default "Code" field by assigning the same code that is stored in the purchasing setup as "Code for special remarks".

Representation in processes

Special notes are displayed in:

- Purchasing Requests,
- Orders
- Purchase Invoices

The display takes place in the info area of the document header for the special notes of the vendors. The notes are displayed automatically whenever the vendor is selected or when scrolling within the window between the documents.

The notes for articles are displayed in the info area of the document rows. The display occurs automatically for the article used in the rows whenever the article is selected or when scrolling within the rows of the document.

Purchase order types

With a large number of open documents, it is very difficult to keep track. Often the documents have different characters such as normal order, rush order, repair order, consignment order as examples of purchase orders. These characters alone can limit the mass of documents already for an overview.

Order types can be assigned dimensions for later analysis, which are inherited by the documents.

Purchase order types facility

To create the purchase order types, proceed as follows:

Use the user search to enter the term "purchase order types" and select the appropriate link.

The purchase order type overview opens where you can create and define a new purchase order type with the help of the table below via the menu item "New".

Field	Comment
Code	Unique meaningful identifier of the respective purchase order type.
Description	Description of the purchase order type.
Type	Connoisseur for the purchase order type. Possible here are the options: • Standard • Price request • Order external work
Booking code	Coding of the posting type to define special report controls for purchase order types.
Standard	Standard purchase order type

Assignment of dimensions to a purchase order type

In the purchase order type overview, you have the option to assign a number of dimension settings to a purchase order type.

To do this, select [...] > "Associated" > "Purchase order type" > "Dimensions".

Via the menu selection "Dimensions" the functions "Assignment for current dataset" and/or "Assignment for selected datasets" are available for the dimension assignment.

The default dimensions card opens, where you make the assignment using the table below:

Field	Comment
Dimension code	Specifies the code for the default dimension - a selection from the Dimensions overview table is possible here
Dimension value code	Specifies the dimension value code that is proposed as the default dimension - a selection from the Dimension values overview table is possible here
Dimension value posting	Specifies how to use default dimensions and their values. Choice between: • Code necessary • Same code • No code

Assignment of posting types to a purchase order type

You can define different valuation types via the posting types. Valuation types are needed for handling the value items of an item.

Example: If the vendor delivers a part, you create a goods receipt with the valuation type Unvalued. In this way, you manage the stock in the system but do not create a value item because it is vendor property. You can assign the valuation type to the purchase order type or set it manually during document entry.

Should you wish to assign the valuation type to the purchase order type, it will be transmitted via the assigned posting code of the purchase order type.

In the respective booking codes, the valuation type for the respective booking code is defined in the "Valuation type" column. The following selection is possible: * Rated * Mixed assessment * Unrated

Report selection by purchase order type

In addition to using the purchase order type as a distinguishing criterion and predefining dimensions, different printouts can be controlled for each purchase order type. In addition to the selection of the actual document, the purchase order type can also be selected in the report selection of the purchasing department in order to be able to store different reports accordingly.

To do this, first call up the "Report selection - Purchasing" via the user search.

Via the "Usage" you can first define for which document you want to make your setups.

In addition to selecting the actual document in the rows via the "Report ID" field, you have the option of storing different reports according to the respective purchase order type (order type) via the "Report selection order types" menu item.

As in the standard report selection, it is also possible to store several reports in a defined sequence in connection with purchase order types (order types).

Assign the purchase order type

To assign the purchase order type to a purchase order, first create or open a purchase order. Under the "General" info tab, in the "Purchase order type" field, you have the possibility to specify / change the purchase order type.

Variants

Variant obligation

In Microsoft Dynamics Business Central™ Standard, the use of variants is possible. However, the variant is only an additional distinguishing criterion. A check for the mandatory entry of a variant code is not given in the standard.

When using variants for articles, different types are often taken into account (e.g. sizes or color characteristics). In this context, a variant code is mandatory when entering a document line.

Example: To use a work shoe without sizes must be interrupted.

KUMAVISION base365 (BOOSTER) variant requirement forces the entry of the variant for an item when used in vouchers or book.sheet lines.

Within the article master record it can be defined whether the mandatory specification of a variant code is required for the respective article. For this purpose, the field "Variant obligation" on the info tab "Stock" is used.

The setting of this field refers both to the purchase and to the sale or other entry of the item. The check for a missing variant code is performed when entering the quantity in the respective document or book.sheet.

If an article was marked as requiring a variant and no variant was specified, the system issues a corresponding message.

The entry of a quantity is thus only possible for the line after entering a variant code.

In addition, this mandatory variant check is also performed during the booking process in Sales, Purchasing and from the Book.sheet article.

Variant lock

In Microsoft Dynamics Business Central™ Standard articles are lockable. This blocking of articles has been extended in KUMAVISION base365 (BOOSTER) by the distinction "Blocked sales, Blocked purchasing, Blocked production. In addition, it is possible to lock individual variants for a range or completely.

If, for example, the work shoe in a certain size is no longer to be used in sales or purchasing, it is possible to block it for the respective area.

On the article variant card, the following fields are available for the variant lock:

- VK Variant Lock,
- EK Variant Lock,
- Service variant lock
- Production variant lock
- Article book sheet variant lock
- Stock transfer order variant block
- Project Variant Lock
- Mounting variant lock

These fields can be used to lock the individual variant for the respective process.

If a locked variant is used within an operation, an error message is issued immediately after the variant code is entered. It is not possible to enter the respective variant.

The blocking indicator check is performed in the following hierarchy:

- the check for the field "Locked" = "no" in the article
- the check for the field "Blocked sales" = "no" (or in the purchasing transaction then "Blocked purchasing", production transaction -> "Blocked production", service -> "Blocked service") in the article
- the check for the field "Sales variant lock" = "no" (or in the purchasing process then the field "Sales variant lock", Production -> Production variant lock", Service -> Service -variant lock) in the article variant.

Distribute order / planning lines

The processing of order and planning worksheets is carried out by several people in larger companies. However, the standard system does not offer the possibility to create several purchase order worksheets/ planning runs delimited per book.sheet. To meet this requirement, the articles are assigned to MRP controllers. The results of the ordering or planning run are then set (distributed) for each MRP controller in their own worksheet.

Through this distribution function, users are assigned to the articles. After a procurement run, the worksheet lines can then be distributed into their own worksheet names. For this purpose, any number of users can be assigned to each worksheet name and thus groups of users can also be distributed into a worksheet name again.

To assign an article to a user, first call up the desired article card. In the "Planning" info tab, you can make the assignment in the "Assigned user ID" field by selecting the desired user.

In the order worksheet lines, when an item number is created or entered and during the order or planning run, the field is filled using the data from the item card.

The assignment between Assigned User ID and the worksheet names is done in the Worksheet Lines Distribution Filters table, which can be found in the Administration in the Warehouse area. It should be noted that each Assigned User ID may only appear once in the distribution filters.

Price inquiries with price comparison list

This service area provides for articles a price comparison list of price requests of quantities, scale quantity, prices and procurement times at different vendors or contacts. The results can be transferred to the vendor/ article catalog or the purchase prices.

Price requests are usually created from the purchase order or planning worksheets for a selection of vendors or contacts. Alternatively, the vendors from the vendor/article catalog can be used.

To create a price request from a purchase order or planning worksheet, place a check mark in the "Price request" field in the respective worksheet row.

Via the menu item "Associated" in the menu ribbon, select the "Selection for price requests". The selection options "Assignment for current data record" or "Assignment for selected data records" are available. These can be used to select the desired vendor or contact from which the price inquiry is to be obtained.

A price inquiry can be created via the corresponding function in the menu ribbon. The purchase requests are now generated per vendor no. and contact no. from the selection for price requests.

In the options, you can select whether, in addition to the creditors or contacts listed in the selection for price requests, the creditors from the article/supplier catalog are also used. With a check mark in Print price request, the price requests generated in this way are also printed directly.

The purchasing conditions reported back are entered in the price requests in the system. The results of the price inquiries generated in this way can be displayed under the call "Price comparison list". The call can be called from the order or planning worksheets.

The price comparison chart itself is based on the purchase lines of the Inquiry type, but is sorted by vendor no. and displays other fields.

In addition, the procurement time field is displayed before the Quantity field. At the end there is a calculated field EK price without VAT. (base,MW). This field is calculated from line amount without VAT / quantity per unit. If the currency code is filled still another conversion takes place on client currency.

The following menu items can be called up via the menu ribbon in the price comparison list:

Action - Function:

Field	Description
Transfer to article/supplier catalog	The procurement time is transferred to the field with the same name in the article/supplier catalog for the vendor and article.
Transfer to purchase prices	New lines are created in the purchase prices for the vendor and item. The start date is the working date. This way, e.g. scale prices can be taken over or updated for later orders. If the field Vendor no. in the purchase inquiry is still empty, a user query is made as to whether the contact is to be converted into a vendor. If this is negated, the function is aborted.

Related - purchase prices:

Field	Description
Article	Opens the article map
Purchase prices	Opens the purchase prices for the item and vendor
Article/Supplier Catalog	Opens the catalog for the item and vendor
Price request	Opens the purchase request
Document texts, heading text / additional text	Opens the corresponding document line text

Order confirmations and reminders

In order to record order confirmations from suppliers in the system and to dun them if necessary, the functionality of order confirmations has been extended in KUMAVISION base365 (BOOSTER).

For a purchase order, even with several purchase order lines, it is possible to enter the purchase order confirmations only for selected purchase order lines. Whenever the relevant fields in the purchase line are changed, the corresponding fields in the order confirmation are updated. If the purchase line is deleted, the corresponding order confirmation lines are also deleted.

Establishment

Accounts Payable & Purchasing Setup

To make the necessary setups for the purchase order confirmation reminder, first call up the Accounts Payable & Purchasing setup via the user search.

In the "General" info tab, you can specify the reference date of the order confirmation reminder in the "Default order confirmation reminder date field". Date field" you can set the reference date of the order confirmation reminder. You can choose between "Document date" and "Order date". Usually it is set to the document date.

In addition, a number series must be stored in the "Number series" info tab in the "Order confirmation reminder" and "Registered order confirmation reminder" fields.

Order confirmation reminder code

An order confirmation dunning code is then created and, if necessary, the associated dunning levels. To do this, first call up the "Order confirmation dunning methods" via the user search.

You can set up a new order confirmation reminder code using the "New" menu item.

Furthermore, you should define the required number of dunning levels and their due date. To do this, click on the "Levels" function button in the same ribbon as before and enter your data first.

You can round off the dunning procedure with suitable dunning texts for each stage. To do this, select [...] - Associated - Stages - Pretext / Posttext and formulate your introductory text (pretext) and closing text (posttext) for each dunning stage line by line according to your ideas.

Vendor assignment

Finally, the order confirmation reminder code must be assigned to each vendor for which an order confirmation reminder is to take place in the "Delivery" info tab.

Report selection Comfort EC

In addition, the associated report must be accessed for the reminder. This is set up in the report selection Comfort EC.

Execute order confirmation reminder

Create an order confirmation reminder to remind a supplier of your order and ask them to confirm it. To do this, call up the order confirmation reminders via the user search.

A blank order confirmation reminder opens and by pressing the Enter key, the system draws itself a sequential number.

Now select the "Create order confirmation reminders..." item in the ribbon.

The "Create order confirmation reminder" card opens, where you can make further filterings. With the help of the filters you can, for example, limit vendors or articles to be searched. If you leave the filters as default, the system will go through all overdue order confirmations.

The system will automatically create the order confirmation reminder for you with the appropriate reminder lines.

Note

The dunning method code must be maintained on the corresponding vendor.

The order confirmation reminder must be registered in the system (necessary for further reminder levels) and to print the corresponding order confirmation reminder. Select the "Register" item in the menu ribbon.

As soon as you have executed the "Register..." function, the corresponding receipt will be printed automatically afterwards on your printer set up as the default printer.

Under "Reg. order confirmation reminders" you can also print your order confirmation reminder. To do this, call up the Reg. order confirmation reminders via the user search and select your generated Reg. order confirmation reminder.

Analogous to the order confirmation reminder, a delivery reminder can be carried out.

Prices

Price origin

In the purchasing documents, the "Price origin" field is available for information on the price of origin. Depending on the origin, the following information is given in the "Price origin" field:

Field	Description
Item / Selling price	Depending on how the purchase price without VAT or purchase price (price unit) without VAT is determined, the "Price origin" field is then set to Article or Purchase price.
Frame order	If the order is created from a blanket purchase order, the "Price origin" is set to "Blanket purchase order".
Manual	In case of any manual input of the purchase price without VAT or purchase price (price unit) without VAT, the field is set to "Manual".

Note

In the case of the price origin blanket purchase order and manual, the price is no longer determined again if the quantity is changed, contrary to the standard. For the other two options, the standard behavior remains unchanged.

Analogous to the price origin, the line discount origin is stored per line. The basic logic and sense of the price origin is applied accordingly to the discount origin.

Advanced pricing

This service area extends the two standard modules "Purchase prices" and "Purchase discounts" by the possibility to define them also per responsibility unit. I.e. both prices and discounts can be different for different units of responsibility.

In addition, entries from higher-level vendors in the hierarchy are also included in the best price or best discount determination (see also "Managing hierarchies").

To be able to use this functionality, first call up the Accounts Payable & Purchasing setup via the user search. In the "Hierarchy type code pricing" field, enter the hierarchy type code to be used in pricing.

All vendors stored via the defined hierarchy type code are then taken into account accordingly in the price/discount determination. The best price and the best discount in the corresponding combinations (validity, minimum quantity, units, currency, unit of responsibility...) are transferred to the document line. It does not matter in which hierarchy level the price was determined. If necessary, different prices (vendor price, article price group price, etc.) are determined in the different hierarchy levels.

Purchasing conditions

Purchase conditions are a new form of discount definitions. The Purchase condition application area allows you to flexibly calculate the line discount % in the purchase line using freely definable calculation lines.

You can define the calculation lines in a standardized way already in the master data. The storage in the master data takes place with the help of so-called "purchase conditions".

Purchase conditions allow you to calculate a variable line discount % and ultimately a variable discount calculation in a purchase line.

Purchasing conditions are first defined as an independent dataset in the purchasing master data and then assigned to one or more records in the Purchasing Line Discount tables.

Attachment purchase conditions

To create a new purchase condition, open the purchase condition overview via the application search and click on "New".

A new purchase condition card opens where you can create the desired purchase condition with the help of the tables below.

Inforegister General

Field	Description
No.	Assignment of a unique, identifiable no. of the purchase condition by sequential number by stored number series or manual assignment.
Description	Description of the purchase condition
Calculation basis	Definition of the use of the condition. "Discount Condition"
Currency code	Currency code for using the purchase condition. A purchase condition is always used for a fixed currency and therefore must be created with a currency code.

Inforegister Purchase Condition Subform

The purchase condition rows define the calculation steps for calculating a purchase discount when applying the condition. When defining the purchase condition lines, note in particular that the sequence of the subsequent processing of the calculation steps for calculating the line discount % is determined by the sequence of the lines you entered in the window.

Field	Description
Description	Description of the purchase condition line
Operators	+ adds the entered percentage / currency amount - subtracts the entered percentage / currency amount
Value	The value of the percentage or currency amount that will be added or subtracted via the operator is entered here.
Calculation	**Net Percent:** calculates the percentage value on the calculation basis (purchase price or cost price) **Consequence percent:** calculates the percentage value on the final value of the previous line in the sales condition **Currency amount:** adds or subtracts the entered value in the amount of the currency.

Example:
The purchase condition has the following characteristics:

Description	Operator	Value	Calculation
Basic discount	-	5	Net percentage
Discount for action	-	3	Net percentage

When applying the purchase condition in a purchase line, it has as a basis the item's EK price.

In the first step, a "basic discount" of 5% is calculated and deducted.

In the next step, a "discount for action of 3%" is granted from this result, related here to the EK price of the item.

The purchase condition is now to be used in the purchase discounts of the article in our example. In our example, the article has a purchase price of 26.80 EUR.

The item has the following defined purchase discounts:

Vendor	Discount %	Purchase condition no.	Valid from	Valid until
3000		EK_KOND_BSP	01.01.2020	30.04.2020

Note

The purchase discount is a discount that uses a purchase condition. Therefore, the value in the "Discount %" field remains "0" in the master data definition, it is calculated dynamically when the discount is applied in a purchasing document.

The item is now to be purchased in a purchase order on 04/15/2020 from vendor 30000.

The application runs through the standard pricing routine when entering the item. The purchase condition is transferred to the purchase order and calculates the total discount for this line = 8.

Note

The calculation used with the calculation steps can be called up and viewed via the "EK price/discount calculation" -> "Line discount" function in the "Lines" info tab.

Via the action "Translations" you have the possibility to store a translation for the individual calculation descriptions. This translation will be used instead of the German description when transferring to the documents, provided that a language code is stored in the document. If no translation is available, the German description is always used.

Field	Description
Target language	Select translation language
Value	Translation of the calculation description

Note

The purchasing conditions are not printed in the KUMAVISIONs standard documents. If they are printed project specific, the translation is available in the respective document.

Purchase condition in the tables Purchase line discount

The linking of a purchasing condition to a data record of the "Purchasing line discount" table is always done via the field "Purchasing condition no." The currency of the condition must match the currency of the "Purchasing line discount".

Records in the "Purchase discounts" table with the "Purchase condition no." field filled in always have the value 0 in the "Discount %" field in the master data, the discount is calculated when entering it in the purchase lines.

The calculation of the line discount % always takes place at runtime when the respective data record is used in a purchasing document with its data.

Purchasing line discounts with specified purchasing conditions in best discount determination

The purchase discounts with specified condition no. are used like normal purchase discounts for the determination of the "best discount". Whether or not a purchase discount is taken into account as a valid purchase discount for pricing in a special purchasing document is therefore not dependent on the purchasing condition data. Only the value of the purchase discount is determined dynamically and the purchase discount then participates with this determined discount rate in the best discount determination.

Note

The default logic for finding the records of the "Purchase line discount" table has not been changed.

Transfer of the purchase condition data to the "Purchase discount calculation line" table.

If a purchase condition is found during the purchase discount calculation, the data of the purchase condition rows are transferred to a sub-table of the purchase row ("Purchase discount calculation row" table).

The user can display the records of the "Purchase- Price/Discount calculation row" table in a window and edit them there if necessary. The parameters can be changed, rows can be deleted and rows can be added.

In addition, if necessary, it is possible to call on a completely empty calculation in the purchase line and transfer by function the lines of any condition selected by him.

Editing is always done in a temporary environment, which allows the user to simulate his change first and - if he does not like the effect of his change - to discard it completely and restore the previous state before calling the window. By confirming with OK, the changes made are transferred to the purchase line, the changes are retained, these can be called up again and edited.

The purchase line contains 2 calculated fields "Price calculation available" and "Discount calculation available" (both Yes/No). The fields are not initially displayed in the purchase line, but can be selected by the user and show the user whether a respective calculation is available for the line or not.

Transfer of data records of the table "Purchase price/discount calculation line" when copying, posting, archiving, delivery call-off etc.

The data records of the table "Purchase price/discount calculation line" are transferred to the posted documents and archived documents during posting and archiving.

These can be displayed in read-only from the posted or archived document to the respective line of the document.

Note

The exceptions are "Delivery lines" and "Return delivery lines", where the purchase price is not displayed by default.

The 2 calculated fields "Price calculation available" and "Discount calculation available" can also be displayed in the posted and archived document lines.

During copying and delivery call-off, the data records of the table "Purchase price/discount calculation line" are also copied between the source document and the target document.

This is not the case if the rows are recalculated instead, e.g. when copying a document by selecting "Recalculate rows".

Price units

The price calculation of a purchasing document line from the standard system is based on the formula:

$$ Net\ amount = quantity * purchase\ price * (100 - discount\%) / 100 $$

In practice, other calculation formulas are also encountered.
An example of this is price calculation using price units.

Typical for the task of a price unit is price indication of a multiple of the EK price.

In any case, the price of the document line must be interpreted in the unit code of the document line.

Example 1:
The basic unit of the article is Piece, the unit of the document line is also Piece.
The price in the document line is given in multiples of 1000 (= price unit). The price entered by the user is to be interpreted as the price for 1000 PIECES.

Example 2:
The basic unit of the article is Piece, the unit of the document line is Package.
The unit PAKET is defined in the table of article units for the article, where 1 PAKET = 50 PIECES. The price in the document row is given in multiples of 50 (=price unit). The price entered by the user should be interpreted as the price for 50 PACKAGES.

Voucher printing

Document printing in all documents is now done using the price unit and the purchase price in the price unit. In addition, the user can already manage the prices agreed with the suppliers in the master data by specifying a price unit.

Basic procedure

In the purchase lines there are additional fields for entering/managing price units: "Price unit" columns as well as "EK price (price unit) without VAT". Likewise, the fields are in all the corresponding archive tables and in the tables for posted documents. The Item EK Price table also contains the two price unit fields.

Alternatively, price units can be used only in one document or they can be stored in the pricing. When maintaining in the article EK prices, make sure that the purchasing unit must also be maintained accordingly.

Note

Price units do not represent a conversion between units that cannot be defined in the article unit table by fixed conversions.

E.g. the article is managed in the basic unit piece. The document line is also entered in pieces, but the price calculation of the document line is not based on the piece, but on the weight.

The mapping of such weight-based document pricing is another pricing method and is not mapped in this section.

Article price group

Identical items that have not been priced individually can be grouped into item groups based on which prices can be maintained. For example, a group of paperbacks always costs the same, regardless of the title.

Price agreements for item price groups can be recorded in the same way as item prices, i.e. in particular:

- Vendor hierarchies are supported
- Purchasing conditions are supported
- Quantity based, date based, currency based price are supported
- unit-dependent prices are also supported, as follows: If a price (defined for an article price group) is to apply to a special article unit, this must be stored in the line.
  It is up to the user to ensure that this unit is then also defined as an article unit for the articles of this article price group.

Note

Variant-dependent price definitions are not supported for item price groups. The following applies here: If an article with variants belongs to an article price group, the prices of this article price group automatically apply to all variants of this article.

The use in the purchasing documents is the same as for item prices. When entering the item no. in the purchase line:

In addition to the prices stored directly for the article, the prices stored behind the article price group are also used.

The best price determination is carried out among all prices found, the prices that come directly from the article and the prices that come indirectly from the article price group have equal rights in the best price determination.

In the info area (purchase order line / purchase invoice line ...) you can branch to the article prices. The prices coming from an article price group are also shown here. The user can also select such a price (corresponds to function Get purchase price).

To define an article price group, call up the "Article price groups" via the user search.

Via "New" in the ribbon you can define a new item price group using the table below.

Field	Description
Code	Specifies a meaningful abbreviation of the item price group
Description	Indicates the description of the item price group
Sale	Specifies the use for the sales area
Purchasing	Specifies the usage for the purchase area

After successful creation of the article price group, you can enter the prices via the "Ribbon - Belonging - Article price group - Purchase prices" analog to the standard price maintenance per vendor or vendor group of the article price group.

Graduated prices

The calculation of the value of the fields Purchase price and Line discount % of the purchase line is based on the price or discount agreements between vendor and item stored in the master data in the tables Purchase price and Purchase line discount.

The possibilities of price and discount agreements are very diverse. For example, agreements for all vendors, for vendor groups or for special vendors can be stored on the vendor side and agreements for article groups or for special articles can be stored on the article side.

If the user enters an item in a purchasing line in a purchasing document for a vendor, the application automatically calculates the value of the purchase price and line discount % fields of the purchasing line. The calculation is done by comparing the value of the Quantity field of this specific purchase line with the minimum quantities stored in the mentioned master data, and thus runs through a best price determination among all the purchase prices or line discounts found.

In principle, the standard system carries out the best price determination described above separately for each purchasing line of a purchasing document. In practice, it can happen that the user enters one and the same article several times in one purchasing document. This may be necessary, for example, if the item is to be delivered on different delivery dates. This industry solution therefore extends the price or discount determination of Microsoft Dynamics Business Central™ in that not only the quantity of the specific purchasing line that the user is currently entering is used for the price or discount calculation of this line, but the sum of the quantities in all purchasing lines of the same purchasing document with the same item number. Price relevant fields for this functionality of the purchase line are:

- Type and no.
- Variant code
- Unit code and quantity per unit
- Alternative with value <empty>
- Allow line discount and allow calculation discount

Only those purchasing lines that have the same values within these fields will be used to calculate totals via the Quantity field.

As a rule, purchasing lines with:

- Delivery no. or return no. with value not equal to <empty>.
  (i.e. invoice or credit memo lines that have been created by a delivery schedule)
- Frame order no. with value not equal to <empty>.
  (i.e. order lines that refer to a blanket purchase order line)
- Alternative with value not equal to <empty>

Via the action Update scale prices the scale prices are calculated. The calculation of the scale prices always takes place also with the release of the document.

If the purchase price or line discount % is changed manually in a document line, neither the price discount nor the line discount will be recalculated when calculating the scale prices for these lines. Moreover, this line is not included in the total quantity for the calculation of the scale prices and discounts.

This also applies to document lines with a link to a frame position as well as to alternative lines and when invoicing posted deliveries or returns.

Note

Please note that this functionality is only available if the Extended Pricing is set to "Extended Pricing" in the Accounts Payable & Purchasing Setup.

Saving purchase prices/discounts from documents

Often, due to the high number of potential articles, price maintenance in the retail sector is not carried out in advance, but supplier-specific within an inquiry/order.

The "Save prices / discounts" section gives the user the option of conveniently saving the prices individually agreed within an inquiry or order, so that they are directly available the next time the items are used.

To save the individual prices within an inquiry or order, proceed as follows:

First create an inquiry / order with the desired article lines. In the columns "EK price" or "Line discount" the values are changed with the agreed prices/discounts.

Then select the rows for which you want to save the prices / discounts. Using the "Rows" info tab, select the menu item Row - Price / discount calculation - Save price / discount.

Note

You can select several lines and call the function. Only the document lines of the type "Article" are considered. If there are no lines of the type "Article" among the selected lines, the corresponding message will be displayed when the menu item "Line > "Save prices / discounts" is called up and the process will be terminated.

The "Save purchase price / line discount" mask opens on which you activate the "Save prices" and "Save line discounts" buttons. In addition, there are other options for saving prices that can be activated/deactivated individually:

Meaning of the mask fields for prices:

Field	Description
Save prices	If the user wants to save the prices, this field must be activated. Only after activation the other "price relevant" parameters can be set. If this field is deactivated, the prices will not be saved.
Vendor no.	Using the vendor number, the user can specify for whom the prices are to be saved.
Start date	Here you can specify a start date from which the prices are to apply. The current working date is preset here.
End date	Here you can enter an end date until which the prices should be valid.
Adopt minimum quantity	The "Adopt minimum quantity" indicator is used to specify that the quantities of the respective selected purchasing lines are adopted as minimum quantities in the price table. If this field is deactivated, no minimum quantities are transferred to the price table.
Apply variant code	The "Adopt variant code" indicator is used to specify that the variants of the respective selected sales lines are adopted as variants in the price table. If this field is deactivated, no variants are transferred to the price table and the price is therefore valid for all variants.
Show prices after creation	If this checkbox is activated, the newly created prices are displayed in the "Purchase price" window after creation. Here, a manual check and, if necessary, revision is possible.

Meaning of the mask fields for discounts:

Field	Description
Save line discounts	If the user wants to save the line discounts, this field must be activated. The other "discount-relevant" parameters can only be set after activation. If this field is deactivated, the line discounts will not be saved.
Vendor no.	Using the vendor number, the user can specify for whom the prices are to be saved.
Start date	Here you can specify a start date from which the line discounts are to apply. The current work date is preset here.
End date	Here you can enter an end date until which the line discounts should be valid.
Adopt minimum quantity	The "Adopt minimum quantity" indicator is used to specify that the quantities of the respective selected purchasing lines are adopted as minimum quantities in the line discount table. If this field is deactivated, no minimum quantities are transferred to the line discount table.
Apply variant code	The "Adopt variant code" indicator is used to specify that the variants of the respective selected purchasing lines are adopted as variants in the line discount table. If this field is deactivated, no variants are copied to the line discount table and the line discount is therefore valid for all variants.
Show line discounts after creation	If this checkbox is activated, the newly created line discounts are displayed in the "Sales line discount" window after creation. This allows manual checking and, if necessary, revision.

Then confirm your selection with "OK".

Close prices and discounts

The correct price and discount determination depends on the use of start and end dates in the corresponding EK price and line discount tables. In KUMAVISION base365 (BOOSTER), the latest price is always the currently valid price, all other things being equal. Analogously, this is also true for the line discounts.

In principle, it is possible to automatically assign an end date to existing price or discount entries as soon as an entry with a new start date and the same constellation is made. This makes it easier for the user to understand the price or discount found.

For this purpose, in the Accounts Payable & Purchasing setup, the "Prices and discounts" switch on the KUMAVISION info tab must be activated.

If a new price or a new discount is entered in the corresponding table with a new start date, the system automatically sets the end date to 1 day before the new start date in previous entries that have the same constellation and did not have an end date before.

Note

The "old" prices and discounts will be closed only if the new price or discount entry has no end date.

Prices *(From Version 20.0)*

Setup function extension

The new price management must first be activated in the function administration. To do this, call up the "Function administration" via the user search.

The function "Function update: "New sales calculation" must be set to the value "All users" in the column "Activated for".

Note

Please note that to use the previous pricing, you must not activate this feature. After activation it is not possible to deactivate this feature.

Price origin

In the purchasing documents, the "Price origin" field is available for information on the price of origin. Depending on the origin, the following information is given in the "Price origin" field:

Field	Description
Article / purchase price	Depending on how the purchase price without VAT or purchase price (price unit) without VAT is determined, the "Price origin" field is then set to item or purchase price.
Frame order	If the order is created from a blanket order, the "Price origin" is set to "Blanket order".
Manual	In case of any manual input of the purchase price without VAT or purchase price (price unit) without VAT, the field is set to "Manual".

Note

For the price origin "Blanket order" and "Manual", the price is no longer determined again when the quantity is changed, contrary to the standard. For the other two options, the standard behavior remains unchanged.

Analogous to the price origin, the line discount origin is stored per line. The basic logic and sense of the price origin is applied accordingly to the discount origin.

Saving purchase prices/discounts from documents

Often, due to the high number of potential articles, price maintenance in the retail sector is not carried out in advance, but supplier-specific within an inquiry/order.

The "Save prices / discounts" area gives users the option of conveniently saving the prices individually agreed within an inquiry or order, so that these are directly available the next time the articles are used.

To save the individual prices within an inquiry or order, proceed as follows:

First create an inquiry / order with the desired article lines. In the columns "EK price" or "Line discount" the values are changed with the agreed prices/discounts.

Then select the rows for which the prices / discounts are to be saved. Via the info tab "Rows" select the menu item "Row" > "Price / discount calculation" > "Save price / discount".

Note

You can select several lines and call the function. Only the document lines of the type "Article" are considered. If there are none of the "Article" type among the selected document lines, the corresponding message is displayed when you call up the "Line > "Save prices / discounts" menu item and the process is ended.

The "Save purchase price / line discount" mask opens on which you activate the "Save prices" and "Save line discounts" buttons. In addition, there are other options for saving prices that can be activated/deactivated individually: Meaning of the mask fields for prices:

Field	Description
Save prices	If users want to save the prices, this field must be activated. The other "price-relevant" parameters can only be set after activation. If this field is deactivated, the prices will not be saved.
Price list code	Specifies a possible price list. Specifying the price list code is mandatory for saving purchase prices.
Vendor no.	The vendor number allows users to specify for whom the prices should be saved.
Start date	Here you can specify a start date from which the prices are to apply. The current working date is preset here.
End date	Here you can enter an end date until which the prices should be valid.
Adopt minimum quantity	The "Adopt minimum quantity" indicator is used to specify that the quantities of the respective selected purchasing lines are adopted as minimum quantities in the price list. If this field is deactivated, no minimum quantities are transferred to the price table.
Apply variant code	The "Adopt variant code" indicator is used to specify that the variants of the respective selected sales lines are adopted as variants in the price list. If this field is deactivated, no variants are transferred to the price list and the price is therefore valid for all variants.
Show prices after creation	If this checkbox is activated, the newly created prices are displayed in the "Price list line" window after creation. This allows manual checking and, if necessary, revision.

Meaning of the mask fields for discounts:

Field	Description
Save line discounts	If users want to save the line discounts, this field must be activated. The other "discount-relevant" parameters can only be set after activation. If this field is deactivated, the line discounts will not be saved.
Vendor no.	The vendor number allows users to specify for which vendor the prices should be saved.
Start date	Here you can specify a start date from which the line discounts are to apply. The current work date is preset here.
End date	Here you can enter an end date until which the line discounts should be valid.
Adopt minimum quantity	The "Adopt minimum quantity" indicator is used to specify that the quantities of the respective selected purchasing lines are adopted as minimum quantities in the price list. If this field is deactivated, no minimum quantities are transferred to the price list.
Apply variant code	The "Adopt variant code" indicator is used to specify that the variants of the respective selected purchasing lines are adopted as variants in the price list. If this field is deactivated, no variants are transferred to the price list and the line discount is thus valid across variants.
Show line discounts after creation	If this checkbox is activated, the newly created line discounts are displayed in the "Price list line" window after creation. This allows manual checking and, if necessary, revision.

Then confirm your selection with "OK".

Purchasing conditions

Purchase conditions are a new form of discount definitions. The Purchase condition application area allows you to flexibly calculate the line discount % in the purchase line using freely definable calculation lines.

You can define the calculation lines in a standardized way already in the master data. The storage in the master data takes place with the help of so-called "purchase conditions".

Purchase conditions allow you to calculate a variable line discount % and ultimately a variable discount calculation in a purchase line.

Purchasing conditions are first defined as an independent dataset in the purchasing master data and then assigned to one or more records in the Purchasing Line Discount tables.

Attachment purchase conditions

To create a new purchase condition, open the purchase condition overview via the application search and click on "New".

A new purchase condition card opens where you can create the desired purchase condition with the help of the tables below.

Inforegister General

Field	Description
No.	Assignment of a unique, identifiable no. of the purchase condition by sequential number by stored number series or manual assignment.
Description	Description of the purchase condition
Calculation basis	Definition of the use of the condition. "Discount condition"
Currency code	Currency code for using the purchase condition. A purchase condition is always used for a fixed currency and therefore must be created with a currency code.

Inforegister Purchase Condition Subform

The purchase condition rows define the calculation steps for calculating a purchase discount when applying the condition. When defining the purchase condition lines, note in particular that the sequence of the subsequent processing of the calculation steps for calculating the line discount % is determined by the sequence of the lines you entered in the window. |Field |Description| | --- | --- | |Description |Description of the purchase condition line| |Operators |+ adds the entered percentage / currency amount
-subtracts the entered percentage / currency amount| |Value |The value of the percentage or currency amount that will be added or subtracted via the operator is entered here.| |Calculation |**Net percentage calculates the percentage**
value on the calculation base (purchase price or cost price).

Subsequent percentage calculates
the percentage value on the final value of the previous line in the sales condition.

Currency Amount
adds or subtracts the entered value in the currency amount.|

Example:
The purchase condition has the following characteristics:

Description	Operator	Value	Calculation
Basic discount	-	5	Net percentage
Discount for action	- 3	Net percentage	

When applying the purchase condition in a purchase line, it has as a basis the item's EK price.

In the first step, a "basic discount" of 5% is calculated and deducted.

In the next step, a "discount for action of 3%" is granted from this result, related here to the EK price of the item.

The purchase condition is now to be used in the purchase discounts of the article in our example. In our example, the article has a purchase price of 26.80 EUR.

The item has the following defined purchase discounts:

Vendor	Discount %	Purchase condition no.	Valid from	Valid until
3000		EK_KOND_BSP	01.01.2020	30.04.2020

Note

The purchase discount is a discount that uses a purchase condition. Therefore, the value in the "Discount %" field remains "0" in the master data definition, it is calculated dynamically when the discount is applied in a purchasing document.

The item is now to be purchased in a purchase order on 04/15/2020 from vendor 30000.

The application runs through the standard pricing routine when entering the item. The purchase condition is transferred to the purchase order and calculates the total discount for this line = 8.

Note

You can call up and view the calculation used with the calculation steps via the "EK price/discount calculation" > "Line discount" function in the "Lines" info tab.

Via the action "Translations" you have the possibility to store a translation for the individual calculation descriptions. This translation will be used instead of the German description when transferring to the documents, provided that a language code is stored in the document. If no translation is available, the German description will always be used.

Field	Description
Target language	Translation language selection
Value	Translation of the calculation description

Note

The purchasing conditions are not printed in the KUMAVISIONs standard documents. If they are printed project specific, the translation is available in the respective document.

Assignment of purchase condition in purchase price and purchase line discount

The assignment of a purchase condition is always done via the "Price condition" field of the respective price list. The currency of the condition must match the currency of the "Purchase price" or "Purchase line discount".

Price list records with the "Purchase condition no." field filled in always have the value 0 in the "Discount %" field in the master data, the discount is calculated when entering it in the purchase lines.

The calculation of the line discount % always takes place at runtime when the respective data record is used in a purchasing document with its data.

Purchase prices or purchase line discounts with specified purchase condition

The purchase prices with specified condition number are used like normal purchase prices to determine the "best discount". Whether or not a purchase price is taken into account as a valid purchase price for pricing in a special purchasing document is therefore not dependent on the purchasing condition data. Only the value of the purchase price is determined dynamically and the purchase price then participates with this determined price in the best price determination.

Price units

The price calculation of a purchasing document line from the standard system is based on the formula:

Net amount=quantity∗EK price∗(100-discount%)/100

In practice, other calculation formulas are also encountered. One example is the price calculation using price units.

Typical for the task of a price unit is price indication of a multiple of the EK price.

In any case, the price of the document line must be interpreted in the unit code of the document line.

Example 1: The basic unit of the article is Piece, the unit of the document line is also Piece. The price in the document line is given in a multiple of 1000 (=price unit). The price entered by the user is to be interpreted as the price for 1000 PIECES.

Example 2: The basic unit of the article is Piece, the unit of the document line is Package. The unit PAKET is defined in the table of article units for the article, where 1 PAKET = 50 PIECES. The price in the document row is given in multiples of 50 (=price unit). The price entered by the user should be interpreted as the price for 50 PACKAGES.

Basic procedure

In the purchase lines there are additional fields for entering/managing price units: "Price unit" columns as well as "EK price (price unit) without VAT". Likewise, the fields are in all the corresponding archive tables and in the tables for posted documents.

Alternatively, price units can only be used in a document or stored in pricing. When maintaining in the article EK prices, make sure that the purchasing unit must also be maintained accordingly.

Note

Price units do not represent a conversion between units that cannot be defined in the article unit table by fixed conversions.

E.g. the article is managed in the basic unit piece. The document line is also entered in pieces, but the price calculation of the document line is not based on the piece, but on the weight.

The mapping of such weight-based document pricing is another pricing method and is not mapped in this section.

Receipt printing

The document printout in all documents is now done using the price unit and the purchase price in the price unit. In addition, the user can already manage the prices agreed with the suppliers in the master data by specifying a price unit.

Article price group

Identical items that have not been priced individually can be grouped into item groups based on which prices can be maintained. For example, a group of paperbacks always costs the same, regardless of the title. Price agreements for item price groups can be recorded in the same way as item prices, i.e. in particular:

- Vendor hierarchies are supported
- Purchasing conditions are supported
- Quantity based, date based, currency based price are supported
- unit-dependent prices are also supported, as follows: If a price (defined for an article price group) is to apply to a special article unit, this must be entered in the line. It is up to the user to ensure that this unit is then also defined as an article unit for the articles of this article price group.

Note

Variant-dependent price definitions are not supported for item price groups. The following applies here: If an article with variants belongs to an article price group, the prices of this article price group automatically apply to all variants of this article.

The usage in the purchasing documents is the same as, for item prices. When entering the item no. in the purchase line:

In addition to the prices stored directly for the article, the prices stored behind the article price group are also used.

The best price determination is carried out among all prices found, the prices that come directly from the article and the prices that come indirectly from the article price group have equal rights in the best price determination.   In the info area (purchase order line / purchase invoice line) you can branch to the article prices. The prices coming from an article price group are also shown here. Users can also select such a price (corresponds to function Get purchase price).

To define an article price group, call up the "Article price groups" via the user search.

Via "New" in the ribbon you can define a new item price group using the table below.

Field	Description
Code	Specifies a meaningful abbreviation of the item price group
Description	Indicates the description of the item price group
Sale	Specifies the use for the sales area
Purchasing	Specifies the usage for the purchase area

After successfully creating the article price group, you can define the prices via the menu ribbon using the menu item "Prices" > "Purchase prices" analogous to the standard price maintenance.

Graduated prices

The calculation of the value of the fields "Purchase price" and "Line discount %" of the purchase line is based on the price or discount agreements between the vendor and the item stored in the price list.

The possibilities of price and discount agreements are very diverse. For example, agreements for all vendors, for vendor groups or for special vendors can be stored on the vendor side and agreements for article groups or for special articles can be stored on the article side.   If users enter an item in a purchasing document for a vendor in a purchasing line, the application automatically calculates the value of the fields "Purchase price" and "Line discount %" of the purchasing line. The calculation is performed by comparing the value of the "Quantity" field of this specific purchasing line with the minimum quantities stored in the master data mentioned above, and thus runs through a best price determination among all the purchasing prices or line discounts found.

In principle, the standard system carries out the best price determination described above separately for each purchasing line of a purchasing document. In practice, it can happen that users enter one and the same article several times in one purchasing document. This may be necessary, for example, if the article is to be delivered on different delivery dates. KUMAVISION base365 (BOOSTER) therefore enhances the price or discount calculation of Microsoft Dynamics Business Central™ in that not only the quantity of the specific purchase line that users are currently entering is used for the price or discount calculation of this line, but the sum of the quantities in all purchase lines of the same purchase document with the same item number.

Price relevant fields for this functionality of the purchase line are:

- Type and no.
- Variant code
- Unit code and quantity per unit
- Alternative with value >
- Allow line discount and allow calculation discount

Only those purchasing lines that have the same values within these fields will be used to calculate totals via the "Quantity" field.   As a rule, purchasing lines with:

- Delivery no. or return no. with value not equal to (i.e. invoice or credit memo lines created by a delivery schedule).
- Frame order no. with value not equal to (i.e. order lines that refer to a frame order line).
- Alternative with value not equal to

Via the action "Update scale prices" the scale prices are calculated. The calculation of the scale prices always takes place also with the release of the document.

If the purchase price or line discount % is manually changed in a document line, neither the price discount nor the line discount will be recalculated when calculating the scale prices for these lines. Moreover, this line is not included in the total quantity for the calculation of the scale prices and discounts.

This also applies to document lines with a link to a frame position as well as to alternative lines and when invoicing posted deliveries or returns.

Note

Please note that this functionality is only available if the price calculation method is set to "KUMAVISION base Lowest price" in Accounts Payable & Purchasing.

Close prices and discounts

The correct price and discount determination depends on the use of start and end date in the corresponding price lists. In KUMAVISION base365 (BOOSTER) always the newest price is valid, otherwise the same constellation as the currently valid price. Analogously, this is also the case for the line discounts. In principle, it is possible to automatically assign an end date to existing price or discount entries as soon as an entry with a new start date and the same constellation is made. This makes it easier for users to understand the price or discount found.

To do this, the "Close prices and discounts automatically" checkbox must be activated on the Prices info tab in the Accounts Payable & Purchasing setup. If a new price or a new discount is entered in the corresponding table with a new start date, the system automatically sets the end date in previous entries that have the same constellation and previously had no end date to 1 day before the new start date.

Note

The "old" prices and discounts are closed only if the new price or discount entry has no end date.

Pricing by unit of responsibility Extended pricing

This service area extends the "Purchase prices" and "Purchase discounts" by the possibility to define them also per responsibility unit. I.e. both prices and discounts can be different for different units of responsibility. For this purpose, the desired unit of responsibility must be maintained in the "Unit of responsibility code" field in the corresponding purchase price or purchase discount line of the price list.

Best price determination controllable

In the best price or best discount determination, entries from the hierarchy of higher-level vendors are also included (see also "Management of hierarchies"). To be able to use this functionality, first call up the Accounts Payable & Purchasing setup via the user search. Enter the hierarchy type code to be used in pricing in the "Hierarchy type code pricing" field. All vendors stored via the defined hierarchy type code are then taken into account accordingly in the price/discount determination. The best price and the best discount in the corresponding combinations (validity, minimum quantity, units, currency, unit of responsibility...) are transferred to the document line. It does not matter in which hierarchy level the price was determined. If necessary, different prices (vendor price, article price group price, etc.) are determined in the different hierarchy levels.

Price calculation when transferring from the order and planning worksheet to the order

The Microsoft Dynamics Business Central™ standard revalidates the purchase order date when transferring from the purchase order worksheet and planning worksheet to the purchase order. This triggers a new pricing process.

With the switch "Update prices on transfer from purchase order worksheet" in the Accounts Payable & Purchasing setup it can be decided whether a new price calculation should take place on transfer (option: "Standard") or not (option: "No new pricing").

Document process ID Purchasing

In the purchasing process, it is helpful if related documents can be tracked from the inquiry to the complaint with a common ID. This is particularly useful when documents such as sales complaints are to be linked to purchasing complaints across departments. For this purpose, there is a new field "Document Process ID" in the purchasing header and lines in the purchasing documents.

Establishment

In order to use document tracking, a number series must first be created in the Accounts Payable & Purchasing setup.

To do this, first call up the Accounts Payable & Purchasing setup via the user search. On the Accounts Payable & Setup card on the "Number series" info tab, you now have the option of entering a number series in the "Document process ID" field. You then exit the setup.

Process

The "Document process ID" field is copied in the purchasing header and to all documents resulting from the "Start" purchasing document and their lines.

Inquiry -> Purchase order -> Archived purchase documents -> Delivery -> Invoice -> Purchase complaint (only if the lines are created using the function Retrieve document lines to be cancelled).

Using a purchase order as an example, the document process ID is created on the purchase order and transferred to the purchase invoice/delivery when they are posted.

Via the menu item "Line" in the info tab of the same name, the "Navigate Doc.Process.ID" can be called up. On the Navigate Doc.Process.ID card, all documents for the respective document process ID are displayed. By clicking on the number in the "Number of entries" field, you can display the corresponding document.

In the same way, the general Navigate function can be used to search for all documents that contain a specific document process ID in a line. It is important that the document process ID of the line is decisive for the search.

If a document is copied or if the lines are created with the function Retrieve posted document lines to be cancelled, the document process IDs of the original document are taken over. This means that these lines can then only be retrieved with the original document process ID. If this is not to be the case, the Copy document process ID option must be switched off when creating the corresponding document lines from the Copy document function. When retrieving complaint lines, the original document process ID is always transferred.

Post booking data

You can use the "Post posting data" function to subsequently correct the posting data in orders that have already been delivered but not yet invoiced.

To do this, make your corrections in the corresponding document and execute the "Post entry data" function in the menu ribbon.

When the function is executed, the fields from the open document are transferred to the posted delivery and the associated article, material and value items for all order lines that have already been delivered but not yet invoiced.

The following fields are taken into account during the transfer:

- Business posting group
- VAT business posting group
- Product posting group
- VAT product posting group
- Dimension Set ID
- Global dimension code 1
- Global dimension code 2

Creation of inquiries to contact

In order to create inquiries to potential suppliers, i.e. contacts without an accounts payable assignment, they can be entered using an accounts payable template.

Vendor templates are created in the Financial Accounting section.

To create an inquiry to potential suppliers, the "Create inquiry" function is selected in the action area. An inquiry is drawn with the contact's data and opened directly. At this point, a template can be selected in the field "Credit template code". This template will be used in the inquiry.

The inquiry can also be created without creating a creditor. In this case, the vendor must be created only when converting to a purchase order.

Moreover, inquiries to contacts can be created and released in KUMAVISION base365 (BOOSTER) without creating a creditor.

Bonus management

In the business process, bonus arrangements are often agreed with creditors. These state that if a certain sales volume is achieved at the end of a bonus period, a bonus is paid on the basis of the sales volume.

The bonus settlement rules can vary quite a bit from case to case. For example, the amount of a bonus payment may depend on the achievement of various turnover levels. It may be that the bonus amount is determined by the achieved bonus level, but it may also be that the individual levels must be served in sequence.

The sales of the respective vendor itself or the sales of a group of vendors within a hierarchy can be used for the bonus payment.

The basis of the rebate settlement is the turnover of the creditor according to the creditor items.

The bonus settlement is flexibly designed via a table of bonus groups. A bonus group has different parameters to control the settlement and a sub-table of bonus rates. A bonus group code can be assigned to each vendor.

In addition, a multi-level list of other creditors can be assigned to him, whose turnover is also taken into account for his bonus settlement.

The actual rebate settlement is carried out by means of a report. The user can also call up information on the interim status of the rebate settlement on the accounts payable card.

Attachment bonus management

The rebate group regulates two pieces of information. On the one hand, the turnover of which creditor the rebate settlement of a certain creditor is based on and, on the other hand, the staggering of the turnover amount (according to its associated rebate group lines) as well as its application.

To create the bonus group, first call it up via the search. The bonus group overview opens. Click "New" to create a new bonus group using the table below.

Field	Description
Code	Unique meaningful abbreviation
Description	Description of the bonus group
Calculation basis	Graduation of the amount of turnover. You can choose from the following: **Amount** (specify a graduation from which the creditor, if you have reached the turnover level, will receive the bonus % of the relevant bonus group line on the total turnover) **Graded** (specify a graduation you need to reach the creditor level by level.) Example: There are 2 bonus groups A with calculation base amount and B with calculation base graduated. Both bonus groups have the 3 bonus group lines each: 10,000.00 EUR: 5 % 20,000.00 EUR: 6% EUR 30,000.00: 7% You reach a turnover of 21,353.00 EUR with the vendor. Case1: The vendor has been assigned a bonus group A: You receive a bonus of 6% on 21,353.00 EUR Case2 The vendor has been assigned a bonus group B: You receive a rebate of 5% on 10,000 EUR and a rebate of 6% on 10,000.00 EUR and 7% on 1,353.00 EUR.
Hierarchy type code	Link to a hierarchy type. (For more information, see "Managing hierarchies".

Via the menu item "Zugehörog" - "Bonus groups" you now have the possibility to manage the staggering of the bonus amount by calling "Bonus group lines".

Allocation of rebate management

To assign the rebate groups, open the Accounts Payable table in the application search.

The creditor overview opens. Call up the desired creditor and assign the corresponding rebate group to him in the "Address and contact" info tab in the "Rebate group code" field.

Calculation of the underlying turnover

With the help of the service area "Use of hierarchies" any number of hierarchies can be assigned to a vendor. The individual hierarchies are grouped with the help of the Hierarchy type table.

A special hierarchy type can be, for example, "KREDPRO" Vendor commission. In the "Hierarchy relationship" window, a vendor can then be assigned a list of those vendors whose sales - in addition to their own sales - are also to be used as the basis for rebate settlement. The connection of the special hierarchy type to the rebate settlement is now done via in the table Rebate groups in the field Hierarchy type code. The following logic is used:

- If the vendor has been assigned a rebate group (in the field Rebate group code), which has no entry in the field Hierarchy type code, the own turnover at the vendor is the sole basis for the rebate settlement.
- If a bonus group has been assigned to the vendor with an entry in the Hierarchy type code field, the application also takes into account the hierarchy relationships of the vendor (in addition to its own sales) when settling commissions. However, only those hierarchy relationships of the hierarchy type from the bonus group are taken into account.

Note

The hierarchy relationships of a vendor can be multi-level. The basis is therefore not only the vendors that were directly assigned as hierarchy relationships of the vendor, but also those vendors that were indirectly assigned in a lower level of the hierarchy. However, each assigned vendor is only taken into account a maximum of once, regardless of the level at which the assignment was made.

Bonus settlement

The settlement of bonuses is done via a report.

To run the rebate settlement, first call up the Vendor Rebate Settlement Report from the search.

In the Vendor Bonus report, you can now run the report by specifying the vendor as well as an appropriate billing period using the filter criteria.

The report determines per vendor the turnover in the accounting period according to the above description. If the turnover was also calculated indirectly via other vendors, the report also provides a list of the concrete composition of the turnover

The report compares this total turnover of the creditor with the amounts of the bonus group line of the respective bonus group. It lists the creditor's bonus payable in detail.

Print purchasing documents only for released documents

When the purchasing documents are released, the system runs through a number of checks. Among others, the mandatory field check and the check for pricing. In Microsoft Dynamics Business Central™ Standard it is possible to print open documents, but in KUMAVISION base365 (BOOSTER) printing is only possible for released documents. Exceptions are the purchase request and the print preview.

Copy demand planning

Microsoft Dynamics Business Central™ Standard MRP can be used to plan promotional goods in procurement planning or to enable standard MRP in addition to demand from orders. Sales planning is completed manually in the standard system. To simplify the maintenance of the sales planning, a copy of an existing demand plan can be created in KUMAVISION base365 (BOOSTER).

To do this, first call up "Material requirements planning" via the user search. Via the menu > [...] > "Actions" > "Function" you can execute the function "Copy MRP".

The "Copy MRP" screen opens. When copying a material requirements planning, the material requirements planning to be copied to is selected first. A filter can be set for certain articles or storage locations. When copying, it is also possible to select the components of the material requirements planning. Here, too, the planned items can be shifted using the date formula. For the correction factor in % and rounding method, the procedure described in "Propose demand planning" applies. Now, in order to copy exactly one specific demand plan and not all demand planning items, this must be specified in the filter Demand planning items.

Extension of blanket purchase order system

If articles are purchased in larger quantities, a quota is usually agreed with the supplier at a lower price. This can be represented by blanket orders with their own prices.

However, the information in the standard system on the blanket purchase order is very rudimentary for controlling these blanket purchase orders. For example, it is not apparent until a call-off is posted in the blanket purchase order that this call-off exists. Another shortcoming of the standard is that in the purchase order and planning worksheets, blanket purchase orders can neither be displayed nor selected. If the buyer is not attentive or in case of larger item inventories, he orders the item at normal prices and conditions. In addition, the process flow is a call-off from the blanket purchase order with many worksheet lines very tedious and time consuming.

Blanket orders get more information about call-offs through this service area by "Remaining quantity in order". In addition, blanket purchase orders are displayed in purchase order and planning worksheet lines per line and can be assigned manually if the remaining purchase order quantity is sufficient. The vendor data and price conditions are thereby taken over from the blanket purchase order.

Using a convenience function, this assignment can also be made automatically for the selected vendor via the blanket purchase order lines that are still open. The price conditions are also taken over. In addition, a separate purchase order can be generated for each blanket purchase order line.

In the blanket purchase order, the fields "Remaining quantity in purchase order" and "Remaining quantity in purchase order (base)" display the information about existing call-offs.

The Remaining Order Quantity in Purchase Order (Base) field is a FlowField and displays the Remaining Order Quantity (Base) of all purchase order lines associated with this blanket purchase order. The Remaining Order

Quantity in Purchase Order field is calculated from the Remaining Order Quantity in Purchase Order (Base) field using the "Quantity per Unit" of the blanket purchase order for normal purchase orders. For external orders, it is also a flowfield and shows the "Remaining order quantity" of all external orders.

The purchase order and thus planning worksheet line also contains three additional fields: "Number of blanket purchase order lines", "Blanket purchase order no." and "Blanket purchase order line no.". The first field Number of blanket purchase order lines is a flowfield and shows the number of all blanket purchase order lines where the type, the no. and the storage location code are the same and the remaining order quantity (base) is > 0. The second and third fields allow the user to manually assign to a blanket purchase order or blanket purchase order line by lookup. If selected, the vendor and, if applicable, a vendor item no. and the price conditions (price, discount, price unit, currency) are taken from the blanket purchase order line. If the assignment is removed again, the fields are reset by validating the vendor no. and pricing is carried out again.

During the selection, a check is made whether the remaining order quantity (base) - remaining quantity in order (base) - already assigned proposal line quantity (base) is still sufficient for the quantity (base) of the worksheet line; if necessary, an error message is issued.

Automatic assignment of blanket order

This variant is a convenience function, it can be started either individually via the menu item "Assign blanket purchase order" or when creating purchase orders via "Execute event message" by the option "Assign blanket purchase order automatically". In the direct menu call there are additionally the options Assign, Reassign and Delete. Reassign is the combination of Assign and Delete.

Via "Assign" the system goes through all filtered worksheet rows with event message=New. If no manual assignment has been made yet, the system searches through all blanket purchase orders for this vendor, article, article variant and storage location with remaining order quantity <> 0. The sort order is document number and document line number. If a blanket purchase order line is found with sufficient open remaining order quantity, it is assigned to the worksheet line. If the quantity of the worksheet line is larger, this part is split off into a new worksheet line. In addition to the frame assignment, the price fields such as purchase price, price unit and discounts are also transferred.

Via Delete the assignment can be removed again. Here, too, the resetting of the pricing is done by validating the vendor.

In the "Execute event message" there is another option "One order per frame". If this is activated, the worksheet lines are additionally sorted according to the blanket purchase order number and blanket purchase order line number. A new purchase order is created for each blanket purchase order or blanket purchase order line.

Manual assignment of blanket order

If a purchase order is entered manually, the user can also transfer the conditions of the blanket purchase order via the assignment of the blanket purchase order line in the purchase order. To do this, the relevant blanket purchase order number is entered in the "Blanket purchase order no." column in the purchase line. The user receives a prompt asking whether the purchase price and line discount % are to be transferred from the blanket purchase order line.

Copy article comfort

The following copy options have been added to the "Copy acticles" function:

Field	Description
All	Activating / deactivating the switch enables / disables all copy options.
Version (Finished parts list)	This field is filled by the currently valid "Production BOM version" via the standard functionality and can be changed by the user to other existing versions if necessary.
Version (Work plan)	This field is filled by the currently valid "routing version" via the standard functionality and can be changed by the user to other existing versions if necessary.

If the copy process is executed, the system will also create a production BOM or routing with the "Item No." as the "No." after the item is created, and store it on the item card. In addition, the header information is copied as follows:

Field	Description
Description	Item description
Unit code	Basic unit code of the item
Type	Type of routing/version to be copied

Note

Article versions are not copied and must be assigned manually by the user. There are no start indicators for the version codes of routings and production BOMs. The entry found is copied. Thus, the created versions must be changed manually.

Item tracking comfort

In Microsoft Dynamics Business Central™, an item can be defined as to whether it will be posted with serial or batch number specific tracking. Often, however, this specification for an item changes during its product life cycle. For traceability and repair reasons, however, a change of the article number is undesirable or not possible.

In KUMAVISION base365 (BOOSTER) a change of the serial no.-specific or batch no.-specific tracking is possible under certain conditions.

When changing the serial no.-specific or batch no.-specific tracking, the following has to be considered:

- If the stock issue method is Selected, the default implementation remains.
- There must be no open items.
- There must not be any article items that have not been completely invoiced.
- The cost price on the item card must be regulated.
- There must be no reservation items for this article with filled serial or batch number.

If these conditions are met, a change can be made. Otherwise, a change is not possible and a corresponding message appears.

Document attachments for articles

Plants

You have the option of storing and monitoring documents such as drawings and certifications for an article.

To do this, first call up the desired article card. Via the "Associated" > "Article" menu tab, you can use the "Attachments" call to save the desired documents to the article with the help of the table below.

Field	Description
Type	Specification about the type of document. You can choose between: • Drawing • protocol • Description • Marketing • Regulation • Approval letter • Certification • Long term supplier declaration • Short term supplier declaration
File name	Via the "File name" field, you can use the arrow to access the file selection to select and upload the desired document
Description	Document description
Start/End date	Indication of the validity of the document
Version	Indication of the version of the document
Version status	Indication of the version status of the document

The following functions are also available in the Plant Overview ribbon:

Field	Description
Import	File selection for the highlighted line to select and upload the desired document
Export	File export for the selected line to save the stored document elsewhere.
Open	Display of the stored document for the selected line.
Delete	Deletion of the stored document for the selected line.

Delivery note cancellation

Using the purchase delivery bill cancellation, posted purchase delivery bills can be cancelled again. A new delivery bill is then created with the reference to the cancelled delivery bill. The order will be increased again in the quantity that is still to be delivered.

Note

Please note that deliveries that have not been invoiced can be cancelled.

To specify the quantity to be canceled in the posted purchase delivery, use the "Suggest Cancellation Quantities" functions to select the appropriate item and confirm the selection. You can then post the cancellation using the "Post cancellation" function.

Purchase Requistion

General

In a purchase requisition, items can be entered as pseudo-items for G/L accounts. Buyers can process the purchase requisitions periodically in the same way as the familiar order proposals in purchasing and trigger corresponding purchase orders via the event message.

> Note

The purchase requisition (BANF) is an activation module that can only be used with an additional license and activation in the module setup.

Institution

Purchase requisition facility

The purchase requisition for the institution can be called up via the user search. The following contents are stored in the purchase requisition setup:

Information Register General

Field	Comment
Standard purchase order type	The order type for presetting the purchase orders is selected in this field.
Division Code	Specifies the department if required.
Cost unit code	Dimension values (if activated) are stored here.

Information Register Number Series

Field	Comment
Number series	The number series for the creation of the purchase requisition is managed in this field.

Information Register E-mail Notification

Field	Comment
E-mail notification	If the switch is active, the e-mail notification for the BANF is activated.
Sender e-mail	The e-mail address to be used as the sender address in the automatically generated e-mails is stored here. e-mails as the sender address.
Rejection email to	Here you can select whether the message should go to the previous approver or to all persons involved in the process. If the field remains empty, no one is notified.
Release text module	Contains the default text to be included in the notification email in the approval workflow.
Text module Rejected	Contains the default text to be included in the notification email in the approval workflow in the event of a rejection.
Text module order	Contains the default text to be included in the notification email in the approval workflow in case of order.
Reminder interval	The reminder frequency is entered in the field, in which the person who has to process, release or reject the BANF is to be reminded.

SMTP Mail Setup

In the purchase requisition process, there are approval processes in which persons set up in the system are notified by e-mail. The SMTP server must be set up for this. This setup depends on the technical conditions of the environment and should be done by the company's IT department.

Note

If you have activated the Microsoft Dynamics Business Central™ feature extension "Feature Update Advanced Email Features", only the setups in the "Email Accounts" are required, the setups in the SMTP setup would be void at this point.

Permit User Facility

A permit administrator and a permit flow code are stored in the permit user facility:

The approval administrator has all rights to execute the various functions of the BANF Application. Only one user can be the approval administrator; the checkbox must be activated for this user.

Users who use the BANF Application should already be assigned an approval process code here. Since the code defines the approval process as well as the approvers, it is mandatory for the approval process. It is automatically carried over from the approval user facility into the document when the BANF is created. Already here there is the possibility to store and assign an approval process according to the section "Approval Processes" by diving into the field "Approval Process Code". The approval process code must be selectable in the document at the latest, otherwise the requisition cannot be sent due to missing approval processes. If

necessary, however, the user can change the code in the purchase requisition process, for example, if he/she requests as an employee in the company, e.g. for different cost centres, or if a different approval process is required.

An email address must be entered so that notifications can be sent to the appropriate persons, if necessary also as a collective email address if several persons are involved in the approval process.

In addition, there is the possibility to store a deputy from the user institution. This person must also have a valid email address for the process to work.

Field	Comment
User ID	Indicates the ID of the user.
Sales/Purchaser Code	Here you can select the code of the seller/buyer for your own user ID.
Approver ID	The user ID of the approver who must approve BANF created by the user from the User ID field is entered here.
Limit amount for sale	Specifies the maximum amount (sale) that the user may authorise.
Unlimited sales permit	Check here if the approver is not bound by any maximum amount for approvals. If the check mark is active, no value can be stored in the field "Limit amount for sale".
Limit amount for purchase	Specifies the maximum amount (purchase) that the user may authorise.
Unguaranteed purchase permit	Check here if the approver is not bound by any maximum amount for approvals.If the check mark is active, no value can be stored in the field "Limit amount for purchase".
Limit amount for enquiry request	Specifies the maximum amount (requests) that the user may authorise.
Unlimited request authorisation	Check here if the approver is not bound by any maximum amount for approvals.If the check mark is active, no value can be stored in the field "Limit amount for purchase".
Deputy	Indicates the possible deputy of the approver.
E-mail	An e-mail address must be stored here for each person involved in the approval process. Collective addresses can also be used instead.
Telephone no.	Indicates the telephone number of the user.
Approval administrator	The approval administrator has all rights to execute the functions in the BANF module. For this purpose, the checkbox must be ticked.
Permit expiry code	The code for the respective approval procedure is stored here.

Approval processes

To set up the approval procedures, first call them up via the user search.

Approval processes define the number and authorisations of the approving persons or departments in the process.

A new approval procedure can be added to the overview via "New" in the menu ribbon. Alternatively, existing approval processes can be edited here:

Field	Comment
Code	A code for the corresponding approval procedure is assigned here.
Description	A description that is as self-explanatory as possible serves to identify the respective approval process.
Number of approvers	The number of approvers results from the approvers deposited for the expiry.

All approvers for the approval procedure are stored via the function key "Approver" in the menu ribbon. The approvers of an approval procedure can be determined from the user set-up or existing approvers can be edited.

Field	Comment
Approver ID	Specifies the user from the user facility who is to participate in the approval process.
Name	The name is preset from the user setup of the selected user.
Level	Sets the numerical order in which approvers are notified or approve. Several persons can be included in the same level. They are then notified at the same time.
Approval limit	The respective approver is only notified if the amount of the purchase requisition in the process exceeds the value deposited here.
May edit	Determines whether the respective approver may process the BANF document.
May refuse	Determines whether the respective approver may reject the purchase requisition.
Notify at WG/ plant	If this field is activated, the approver will be notified in any case for purchase requisitions that use the type "WG/plant" in the lines.

Master data

Pseudo article

Any number of pseudo-articles can be created and managed for G/L accounts via the pseudo-article overview for the purchase requisition process. To access the article card of the pseudo article, call up the "Pseudo article overview" via the user search.

From the overview, pseudo articles can now be created for G/L accounts with the function call "New" in the menu ribbon or edited with the function call "Edit":

The following fields are available in the pseudo item card:

Field	Comment
No.	Is a mandatory field and must be filled in.
Description	Name of the pseudo article.
Description 2	Another line to designate the pseudo-article.
G/L account	Only those G/L accounts can be selected here that can be posted on the purchasing side ("Directly in purchasing" = Yes).
Description G/L account	Displays the description stored for the G/L account.
Creditor no.	An already existing creditor can be selected here.
Credit item no.	The respective article number of the creditor is stored here.
EK price	A purchase price per unit can be entered here.
Unit code	Defines the purchasing unit.
Division Code	Specifies the department if required.
Cost unit code	Dimension values (if activated) are stored here.
Number of text modules	Shows how many text modules are stored in the pseudo-article. Clicking on the number displays the text module overview.

In the purchase requisition process, the purchase requisition lines are pre-filled with the information of the pseudo item card.

Pseudo article text modules

In addition, text modules can be stored for each pseudo-article, which are transferred to the purchase order. The function call "Text modules" in the menu ribbon is available for this purpose. Subsequently, a new text module can be created via "New" in the menu ribbon or an existing text module can be edited via "Edit".

A text module can be used for a limited period of time by entering a start and end date. If it is to be automatically inserted into the vouchers, the option "Automatic" must be selected in the field "Use in voucher text". The field "Position in voucher text" determines whether the text module is to be printed before or after the line.

The selection fields of the text module lines are used to decide on which document the text module is to be printed.

Pseudo Article Purchase Prices

With the function call "Purchase prices" in the menu ribbon of the pseudo-article there is the possibility of an extended price maintenance. Here, time-controlled prices with start and end dates can be stored depending on minimum quantities, but also prices and price scales of alternative suppliers:

If price records of several or alternative suppliers are stored here, it is also possible to store the different vendor article numbers on the price record. The preassignment from the pseudo article card in the lines of a purchase requisition can then be overwritten with these values in the "Vendor no." field.

Functionality

Create BANF

To create a new requisition, call up the requisitions via the user search and click on "New" in the menu ribbon to create a new requisition.

An empty purchase requisition card will open.

Information Register General

By pressing the ENTER key in the "General" tab, the system automatically assigns a new voucher number.

With the function call "Remarks" in the menu ribbon, relevant notes can be added to the process:

The fields in the "General" tab have the following meaning:

Field	Comment
No.	The system automatically draws the next higher document number after the ENTER key is pressed.
Order date	Automatically defaults to the current date.
Due date	In the ordering process, the due date represents the desired, the planned and the expected goods receipt date. It should therefore be supplemented.
Approval code	If available, is preset from the authorisation user facility. If this is not the case, a code must be stored here.
Causes code	To be able to execute the "Reject" function, a cause code must first be selected.
Division Code	Specifies the department if required.
Cost unit code	Dimension values (if activated) are displayed or deposited here.
Status	Indicates the document status in the approval process and is automatically continued in the process. The following statuses are possible: • Open • Waiting for release • Rejected • Create order
Created by	Pre-populated by the user creating the purchase requisition.
Created on	Indicates the date and time the voucher was created.
Corrected on	Indicates when the document was last corrected.
Corrected from	Indicates by whom the document was last corrected.
Level	The number next to the field indicates how far the operation has progressed in the approval process. Clicking on the blue coloured number shows the order of the approvers.
Remarks available	Click on the blue link to see which remarks have been added to the purchase requisition.
Total Amount Net	Is the sum of the individual item values recorded in the rows.

Note

If the "approval code" has not already been preset from the approval user facility, it is mandatory to select it here, otherwise the BANF cannot be sent due to missing approval processes.

The permit code is created as described in the section Permit User Setup and Permit Procedures section.

Information register BANF lines

The desired items of the purchase requisition can now be entered in the BANF lines. All lines of the type "G/L account", "Article", "Resource" and "WG/Facility" are permitted, whereby articles should be ordered via their MRP data and the order proposal.

It is now possible to select pseudo articles instead of G/L account, article or WG/plant. If a pseudo article number is entered in the line without first determining the type, the system automatically changes the "Type" field to G/L account and specifies the G/L account number stored for the pseudo article in the "No." field.

Finally, the quantity is entered. The system then determines the valid cost price for the vendor from the pseudo article number card or a price scale stored for it from the pseudo article purchase prices (if stored). The same applies to prices for lines with the type, G/L account, article and WG/plant.

If prices or price scales of alternative suppliers have also been stored in the pseudo item purchase prices, the "Vendor no." field can be dipped into in the purchase requisition line in order to select the alternative supplier with its respective price and the associated vendor item number. In most cases, however, a separate pseudo article number is created for this due to a lack of grouping criteria.

The field "BANF URL" serves as support for the purchaser. If the requisitioner enters a link to a web address, the purchaser can view the information and conditions for the item on the Internet. All he has to do is click on the function "Open URL" in the respective line:

Once all the information has been entered, the purchase requisition is sent to the first approver by clicking the "Send" button in the menu ribbon:

Confirm the following system message with "Yes" to start the approval workflow or click "No" to make any changes or corrections to the purchase requisition.

Note

To send the emails in the approval workflow, the SMTP server must be set up. This setup depends on the technical conditions of the environment and should have been done beforehand by the IT department of the company.

In case of correction, restart the approval workflow with the function call "Submit" in the menu ribbon and then confirm the message with "Yes".

If the value falls below a possibly set approval limit value at the approver, the purchase requisition is sent directly to the approver stored in the next level.

The approver then receives the following email notification with the request to release the purchase requisition. The approver finds the purchase requisition to be released in the system via the BANF number contained in the email; if necessary, the link to the purchase requisition contained in the email can also be used for this purpose.

Release BANF

By calling up purchase requisitions via the user search, the approver gets to the purchase requisition to be released. In the overview, he can see the status of the requisition sent to him for approval.

With the function button "Edit" or by double-clicking on the corresponding line in the purchase requisition overview, the document is navigated to for editing. The approver can now continue the approval workflow via the function button "Release" in the menu ribbon so that the purchase requisition is sent to the approver in the next stage.

This continues until the requisition has passed through all approval stages and has reached the status "Create BANF" in the last stage.

However, if an approver is authorised to do so according to his approval user facility, he can also process and/or reject the UANF. For more information on rejecting a UANF, see the section "Rejecting a UANF".

Reject BANF

After receiving the requisition email notification in the approval workflow, an authorised approver may as well reject the requisition, for example because a requisitioner is not authorised to request an asset.

To do this, the notified person goes to the requisition to be released via the requisition.

In order to be able to execute the "Reject" function in the menu ribbon, a cause code must first be selected in the "Cause Code" field of the "General" info tab. The system will otherwise return the following error:

The "Reject" function button in the menu ribbon rejects the purchase requisition.

The purchase requisition is then given the status "Open" in the document, and the creator receives an e-mail informing him that the purchase requisition has been rejected.

The creator can either edit the BANF again and then restart the approval workflow, or cancel it.

Resend BANF

If the requisitioner has made all the appropriate changes to the purchase requisition for a successful approval, he can restart the approval workflow by sending it again. To do this, the requester simply clicks on the "Submit" function button in the menu ribbon again.

The process is continued analogous to the description in section "Release BANF".

Cancel BANF

If the requisition has been justifiably rejected and cannot be changed by the requester in such a way that there is a chance of release, it can be terminated and archived via the "Cancel" function button in the menu ribbon:

If the subsequent message from the system is confirmed with "Yes", the purchase requisition with the status "Cancelled" is moved to Archived purchase requisitions.

With "No" there is the possibility to process the purchase requisition again.

Create order

If the purchase requisition has been released by all approvers and the status "Create purchase order" has been reached in the last stage, the buyer goes from the purchase requisition overview to the document and executes the function "Create purchase order" in the menu ribbon.

Depending on the number of different creditors contained in the BANF, one or more purchase orders are now generated.

The creator of the BANF receives a corresponding e-mail notification.

The purchase orders contain, among other things, the following information from the purchase requisition process:

In the head:

Field	Comment
Assigned User ID	This is the BANF creator.
Purchase order type	STANDARD - or depending on the preassignment in the purchase requisition Setup.
Buyer code	Sales/buyer code - either by default from the approval user facility or code of the ordering buyer.

In the lines:

Field	Comment
Planned date of receipt of goods	Due date of the BANF.
Expected date of receipt of goods	Due date of the BANF.
Desired date of receipt of goods	Due date of the BANF.
BANF no.	Document number of the purchase requisition.
Pseudo Article no.	Number of the pseudo article as "G/L account filter".
Requester	Corresponds to the BANF creator.

In the line functions - document texts:
Pre- and/or post-texts from the pseudo-article can be placed here, if necessary.

When the function "Create purchase order..." is executed, the document of the purchase requisition is completed and archived. From here on, the purchase order generated from the BANF represents the usual worklist of a purchaser.

Archived purchase requisitions

Archived requisitions and the requisition log can be found as follows:

As soon as a purchase requisition document has attained the status "Ordered" by triggering the function "Create purchase order...", the document is archived and the purchase requisition overview is updated accordingly. In addition to the archived requisition, open purchase orders are also generated.

If a purchase requisition receives the status "cancelled" by triggering the "cancel" function, the purchase requisition document is also archived, but without triggering a purchase order. The overview of the purchase requisitions is simultaneously cleared of the cancelled PReq.

Regardless of whether an approved or cancelled BANF is archived, the archived documents can be found in the "Archived requisitions".

Purchase requisition log

All actions are recorded in the purchase requisition log.

The purchase requisition log can also be called up from the place described in the section Archived purchase requisitions. However, it is also possible to view all process steps that have taken place so far at several points in the purchase requisition process via the function call "Log Entries" in the "Related" tab of the ribbon:

All changes resulting from the process are documented in the purchase requisition log.

Manufacturing

Manufacturing support according to 21 CFR Part11 / GAMP5

In production, the finished product reports are often posted by several employees at centrally installed workstations. In order to clearly identify the person who posts the consumption reports or finished reports, an additional identification of the user is required in the production log sheet (electronic signature) so that the requirements of 21 CFR Part 11 are guaranteed.

Establishment

Advanced production facility

In the extended production setup, you can define that the verification of the current user via digital signature is activated / deactivated. To do this, first call up the "Extended production setup" via the user search.

The "Advanced production setup" opens. As soon as you activate the "Check Dig. signature in Prod. book. sheet" check box, the user's check by digital signature is active.

Production user facility

All users who are allowed to perform bookings in production are set up in the so-called "Production User Setup". To access the production user setup, call it up via the search.

The production user setup card opens on which you can create a new user via "New".

When creating users, there are three options for mapping booking rights:

1. Each user has his own login. Then the "Resource no." field can remain empty.
2. Each workstation has a fixed user. Only certain persons are allowed to book at each workstation. In this case, all permitted resources are recorded per user ID.
3. It does not matter at which workstation the booking is made. In this case, the "User ID" column remains empty. Only the "Resource no." column is recorded.

The other fields are used to manage the digital signature:

Field	Description
Digital signature	The digital signature of the user is entered here
Digital signature locked	Here you can manually block a user from executing the digital signature
Digital signature No. Incorrect entries	Displays how many times the user entered the digital signature incorrectly during the last attempt.

If three incorrect entries are made, the "Digital signature blocked" field is set and the text "Password entered incorrectly 3 times" is stored in the "Digital signature blocking reason" field. Digital signature blocking reason Specification of the reason for blocking Reset digital signature If the field is set, the user must update it before entering the next signature.

Book. production sheet

When booking the production book. sheet, the digital signature is requested (if activated in the facility).

Note

If several resources are stored for the currently used workstation, the resource number of the user must also be entered in the "Resource no." field.

The digital signature is then entered.

Logging of user ID/resource no.

The user ID and the resource no. from the digital signature are logged in the item items / capacity items during the posting process and can be displayed.

FA Cockpit

The overview and map of released production orders have been adjusted so that the status of the production order is visible as a percentage and by traffic light for the following statuses.

- Consumption material
- Consumption capacity
- Confirmation (status of actual confirmation)

In addition, progress values for external work are displayed as follows:

- Status external production:
  In the field "% Fremd. Fert. Orders", the remaining order quantity (base) from the associated order lines + the quantity (base) from the associated Geb. purchase delivery lines is added for each FA operation (with external production).
  Subsequently, the sum of the two fields (as a sum over all FA operations) is divided by the input quantity from the FA operations (also as a sum over all FA operations) and then divided again by 100.

- Status external production confirmation
  In the field "% Fremd. Confirmations" is added per FA operation (with external production) the finished quantity from the associated capacity items.
  Subsequently, the sum of the field (as a sum over all FA operations) is divided by the input quantity from the FA operations (also as a sum over all FA operations) and then divided again by 100.

For the color highlighting of fields on the map of released production orders, the respective fields can be defined via "Style Definition". The style definition causes a different style of the column "Quantity" on the page "Released production orders".

You can find more information about "Style Definitions" in the section of the same name „Style Definitions".

Comfort navigation for production bill of materials and routings

This service area gives you direct navigation to the production bill of materials and routing from the parts card. This facilitates navigation to the production-related master data.

Likewise, the production bill of materials for the components, the production bill of materials stored on the article and the routing are visible. Navigation is also possible here.

In the daily work of production control or work preparation, it is often necessary to branch from an article overview to other screens such as the production bill of materials or the routing. The aim of the comfort navigation is to reduce this click depth to one step in order to branch quickly and safely into the background information.

In Microsoft Dynamics Business Central™ Standard, for example, 3 calls are required to branch from the article via the production BOM overview to the version overview in the production BOM version.

Insight via Assist call

The execution is performed in the Assist call (Shift + F4). You can find applications for this:

- From the article card to the production bill of materials, routing with its version (Via the Assist button [...] on the respective field (production BOM, routing with their versions).
- From the article overview to the production bill of material and routing with its version (Click on the production BOM no. / routing no. - "Open")
- From the production BOM line to the production BOM (Via the Assist button [...] on the Production BOM field.

> Note

In KUMAVISION factory365 the insight about the Assist call has been extended. You can find further information here .

Creation of production master record via convenient navigation

If the fields of the production parts list and routing on the article card or article overview are empty, the Assist button [...] can be used to initialize the automatic creation and linking of the production master data with the assembly article.

To do this, first call up the required article card and click on the Assist button [...] next to the "Finished parts list no." field on the "Procurement" info tab.

A user query appears asking whether you want to set up a new production BOM for the corresponding article. Confirm the query with "Yes" to set up the production BOM.

After confirming the user query, the production BOM editing card opens, where you can set up the BOM for the selected type as usual and then certify it.

Release inspection for missing parts

The "Release check for missing parts" function adds a missing parts list as a form to the production orders. The form shows all FA components that are not available. The form can be called manually (function call via the menu ribbon) or during the release check if missing parts are available.

Establishment

In order to use the functionality, the appropriate setting must first be made in the production setup.

In the production setup, you can control whether the missing parts table is displayed when the FA status is changed. Depending on the setting, a warning message is displayed which can be accepted.

To do this, call up the "Production setup" via the user search. In the "General" info tab in the "Release check for missing parts" field, you have the following selection options:

selection	description
Never	No warning appears.
Availability balance	The component availability is checked. This availability is displayed in the overview table.
Current stock	The current stock is checked against the production order components and missing components are displayed in a summary table.

Depending on how the radio button is set up, the results table shows different views:

Column content for the "Current stock" setting

Field	Description
Stock (base)	The field shows the current stock of the item (for the selected variant and warehouse)
Quantity in FA lines (base)	The field shows the sum of the FA lines. This is the remaining quantity (base)
Component quantity in current FA (base)	The field shows the sum of the other FA components. This is the remaining quantity (base) related to the same item, variant and storage location. The due date of the line is also taken into account. If the article in this constellation appears only once as FA component in the production order (= this line), the field thus shows the value 0.
Residual quantity (base)	The field shows the remaining quantity (base) of the production order component
Inventory by production (base)	The field shows the stock level of the item (same variant code, storage location code) that would result if all FA components and FA lines of the production order were fully confirmed. The following applies: Stock After Production (Base) = Stock (Base) + Quantity in FA Lines (Base) - Quantity in FA Components (Base) - Remaining Quantity (Base).
Shortage quantity (base)	The field shows the quantity of the item that would be needed at least for the FA component to be completely removed.

Column content for the "Availability balance" setting

In this view, the reference quantity is now the item's availability balance, not the item's inventory.

Field	Description
Availability balance (base)	The "Availability balance (base) results from the stock of the article (same variant code, storage location code) plus all receipts/issues up to the due date of the displayed line. All receipt and issue documents are taken into account, which are also integrated in the availability calculation of the NAV standard (sales, purchase, stock transfer, assembly, etc.).
Availability balance After production (base)	The availability balance After production (base) also takes into account the component requirements of the line shown.

All other columns are understood in an analogous way as in the previous case.

Production structure list

The data for the production of an article is stored for the corresponding article in the form of routings and a production parts list in modular form.

You can use the production structure list to display a production BOM in structural representation. The production BOM is exploded across all levels, i.e. if a component of a production BOM has a production BOM again, this is also displayed.

To display a production structure for an article, proceed as follows:

Call up the production structure list via the user search.

Select an article number in the "Article filter" field. If you have entered the article number, the production BOM number defined for the article is displayed in the "Finished BOM filter" field and the routing number defined for the article is displayed in the "Routing filter" field. In the "Finished BOM version filter" field, the BOM version active on the calculation date is displayed, and in the "Routing version" field, the active version of the routing is displayed. The calculation date is initially preset with the routing.

If, in addition to the BOM components, you also want to display the operations in the production structure, activate the "Calculate routings" check box.

Then execute the "Calculate" function in the ribbon.

All BOM components and operations of the first level are then displayed in the rows of the window (the "Level" field contains the value 1).

The Expand/Collapse button allows you to move around the production structure list as you would in an explorer, by clicking on the button to expand and collapse individual branches of the structure.

If the '+' symbol is displayed in the "Expand/Collapse" button of a line, then this line has subordinate structures or lines that can be expanded. The expanded rows have a larger value in the "Level" field than the initial row.

If you want to expand the complete structure across all layers, execute the "Expand All" function in the ribbon.

You can view the article card of the initial article of the production structure by clicking on the "Article card" button in the "Production structure" area in the "Associated" menu tab of the ribbon. Furthermore, the "Production BOM" and "Routing" calls are available in the "Production structure" area.

You can also view the same information for an article in the structure, i.e. in a row, by clicking on in the "Row" area on the corresponding buttons.

If you want to display the production structure for a different calculation date than the work date, proceed as follows:

1) In the "Calculation date" field, select the date for which you want to display the production structure. When you enter a date in this field, the application automatically searches for the versions of the production BOM and routing that are active on that date and displays them in the "Production BOM version filter" and "Routing version" fields.

2) Then click on the "Calculate" button.

If you want to calculate a specific version of the production BOM, which is not the active version on the calculation date, then you can change the production BOM version filter manually. The calculation date then only affects the validity of individual components of the BOM, which is controlled by the Start date and End date fields.

You can also display the production structure list for production BOMs that are not assigned to an item, i.e. for phantom BOMs. To display a phantom BOM, proceed as follows:

1) Select a production BOM number in the "Finished BOM filter" field. The application automatically searches for the BOM version active on the calculation date. If you calculate a phantom BOM without a part number, you cannot display routings.

2) Then click on the "Calculate" button.

FA Production structure list

With the help of the "FA Production structure list" you can display a production order in structure view. The FA. Components are exploded over all levels if it is a multi-level production order.

To represent a FA production structure for a production order, proceed as follows:

In the "FA status filter" field, select the status of the production order you want to display. Then, in the "FA No. Filter" field, select the number of the production order you want to display.

If, in addition to the FA components, you also want to display the FA operations in the FA production structure, place a check mark in the "Calculate routings" field.

Then click the "Calculate" button in the ribbon.

The same functions are available in the FA Production Structure List window as in the Production Structure List window.

Production documents

KUMAVISION base365 (BOOSTER) offers the following production documents in a uniform design as one package:

- FA work ticket
- Material requirements list
- FA Missing parts list
- Order pool list
- FA component and work plan
- FA Post calculation

Replace article in parts list Comfort

Via the "Replace article BOM comfort" function, you have the possibility to replace a certain article with another one across all BOMs. Furthermore, you have the possibility to replace phantom BOMs with another one.

To do this, call up the "Replace finished part. Replace item" functionality via the user search.

The comfort card opens where you can replace an item in a bill of materials or a phantom bill of materials with the help of the table below:

Field	Description
Replace	
Type	Selection between "Article" or "Phantom Bill of Materials Select which one you want to replace.
No.	Specification of the article number or phantom BOM no. (depending on the specification of the type) which is to be replaced.
Through	
Type	Selection between "Article" or "Phantom Bill of Materials Select which one you want to replace
No.	Specification of the article number or phantom BOM no. (depending on the specification of the type) with which the previous one is to be replaced.
Create new version	Creates a new production BOM version with the changed article / phantom BOM
Multiply quantity by	Quantity change
Start date	If the "Create new version" checkbox is set, the start date will be set as the start date of the BOM version. If the switch is not set, the start date is set in the component line. The source article is additionally set with the end date (start date -1).
Certify	Certify=Yes automatically sets the BOM version to the status "Certified".
Copy connection	Transfer of the connection code from the original to the new article
Delete replaced component	Deletes the source component

Note

In KUMAVISION factory365 this functionality has been extended. You can find more information here.

FA Cancel release

In Microsoft Dynamics Business Central™ it is not possible to terminate a FA if bookings (consumptions, time messages) have already been made but no actual message (stock receipt) has been made yet.

In order to be able to execute a cancellation of a FA including the status change to Finished, a cancellation function has been implemented in KUMAVISION base365 (BOOSTER) which also considers the constellation as described above.

Prerequisite

The cancellation function requires the following conditions:

- In the user setup on the info tab "KUMAVISION" the right "FA cancellation allowed" must be activated for the respective user.

- If actual notifications (stock receipts) have already been made, these must be cancelled in advance via the actual notification book. sheet.

- If consumption postings have already been canceled, it is checked whether these cancellations were really posted with a concrete compensation to the original consumption. If this was not carried out/ posted in this way, a cancellation can no longer be carried out via this function. In this case, the cancellation of the individual movements and the termination of the production order must be carried out manually, as provided by the standard system.

Carrying out cancellation bookings

Provided that the prerequisites for a cancellation are met, the respective production order is cancelled as follows.

Cancellation takes place per production order line, based on its consumption and capacity postings. The postings are made on the working date.

Consumption postings

- The remaining quantities of the material consumptions are reversed via an explicit clearing of the respective consumption items. Thus, one reversal posting is carried out per consumption item

- The dimension values are transferred from the original consumption item during the reversal posting.

Actual messages (capacities)

- For each routing no. and operation no., the posted actual quantities, scrap quantities, setup times, processing times, downtimes, "direct costs" and overhead costs are added up.

- The "Direct costs" are calculated per cancellation booking on the basis of the total times (setup time, processing time, downtime) since the cancellation of setup times, processing times and downtimes is carried out with one booking.

- If the finished/semi-finished product of the FA line is not valuated according to standard, the overhead costs (indirect costs %) are posted weighted according to the total overhead costs!

- The dimension values are transferred from the original capacity items during the reversal posting.

FA Exit

After the cancellation of the consumptions and actual messages (capacities) per FA line, the production order is transferred to the status "Finished" with the standard functionality.

Note

Here it is to be noted that by the standard functionality of the status change on "Finished" very well still bookings "backwards" can take place. These could be, for example, setup times of operations.

Compliance

Introduction

The Compliance module allows you to define conditions via table numbers and field filters. If a data record that meets one of these conditions is to be released again after a change, a compliance document is generated. The final release of the original data record is only possible once the compliance document has been released by all relevant persons.

> Note

The Compliance Module is an activation module that can only be used with additional licensing and activation.

Establishment

Compliance facility

The number series for the compliance documents must be stored in the compliance setup. To do this, call up the "Compliance setup" via the user search.

The Compliance setup card opens where you can define the number series:

Name	Description
Compliance Call Number	Number series for compliance documents

Compliance permissions setup

Compliance authorizations

The compliance authorizations are used for the subsequent assignment of individual process steps. To define the compliance authorizations, call them up via the search.

The Compliance Permissions tab opens. Execute the "New" function in the ribbon to create a new compliance authorization.

A new line for creating a new compliance authorization is inserted in the overview. To define the compliance permission, fill in the necessary fields according to the table below:

Name	Description
Code	Assign a meaningful code for the appropriate compliance authorization. The codes can later be assigned accordingly in the individual compliance authorization groups.
Description	Add a brief description of the compliance authorization

Compliance authorization groups

The individual authorizations are combined in the compliance authorization groups. The compliance authorization groups can then be assigned to the compliance users.

To define the compliance authorization groups, call them up via the search.

The Compliance authorization group overview opens. Execute the "New" function in the ribbon to create a new compliance authorization group.

A new line for creating a new compliance authorization group is inserted in the overview. To define the compliance authorization group, fill in the necessary fields according to the table below.

Name	Description
Code	Assign a meaningful code for the corresponding compliance authorization group.
Description	Add a short description of the compliance permission group.

After creating the compliance authorization group, you can define the corresponding authorizations in the "Compliance authorization lines" info tab via the "Code" column.

In addition, it is possible to assign a maximum amount. This amount is checked when purchasing and sales documents are released. I.e. as soon as the net value of the corresponding document reaches the value specified in the authorizations, the user cannot release the document. If, for example, you also require a minimum amount for a multi-level release, this is entered in the compliance tables.

Compliance user setup

Attachment Compliance User

In the Compliance user setup, you can set up the authorized users who are authorized for the compliance process. In addition, the Compliance User Setup contains the management of the digital signature for all call-based modules.

To access the Compliance user setup, call it up via the user search.

The Compliance user setup opens. Execute the "New" function in the ribbon to create a new user.

A new line for creating a new user is inserted in the overview. To define the compliance user, fill in the necessary fields according to the table below:

Name	Description
User ID	Specifies the user for whom the setup is valid.
Sales/buyer code	Displays the field with the same name from the standard user setup
Digital signature	The digital signature of the user is entered here
Digital signature locked	Here you can manually block a user from executing the digital signature
Digital signature No.	Incorrect entries Displays the number of times the user entered the digital signature incorrectly on the last attempt. If three incorrect entries are made, the "Digital signature blocked" field is set and the "Password entered incorrectly 3 times" test is stored in the "Digital signature blocking reason" field
Digital signature blocking reason	Specification of the reason for blocking
Reset digital signature	If the field is set, the user must update the digital signature before entering the next one.

Note

If you are using KUMAVISION MedTech365, you have the possibility to assign the resubmissions at this point. Further information about this topic can be found [here](#).

Assign compliance authorization groups

Any number of authorization groups can be assigned to a user via the "Compliance authorization groups".

The authorization of a user is made up of the sum of the individual authorizations from the assigned groups. For example, if authorization A is required in a compliance table setup, the user must have this authorization in at least one of the assigned authorization groups.

To assign a compliance authorization group to a user, first select the corresponding user line in the overview and then select the "Compliance authorization groups" menu item in the ribbon.

The Compliance authorization group card opens in which you can define the corresponding authorization groups for your user. Then confirm your entry with "OK".

Compliance tables

In the so-called "Compliance Tables" you can define for which data sets a compliance release is required.

To define the compliance release for a data set, call up the compliance tables in the search.

The Compliance table card opens. Execute the "New" function in the ribbon to create a new compliance table.

A new line for creating a new compliance table is inserted in the overview. To define the compliance table, fill in the necessary fields according to the table below:

Name	Description
Code	Unique code for the record.
Table no., table name	Table for which compliance release is to be performed. **Note** Some sub-tables of the possible tables are also included in the compliance.
Sorting	If several entries exist for a table, which differ in the field filter, it is possible that a record would fall through several entries in a compliance release. In this case, the sorting can be used to determine the order (ascending) of the check.
Description	Internal Description.
Number of field filters	Indicates whether conditions are stored. These are configured via the Field filter action.
Status	Only in the "Released" status is the data set active as a compliance rule.
Min. amount	For purchase and sales documents, this field can be used as an additional condition. If the net amount of a document is below this value, the compliance condition is not met, i.e. no compliance release is required.
Dig. signature required	If the field is set, each release must be verified by a digital signature of the user.
Change authorization code	Authorization code for changing a data record. I.e. to start the compliance process.
Enable authorization code	Authorization code to release the compliance document.
Rejection authorization code	Authorization code to reject the compliance document.
Release 1-5	Indicates which releases are necessary. Max. 5 release levels.
Enable 1-5 Authorization code	Authorization code for the respective part release. Max. 5 release levels.

Note

If you have KUMAVISION MedTech365 in use, you have further setup options at this point. More information about this topic can be found here.

Conditions can be defined for each compliance table. You can specify a filter for a field. To do this, select the desired compliance table and then select the "Field filter" menu item in the ribbon.

The Compliance fields card opens. To define the compliance fields, fill in the necessary fields according to the table below:

Name	Description
Field no., field name	Field no. of the current table
Field value	Filter value on table field

Unless a special compliance field is entered, as described above, the complete data set is monitored, which means that compliance is always triggered by a change.

If individual fields are entered in the compliance fields, the system first checks whether the data record contains the specified entry in the field specified in the table and only then triggers the compliance or creates the compliance data record.

Note

If you have KUMAVISION MedTech365 in use, you have further setup options at this point. More information about this topic can be found here.

Example:
Monitoring on the "item tracking code" field in the item The Item tracking code field has the entry "CN", when changes are made to the record, a compliance document is generated.

Example:
Monitoring on the document type "Inquiry". In addition, this monitoring was limited via the field "Eink. von Kred. Nr" with an entry on a specific creditor. When an inquiry is generated for the corresponding vendor, a compliance document is created.

Note

When making entries in the compliance tables, note that sub-tables of the tables entered in the compliance table that are to be monitored are also included. These can be seen in the Compliance tables window when the "Subtables ID filter" column is displayed.

Note

Only if a record meets one of the defined criteria, a compliance document is generated.

Change log (audit trail)

The Compliance module itself only logs the time and user of the last changes in the Compliance data set.

Changes in the audited record are recorded via the change log (audit trail).

The prerequisite for this is that the change log has been set up beforehand; for at least the tables that have been set up in the compliance tables.

To set up the change log, first call up the "Change log setup" via the search.

Alternatively, you can call up the setup in the audit trail in the compliance overviews or in the open or archived data set and proceed as follows:

The change log setup card opens, where the "Change log enabled" checkbox must be activated.

Then select the "Tables" menu item via the ribbon to set up the change log for the desired table.

The Change settings (Tab.) transfer card opens.

Select the desired table on which you want to set a change log. Then, for the columns "Log insert", "Log edit" and "Log delete", you can specify whether the logging should apply to "some fields" or to "all fields".

If you have selected the "Some fields" option, you must activate the fields to be logged in the change log by clicking the Assist button in the "Change log" overview and placing a check mark in the "Log insertion" field.

In the open compliance record and in the compliance overview, the current changes to be released can be seen via the audit trail.

In the archived compliance data set and in the Compliance Overview Archive, the current changes to be released can be seen via the audit trail, as can the changes made previously.

Compliance

Trigger Compliance Document

After a record has been edited and "released" or "maintenance completed" by the user, as soon as the condition of the entry in the "Compliance Tables" for the record matches, the compliance process is triggered.

The user must now enter a change reason for the compliance release. Optionally, a longer text can be written via the text field.

After entering the reason for change, the user is informed that the data record will only be successfully released after the approval procedure.

The respective compliance status or history can be viewed in the associated compliance info box.

Edit compliance document

To release a compliance document, call it up via the "Compliance overview".

The Compliance overview opens in which the open compliance documents to be released are listed. Open the relevant document by selecting the "View" menu item in the ribbon.

The compliance card then opens, from which you can obtain all the necessary information.

Releases

Depending on how the approvals for the record have been specified in the facility, the releases (approvals) must be processed.

To release the compliance document, first mark the approvals in the Approvals area and execute the "Release" function in the ribbon.

Depending on the setting in the compliance table for the data set to be released, the digital signature is requested.

Note

Once the approval flow has been released by all necessary approvers, the origin document is also released after approval.

After approval, the compliance document is closed and archived.

Decline

To reject the compliance document, execute the "Reject" function in the ribbon.

Now enter a rejection reason for the compliance rejection. Optionally, a longer text can be written via the text field.

After rejection, the compliance document is closed and archived.

Audit trail in the compliance map and overview

If the audit trail is set up for the process, you can view the logging of the changes via the "Audit trail" menu item. The basis for this is the change log as described above.

Compliance archive

The Compliance archive is divided into two subcategories. One is the released compliance and the other is the rejected compliance. To view a completed compliance document again, call it up via the "Compliance overview archive".

Complaint and grievance management incl. Failure Mode and Effects Analysis

Introduction

Complaint and Grievance Management (RuB) makes it possible to map the entire complaint and grievance process. Errors and measures are stored with codes and thus enable an evaluation. The module is based on DIN EN ISO 9001:2015 and DIN EN ISO 13485:2016, deliberately distinguishing between the terms complaint and reclamation as follows:

Complaints are
generally directly related to a product or service and include a legal claim for remedy if the product does not meet the specifications.

ComplaintExpression of
a customer's displeasure or unfulfilled requirements about a product or service.

When a complaint or claim is accepted, the persons, goods and services involved are recorded. In the process, it is also possible to access documents from purchasing, sales, service or production that already exist in the system. Each complaint and/or reclamation can be evaluated and processed by means of corrective and preventive measures. In the process, risk analysis, evaluation and effectiveness testing of the measures implemented can be carried out using FMEA procedures.

Note

The complaint and grievance management as well as FMEA are activation modules, which can only be used with additional licensing and activation.

Establishment

Necessary facilities for RuB

Complaint & Grievance Management Facility

In the RuB facility, the basic setup for complaint and grievance management is made. It is divided into different info registers:

Inforegister General

Settings for contacts and for the digital signature are stored in the General info tab:

Field	Meaning
Contact plant	If a complaint or claim is created for a contact that does not yet exist in the system, this can be used to control whether the contact should be created automatically. The following options are available: **NeverNo** new contact will be created in any case. **QuestionIf the** contact used has not yet been created in the system, the user is asked whether a new contact should be created. **Whenever** a contact is used that has not yet been created in the system, it is created automatically.
Contact update	If an existing contact is used in a complaint or claim with data that does not match that in the system, this setting can be used to control whether the existing contact should be updated. The following options are available: **NeverThe** already existing contact data will not be updated in any case. **QuestionThe** user is asked whether the existing contact should be updated with the contact data used here. **AlwaysIf** contact details are used in the process that differ from those already in the system, the existing contact is automatically updated with the contact details of the complaint/complaint.
Check digital signature	If the switch is activated, the user must authenticate with his digital signature when releasing, archiving, deleting and resetting the status of a complaint, reclamation or FMEA card.

Note

If you have KUMAVISION MedTech365 in use, you have at this point the further possibility to make specifications about the booking code. Further information on this topic can be found here.

Complaint information register

In the Complaint tab, the number series for creating complaints is managed in the Complaint Call Numbers field.

In all other fields, the authorization codes are assigned via the "Generate authorizations" function to the individual functions at which an authorization check is to take place as part of a complaint.

Information register complaint

In the Complaint tab, in the Complaint Call Numbers field, the number series to be transferred to the complaints is stored.

In all other fields, the authorization codes are assigned via the "Generate authorizations" function to the individual functions at which an authorization check is to take place as part of a complaint.

Ribbon Function

With the help of the "Generate Authorizations" button, the authorization codes are automatically initialized during the system configuration and written to the RuB authorizations.

Note

After the authorization codes have been initialized automatically, please do not run the function again.

RuB authorizations

The RuB authorizations were initialized by the Generate authorizations function in the RuB setup and automatically generated for the claim and complaint -see RuB setup. In order for a user to be able to open complaints and/or reclamations (without further processing), this user must have at least the individual authorization to display in one of his assigned authorization groups. Otherwise, a corresponding error message appears.

RuB Authorization groups

In the "RuB authorization groups", the individual RuB authorizations are combined via the RuB authorization lines.

The RuB authorization groups can then be assigned to users.

Note

The authorization group "Super" for complaint or complaint must contain each individual authorization for complaint or complaint.

RuB User Setup

The RuB users are created in the RuB user setup. Only the users entered here can work in the RuB module according to their authorization. The setup also includes the management of the digital signature.

Field	Meaning
User ID	Specification of the user
Digital signature	Entering the user's digital signature
Digital signature locked	If the checkbox is activated, the user's digital signature is locked. This happens automatically if it is entered incorrectly 3 times, or can be set manually In the case of an automatic lock due to repeated incorrect password entry, the Digital signature lock reason field will store password entered incorrectly 3 times.
Digital signature Number of incorrect entries	Displays how many times the user entered the digital signature incorrectly the last time it was used. If the user has entered his digital signature incorrectly 3 times, the checkbox Digital signature locked is automatically activated and stored in the field Digital signature lock reason Password entered incorrectly 3 times. If the user enters the password correctly after all, the indicator in Digital signature locked is removed, as well as the number of incorrect entries is reset.
Digital signature blocking reason	Specification of the reason for locking the digital signature. In case of automatic blocking due to repeated incorrect password entry, password is automatically stored incorrectly entered 3 times.
Reset digital signature	If the checkbox is activated, the user must update his digital signature before the next use. This can also be set when the RuB module is used for the first time, so that the user can assign his own password before the first action.

To assign an authorization group to a user, first select the corresponding user line. Any number of RuB authorization groups can be assigned to a user via the "RuB authorization groups" button. For more information, see the "RuB authorization groups" section. The authorizations of a user are made up of the sum of the individual authorizations in the assigned authorization groups. If, for example, a specific authorization is required for a complaint, the RuB user must have this authorization in at least one of his assigned authorization groups.

Call error

This table is used to manage the error codes that can be selected in complaints or reclamations in the Analysis info tab, Assigned errors area. These should be designed in such a way that as many errors as possible can be recorded in the system and thus the most complete and meaningful evaluations of complaints and calls can be

created. The call errors can be assigned to a call type and call subtype and are thus displayed in the selection filtered accordingly.

Field	Meaning
Code	Clear naming of the error
Type	Control for which document the error code can be selected. The following options are available for selection: **EMPTYErrors of** this type are available for selection in both complaints and reclamations. **ComplaintErrors** of this type are only available for selection in complaints. **ComplaintErrors** of this type are only available for selection in complaints.
Description	Field for more detailed description of the error
Description 2	Field for more detailed description of the error
Callart	Determination for which call type the RuB / call error is available for selection in the call.
Call subtype	Definition for which call subtype (depending on the call type) the RuB / call error is available for selection.

Depending on the call type and call subtype defined in the complaint in the General info tab, the call errors in the Analysis info tab are available as filtered error codes in the complaint. If no call type/subtype is selected in the complaint, all error codes can be selected, including those that have not been assigned.

> Note

A validation check is not performed when an error code with a different call type / call subtype is selected.

Authorities

The authorities to which an incident must be reported can be created in the "Authorities". The authorities will be specified in the later process in a complaint or claim on the "Analysis" info tab.

Call Reasons for rejection

In the "Call Rejection Reasons" global codes can be defined for the rejection reasons of a complaint or claim.

Field	Meaning
Code	Unique code for a reason for rejection
Description	Description of the reason for rejection
Statistics relevant	Specifies whether this code should later be included in statistical evaluations. Initially, this field has no integrated function, but it can be evaluated via a BI.
Standard for	This field defines a code as "default code" for certain system processes. **blank:** No automatic. **Closure by call classification change:** If the classification of a complaint or appeal is changed, the original complaint/appeal document is automatically archived. Within this system process, the first rejection reason with this option is automatically entered as a "rejection reason code" in the complaint/appeal to be archived.

The rejection reason code is applied in the General info tab of a complaint or claim and can only be applied if the entry="no" is made in the "Justified" field.

The field must be filled when the claim or complaint is closed, as soon as the call is declared as not justified.

In the overviews of complaints and claims, as well as their archives, the reason for rejection is also displayed.

Call species and subspecies

Call types and call subtypes are defined for complaints and grievances. These can be used, for example, to differentiate complaints within their document type.

Field	Meaning
Code	Unique code for the call type
Description	Call type code description
Number Call subspecies	Calculated field to display the corresponding call subtypes. Clicking on this field displays the call subtypes accordingly.

Via the field "Number of call subtypes" or the function "Call subtypes" (the call subtypes for a call type can be viewed and edited.

Field	Meaning
Code	Unique code for the call subtype
Description	Call type code description

In the complaint and reclamation the call types and subtypes can be assigned:

Field	Meaning
Type	Selecting or entering a call type code from the "Call types" table
Subspecies	Selecting or entering a call subtype code from the "Call subtypes" table for the selected call type

The call type and subtype fields are integrated in the archived complaints and reclamations, editing is not possible in them.

Necessary facilities for measures

Actions can be managed in the system stand-alone, as well as within a complaint, reclamation and FMEA. Therefore, the necessary setups must be made independently of the RuB setups. When creating actions in an FMEA, it should be noted that this must then be called up via the action overview.

Measures facility

The global facilities for the measures can be defined via the "Measures Setup" window.

In the Inforegister General, the number series for the measures, the data check of the measure and the check of the risk assessment texts are defined:

Field	Meaning
Measure number	This is where the assignment of the number series created for the action cards takes place
Data check measure map	This field disables/enables the mandatory field checks for table 5488142 "Measure".
Review risk assessment texts	This field can be used to set up whether or not risk assessment texts must be maintained when a measure card is closed. **Never:** It never checks for existing risk assessment text when completing a measure card. **With existing FMEA:** As soon as an FMEA or an archived FMEA is linked to the measure, risk assessment texts must also be maintained in the measure card. **Always:** With this option, the check for existing risk assessment texts for the measure is always executed.

In the authorization info tab, the authorization codes are assigned to the individual functions at which an authorization check is to take place as part of a measure.

Field	Meaning
Create	Authorized to create an action card from various program points (e.g. complaint, grievance, FMEA)
View	Authorized to view a map of measures
Edit	Authorized to edit/modify a task card
Delete	Authorized to delete a task card
Care risk assessment	Authorized to maintain a risk assessment text for a measure card
Care effectiveness test	Authorized to maintain an effectiveness check text for a measure card
Lock	Entitled to conclude an action card

With the help of the "Generate Authorizations" button in the Measures Setup ribbon, the authorization codes are automatically initialized during the system configuration.

In order for a user to be able to open tasks (without further processing), this user must have at least the individual authorization to display a document in one of his assigned authorization groups. Otherwise, a corresponding error message appears:

Note

After the authorization codes have been initialized automatically, the function must not be executed again.

Measures authorizations

The table is automatically filled via the " Generate permissions" action in the "Actions setup" window.

Measures Authorization groups

The individual task authorizations are summarized in the task authorization groups. These can then be assigned to users.

The individual authorizations that are to be combined into an authorization group are stored in the task authorization lines.

Measure User Setup

The "Measures User Setup" window can be used to assign user authorizations for managing measure cards. The respective user is entered, selected and the corresponding groups are assigned via the "Authorization group code" field.

Note

This setup does not replace the setup in the roles and permissions of a users. These must continue to be made accordingly elsewhere.

Measures CAPA / Call CAPA

The abbreviation CAPA stands for Corrective and Preventive Action. This procedure has its origins in quality management and thus represents GMP-compliant work. Every deviation or error that occurs is investigated and then corrective and preventive action is taken. CAPA is thus part of the continuous improvement process (CIP).

Note

Action / CAPA is taken to initiate immediate correction of a failure to avoid further impact.

In the system, these corrective and preventive actions are managed in the "Call CAPA" table.

Field	Meaning
Code	Unique designation of the CAPA code
Type	Control for which type of measure he CAPA code can be selected. The following options are available for selection: • EMPTY • Correcting • Preventive
Description	Field for more detailed description of the CAPA
Description 2	Field for more detailed description of the CAPA

These CAPA codes are used in the measure, General info tab, Measure code field. The selection depends on the field Action type (Corrective, Preventive, Empty) in the Action card.

Necessary facilities FMEA

The abbreviation FMEA stands for Failure Mode and Effective Analysis and is used for risk assessment. FMEA can be used in the system both standalone and as part of the measure, so the necessary facilities must be made independently of the RuB facilities.

FMEA setup

In the FMEA facility, the basic setup for the risk assessment is made. It is divided into different information registers.

Inforegister General

In the General information tab, the number series for the FEMA installation is managed in the "FMEA numbers" field.

Inforegister Authorization

In the authorization info tab, the authorization codes are assigned to the individual functions at which an authorization check is to take place as part of an FMEA.

With the help of the "Generate Authorizations" button in the ribbon, the authorization codes are automatically initialized during the system configuration.

Note

After the authorization codes have been initialized automatically, the function must not be executed again.

Inforegister coloring FMEA lines

The Coloring FMEA Lines info tab stores the colored indicators that are displayed in the FMEA line for the individual threshold values when calculating the risk priority number.

Field	Meaning
Green traffic light	By right-clicking on this field, an image file for the traffic light display of the initial color in the FMEA lines can be added/modified.
Yellow traffic light	By right-clicking on this field, an image file for the traffic light display of the yellow color in the FMEA lines can be added/modified.
Red traffic light	By right-clicking on this field, an image file for the traffic light representation of the red color in the FMEA lines can be added/modified.

Notes

If the fields "Green traffic light", "Yellow traffic light", "Red traffic light" are changed afterwards, there is no automated recalculation of the colors on the FMEA lines and archived FMEA lines.

However, when changing an FMEA line (excluding archive), the color would be recalculated.

FMEA authorizations

The FMEA authorizations are initialized and automatically generated in the FMEA setup by the "Generate authorizations" function.

These can be viewed in the FMEA Authorization Overview and can be assigned to the authorization groups in the following section.

FMEA authorization groups

The individual FMEA authorizations are summarized in the FMEA authorization groups. These can then be assigned to users. The FMEA authorization lines contain the individual authorizations that are to be combined into an FMEA authorization group. In order for a user to be able to open an FMEA (without further editing), this user must have at least the individual authorization to display a document in the authorization group. Otherwise, a corresponding message appears.

FMEA user setup

In the FMEA User Setup the users are set up. Only the users entered here can view, create and edit FEMA, depending on the FMEA authorization group assignment.

The FMEA Authorization Groups button can be used to assign a user his FMEA authorization groups.

Thus, the authorizations of a user are composed of the sums of the individual authorizations from the assigned authorization groups. If, for example, a specific authorization is required for an FMEA, the user must be assigned in at least one of his assigned authorization groups.

Facility for internal company complaints and reclamations

Complaints and reclamations can be created not only for calls from debtors and creditors, but can also be used for internal processes (e.g. for manufacturing, internal processes, etc.). For this purpose, the own company must be created as an internal contact in the system (activated switch "Internal" on the contact card).

Further processing of internal company complaints and claims then works in the same way as those relating to external company contacts.

Complaint card

A complaint is recorded via a separate card, which contains all the necessary information such as contact, article, etc., but also includes the further procedure for handling the complaint.

The call of open and archived complaints can be found through the search:

Inforegister General

The General info tab contains general data about the complaint created:

Field	Meaning
No.	Document number of the complaint, is assigned automatically and cannot be changed.
Description	Enter a brief description of the complaint
Type	Selection of whether the complaint is internal, accounts payable or accounts receivable.
Accounts Payable No. / Accounts Receivable No. / Contact No. Contact no.	Depending on the type of complaint, these fields are automatically filled with the corresponding data. The contact number is always filled in, the customer number only if it is a customer complaint, and the vendor number for a vendor complaint. If a wrong customer/vendor has been selected by mistake, this cannot be changed here, a new data record must be created and the wrong one must be closed.
Name/Name2	Specification of the contact or customer/vendor name
Note	If sales price texts have been entered for a customer or purchase price texts for a vendor, they will be displayed here.
Justified	Selection of whether the complaint is justified, the following information is available for selection: EMPTY complaint is not classified. YesComplaint is justified. NoComplaint is not justified. GoodwillComplaint is accepted for goodwill reasons. If a classification of the complaint is made, a text editor opens automatically, in which the user must enter the reasons for the classification made. Without this entry, the Justified field cannot be filled or changed.
Justification text	As soon as the "Justified" field is changed to the "Yes", "No" or "Goodwill" option, a text must be entered. Only the first line entered in the editor is always displayed, regardless of whether this comes from the justification text or analysis text. This can be adjusted in the editor. All changes to the texts are recorded in versions in the analysis text.

Field	Meaning
Rejection reason code	Select or enter a rejection reason code from the Call Rejection Reasons table. The selection of a rejection reason is only possible with "Justified" = "No". Should the "Justified" field be changed afterwards, the rejection reason will be removed automatically if required. The field must be filled when the claim or complaint is closed, as soon as the call is declared as not justified.
Reason for rejection	Calculated field to display the description of the specified rejection reason code.
Status	Indication of the status: **Open:** The complaint is in the Open status. In this status, the complaint can be processed. **Released:** The complaint has the status Released. In this status, the complaint is completely processed except for the final review that is still missing. If a digital signature is activated, a changeover can only be made by specifying it.
Origin no.	If the complaint was created by converting a complaint into a complaint, the document number of the related complaint is displayed here.
Type	Selecting or entering a call subtype code from the "Call subtypes" table for the selected call type
Subspecies	Selecting or entering a call subtype code from the "Call subtypes" table for the selected call type
Assigned user	Select or enter an assigned user for the complaint.
Number FMEA	Indicates the number of FMEA created for this complaint.
Number Archived FMEA	Indicates the number of archived FMEA related to this complaint.
Number of FMEA performed Measure	Indicates the number of FMEA actions performed related to this complaint.

Field	Meaning
Number Archive. FMEA performed Measure	Indicates the number of performed, already archived actions related to this complaint.

Information register Reporting persons

In the Reporting persons info tab, the person of the creditor or debtor or the contact who reports the complaint is recorded. If this person is already entered as a contact in the system, the corresponding information from the master data is automatically inserted. If there is a connection to a CTI system, the reporting person can be called directly from the system.

Furthermore, other contact persons can be entered in new lines below the line already entered. If the entry is done manually, the corresponding data must be entered in the individual fields. If automatic contact creation is activated in the RuB setup, the system automatically creates a new contact from this.

If a contact already in the system is to be added as the reporting person, all partner contacts assigned to the company can be accessed via the No. field.

Inforegister Disputed Positions

In the Complained items tab all items of the complaint are recorded, they can be items, services (resources or G/L accounts) or other things.

The rows can also be filled using the documents already in the system with the function in the menu ribbon, for more information see section "Menu ribbon complaint".

In case of a manual entry of the positions, the lines are filled in field by field, starting with the Type field. Application for this is when the disputed item is not managed in the system, which is possible at the beginning of one of the system. Example: The position was still processed through the previous system.

Inforegister acceptance text

In the "Acceptance text" info tab, the content of the complaint acceptance call is entered with the help of a simple text editor. The text entry is started by clicking the "Enter text" button in the menu ribbon; after completion, the text is displayed in the info tab. The text is versioned.

For more information on entering texts, see the section "Entering texts in a complaint, claim or action".

Inforegister analysis

In the "Analysis" info tab, the error analysis of the complaint is documented. The "Error analysis on" and "Error analysis by" are filled in first. The fields "Analysis checked on" cannot be filled in by the same user as in "Error analysis by", in accordance with the 4-eyes principle. A corresponding message is displayed.

If a complaint is reportable, this can be marked with the "Reportable" indicator and the authority report can be documented via "Report to authorities". It is not possible to transmit the report(s) via the system.

An analysis text can be entered using the "Enter text" function in the menu bar, which is then displayed in the info tab. The text is versioned.

In addition, for a possible evaluation, the error codes (call errors) can be filled in the "Assigned errors" info tab.

Field	Meaning
Analysis on/by	Fields to record who performed the analysis and when.
Analysis checked on/by	Fields for recording who checked the previously performed analysis and when. The user who checks the analysis must not be the same as the user who performed the analysis (illustration of the dual control principle); if this is the case, a corresponding error message is displayed.
Reportable	Marking whether the complaint must be reported to an authority
Notification to authorities	Documentation of the notification to the authority(ies) (no transfer)
Assigned errors	Sub-tab to classify the errors found during the analysis via the error codes already present for a complaint in the system. These can be selected via the Error code field. It is mandatory to fill this field. The Description and Description 2 fields are automatically filled with the data stored in the RuB Error facility.
Analysis text	Display of the already recorded analysis texts and the justification text

Inforegister Measures

Open complaints can be assigned preventive and corrective action cards in the "Actions" info tab, or new action cards can be created from these, which can then be accessed by all other documents. The management of measures is thus centrally regulated via the measure cards. The tasks created or inserted in the complaint

are carried over to the archived complaint. The complaint can only be closed if the tasks have the status "Closed". A corresponding message is issued.

Field	Meaning
Measure card no.	Input/selection of the assigned action card for the complaint or grievance.
Error code	Assignment of the action to a concrete error code of the complaint/complaint. When the measure is created from the Analysis section, then the error code from the analysis is carried along.
Description	Calculated field to display the description from the measure map.
Description 2	Calculated field to display description 2 from the measures map.
Status	Calculated field to display the status from the action map.
Measure type	Calculated field to display the measure type from the measure map.
Measure code	Calculated field to display the measure code from the measure map.
Successful	Calculated field to display the "Successfully performed" field from the measures map.
Number FMEA	Calculated field to display "Number of FMEA" from the action card.
Number of FMEA performed Measures	Calculated field to display the "Number FMEA by. Measures" from the measures card
Number Archived FMEA	Calculated field to display "Number of Archived FMEA" from the action card.
Number Archive. FMEA by. Measures	Calculated field to display "Number of archiv. FMEA by. Measures" from the measures card.

Ribbon complaint

Depending on whether the complaint is related to an internal contact, customer or vendor, the menu bands contain different buttons.

The "Process" tab of the menu ribbon can be used to call up the accounts payable or accounts receivable card or the Marketing Cockpit associated with the complaint.

Via the tab "Get position", the documents belonging to the vendor or customer can be called up using the various buttons, in order to insert positions for the complaint from them.

In the case of a complaint related to an internal contact, some entries of the ribbon are not active or are available to a reduced extent, since there are no outgoing documents for internal complaints.

Via the actions "Release", "Reset status" and "Close call", the status of the complaint is changed accordingly.

The different texts (acceptance text, analysis text, etc.) can also be entered using the "Enter text" button. Further information on entering tests can be found in the "Entering texts" chapter.

RuB sheet

The Rub sheet button in the ribbon enables the document printing of the complaint.

Audit Trail

The Belonging tab contains the Change log items button, here all changes to the complaint are logged as well (who inserted/changed/deleted what and when), if the activity log is enabled for the corresponding tables.

Complaint card

A complaint, similar to a complaint, is recorded on a separate card, which contains all the necessary information such as contact, article, etc., but also contains the further procedure for processing the complaint. The call of open and archived complaints can be found via the search.

Inforegister General

The "General" info tab contains general data about the created complaint.

Field	Meaning
No.	Document number of the complaint, is assigned automatically and cannot be changed.
Description	Enter a brief description of the complaint
Type	Selection of whether the complaint is an internal, vendor or customer complaint.
Accounts Payable No. / Accounts Receivable No. / Contact No. Contact no.	Depending on the type of complaint, these fields are automatically filled with the corresponding data. The contact number is always filled, the customer number only if it is a customer complaint, analogously the vendor number for a vendor complaint. If a wrong customer/vendor has been selected by mistake, this cannot be changed here, a new data record must be created and the wrong one must be completed.
Name/Name2	Specification of the contact or customer/vendor name
Note	If sales price texts have been entered for a customer or purchase price texts for a vendor, they will be displayed here.
Justified	Selection of whether the complaint is justified, the following information is available for selection: **EMPTY:** Complaint is not classified. **Yes:** Complaint is justified **No:** Complaint is not justified. **GoodwillReclamation** is accepted for goodwill reasons. If a classification of the complaint is made, a text editor opens automatically, in which the user must enter the reasons for the classification made. Without this entry, the field cannot be filled or changed. If a classification of the complaint is made, a text editor opens automatically, in which the user must enter the reasons for the classification made. Without this entry, the Justified field cannot be filled or changed. The text stored in the text editor is partially displayed in the "Justification text" field and is included in the analysis text in versions.

Field	Meaning
Field	**Meaning**
Justification text	As soon as the "Justified" field is changed to the "Yes", "No" or "Goodwill" option, a text must be entered. Only the first line entered in the editor is always displayed, regardless of whether this comes from the justification text or analysis text. This can be adjusted in the editor. All changes to the texts are recorded in versions in the analysis text.
Rejection reason code	Select or enter a rejection reason code from the Call Rejection Reasons table. The selection of a rejection reason is only possible with "Justified" = "No". Should the "Justified" field be changed afterwards, the rejection reason will be removed automatically if required. The field must be filled when the claim or complaint is closed, as soon as the call is declared as not justified.
Reason for rejection	Calculated field to display the description of the specified rejection reason code.
Status	Indication of the status: **Open:** The complaint is in the Open status. The complaint can be processed in this status. **Released:** The complaint has the status Released. In this status, the complaint is completely processed except for the final check that is still missing. If a digital signature is activated, a changeover can only be made by specifying it.
Origin no.	If the complaint was created by converting a complaint into a reclamation, the document number of the related complaint is displayed here.
Type	Selecting or entering a call subtype code from the "Call subtypes" table for the selected call type
Subspecies	Selecting or entering a call subtype code from the "Call subtypes" table for the selected call type
Assigned user	Select or enter an assigned user for the complaint.
Number FMEA	Displays the number of FMEA created in the complaint still open
Number Archived FMEA	Displays the number of archived FMEA created in the complaint

Field	Meaning
Number of FMEA performed Measure	Indicates the number of actions created in the complaint still open, but with already performed action in FMEA
Number Archive. FMEA performed Measure	Displays the number of archived in the complaint created with performed action in FMEA

Information register Reporting persons

In the Reporting persons info tab, the person of the creditor or debtor or the contact who reports the complaint is entered. If this person is already entered as a contact in the system, the corresponding information from the master data is automatically inserted. If there is a connection to a CTI system, the reporting person can be called directly from the system.

Furthermore, other contact persons can be entered in new lines below the line already entered. If the entry is made manually, the corresponding data must be entered in the individual fields. If automatic contact creation is activated, the system automatically creates a new contact from it.

If a contact already in the system is to be added as the reporting person, all partner contacts assigned to the company can be accessed via the No. field.

Inforegister Disputed position

In the "Complained items" info tab all items of the complaint are recorded, they can be items, services (resources or G/L accounts) or other things. The lines can be filled from the documents using the function in the ribbon, for further information see section "Ribbon Complaint". In case of a manual entry of the positions, the lines are filled in field by field, starting with the Type field. Application for this is when the disputed item is not managed in the system, which is possible at the beginning of one of the system. Example: The position was still processed through the previous system.

Inforegister acceptance text

In the "Acceptance text" info tab, the content of the acceptance conversation of the complaint is entered with the help of a simple text editor. The text capture is started by pressing the "Capture text" button in the menu ribbon, after completion the text is displayed in the info tab. The text is versioned. For more information on capturing texts, see the section "Capturing texts".

Inforegister analysis

In the "Analysis" info tab, the error analysis of the complaint is documented. The "Error analysis on" and "Error analysis by" fields are filled in first. The "Analysis checked on" fields cannot be filled in by the same user as in "Error analysis by", in accordance with the dual control principle. A corresponding message is displayed.

If a complaint is reportable, this can be marked with the "Reportable" indicator and the authority report can be documented via "Report to authorities". Transmission of the notification(s) is not possible via the system.

An analysis text can be entered using the "Enter text" function in the menu bar, which is then displayed in the info tab. The text is versioned.

In addition, for a possible evaluation, the error codes (call errors) can be filled in the "Assigned errors" info tab.

Field	Meaning
Analysis on/by	Fields to record who performed the analysis and when.
Analysis checked on/by	Fields for recording who checked the previously performed analysis and when. The user who checks the analysis must not be the same as the user who performed the analysis (illustration of the dual control principle); if this is the case, a corresponding error message is displayed.
Reportable	Marking whether the complaint must be reported to an authority
Notification to authorities	Documentation of the notification to the authority(ies) (no transfer)
Assigned errors	Sub-tab to classify the errors found during the analysis via the error codes already present for a complaint in the system. These can be selected via the "Error code" field. This field should be filled. The "Description" and "Description 2" fields are automatically filled with the data stored in the RuB error facility.
Analysis text	Display of the already recorded analysis texts and the justification text

Inforegister Measures

Open complaints can be assigned to preventive and corrective action cards on the "Actions" information tab, or new action cards can be created from these, which can then be accessed by all other documents. The management of measures is thus centrally controlled via the measure cards. The tasks created or inserted in

the complaint are included in the archived complaint. The complaint can only be closed if the tasks have the status "Closed". A corresponding message is displayed.

Field	Meaning
Measure card no.	Input/selection of the assigned action card for the complaint or grievance.
Error code	Assignment of the action to a concrete error code of the complaint/complaint. When the measure is created from the Analysis section,then the error code from the analysis is carried along.
Description	Calculated field for displaying the description from the measure map
Description 2	Calculated field for displaying description 2 from the measure map
Status	Calculated field for displaying the status from the measure map
Measure type	Calculated field for displaying the measure type from the measure map
Measure code	Calculated field to display the measure code from the measure map.
Successful	Calculated field for displaying the "Successfully executed" field from the measures map
Number FMEA	Calculated field for displaying "Number of FMEA" from the action card
Number of FMEA performed Measures	Calculated field to display the "Number FMEA by. Measures" from the measures card
Number Archived FMEA	Calculated field for displaying "Number of archived FMEA" from the action card
Number Archive. FMEA by. Measures	Calculated field to display "Number of archiv. FMEA by. Measures" from the measures card

Complaint ribbon

Depending on whether the complaint refers to an internal contact, customer or vendor, the menu bands contain different buttons.

The "Process" tab of the menu bar can be used to call up the accounts payable or accounts receivable card or the Marketing Cockpit associated with the complaint.

On the "Get item" tab, you can use the various buttons to call up the documents belonging to the vendor or customer in order to insert items for the complaint.

In the case of a complaint that relates to an internal contact, some entries of the ribbon are not active or are available to a reduced extent, since there are no outgoing documents in the case of an internal complaint.

Via the actions "Release", "Reset status" and "Close call", the status of the complaint is changed accordingly.

The different texts (acceptance text, analysis text, etc.) can also be entered using the "Enter text" button. Further information on entering tests can be found in the "Entering texts" chapter.

The "Create action" button allows you to create a new action for the complaint.

The "Perform FMEA" button allows you to create a new FMEA for the complaint.

RuB sheet

The "Rub sheet" button allows to print the receipt of the claim.

Audit trail

The Related tab contains the Change log items button, here all changes to the reclamation are logged as well (who inserted/changed/deleted what and when), if the activity log is activated for the corresponding tables. Infoboxes

Measures

An action is recorded via its own card, which contains all the necessary information such as contact, article, etc., but also includes the further procedure for processing the complaint.

An FMEA can be created in the action map. Within the FMEA, a risk graph can be created - see further in the section "FMEA Risk Graph".

The open and closed measures are called up via the user search by the term "Measures". A new creation can already be created from the overview or from a measure card - see also section "Create measure".

Overview of measures

All open and closed measures are displayed in the measure overview.

Measures map

Inforegister General

The "Measures Map" window can be opened from the Measures Overview to edit existing measures.

Field	Meaning
No.	Unique number of the measure from the number series set up (see "Measures setup").
Measure type	Selection from the "Corrective" and "Preventive" options depending on the type of action required.
Measure code	Selecting a measure code from the CAPA measures. Depending on the selected "Measure type", the allowed measure CAPA codes are displayed in the selection.
Description	In the Description field, you can enter a free text about the measure.
Description 2	In the Description 2 field, you can enter a free text about the measure.
Type of origin	**"Empty":** The measure has no origin. **Measures Map:** The current measure map was created as a follow-up to the measure no. in the "Origin no." field. **Complaint:** The current action card is created from the complaint no. noted in the Origin no." field. **Complaint:** The current measure card is created from the complaint no. noted in the "Origin no." field. **FMEA:** The current action map has been created from the FMEA noted in the "Origin No." field.
Origin no.	Displays the document no. in relation to the "Origin type" field.
Status	**Open:** It is possible to edit the action map. **Completed:** The action card is closed - editing as well as resetting the status is no longer possible.

Field	Meaning
Successfully performed	The field determines whether the action card was successfully performed. "Successfully performed" is set automatically, for example, as soon as the "Effectiveness test successfully performed" field is changed. If this field is set to "No" when a measure card is completed, a follow-up measure is automatically created if required.
Successfully performed on	The field is automatically filled with the timestamp of the change when the "Successfully done" field is changed.
Successfully carried out by	The field is automatically filled with the user ID of the change when the "Successfully performed" field is changed.
Follow-up no.	This field is automatically filled with the follow-up action card no. as soon as the "Successfully completed" field = "No" when the current action card is closed.
Completed on/ about	The field is automatically filled with the timestamp of completion when the action card is closed.
Completed from	The field is automatically filled with the user ID of the closing user when closing the action card.

Inforegister Risk Assessment

The "Risk assessment text" information tab in the measures map displays the risk assessment texts entered via the "Enter text" button in the menu ribbon (analog in the archive). The texts are versioned. The texts can only be added in the "Open" status. Further information on text entry can be found in the "Entering texts" section.

Field	Meaning
Number FMEA	Calculated field to display the number of FMEA lines for the current action card. For this, the FMEA must have been created from the action map
Number Archived FMEA	Calculated field to display the number of FMEA lines with the "Action performed" field filled in for the current action card. For this, the FMEA must have been created from the action map

Inforegister effectiveness test

Field	Meaning
Number of FMEA performed Measure	Calculated field to display the number of FMEA lines with the "Action performed" field filled in for the current action card. For this, the FMEA must have been created from the action map.
Number Archive. FMEA performed Measure	Calculated field to display the number of archived FMEA lines with the "Performed action" field filled in for the current action card. For this, the FMEA must have been created from the action map.
Effectiveness test successfully performed	Set manually by the user once the effectiveness check has been successfully performed. This field cannot be set to Yes as long as an FMEA of the action is still open.
Effectiveness test Comment	A free text for the effectiveness check can be entered here.
Effectiveness test successfully performed on	Filled with the timestamp of the change when the "Effectiveness check successfully performed" field is changed.
Effectiveness test successfully performed by	Is filled with the user ID of the change when the "Effectiveness check successfully performed" field is changed.

Inforegister additional information

Field	Meaning
Created on/about	Filled with the timestamp of creation when the action card is created.
Created by	Filled with the user ID of the creation when the action card is created.
Corrected on/about	Filled with the timestamp of the change when the action card is changed.
Corrected from	Filled with the user ID of the change when the measure card is changed.

Ribbon Measure

Function	Meaning
Edit	Switches the measures map to edit mode **Notes:** Only "open" action cards can be edited
Delete	Deletes the current action card. **Notes:** Only "open" task cards can be deleted
Enter text	Generates a risk assessment text
Create FMEA	Creates an FMEA for the current action map. The FMEA and action map are linked by data. For more information on FMEA, see the FMEA Map section.
Archive	Completes the current action card. **Notes:** If the "Perform successfully" field in the measure card is set to "No", a follow-up measure is automatically created, otherwise completion is not possible
Change log	Displays the change log items for the action card

Note

If you have KUMAVISION MedTech365 in use, you have the further possibility to set up resubmissions and to view possibly existing document characteristics on the measures map. Further information can be found [here](#) .

FMEA card

An FMEA can be created either stand-alone or from an action. The call of the open and archived FMEA can be found via the call "FMEA Overview" via the user search.

FMEA Basics

FMEA is a procedure for the investigation of (possible) errors and for error prevention. There are different normative definitions, the FMEA implementation in KUMAVISION base365 (BC BOOSTER) is analogous to DIN EN 60812:2015-08. Accordingly, four different FMEA types can be distinguished:

Process FMEA
A process FMEA is based on the results of the design FMEA and investigates possible weaknesses in the production or performance process.

Product FMEA
A product FMEA examines possible defects and weaknesses in a specific product.

System FMEA
A system FMEA examines the interaction of several components in a complex system (e.g. machine, plant) with the aim of identifying potential weak points that arise from the interaction of the individual components or from the interaction of the system with the environment.

Design FMEA
A design FMEA is used to assess the manufacturability and assemblability of a product with respect to systematic errors in the design phase.

The goal of every FMEA is the consistent, permanent elimination of defects by identifying the causes of defects and introducing demonstrably effective measures (CAPA), as well as the avoidance of defect repetition in new products and processes by using experience gained. The individual errors are described and evaluated with regard to the following criteria:

Probability of occurrence A
of the cause, a high probability is rated as 4, an extremely low probability as 1.

Probability of detection E
of the defect before the product is passed on to the customer or passed on to the next process step, a high probability of detection is rated 1, a low probability of detection is rated 4.

Error meaning/error sequence B
is evaluated from the customer's point of view, a high impact of the error at the customer or for the subsequent process is evaluated as 4, a low impact as 1.

The product of these criteria forms the damage priority signal of the FMEA, which is mapped via the settings of the risk graph.

After the corresponding CAPA has been carried out, an FMEA must be carried out again, taking these measures into account, in order to determine the corresponding RPN and, via its reduction, to prove the effectiveness of the CAPA taken.

The FMEA card can be used to record and document the data required to carry out the FMEA. An FMEA can be created from a complaint and a task and thus receives a corresponding reference to the respective document. Stand-alone FMEA can be started via the FMEA overview and have no reference to a complaint or action.

The General information tab contains general data about the created FMEA.

Field	Meaning
No.	Document number of the FMEA, is assigned automatically and cannot be changed.
Origin no.	If the FMEA is created from a complaint or task, the document number of the associated complaint/task is created here; for a stand-alone FMEA, the field remains empty.
Type	Indication of the type of FMEA, are available for selection: • Process • Product • System • Construction
Department	Input of the department/area, which is examined in the context of the FMEA (free text).
created on/about	Indication of the date when the FMEA was created.
created by	Indication of which user created the FMEA.
corrected on/about	Indication of the date when the FMEA was last edited.
corrected from	Indication of which user last edited the FMEA.

The results of the FMEA are documented in the FMEA lines. Each defect is recorded in a separate line. The front part of the lines refers to the defect recording and analysis, as well as its risk assessment.

Field	Meaning
Error location	Indication of the place where the error occurred (in the process, department, etc.)
Potential error	Description of the error/defect that can occur or has occurred.
Error sequence	Description of the consequence that occurs due to the potential error.
Error cause	Description of the possible cause of the error
Control measure	Description of the measure that can be used to check whether the potential error is actually present.
Severity of the damage	Selection of the severity of the damage, for further information see chapter "FMEA Basics", selection 1 - 4.
Probability of the damage	Selection of the probability of damage, for further information see chapter "FMEA Basics", selection 1-4
Damage priority signal	Color representation of the damage priority signal is calculated according to the setup of the risk graph - see chapter FMEA Risk Graph

The following part of the lines documents the effectiveness test of the implemented measure:

Field	Meaning
Recommended measure	Input of the measure to be carried out for risk minimization or error elimination.
Responsible	Selection of the person responsible for the measure
Date	Date on which the measure is completed. When entering the date, a resubmission is opened, which can be used to inform the responsible person about the action.
Implemented measure	Enter the measure that was carried out to minimize the risk or eliminate the error.
New severity of the damage	Selection of the severity of the damage after implementation of the measure, for further information see chapter "FMEA Basics", selection 1 - 4.
New probability of damage	Selection of the probability of damage after implementation of the measure, for further information see chapter "FMEA Basics", selection 1-4
New damage priority signal	Color representation of the damage priority signal is calculated according to the setup of the risk graph - see chapter FMEA Risk Graph

FMEA ribbon

Function	Meaning
Enter text	Via "Enter text" the different texts (remarks, measure texts and performed measure texts.) can be entered.
Create measure	With this call you can create a new action for the FMEA.
Lock	The FMEA can be closed and archived via the "Close" button.
Riskograph	Opens the FMEA Risk Graph overview for the current FMEA number.
Risk graph	Prints the FMEA risk graph or this can be displayed in the preview.
Audit Trail	If the activity log is activated for the corresponding tables, all changes to the FMEA are logged via the "Audit Trail" (who inserted/changed/deleted what and when).

Creation of complaints and claims

Complaints and reclamations cannot be created standalone, their starting point must always be a master record such as a contact, customer or vendor.

Contacts

The contact overview or the Marketing Cockpit is the central processing area based on the contacts, and therefore the starting point of many processes that can be started from the overview as well as from the respective contact card via the "New Call" button in the menu ribbon.

Prerequisite: A corresponding contact already exists for which a complaint or reclamation is to be created. Otherwise, this should be created.

The call classification opens.

Selection of the corresponding call classification. For a complaint, the "Complaint" button must be activated, for a reclamation the "Reclamation" button.

The system automatically creates a new complaint / claim (call) according to the pre-selected call classification. The data stored for the contact is automatically transferred to the complaint / reclamation (call). This can then be processed further or closed by clicking on "OK".

Debtor

A complaint or claim can be created for a customer both from the customer overview and from a customer card via the "New Call" button in the menu ribbon.

Prerequisite: A corresponding customer already exists for which a complaint or reclamation is to be created. Otherwise, this should be created.

The call classification opens.

Selection of the corresponding call classification. For a complaint, the "Complaint" switch must be activated, for a complaint the "Complaint" switch. Then confirm the selection with "OK".

The system automatically creates a new complaint / reclamation (call) according to the pre-selected call classification. The data stored for the customer is automatically transferred to the complaint / reclamation (call). This can then be processed further or closed by clicking on "OK".

Vendor

A complaint or claim can be created for a vendor both from the vendor overview and from a vendor card via the "New Call" button in the ribbon.

Prerequisite: A corresponding vendor already exists for which a complaint or reclamation is to be created. Otherwise, this should be created.

The call classification opens.

Selection of the corresponding call classification. For a complaint, the "Complaint" button must be activated, for a reclamation the "Reclamation" button. Then confirm the selection with "OK".

The system automatically creates a new complaint / claim (call) according to the pre-selected call classification. The data stored for the vendor is automatically transferred to the complaint / reclamation (call). This can then be processed further or closed by clicking on "OK".

> Note

If you are using KUMAVISION MedTech365, you have the further possibility to create resubmissions and to view possibly existing document characteristics on the action card. Further information can be found [here](#).

Perform actions - stand alone and within the complaint, reclamation and related to FMEA.

In addition to the creation and execution integrated in a complaint or reclamation, a task can also be created or executed stand-alone. If a measure was created from an FMEA, then this combination is called from the measure.

Create measure

A measure can be created either as a stand-alone measure, via the corresponding "New" button in the measures overview, in the measures map, or from a complaint or complaint. In the following, the stand-alone creation is described in more detail. The creation of a measure from the complaint, reclamation and FMEA is described in the respective sections.

Click on "New" e.g. in the measures overview. A new measure will be opened.

After entering the "No." by return - click on selection button "Measure type" and select the desired for this measure.

After the entry in the "Measure type" field, click on the "Measure code" selection button and select the code that depends on the selected "Measure type".

In the fields "Description" and "Description 2" a free text can be entered for the measure.

So far, all data have been entered in the General information tab, the measure has been created and can be closed by clicking on "OK".

Edit measure

Via the "Measures", the overview of all measures that can be processed is displayed. Both stand-alone actions and actions that have been generated from a complaint or reclamation are displayed.

Select the measure to be edited. In the ribbon click on the "Edit" button (alternatively Ctrl+Shift+E). The selected measure opens in edit mode.

Now, in the task, e.g. texts can be added and an FMEA can be created or fields necessary for later completion, such as the effectiveness test, can be set.

Creating an FMEA in the measure

In a task, an FMEA can be created via the "Create FMEA" button in the ribbon. For more information on FMEA, see the FMEA section.

Creation of a follow-up

If the "Successfully completed" field is not set in a measure when it is closed, the "Successfully completed" and "Successfully completed by" fields are not filled and a follow-up measure is automatically created.

In the previously unsuccessfully completed measure, the newly created measure number is automatically entered in the "Follow-up measure no." field and you can use this field to branch to the new follow-up measure for further processing. The new follow-up measure is also displayed in the Measures overview.

In the follow-up task, the previous task is displayed as "origin type" and "origin no.".

If a task has been created within the complaint or claim and a follow-up task is created, this "new" follow-up task must be added manually in the Actions info tab of the complaint or claim.

Close measure

Analogous to processing, a task can be completed and archived regardless of its origin (stand-alone or from complaint, reclamation, FMEA).

Prerequisites: A fully processed measure already exists that is to be completed.

Selection of the measures to be edited. Click on the "Edit" button in the ribbon (alternatively Ctrl+Shift+E), since the measure cannot be completed in the Measures overview.

The selected measure opens in edit mode. In the ribbon click on the "Complete" button (alternatively Ctrl+F9). Other requirements to complete a measure: The "Effectiveness check successfully performed" field in the Effectiveness check info tab of the measure must be set to "YES". By setting this value, the documentation fields are automatically filled with the date and user identifier. If these conditions are met, the measure will be closed after clicking the "Close" button mentioned above. The completed measures can be found in the measures. These can be filtered in the Measures overview according to their "Completed" status.

Perform FMEA - stand-alone and within the measure

An FMEA can either be created as a stand-alone FMEA using the corresponding button in the Role Center, or from a complaint or rejection. In the following, the stand-alone creation is described in more detail, further information on the creation of an FMEA from a complaint in the corresponding chapter Complaint.

Create FMEA

An FMEA can either be created as a stand-alone FMEA by clicking on the corresponding button in the FMEA overview, or from a complaint or rejection. In the following, the stand-alone creation is described in more detail, further information on the creation of an FMEA from a complaint can be found in the corresponding section Complaint.

Clicking on "New" in the menu ribbon opens a new FMEA card

Click on the Type selection button and select the appropriate FMEA type. Click on the Department text field and enter the department that processes the FMEA.

So far, all data have been entered in the General information tab, the FMEA has been created and can be closed by clicking on "OK".

If no further data has been recorded in the FMEA, a query appears asking whether the FMEA should be deleted; answer this with "No".

Thus, a new FMEA has been created and the necessary data has already been entered in the General info register.

Edit FMEA

The FMEA overview displays all FMEAs that can be edited. Both stand-alone FMEAs and FMEAs that were generated from a complaint are displayed.

Prerequisite: An FMEA already exists that is to be processed further. The further processing is independent of whether the FMEA was started on its own or from a complaint.

Selection of the FMEA to be edited. In the ribbon click on the "Edit" button (alternatively Ctrl+Shift+E). The selected FMEA opens in edit mode.

Now the following text fields can be filled in the FMEA line(s). To do this, click in the Error location field and enter the error location.

Click in Potential Error field, and enter the potential error.

Click in Error sequence field, and enter the error sequence.

Click in the Troubleshooting field and enter the cause of the error.

Click on the Control action column and enter the control action.

Click on the radio button in the Damage severity field and select the appropriate value.

Click on the radio button in the Probability of damage field and select the appropriate value.

Automatically, the corresponding color is displayed in color in the Damage priority signal field based on the setup of the risk graph.

Click in Recommended action field, and enter the recommended action.

For the recommended measure, a text with additional information belonging to the field can be entered in the FMEA. The type of text is selected using the "Enter text" button on the menu bar and the supplementary text is entered in the text editor that then opens.

The text is entered in the Action text info tab after the text editor is closed. When you call up "Enter text" and the text editor again, this text is then created as the next version.

Click on the radio button in the Responsible person field and select the user who is responsible for performing the action.

Click on the Appointment column and enter the appointment.

After the "Recommended action" has been performed, the FMEA can be further processed. By clicking in the "Performed action" field and entering the action actually performed.

Note

The "Action performed" field is the counter if the FMEA was created from the action, so that the "Number of FMEA performed actions" is displayed in the action. Action" is displayed.

A text with additional information belonging to this field can be entered in the FMEA for the action performed. The type of text is selected via the "Enter text" button in the menu bar and the supplementary text is entered in the text editor that then opens.

The text is entered in the Action text info tab after the text editor is closed. When you call up "Enter text" and the text editor again, this text is then created as the next version.

Click on the radio button in the "New damage severity" field and select the appropriate value.

Click on the radio button in the "New damage probability" field and select the appropriate value.

Automatically, the corresponding color is graphically displayed in the "Damage priority signal" field based on the setup of the risk graph.

Additional errors can now be recorded in additional lines.

If all defects are documented accordingly, a comment can be stored in the FMEA via the button "Enter text" in the menu bar. The type of text is selected and text is entered in the text editor that then opens. The remarks are versioned.

The text of the remark can be viewed under Remarks.

When all necessary information has been entered in the FMEA, the FMEA can be closed by clicking on "OK".

FMEA risk graph

Within the FMEA, the risk graph represents the risk in the FMEA line in color as a traffic light symbol.

The detailed setup for evaluation per risk graph is done in the respective FMEA card.

The basic pre-fitting takes place in the FMEA facility - see section FMEA Facility.

The number of risk graphs for the current FMEA is displayed in the General tab of the FMEA card.

The current risk graph can be printed as a graphic directly from the FMEA card.

The traffic light color result is then controlled by the evaluation fields of the FMEA line. Risk graphs can only be created in open FMEA.

Field	Meaning
Riskograph	Opens the FMEA risk graph overview for the current FMEA number
Risk graph	Prints the currently valid version of the FMEA risk graphs for the FMEA. If the risk graph is displayed completely white, no values have been set up in the risk graph yet.
Number of risk graphs	Calculated field to display the number of associated risk graphs. Clicking on the displayed number also opens the FMEA Risk Graph overview

FMEA Risk Graphs Overview

Initially, the FMEA is created without a risk graph, there is no line in the overview.

If risk graphs have already been created, they are all displayed in the overview with the current status.

Menu Ribbon of the FMEA Risk Graph Overview

Field	Meaning
Create new version	Opens a FMEA risk graph map for new creation.
View	Switches the window to view mode.
Edit	Switches the window to edit mode.
Print	Prints the FMEA risk graph or this can be displayed in the preview.

Create new version" risk graph

A first or a new risk graph is called up by means of "Create new version" and can be set up accordingly. The window is initially offered empty to build up a first version.

Inforegister General

Field	Meaning
FMEA No.	FMEA No. for which the risk graph is created.
Version no.	Version number of the risk graph
Status	Status in which the risk graph is located
Description / Description 2	Offer the possibility to enter free texts for the FMEA risk graph
Justification	Justification must be entered when a risk graph is changed or when a new version is created.

Inforegister Rating

In the "Evaluation" tab, the corresponding colors are defined for the respective combination of "Severity of damage" and "Probability of damage" or "New severity of damage" and "New probability of damage".

You can choose between the values "empty", "yellow" and "red". The empty value uses the defined RDLC standard color from the "FMEA Setup", Risk graph info tab as the color value (green/green in the example).

Inforegister additional information

The Additional Information tab shows the creation or modification dates of the FMEA Risk Graph.

Edit risk graph

As long as a risk graph has not been closed with the "Close" function, it is in the "In process" status.

Via the call "Edit" this can be called and edited from the overview risk graphs.

As soon as a risk graph is in the "Invalid" or "Valid" status, it can no longer be edited. In this case, a new version must be created using the "Create new version" function. There, the risk graph can be edited again.

A newly created version is in the "in progress" status until it is closed with the "Close" function in the risk graph map and thus becomes the valid risk graph. The entries of the "Assessment" info tab are transferred to a new version from the previous version.

Complete risk graph

The risk graph that has the status "Valid" is the one that controls the traffic light signal and over the damage fields.

As soon as a newly created version of the risk graph is completed using the "Complete" function in the risk graph map, it is changed to the "Valid" status and the risk graph previously in the "Valid" status is changed to the "Invalid" status.

The change is transferred directly to the traffic light symbols of the FMEA lines.

Risk graph ribbon

Field	Meaning
View	Switches the window to view mode.
Edit	Switches the window to edit mode.
Delete	Deletes the FMEA risk graph. This is only allowed for FMEA risk graphs in the status "In progress".
Lock	Completes the capture of the current FMEA risk graph. The version thus completed is declared in the status as "Valid", all previous versions as "Invalid". If the version to be closed is a subsequent version of a risk graph, a corresponding value must be entered in the "Reason" field so that the FMEA risk graph can be closed/released. The damage priority signals in the associated FMEA lines are recalculated.
Print	Prints the FMEA risk graph. Or it can be displayed in the preview.

Close / archive FMEA

Analogous to editing, an FMEA can be completed and archived regardless of its origin (stand-alone or from measure).

Prerequisite: A fully processed FMEA already exists that is to be completed.

Selection of the FMEA to be completed. In the ribbon click on the "Edit" button (alternatively Ctrl+Shift+E).

The selected FMEA opens in edit mode. In the ribbon click the Close button (alternatively Ctrl+F9).

Confirm the displayed query with "Yes".

The FMEA is now closed and archived and can be found in the archived FMEA.

> Note

Archived FMEA incl. their risk graphs cannot be edited. However, the risk graphs can be printed out using the "Print risk graph" function.

Edit created complaint

The complaint overview displays the open or released complaints.

For further processing, it is a prerequisite that an open complaint that is to be processed further has already been entered in the system.

Selection of the complaint to be edited. In the ribbon click on Edit button (alternatively Ctrl+Shift+E).

The selected complaint opens in edit mode. Further data on the complaint can be entered. For example, its review by a second user can be documented in the "Analysis" info tab.

In the "Analysis checked on" field, enter the date of the analysis check.

In the "Analysis checked by" field, the user who performed the analysis is entered. The user must differ from the user in the "Analysis by" field, otherwise a corresponding message will be issued.

Once all the necessary data for the complaint has been entered, it can be released. To do this, click on the "Release" button in the ribbon (alternatively Ctrl+F9).

> Note

If it is set up that the release of a complaint requires the entry of a digital signature, this must be entered in the appearing query in the text field Digital signature and the entry must then be confirmed with OK.

The complaint is now in the status Released. The complaint is not closed with this.

Edit created complaint

The complaint overview displays the open or released complaints that can be processed.

The prerequisite for further processing is that an open complaint that is to be processed further has already been entered in the system.

Selection of the complaint to be edited. Then click on the "Edit" button in the ribbon (alternatively Ctrl+Shift+E).

The selected complaint opens in edit mode. Now you can enter further data for the complaint, for example, you can enter additional data in the "Complained items" information tab.

In the Rejected items tab, click in the Type field and select the item type.

To select an item click on column No. and select the desired item.

To enter the claimed quantity, click on the Quantity field and enter the quantity.

If an FMEA is also to be performed (only possible in a complaint or measure), click on the "Perform FMEA" button in the menu ribbon:

A new FMEA is opened. This can be created, edited and completed in the same way as described in "Perform FMEA".

Once all the necessary data for the complaint has been entered, it can be released. To do this, click on the Release button in the ribbon (alternatively Ctrl+F9).

> Note

If it is set up that the release of a complaint requires the entry of a digital signature, this must be entered in the Digital signature text field in the query that appears and the entry must then be confirmed with OK.

The complaint is now in the status Released. The complaint is not closed.

Converting a complaint into a reclamation

If, during further processing of a complaint, it is determined that the recorded case is a complaint, the complaint can be transferred to a reclamation. In this case, the data already recorded in the complaint is transferred to the reclamation, and the two processes are also linked.

Prerequisite: A released complaint already exists that is to be converted into a complaint.

Selection of the complaint to be converted into a complaint.

The selected complaint will be opened and in case the complaint has the status "Released", the status will be reset.

In the complaint, the button "Convert classification" is selected via the ribbon.

Confirm the following query with "Yes".

The complaint is converted into a reclamation by transferring the complaint data into a new reclamation. The complaint is closed with the "reclassification" and archived. The complaint is opened automatically.

In the complaint, the "Reclassification" is recorded in the "Rejection reason code" field and in the "Rejection reason" field. The prerequisite for this is the corresponding setup in the "Call rejection reasons".

From the complaint, the archived complaint can be opened via the "Origin no." field in the General info tab.

The newly created complaint can be further processed and closed by clicking OK.

Converting a complaint into a grievance

If, during further processing of a complaint, it is determined that the recorded case is a complaint, the complaint can be transferred to a complaint. In this case, the data already recorded in the complaint is transferred to the complaint, and the two processes are also linked.

Prerequisite: A released complaint already exists that is to be converted into a complaint.

Selection of the complaint to be converted.

In the ribbon click on the "Edit" button (alternatively Ctrl+Shift+E).

The selected complaint will be opened and in case the complaint has the status "Released", the status will be reset.

In the complaint, the button "Convert classification" is selected via the ribbon.

Confirm the following query with "Yes".

The complaint is converted into a complaint by transferring the complaint data into a new complaint. The complaint is closed with the reclassification and archived. The complaint is opened automatically.

In the complaint, the "Reclassification" is recorded in the "Rejection reason code" field and in the "Rejection reason" field. The prerequisite for this is the corresponding setup in the "Call rejection reasons".

From the complaint, the archived complaint can be opened via the "Origin no." field in the "General" info tab.

The archived complaint is opened.

The newly created complaint can be further edited and closed by clicking "OK".

Close complaints and claims

Complaints and reclamations that have been fully processed and are in the "Released" status can be closed and thus archived. A corresponding button is available for this purpose in the respective menu ribbon.

Close complaint

Prerequisite: A fully processed and released complaint already exists that is to be closed. All actions in the complaint have the status "Closed".

Selection of the complaint to be closed.

Without opening the selected complaint, it can already be closed in the overview. Click on the "Close" button in the ribbon.

Confirm the displayed query with "Yes".

If the complaint has an entry of "No" in the "Justified" field, the "Rejection reason code" field must have an entry, otherwise a corresponding message will be issued.

If the entry in the "Justified" field is "Yes", "Goodwill" or "Empty", no message is generated.

> Note

If it is set up that the closure of a complaint requires the entry of a digital signature, this must be entered in the Digital signature text field in the query that appears and the entry must then be confirmed with OK.

Close complaint

Prerequisite: A fully processed and released complaint already exists that is to be closed. All actions in the complaint have the status "Completed".

Selection of the complaint to be closed.

Without opening the selected complaint, it can already be closed in the overview. To do this, click on the "Close" button in the menu ribbon.

Confirm the displayed query with "Yes".

If the complaint has an entry "No" in the "Justified" field, the "Rejection reason code" field must have an entry, otherwise a corresponding message will be issued.

If the entry in the "Justified" field is "Yes", "Goodwill" or "Empty", no message is generated.

> Note

If it is set up that the completion of a complaint requires the entry of a digital signature, this must be entered in the Digital signature text field in the query that appears and the entry must then be confirmed with OK.

The complaint is closed and archived. The archived complaint can now be viewed via the "Archived complaints" call.

Capture texts

Texts can be entered at various points in a complaint, reclamation, action and FMEA in order to record further information on the corresponding areas. The texts entered in this way are subject to versioning.

Note

As the further procedure for all text types is identical for a complaint, rejection, action and FMEA except for the selection of which text type is to be entered (e.g. acceptance text or analysis text), the entry of one text type is shown below as an example; the procedure shown can be used analogously for the other text types, regardless of which card is involved.

Prerequisite: A complaint, reclamation, action or FMEA already exists for which a text is to be entered.

Click on the "Enter text" button in the Start menu ribbon of the currently opened map.

The query, which text type is to be entered, opens. The text type is selected by activating the corresponding button.

When text is entered again, the previously entered text is displayed and can be changed or supplemented.

The entered text can be seen in the corresponding info tab according to the text type.

The text for remarks can be found under Remarks.

All shown text types are versioned, that means every new text input and text change is shown as a new version in the corresponding windows.

The first entry of a text creates version 1 in the text display. Re-entering or changing a text creates another version.

You can scroll between versions using the "Previous version" and "Next version" buttons.

Also aborted text inputs, generate versions, which are then shown as empty lines in the text info registers.

In Complaint and Reclamation, when the "Justified" field is changed, the text editor is automatically opened and a text must be stored so that the field can be changed. This text is entered in the Analysis text info tab and versioned with the analysis text.

Sales and Marketing

Hierarchy management

By using hierarchies, contacts, debtors and creditors can each be related to each other. Via views the relationship can be displayed top-down or button-up.

On both sides of the hierarchies, any number of entities can be related to each other.

In the following, accounts receivable hierarchies are discussed in detail.

Hierarchy types facility

To be able to use hierarchies, the corresponding setup must be performed. If you get a message "Define at least one hierarchy type ..." when using hierarchies, proceed as follows:

To set up the necessary hierarchies, first call up the "Hierarchy types setup" via the application search.

Via "New" you can create a new hierarchy type using the table below:

Field	Comment
Code	Unique meaningful abbreviation
Description	Description of the hierarchy type
Standard	Standard hierarchy type
Origin table name	Customer / Vendor or Contact

Assign hierarchy

To adjust the hierarchy of a customer, first call up the customer overview via the user search. Then select the desired customer and call up the customer card.

For setting a top-down hierarchy: From the ribbon, select Related - Customer - Hierarchy - Related Customers to access the Hierarchy Relationships card.

In the opened form, check if the hierarchy type filter is correct.

In the table, enter the customer number in the "Value" field or select from the list of customers by clicking [...].

Click in the next line and repeat the input to assign another relation.

For setting a bottom-up hierarchy: From the ribbon, select Belonging - Customer - Hierarchy - Belongs to Customers to access the Hierarchy Relationships card.

In the opened form, check if the hierarchy type filter is correct.

In the table, enter the customer number in the Value field or select from the list of customers by clicking [...].

Click in the next line and repeat the input to assign another relation.

Show hierarchy

To display the hierarchies of a customer, first open the desired customer cards. You can call up the hierarchy via the Ribbon - Belonging - Customer - Hierarchy Usage.

Select the method of use

- Associated records (top-down)
- Belongs to (Bottom-Up)

Then click Calculate.

The hierarchy is displayed

Via Manage -> Expand All/Collapse All, complex structures can be quickly displayed clearly.

Special notes

Remarks for customers and articles can be marked as "Special note" via a code. In the sales documents, these remarks are then displayed directly in the info box.

Establishment

In the Accounts Receivable & Sales setup, you can store a code on the "General" info tab in the "Code for special notes" field that distinguishes "special notes" from "normal" notes. It should be noted that this code can be stored differently for purchasing and sales notes and may result in a note being displayed only in the respective area.

The user can mark individual remark lines as special remarks for customers and items in their remarks in the default "Code" field by assigning the same code that is stored in the sales setup as "Code for special remarks".

Representation in processes

Special notes are displayed in:

- Offer for sale,
- Sell order
- Sales invoice

The display is done in the infobox Sales document information of the document header for the special notes of the customers. The notes are displayed automatically whenever the customer is selected or when scrolling within the window between the documents.

The notes for articles are displayed in the Sales info box Document row information of the document rows. The display is automatic for the article used in the rows whenever the article is selected or when scrolling within the rows of the document.

Sales order types

The variety of the kind of documents, in the sales, reaches from the offer production for new products or service, sales of rebuildings up to the spare part sales or service. In order to be able to assign the documents to all these variants, there is the "order type".

In KUMAVISION base365 (BOOSTER) you can manually define different order types and assign them in the documents quotation, order, delivery bill and invoice.

Sales order type setup

To create a new sales order type, first call it up via the user search.

Then the sales order type overview opens, where you can use the "New" menu item to create and define a new order type using the table below.

Field	Comment
Code	Unique meaningful abbreviation of the respective sales order type
Description	Description of the sales order type
Minimum DB%	Indication in %. To check for the contribution margin in the processes (VK order).
Standard	Standard sales order type
Reference to recorded orders	Note during order entry If an order with the same combination (order type / customer / article) already exists in the system, a corresponding message appears.

Assigning dimensions to a sales order type

In the sales order type overview, you have the option to assign a number of dimension settings to a sales order type.

To do this, select [...] - Associated - Sales order type - Dimensions.

Via the menu selection "Dimensions" the functions "Assignment for current dataset" and/or "Assignment for selected datasets" are available for the dimension assignment.

The default dimensions card opens where you can make the assignment using the table below:

Field	Comment
Dimension code	Specifies the code for the default dimension - a selection from the Dimensions overview table is possible here
Dimension value code	Specifies the dimension value code that is proposed as the default dimension - a selection from the Dimension values overview table is possible here
Dimension value posting	Specifies how to use default dimensions and their values. Choice between: • Code necessary • Same code • No code

Report selection by sales order type

In addition to the use of order types as a distinguishing criterion and the presetting of dimensions, different printouts can be controlled for each order type. For this purpose, in addition to the selection of the actual document, the sales order type can also be selected in the report selection of sales, in order to then be able to store different reports accordingly, e.g. other order confirmations for spare parts orders.

To do this, first call up the "Report selection - Sales" via the user search.

Via the "Usage" you can first define for which document you want to make your setups.

In addition to selecting the actual document in the rows via the "Report ID" field, you have the option of storing different reports according to the respective sales order type via the "Report selection order types" menu item.

As in the standard report selection, it is also possible to store several reports in a defined sequence in connection with order types.

Incoming orders statistics (AE)

For medium-sized and larger companies, incoming orders are often an important key figure for managing the company. The order backlog represents the value in the form of orders and unposted invoices minus complaints and unposted credit notes (sales often arise much later).

The incoming order is a key figure on the time line and can change with every change to the documents.

In particular, it is very difficult to retroactively determine the order intake from the posted documents and the remaining open amounts from the unposted documents, or it is no longer possible when changes are made. However, this is crucial for concrete management statements.

The management of incoming orders documents the changes of incoming orders in the following documents of the sales:

- Order
- Complaint
- Invoice (only lines that do not belong to any order)
- Credit notes (only lines that do not belong to any order)

For this purpose, the system forms "incoming order items".

Depending on the setting in the "Accounts Receivable & Sales Setup" in the "Creation Date" field, the order entry item will be created on the order date or on the work date.

In addition, it is possible to define in the setup which date should be used as the basis for changing the order entry. Changes always occur when the job has already been released once and is reopened for processing.

The order entry items are created in orders and complaints when the "Status" field is changed from "Open" to "Released" and from "Released" to "Open" (status change is executed by function in the standard system), as well as when the documents are invoiced and, if necessary, when they are deleted (if document processing is not complete).

In the case of invoices and credit notes, this is only done when the document is posted, unless the lines belong to an order or a complaint.

The following principles apply in orders and complaints:

- The status of the sales header is still open after it has been set up, and the order does not yet have any incoming order items.

- The status of the sales copy is changed to Released:

All sales lines are completely mapped in the incoming order items. The portion of the sales lines that has not yet been billed is mapped in the incoming order items with the conditions and dimensions stored in the sales line. (The portion of the sales lines that has already been billed, if applicable, was mapped with its actual value and dimensions in the incoming order items when the billing was posted.

Incoming order amount of the document = Open amount of the document + Invoiced amount of the document

The sales header status is reset from Released to Open: The incoming order items accurately reflect the billed portion of the sales lines, taking into account its correct breakdown by dimension. The portion of the sales lines that has not yet been billed is negatively reflected in the incoming order items with the conditions and dimensions stored in the sales line, thus balancing the incoming order item of the release.

Incoming order amount of the document = Invoiced amount of the document

Note

If during the reopening of the document an order line is not changed in the fields relevant for the order entry (quantity, amount, dimensions), then - to avoid unnecessary items - the later re-release of the document will not create any new items for the order line, but rather delete the item created by the opening. This only applies if "Summarized order entry on status change" is activated in the Accounts Receivable & Sales setup.

Self-learning function Article reference

In many cases, customers send their orders to the supplier naming their own customer article numbers. These customer article numbers can be used in the order entry in the field "Reference number", provided that they are maintained in the article or customer master under reference numbers. To facilitate the master data maintenance at this point, these reference numbers can be maintained or created in KUMAVISION base365 (BOOSTER) from the sales line.

For example, if a sales line has the fields * Type = Article * No. = Item number * References. = Customer article number * Unit = item sales unit * Optional variant code

are entered, the system automatically creates a reference entry for this item and this customer.

If there is already a reference entry in the system for this customer and this item number, the user is prompted whether the existing reference entry should be overwritten.

If this message is confirmed with "Yes", the existing reference entry is overwritten. If "No" is selected, the process is aborted.

Sales line DB% and cost price

Differing from Microsoft Dynamics Business Central™ Standard, the field Cost price (MW) in the sales lines of a sales document is no longer editable by the user. It is filled from the item card or, if inventory data is available, from the inventory data.

The DB% field of the sales line is related to the cost price. It is not calculated in Microsoft Dynamics Business Central™ Standard, but copied from the item card to the sales line. It is not recalculated even if the prices and discounts of a sales line are changed. In KUMAVISION base365 (BOOSTER), the DB% field is calculated based on the cost price (MW) and sales price and discount of the sales line and therefore corresponds to the correct DB%.

Minimum contribution margin check at row level

Minimum contribution margins can be stored per article category and article. If the minimum contribution margin is not reached in a sales transaction, the user receives a corresponding warning message. Within this dialog, the user is shown the minimum sales price by means of which the minimum DB (contribution margin) was reached.

Only selected users with special authorization can continue to process the transaction with a minimum DB underrun. For this purpose, "Minimum DB underrun allowed" has been set up in the user authorization. Depending on the user's authorization, a message or error message is displayed if the minimum DB is not reached.

The check for minimum DB is performed according to this hierarchy: * Article * Article category

Establishment

User setup

In the user setup, it can be defined per user whether the sales transaction can be processed further if the minimum DB is not reached. Depending on the user's authorization, a message or an error message is displayed if the minimum DB is not reached.

To perform this setup, call up the "User setup" via the user search. Activate the field "Minimum DB underrun allowed" on the respective user setup card on the info tab "KUMAVISION" if the user should be allowed to continue processing in case of an underrun. The user will receive a message in the process in case of a shortfall.

If the switch is disabled, the user will receive an error message and will not be allowed to continue processing.

Care Minimum cover contribution

To use the minimum contribution margin check at the line level for the sales transaction, either the minimum DB must be maintained on the item card or in the respective item category.

Article card

To set the minimum contribution margin on the item card, on the "Prices and sales" info tab, in the "Minimum DB%" field, enter the percentage value that should be achieved at least in each sales transaction.

Article category

The article category can be used for grouping the contribution margin. Each article belonging to the article category will receive the same minimum contribution margin rate. To set the minimum contribution margin for item categories, enter the percentage value that should be achieved at least in each sales transaction in the "Minimum DB%" field of the respective item category.

Minimum contribution margin check at document level

Minimum cover contributions can be checked at the document level in addition to the line level check.

When a sales order is released, the system checks whether the entire order falls below a specified minimum contribution margin. Analogous to the check at line level, only selected users can fall below the minimum contribution margin.

For this purpose, "Minimum DB underrun allowed" has been set up in the user setup. The release authorization for document or rows minimum DB underrun cannot be set up separately. The check for minimum DB at document level is performed according to the following hierarchy: * Debtor * Sales order type * Accounts Receivable & Sales Facility

With this hierarchy, the data is checked in the sales document, and the minimum DB is set for the sales document that is found first in this order.

Establishment

Accounts Receivable & Sales Facility

The setup of a generally valid minimum contribution margin for sales documents is done in the Accounts Receivable & Sales setup.

To do this, first call this up via the user search. On the info tab "KUMAVISION" in the field "Minimum DB %" you can define the desired minimum contribution margin percentage for the sales documents.

Sales order type

In the sales order type, the minimum DB % is stored in the field of the same name.

Debtor

The minimum DB % for sales documents can be stored on the customer in the "Invoicing" info tab.

Process

If a sales document is entered for a customer and a minimum DB for documents is stored, the user will receive a corresponding warning message if this record is not reached in a sales transaction.

Within this dialog the user is shown the minimum DB that must be reached and which DB the document currently has.

Only selected users with special authorization can continue to process the transaction with a minimum DB underrun. For this purpose, the field "Minimum DB underrun allowed" has been set up in the user setup.

Depending on the user's authorization, a message or an error message is displayed if the minimum DB is not reached.

The check for the minimum DB is triggered by the release of the document. If a document is not released manually, the minimum DB at document level is not checked, e.g. when creating an advance payment invoice without prior release.

Archive

In order to track the undercutting of minimum DBs at document level, there is a so-called release archive at the document. To be called up via the Navigate/Releases archive menu ribbon

This makes it possible to track in detail who released an order that fell short of the minimum DB and when.

In addition, this information is also displayed in the Sales Document Information infobox. Here the user also receives information about how high the minimum DB must be and where this specification comes from.

Note

If there are both minimum DB underruns at row level and document level in a document, only the underrun at document level is logged. Implicitly, the line underruns are also released.

Display of contribution margin information in the info box of the document rows

Infobox "VK Line Contribution Margin Details

In the info box "VK line contribution margin details" you can see data about the contribution margin for the respective customer in relation to the corresponding article. The following data can be displayed at row level in the info box: * No. (Item number) * Line amount (MW) * Line amount (MW) without VAT * Cost price (MW) * Cost amount (MW) * Contribution margin (MW) * DB % * Min. DB % * Minimum DB Origin * Shortfall released

Infobox "Sale voucher information

In the info box "Sales document information" you can see data on document level concerning the contribution margin for the respective customer in relation to the entire order. The following data can be displayed at document level in the info box: * Pretext * Post text * Sell to Deb. Note * Rech. to Deb. Last VK * Contribution margin * DB % * Minimum DB % * Minimum DB Source * DB undercut. released by

Info box "Sales history for sale to customer".

In the "Sales history for sales to customer" info box, the customer sales history is displayed with the number of documents that are currently available in the system. The date filter limits the number of vouchers that can be viewed directly by clicking on the respective number.

The date filter is set up via the Accounts Receivable & Sales setup. To do this, first call this up via the user search.

In the "Archiving" info tab, you can specify the desired formula, e.g. -1Y, in the "Sales history date formula" field.

The info box always calculates back from the current date for the duration of the date formula.

If you click on the number of orders in the info box, for example, the customer sales history card will open.

The map is divided into 3 sections:

Filters:
In the filter area, the currently applied filters are set for the data displayed further below. You can change the document selection directly from here and, for example, switch from orders to posted invoices.

Number of vouchers:
Displays the total number of the respective sales documents available in the system.

Debtor Sales History:
In this area, all documents are listed in detail with number and all lines. If you have opened the window from a sales document, you can use the "Copy to document" row function to copy selected rows directly into your current sales document. Alternatively, you can use the "View document" row function to open the documents in Microsoft Dynamics Business Central™.

Post booking data

The "Post posting data" function allows you to subsequently correct the posting data in sales orders that have already been delivered but not yet invoiced.

To do this, make your corrections in the corresponding document and execute the "Post entry data" function in the menu ribbon.

When the function is executed, the fields from the open document are transferred to the posted delivery and the associated article, material and value items for all sales order lines that have already been delivered but not yet invoiced.

The following fields are taken into account during the transfer: * Business posting group * VAT business posting group * Product posting group * VAT product posting group * Dimension Set ID * Global dimension code 1 * Global dimension code 2

Print sales documents only for released documents

When the sales documents are released, the system runs through several checks. Among others, the mandatory field check and the check for pricing. In Microsoft Dynamics Business Central™ Standard it is possible to print open documents as well. In KUMAVISION base365 (BOOSTER) printing is possible only for released documents. The exception here are the sales quotations and the print preview.

Preparation of offers to contracts

In order to create offers to prospects, i.e. contacts without an accounts receivable assignment, they can be entered using an accounts receivable template.

Accounts receivable templates are created in the Financial Accounting area.

To create an offer to a prospect, the "Create offer" function is selected in the action area. An offer is drawn with the contact's data and opened directly. At this point, a template can be selected in the "Sales to deb. template code" field. This will be taken over into the offer.

The offer can also be created without creating a customer. In this case, the customer must be created only when converting to an order.

Moreover, offers to contacts can be created and released in KUMAVISION base365 (BOOSTER) without the need to create a debtor.

Blanket order management

In the standard Microsoft Dynamics Business Central™, orders can be retrieved directly from a blanket order. This is also possible in partial quantities. However, it is very inconvenient that all blanket order lines are always transferred to the order. If a blanket order now consists of many lines and only two lines have a retrieval quantity <> 0, it is difficult to find these lines in the order between all the lines. Or the user has to delete the unnecessary lines afterwards.

In the standard system, the prices are taken from the blanket order during transfer. However, if the quantity is subsequently changed again in the order, the normal price calculation takes place and the price can change. In practice, however, this is not desired because the price is fixed by the blanket order. See also section "Price origin".

Contrary to the standard, this functionality retrieves only those lines in an order that are marked by the corresponding quantity entry in To Deliver. The sales pricing in the created order is set to blanket order so that no new pricing is carried out if the quantity is changed. When entering an article in a quotation or order, a note is issued if there is already a blanket order for the article and customers.

Assignment of blanket order to sales order

In order to assign these to the new order after the message in the sales order that blanket order lines exist for the customer, the relevant blanket order no. is entered in the blanket order no. column in the sales line. You will be asked whether the sales price and line discount % should be taken from the blanket order line.

If you confirm with Yes, the corresponding conditions will be transferred. If you confirm with No, the price of this line will be kept as entered in the order.

For better traceability for the user, the quantities that have already been called off to orders are displayed in the blanket order itself. The remaining quantity of the blanket order that can still be released is also displayed in the blanket order. For this purpose, the fields Quantity in order and Remaining quantity less order in blanket order have been created.

This is necessary because the Microsoft Dynamics Business Central™ standard does not set the quantity delivered until the sales delivery of the associated order is posted.

If an attempt is made to retrieve a higher quantity from the blanket order via the order than is available in the remaining quantity less order, a corresponding error message appears:

Framework agreements

In addition to blanket orders, which are always clearly related to the customer, there are also so-called block orders in KUMAVISION base365 (BOOSTER).

In contrast to blanket orders, several customers can call off on a common blanket agreement. It should be noted here that the customers are linked to each other via a hierarchy type, and the outline agreement applies to the customer and to customers subordinate to him. The outline agreements are not relevant to requirements, i.e. they are not taken into account in the purchase order or planning worksheets. Only as soon as a call is made on such an outline agreement is the resulting sales order a source of requirements. Stocking in the warehouse must therefore be controlled via the planning parameters or additional sales planning for these articles.

Establishment

In order to be able to use the function of the framework agreement, some facilities are necessary. To do this, first call up the Accounts Receivable & Sales setup via the user search.

Number series

For the framework agreements, it is necessary to store a number series. To do this, enter the number series for the framework agreements in the field of the same name in the "Number series" info tab.

If you have not previously defined a number series for the framework agreements, you can do so via the field - display from complete list, catch up and assign afterwards.

Hierarchy type code

In the "KUMAVISION" info tab, you have the option to define the hierarchy type code for the outline agreements in the "Outline agreement. Hierarchy type" field.

Note

Only customers associated with this hierarchy type can access the master agreements.

Create framework agreement

To create a new framework agreement in the system, first call up the framework agreements via the user search.

You can create a new framework agreement via "New" in the ribbon.

After opening the new framework agreement card, the system will automatically assign a new framework agreement number from the stored number series by clicking in the "Customer no." field. Otherwise, this can be changed manually by the user by an individual identifier.

Now select the desired customer in the "Customer no." field, for which the framework agreement is valid.

If the master agreement applies to several customers, then the master agreement must be issued to the main customer. The associated customers must be linked to the main customer via the hierarchy type. In the fields "Description" and "Description 2" a free text for the internal description of the framework agreement can be entered.

In the fields "Valid from" and "Valid until" the validity period of the agreement is defined.

The lines of the agreement are then entered. If necessary, the framework agreement takes into account listings that are stored at the customer(s).

In the lines, the total quantity per article is stored, which can be retrieved by all customers over the validity period. As an alternative to a defined article, an article price group can also be entered. In orders, the respective exact article is then retrieved from this article price group.

Prices and discounts are specified in the framework agreement lines. These are always net prices, since the function of framework agreements is only required in B2B business. Prices including VAT are only required by default in retail and thus in the end customer business, where, however, framework agreements do not occur.

After completing the entry, the framework agreement can be released via the Release action in the menu ribbon and printed via the Confirm action.

Call off framework agreements

Outline agreements are called off from an order or quotation.

For this purpose, the article in question is entered in an order or quotation. The user receives a note that a framework agreement exists for this and that this can be called up.

If the framework agreement is entered in the sales document line, the price and discount from the framework agreement are updated in the sales document.

From the outline agreement, it is possible to see in which sales documents quantities are currently called or have already been called. For this purpose, the line function order lines, invoice lines, etc. is called up.

After expiration, a framework agreement can be terminated. It is then deleted from the list of current framework agreements and written to the archive of terminated framework agreements. To do this, call up the End function in the Actions ribbon in the framework agreement.

This process cannot be undone. However, the "Copy framework agreement" function can be used to copy a terminated framework agreement to a new framework agreement. This can be done including header and lines or selectively (analogous to the function Copy document from the sales area).

Commission Management

Basic

Commission management is based on the posted sales documents (invoices and credit memos). Only sales that ultimately end in a posted sales document in the document flow are therefore included in commission settlement. (For example, sales that are entered and posted manually as invoices in financial accounting ledgers are not taken into account).

The center of a commission settlement is the standard table Seller / Buyer. It is possible to inherit both a first and a second salesman directly from the accounts receivable, or to adjust these fields before posting in the documents that have not been posted yet.

If only one field is filled with a value, the commission management logic will be executed only for this salesperson. If both sellers are entered, it will be calculated for each. There are no mutual influences of the commission settlements between the two salespersons.

The sales code applies to all lines of a sales document together. It is not repeated in the lines of the unposted document.

In addition, with the help of the various setup options, the commissions can be set as a function of customers, customer groups or even products and product groups as well as responsibility units. Net or gross amounts or contribution margins can be used as the basis for calculation.

Due to these different setup constellations, the commission arrangements can be used flexibly.

Note

Only if the fields (salesperson code 1 and, if applicable, salesperson code 2) in the posted sales documents are filled, a commission calculation takes place. If no commission is to be calculated in a particular case, these fields can be cleared manually.

Establishment

Seller

Each salesperson must be created in the Salesperson/Purchaser table. These salespersons are then assigned in the "Salesperson code" or "Salesperson code 2" fields on the "Commission" info tab when creating an account.

Commission groups

With the help of commission groups, both customers and products can be grouped and commissioned separately.

This classification into commission groups is inherited in the sales process in the posted documents.

Accounts receivable commission groups

Codes and corresponding descriptions can be assigned in the Customer Commission Groups table. These codes can then be stored in the customers under the Commission tab.

Product commission groups

Analogous to the grouping of customers, items can be freely grouped in the Product commission group table. The set up groups can be selected in the item card under the Prices and Sales tab.

A product commission group can be assigned to each G/L account, article, resource, asset and article surcharge (in the field of the respective table) in order to achieve standardization here as well.

Commission rates

The commission rates regulate the applicable commissions of the sellers. Here different classifications can be combined with each other. These entries are used to determine the valid applicable commission rates for the posted document lines.

Field	Description
Seller Prov. type	For which seller (Seller, Seller 2, All sellers) should the commission rate apply.
Seller code	The corresponding vendor code is entered here.
Customer Prov. type	The customer provision type is used to determine whether the sales commission is dependent on all customers, a customer group or a specific customer. For the last two variants, it is mandatory to fill in the following column 'Customer code'.
Debtor code	see above
Product Prov. type	Analogous to the customer commission type, the product commission type is used to control the dependency of the commission on articles, G/L accounts, resources, assets, articles (addition/deduction), product commission groups or on all products.
Product code	For all available product prov. types, the corresponding code must be filled in here. If there is no special regulation, i.e. all products are remunerated, this field remains empty.
Unit of responsibility	Specification of a possible unit of responsibility for the respective commission record. In the run of the commission reporting, the units of responsibility are then taken into account for the calculation
Start date / End date	In addition to the fields already listed, the Start Date field is stored, which together with an End Date field further restricts the validity of the matrix row.
Calculation basis	The basis of commission calculation is selected here. The following options are available: • Gross amount (basis is the gross amount - incl. VAT - of the posted line item in MW). • Net amount (basis is the net amount of the posted line item) • DB original (basis is the original DB of the posted line item) • DB regulated (basis is the regulated DB of the booked line item)
Commission %	The amount of the commission in percent is recorded in the column.
Description	This column provides space for internal explanations / free text.
Locked	If a commission rate should be locked, the check mark is activated here.

Hierarchy commission rates

If a posted sales document row is to be commissioned, all valid commission rates for the data of the posted sales document row are determined first. If several commission rates apply to the data of a posted sales document line, the following applies for determining the commission rate to be ultimately applied:
* For all 3 classifications, the following applies independently: A special rule beats a general rule (e.g. an entry for a special customer beats an entry for a special customer commission group. This in turn would have already beaten an entry "All debtors". * If a valid special entry for products exists, it has a higher priority than a special entry for customers. This in turn has a higher priority than a special entry for a seller.

Commission rates in connection with a unit of responsibility behave as follows for corresponding combination hits:

- If no combination of salesperson and unit of responsibility is found in the commission rates, the combination All salesperson/unit of responsibility is used for the calculation.

- If the combination of salesperson and unit of responsibility is maintained in the commission records, the corresponding commission rate of the combination (salesperson / unit of responsibility) is used for the calculation.

- If no unit of responsibility has been defined specifically for the salesperson, the specific *(combination salesperson / no unit of responsibility)* commission rate will also be used for the calculation.

Creation and analysis

Commission Book Sheet Book commission

On the basis of the posted document lines, a proposal can be made periodically by means of a book sheet as to which commissions should be paid to which salesperson for which document and in what amount.

Via 'Build commission' in the menu ribbon, the book sheet can first be filled. There are several options for this:
* Document date filter * Only consider invoices / credit notes if customer item status: here you can choose between closed or open, open and closed. It is taken into account whether an incoming payment has already been posted or whether the customer item is still open. * Settlement for: both seller code, seller 1 or seller 2

In addition, the booking date and, if necessary, a booking description must be selected. In addition, other filters can be set in relation to the seller, to the header of sales invoices and to the header of sales credits.

The fill run analyzes all posted document lines with a sales code where no commission has been posted so far, and determines the valid commission rate.

With the logic of the commission rates described above, different commission agreements can be agreed at the same time with different levels of detail. As already described above, this has the consequence that due to the flexible system several commission rates may be applicable for one commission case. In the lower part of the book sheet the number of valid commission rates is displayed. These are displayed via the lock-up. Thus, no summation of the found commission rates takes place.

The book sheet rows can be edited manually.

Subsequently, the so-called commission items are formed by posting. In addition, a check mark is placed in the column 'Commission booked salesperson 1' (or salesperson 2) in the posted invoice lines for each salesperson. This prevents a commission from being made twice.

Note

The book sheet lines form only a suggestion and can be deleted or corrected by the respective user. If a line is deleted, this item will be retrieved again during a next filling run.

Cancel commission

Commission items can be cancelled. To do this, select the corresponding line in the Commission items table and click the 'Cancel items' function in the ribbon. Via a posted Invoice - Related - Invoice - Commission items, these can also be cancelled.

The cancellation causes the deletion of the checkmark 'Commission booked salesman 1' (or salesman 2) in the posted document lines. This allows you to retrieve a commission settlement again at a later time and correct it if necessary.

Commission journal

The generated commission items can be evaluated in reports. The printed commission reports form the internal company basis for the settlement of the commission to the salesperson (a transfer to payroll or purchasing documents with salesperson as vendor is no longer part of the commission management). For this purpose, the 'Provision' menu offers various reports: * Commission journal * Commission settlement (according to commission groups) * Commission settlement (by voucher).

The commission journal only shows the posted commission items. The commission statements, on the other hand, show the commission per salesperson. The commission statement by commission group also breaks down commission by group. For creation, filters can be made on the items - for example, on the posting date and on the seller.

Alternative lines in offers

In the offers there is the possibility to mark lines as alternatives. To do this, select in the article line in the column "Alternative = Alternative". Their prices are not included in the total price and can be displayed graphically differently in the printout.

Validity period in the offer

This functional area extends the standard in that a validity date can be entered in the offers. You can maintain this date manually on the quote card on the "General" info tab in the "Valid until date for quote" field.

Or the validity date is calculated automatically. In order to be able to use this functionality, it is mandatory that an additional validity formula has been stored in the Accounts Receivable & Sales setup in the "Offer validity formula" field on the "General" info tab.

When converting the offer into an order, the user will be notified that the validity has been exceeded by means of the stored validity formula. However, the offer can still be converted into an order.

Quotation status

In addition, a status management for quotations has been integrated, so that a quotation status can be assigned to the quotation. When creating and converting an offer into an order, a defined status can be set automatically (e.g. NEW or ORDER). This setup is set under "Offer status".

Delete and archive quotes

In sales, many quotations are often written, but (unfortunately) not every quotation results in an order. If the offers are not converted to an order, they remain in the system and have to be deleted manually. In order to facilitate this work, a batch processing function has been implemented in KUMAVISION base365 (BOOSTER), which deletes completed offers.

The call "Delete expired offers" can be found in the offer overview in the menu ribbon under the menu tab "Actions" > "Offer".

Click on the menu item "Delete expired sales offers". A query window opens. Here you can now specify whether the offers that are to be deleted should be automatically archived beforehand. You also have the option of using the filter criteria to narrow down the offers to be deleted.

For example, you could only delete offers whose validity has expired. In addition, it may make sense to filter for a specific seller code. When you confirm the query with "OK", you will be asked again whether you really want to delete the offers.

Confirm this with "Yes".

> Note

In order not to delete all offers by mistake, deletion without setting a filter is not possible. You will then receive a corresponding error message.

Zero positions

Basically, the system prevents unintentional invoicing of orders with an amount of zero in a line.

This can be circumvented by using the zero positions. If an invoice with zero is nevertheless necessary e.g.: for goodwill or warranty, these lines can be declared accordingly in the field "Zero position". The invoice is then possible and instead of the price the option value of the zero position is printed.

Optionally, the amounts present in the line can be kept and a line discount of 100% can be inserted automatically, or the amounts can be set to zero. A corresponding prompt appears to select these options.

Proforma invoice on order

Especially in the export business it is necessary to provide the forwarder or the customer with a proforma invoice before delivery. For this purpose KUMAVISION base365 (BOOSTER) offers the possibility to print such an invoice in the order.

Establishment

Accounts Receivable & Sales Facility

Since a proforma invoice must normally always have a number printed on it, this is controlled in the Accounts Receivable & Sales setup.

To do this, call up the Accounts Receivable & Sales setup via the user search. Then activate the checkbox "Get invoice no. when printing pro forma invoice" on the info tab.

Report selection sale

In addition, a report ID must be selected in the Sales report selection for the pro forma invoice.

Printing proforma invoice

The printing of the proforma invoice from the order is done via the "Actions" > "Booking" > "Proforma invoice" ribbon.

When printing a pro forma invoice from the 'Sales order, the next invoice number to be used is drawn and a "P" is appended. This number is then used up in the number series and can no longer be used for a posted invoice. Otherwise, the proforma invoice is a copy of the order confirmation with the difference that the text modules are printed that would also be printed with an invoice.

Use sales order confirmation Planned delivery date

This function allows you to control whether the "Planned Goods Issue Date" or the "Planned Delivery Date" should be printed on the order confirmation.

The definition is done globally in the Accounts Receivable & Sales setup via the field "Print Planned Goods Issue Date or Planned Delivery Date" on the info tab "KUMAVISION".

Reference to order doublet

Similar to the reference to existing quotations and blanket orders, a reference to an order duplicate can also be issued for orders.

Establishment

Accounts Receivable & Sales Facility

In order to receive these notes, the setup period order duplicates must be set in the Accounts Receivable & Sales setup. To do this, first call up the Accounts Receivable & Sales setup via the user search. The field "Period of order duplicates" on the info tab "General" defines the period of time in which the system looks back from the work date to see if the same article has already been entered in an order for a customer.

Sales order types

The message only appears if you are working with sales order types at the same time. For this purpose, the "Note on entered orders" checkbox must be set in the sales order type.

Order duplicate check

If an order is now entered for a customer with the corresponding order type, the system uses the Created on field on the order line to check whether other order lines exist within the defined period with the same article and the same order type. If this is the case, the system issues a corresponding message.

Create orders for direct delivery / special order from the order

This service area extends the standard process for direct deliveries and special orders. Contrary to the standard, either orders for direct delivery or special order can be created from an order for selected lines.

Note

In the standard system, this process can only be initiated from purchasing.

Direct delivery

You can use direct delivery (also called drop shipment) to have ordered goods delivered by your supplier directly to your customer. To create the order for direct delivery from the sales order, proceed as follows.

First, create a new sales order for the desired customer and add the corresponding items to the sales item rows as usual.

Mark the sales item lines as "Direct delivery" by checking the "Direct delivery" box.

Note

Instead of the "Direct delivery" field in the order line, you can also work via the "Purchase code" field. This automatically sets the necessary checkmarks in the previous field

Via the ribbon > Action > Schedule > Generate direct delivery you can generate the corresponding purchase order.

The selection of which sales lines are to be transferred is controlled by the "Direct delivery" field, as in the standard system. For this reason, only lines with the Direct delivery indicator are transferred when you call up Direct delivery. The selection window for the vendor opens. It is preset with the default vendor. Confirm with OK to generate the order.

Special order

A special order is used as soon as you, for example, order a special production for a customer from your supplier, but this is not to be sent directly from the supplier to the customer after completion, but to you, e.g. to be checked by your quality assurance.

First, create a new sales order for the desired customer and add the corresponding items to the sales item rows as usual.

Mark the sales item lines as "Special order" by checking the "Special order" box.

Note

Instead of the "Special order" field in the order line, you can also work through the "Purchase code" field. This automatically sets the necessary checkmarks in the previous field

Via the ribbon > Action > Schedule > Generate special order you can generate the corresponding purchase order.

The selection of which sales lines are to be transferred is controlled by the "Special order" field, as in the standard system. Therefore, when called up under Special order, only lines with the Special order indicator will be taken over.

The selection window for the vendor opens. It is preset with the default vendor. Confirm with OK to generate the order.

Prices

Price information in the contact management

Especially in the telephone sales of trading companies, a quick price statement is indispensable. The user can call up the following information directly via the "New customer price information" function:
* Item availability * Pricing of the item for the corresponding customer * Storage of the price or the agreed discount in the master data * Provide price information and save it * Display of existing price information (also already expired)

To call up the price information, open the desired contact card and then execute the function "New customer price information" via the menu ribbon under Link.

Note

The price information is available for contacts with an existing customer master. If the contact is not yet a customer, the standard route via an offer must be taken for the price information. If the price information function is called from the cockpit, the user receives a message.

The price information card opens.

Fill in the price information card according to your request using the table below:

Field	Description
No.	Enter the desired item number for the price information.
Variant code	If the article you have specified for the price information is variant-managed, enter the desired variant in the field.
Quantity	Enter the number of pieces for which the customer wants a price quote.
Unit code	The base unit code of the article is preset as the unit code. It can be changed depending on the article for this price information.
Date	The date is the date of the price information. The field can be changed if necessary.
Currency code	The currency code of the customer is stored in the currency code. If required, a different currency code can be entered here for the price information.
Price unit	The price unit of the item is displayed in the Price unit field. This can be changed for a specific price information.
Responsibility unit code	The responsibility unit code field displays the responsibility of the customer.
Sales order type	If necessary, specify a sales order type for the price information.
Description / Description 2	The Description, Description 2 fields are information fields pulled from the item data.
Base unit code	The Base Unit Code field is an information field that is pulled from the item data.
Cost price (MW)	The Cost Price (MW) field is an information field that is pulled from the item data.
Min. contribution margin %	The Min. contribution margin % field is an information field that is drawn from the item data.
Storage location	In the field Storage location the stored storage location of the customer is preset. If required, a different storage location can be entered here for the price information.
UK price	The UK price can be changed if necessary.
Line discount amount %	The Line discount amount % field can be changed if necessary, e.g. to 2.

On the basis of the price and discount data taken or, if necessary, modified, the line amount without VAT is calculated, which serves as a price information for the customer.

The non-editable fields Line Amount (MW) without VAT, Cost Amount (MW), Contribution Margin (MW) and Contribution Margin % show the user the total values for this price request.

The editable fields Remark, Minimum quantity, Start date and End date are used to permanently store the prices or discounts with these details for the customer in the sales prices or discounts.

To save prices, you can use the Save sales price function in the ribbon. If the check mark is set in the field Save information automatically when exiting, the price will be saved automatically.

The line discounts are saved analogously via the Save line discount function.

Price origin

In the sales documents, the "Price origin" field is available for information on the price of origin. Depending on the origin, the following information is given in the "Price origin" field:

Field	Description
Item / Selling price	Depending on how the sales price without VAT or sales price (price unit) without VAT is determined, the "Price origin" field is then set to item or purchase price.
Framework order	If the order is created from a blanket order, the "Price origin" is set to "Blanket order".
Manual	In case of any manual input of the sales price without VAT or sales price (price unit) without VAT, the field is set to "Manual".

Note

With the price origin Blanket order and Manual, the price is no longer determined again when the quantity is changed, contrary to the standard. For the other two options, the standard behavior remains unchanged.

Analogous to the price origin, the line discount origin field is stored per line. The basic logic and sense of the price origin are applied accordingly to the discount origin.

Saving prices to documents

Often, due to the high number of potential articles, price maintenance in the retail sector is not carried out in advance, but customer-specifically within an offer. Especially with regard to the tele-sales area, prices are agreed by telephone and stored in the system.

The Save Prices / Discounts section gives the user the possibility to conveniently save the prices individually agreed within an offer or order, so that they are directly available to the article the next time it is used.

To save the individual prices within an offer or order, proceed as follows:

First create an offer / order with the desired article lines. In the columns "Sales price" or "Line discount" the values with the agreed prices/discounts are changed.

Then select the rows for which you want to save the prices / discounts. Using the "Rows" info tab, select the menu item Row - Price / discount calculation - Save price / discount.

The "Save sales price / line discount" mask opens on which you activate the "Save prices" and "Save line discounts" buttons. In addition, further options for saving the prices are available which can be activated/ deactivated individually. Then confirm your selection with "OK".

If "Show prices after creation" was activated in the previous mask, the Sales prices mask opens. Here the prices can be checked again and edited if necessary. Otherwise, you will be returned to the sales document.

If "Show line discounts after creation" was activated in the previous screen, the Sales line discounts screen opens. Here the prices can be checked again and edited if necessary. Otherwise, you will be returned to the sales document.

Sales conditions

Sales conditions are a new form of price or discount definitions. The Sales Condition application area allows you to flexibly calculate the Sales Price and Line Discount % fields in the sales line using freely definable calculation lines.

You can define the costing lines in a standardized way already in the master data.

Sales conditions allow you to variably calculate a sales price or a line discount % in a sales price or sales line discount, and ultimately a variable price or discount calculation in a sales line.

Sales conditions are first defined as an independent dataset in the sales master data and then assigned to one or more records in the Sales Price or Sales Line Discount tables, depending on whether the sales condition is used to calculate a sales price or a line discount %.

Plant sales conditions

To create a new sales condition, access the sales condition overview via the application search and click on "New".

A new sales conditions card opens where you can create the desired sales condition using the tables below.

Inforegister General

Field	Description
No.	Assignment of a unique, identifiable no. of the sales condition by sequential number by stored number series or manual assignment.
Description	Description of the sales condition
Calculation basis	Definition of the use of the condition. The following selections are available: • Price condition (cost price) • Price condition (EK price (latest)) • Discount condition • Price condition (EK price)
Currency code	Currency code for the use of the sales condition

Sales condition subform

The sales condition rows define the calculation steps for calculating a sales price or a sales discount when applying the condition. When defining the sales condition rows, note in particular that the sequence of the subsequent processing of the calculation steps for calculating the sales price or line discount % is determined by the sequence of the rows you have entered in the window.

Field	Description
Description	Description of the sales condition line
Operators	+ adds the entered percentage / currency amount - subtracts the entered percentage / currency amount
Value	The value of the percentage or currency amount that will be added or subtracted via the operator is entered here.
Calculation	**Net Percent:** calculates the percentage value on the calculation basis (purchase price or cost price) **Consequence percent:** calculates the percentage value on the final value of the previous line in the sales condition **Currency amount:** adds or subtracts the entered value in the amount of the currency.

Example 1:
Sales condition 001
Knife discount -10%Calculation subsequent percentage

Basic condition + 5%Calculation subsequent percentage

Result:
The cost price of the item is valued at 3.040, -€.
10 % of 3.040,00 = 304,00
3.040,00 - 304,00 = 2736,00
5 % of 2736.00 = 136.80
2736.00 + 136.80 = 2,872.80

Example 2:
Sales condition 001 Trade fair discount -10%Calculation net percent Basic condition + 5%Calculation net percent

Result:
The cost price of the item is valued at € 3040.00
10 % of 3.040,00 = 304,00
3040,00 - 304,00 = 2736,00
5 % of 3040.00 = 152.00
2736.00 + 152.00 = 2,888.00

Via the action "Translations" you have the possibility to store a translation for the individual calculation descriptions. This translation will be used instead of the German description when transferring to the documents, provided that a language code is stored in the document. If no translation is available, the German description is always used.

Field	Description
Target language	Select translation language
Value	Translation of the calculation description

Note

The sales conditions are not printed in the KUMAVISIONs standard documents. If they are printed project-specifically, the translation is available in the respective document.

Assignment sales condition in sales price and sales line discount

The assignment of a sales condition to a record in the "Sales price" or "Sales line discount" table is always done via the "Sales condition no." field. The currency of the condition must match the currency of the "Sales price" or "Sales line discount ".

Records in the "Sales price" table with the "Sales condition no." field filled in always have the value 0 in the Sales price field in the master data, the price is calculated when entering the data in the sales lines. The same applies to the "Sales line discount" table and the line discount % field there.

The calculation of the sales price or the line discount % always takes place at runtime when the respective data record is used in a sales document with its data.

Sales prices or sales line discounts with specified sales conditions

The sales prices with specified condition number are used like normal sales prices to determine the best price. Whether or not a sales price is taken into account as a valid sales price for pricing in a special sales document is therefore not dependent on the sales condition data. Only the value of the sales price is determined dynamically and the sales price then participates with this determined price in the best price determination.

Note

The default logic for finding the records of the "Sales price" or "Sales line discount" table has not been changed.

Function: "Get sales price" in sales document

The "Get Sales Price" function, available by default in every sales document, lists for the user's selection the records of the Sales Price table applicable to a sales line. The user can select a specific sales price and transfer it to the sales lines, thus manually bypassing the automatic sales price determination when entering the item no. or sales line quantity.

The same applies analogously to the "Get line discount" function (can also be called in the sales document.) The function has been extended in that when a data record from the "Sales price" table with an assigned "Sales condition no." is displayed, the value calculated on the basis of the sales line data using the sales condition

lines is now displayed instead of the 0 defined in the master data. This applies to each row of the window that refers to a sales condition.

If a sales price is included in the best price determination, the currency and the unit of the sales line may differ from the currency and the unit of the data record of the Sales Price table. Therefore, the Sales price table has been extended with the information "Currency code (Calculated)", "Unit code Calculated" and "Sales price (Calculated)". The first two fields contain the data of the sales line from which the calculation call has been started. The "Sales price (calculated)" field contains the calculated sales price in the currency and the unit of the sales line, unlike the default "Sales price" field which contains the price in the currency and the unit code of the "Sales price" (master data) record.

By clicking on the Assist button in the Sales condition no. field, you can branch out to a window that shows the application of the sales condition up to the sales price determined in this way and thus makes it comprehensible. The same applies in analogy to the Sales line discount table. Transfer of the sales condition data to the "Sales price/discount calculation line" table. If a sales condition is found during the sales price determination, the data of the sales condition rows are transferred to a sub-table of the sales row ("Sales price/ discount calculation row" table). This applies both when using the best price determination by the application and when using the "Get sales price" function by the operator. The same applies here again analogously for the discount determination.

The user can display the records of the "Sales- Price/Discount calculation row" table in a window and also edit them. The parameters can be changed, rows can be deleted and rows can be added.

In addition, if necessary, it is possible to call on a completely empty calculation in the sales line and transfer by function the lines of any condition selected by him.

Editing is always done in a temporary environment, which allows the user to simulate his change and - if he does not like the effect of his change - to discard it completely and restore the previous state before calling the window. By confirming with OK, the changes made are transferred to the sales line, the changes are retained, these can be called up again and edited. The same applies here again for the application of the sales discounts. The sales line contains 2 calculated fields "Sales price calculation available" and "Sales discount calculation available" (both Yes/No). The fields are not initially displayed in the sales line, but can be selected by the user and show the user whether or not there is a respective calculation for the line.

Transfer "Sales price/discount calculation line". when copying, posting, archiving, delivery call-off, etc.

The data records of the "Sales price/discount calculation line" table are also transferred to the posted documents and archived documents during posting and archiving. These can be displayed read-only from the posted or archived document to the respective line of the document.

Note

Exception are the delivery lines and return delivery lines, because here by default no display of the sales price takes place.

Price units

The price calculation of a document line of the sale from the standard system is based on the formula:

Net amount = quantity * sales price * (100 - discount%) / 100

In practice, other calculation formulas are also encountered. An example of this is the price calculation using price units. Typically, this price calculation is used for goods that have a very low unit price, e.g. screws. When using price units, the price information of the document line must always be interpreted in the unit code of the document line.

Example 1:
The basic unit of the article is Piece, the unit of the document line is also Piece. The price in the document line is given in multiples of 1000 (= price unit). The price entered by the user is to be interpreted as the price for 1000 PIECES.

Example 2:
The basic unit of the article is Piece, the unit of the document line is Package. The unit PAKET is defined in the table of article units for the article, where 1 PAKET = 50 PIECES. The price in the document row is given in multiples of 1000 (=price unit). The price entered by the user is to be interpreted as the price for 1000 PAKET.

In addition, the user can already manage the prices agreed with the customers in the master data by specifying a price unit.

Note

Price units do not represent a conversion between units that cannot be defined in the article unit table by fixed conversions. E.g. the article is managed in the basic unit Piece. The document line is also recorded in PUNCH, but the price calculation of the document line is not based on PUNCH, but on weight. The mapping of such weight-based document pricing is another pricing method and is not mapped in this section.

Article price groups

In view of the fact that in wholesale identical articles are not to be priced individually in both purchasing and sales, but a price is to be stored for an entire group of articles with the same price, the functionality of the article price groups is a time saver and a reduction in the amount of maintenance required for pricing.

An example of an item price group can be colors. A group of colors of the same container always costs the same, no matter if it is red, yellow or green color. Thus, price maintenance in sales can be done via an article price group "color". The prices stored via an article price group are fully integrated into the pricing routine in Microsoft Dynamics Business Central™.

Price agreements for item price groups can be recorded in the same way as item prices, i.e. in particular:

- the sales type can accept all options (All customers / Customer price group / Special customer) even for item price groups,
- Campaign awards are supported,
- Customer hierarchies are supported (see chapter Hierarchies),
- Sales conditions are supported,
- Quantity-based, date-based and currency-based prices are supported,
- unit-dependent prices are also supported, as follows: If a price (defined for an article price group) is to apply to a special article unit, this must be stored in the line. It is up to the user to ensure that this unit is then also defined as an article unit for the articles of this article price group.

Note

Variant-dependent price definitions are not supported for article price groups. The following applies here: If an article with variants belongs to an article price group, the prices of this article price group automatically apply to all variants of this article.

To define an article price group, call up the "Article price groups" via the user search.

Via "New" in the ribbon you can define a new item price group using the table below.

Field	Description
Code	Specifies a meaningful abbreviation of the item price group
Description	Indicates the description of the item price group
Sale	Specifies the use for the sales area
Purchasing	Specifies the usage for the purchase

Once the article price group has been successfully created, you can use the "Ribbon - Belonging - Article price group - Sales prices" to enter the prices for each customer or customer group of the article price group in the same way as for standard price maintenance.

Graduated prices

The calculation of the value of the Sales price and Sales line discount % fields of the sales line is based on the price and discount agreements between the customer and the item stored in the master data in the Sales price and Sales line discount tables.

The possibilities of price and discount agreements are very diverse. For example, agreements for all customers, for customer groups or for special customers can be stored on the customer side and agreements for article groups or for special articles can be stored on the article side.

If the user enters an item in a sales line in a sales document for a customer, the application automatically calculates the value of the Sales price and Line discount % fields of the sales line. The calculation is done by comparing the value of the Quantity field of this specific sales line with the minimum quantities stored in the mentioned master data, and thus running a best price determination among all the sales prices or line discounts found.

In principle, the standard system carries out the best price determination described above separately for each sales line of a sales document. In practice, it can happen that the user enters one and the same article several times in one sales document. This may be necessary, for example, if the item is to be delivered on different delivery dates. This industry solution therefore extends the price or discount determination of Microsoft Dynamics Business Central™ in that not only the quantity of the specific sales line that the user is currently entering is used for the price or discount calculation of this line, but the sum of the quantities in all sales lines of the same sales document with the same item number. Price relevant fields for this sales line functionality are:
* Type and no. * Variant code * Unit code and quantity per unit * Alternative with value \<empty> * Allow line discount and allow calculation discount

Only those sales lines that have the same values within these fields will be used for summation via the Quantity field.

As a rule, sales lines with the following values are not included in the totals
* Delivery no. or return no. with value not equal to <empty>.
(i.e. invoice or credit memo lines that have been created by a delivery schedule) * Blank frame order no. with value not equal to .
(i.e. order lines that refer to a blanket order line) * Alternative with value not equal to <empty>

Via the action Update scale prices the scale prices are calculated. The calculation of the scale prices always takes place also with the release of the document.

If the sales price or line discount % is changed manually in a document line, neither the price discount nor the line discount will be recalculated when calculating the scale prices for these lines. Moreover, this line is not included in the total quantity for the calculation of the scale prices and discounts.

This also applies to document lines with a link to a blanket order or blanket agreement, as well as to alternative lines and when invoicing posted deliveries or returns.

If, exceptionally, no distributed scale price determination is to take place in a document, this function can be switched off via the switch Price/discount minimum quantity per line. This can be necessary, for example, if you want to explicitly show the quantity scale prices or discounts to a customer in an offer.

If lines have already been entered in the sales document, the system asks whether this change should be made. Confirm with Yes if you want to switch off scale pricing for the document.

  Note

Please note that this functionality is only available if the Extended pricing is set to "Extended pricing" in the Accounts Receivable & Sales setup and the "Price/discount minimum quantity per line" checkbox is deactivated.

Prices/discounts depending on the type of order

For different sales situations (e.g. the differentiation of an article sale in the "new customer business" and in the "spare parts business") it is necessary to be able to agree also on different conditions (prices and discounts) for this.

Therefore, in KUMAVISION base365 (BOOSTER) it is possible to store the sales prices and line discounts depending on the sales order type.

Sales prices The article sales prices can also be stored depending on the respective sales order type. These prices are then taken into account during pricing if the corresponding sales order type is specified (in the sales header).

You can specify the sales order type in the field of the same name in the respective sales price line for the required item.

When a sales order is created with the corresponding sales order type, the corresponding price is determined for the item line.

Sales line discount Analogous to the sales prices, the sales line discounts are maintained. These can now also be stored depending on the sales order type.

Debtors resource prices

Customer-specific prices can also be stored for resources in KUMAVISION base365 (BOOSTER). The call of the resource prices is done via the customer or the resource.

Resource prices can be created per customer, per customer price group or for all customers. They apply to specific resources or a resource group and, like item prices, can be given a start and end date.

The logic of best price determination or, depending on the institution, no best price determination also applies to the resources VK prices.

> Note

Resource prices are not integrated into pricing with hierarchy code.

Close prices and discounts

The correct price and discount determination depends on the use of start and end dates in the corresponding sales price and line discount tables. In KUMAVISION base365 (BOOSTER), the most recent price always applies as the currently valid price, all other things being equal. Analogously, this is also true for the line discounts.

In principle, it is possible to provide existing price or discount entries automatically with an end date, as soon as an entry with a new start date and the same constellation is made. This makes it easier for users to understand the price or discount found.

To do this, the "Prices and discount" switch on the KUMAVISION info tab must be activated in the Accounts Receivable & Sales setup.

If a new price or a new discount is entered in the corresponding table with a new start date, the system automatically sets the end date to 1 day before the new start date in previous entries that have the same constellation and did not have an end date before.

> Note

The "old" prices and discounts will be closed only if the new price or discount entry has no end date.

Best price determination controllable

In Microsoft Dynamics Business Central™, the so-called best price determination applies. This means that in the customer/article constellation, the system always finds the most favorable price and discount available for the customer that is valid at the time of document entry. A so-called net best price determination is made, i.e. the lowest combination of sales price minus line discount is taken. If necessary, a higher sales price that is eligible for line discount is taken and not a lower sales price that is not eligible for line discount. This also applies to KUMAVISION base365 (BOOSTER).

However, there are often customers who are excluded from this rule, but receive individual prices slightly higher than the prices generally available in the system.

For this reason KUMAVISION base365 (BOOSTER) offers the possibility to switch off the best price determination either generally for all customers or customer specific. Switching off the best price determination corresponds to a hierarchical pricing.

Facility general

In the "Accounts Receivable & Sales Setup" on the "General" info tab, the "Best price determination" field is used to control whether and to what extent best price determination should take place.

The Best price determination field can be assigned the following option values:

Option value	Description
always	Best price determination is to be carried out (in principle).
never	There shall be no best price determination.
According to debtor	Best price determination is to be carried out according to the setting for the respective customer

Setup controlled best price determination at the debtor

If the setting "according to customer" is selected in the Accounts Receivable & Sales setup, it must be specifically defined for the respective customer whether the best price determination is to be switched off for this customer.

Activating the "No best price determination" checkbox on the "Invoicing" information tab will always result in the customer-specific price being found for this customer, even if it is higher than the generally valid sales price.

If a new sales document is created for a customer that has the "No best price determination" identifier, the sales document now also (automatically) receives the "No best price determination" indicator in the "Invoice details" info tab.

The (pre-)assignment is done as follows:

Option value	Description
Switch not active	Means that the best price determination should take place for the sales document. This default setting is made if the "Best price determination" field is set to "always" in the Accounts Receivable & Sales setup.
Switch active	Means that no best price determination is to be carried out for the sales document. This default setting is made if the "Best price determination" field is set to "never" in the Accounts receivable & sales setup. or If the "Best price determination" field in the Accounts Receivable & Sales Setup is set to "According to customer" and the current customer is marked with "Yes" in the "No best price determination" field.

In the respective sales document, this default can only be changed by the user if the "Best price determination" field is set to "always" or "according to customer" in the Customers & Sales setup (if set to "never", the field is blocked for entry/change). You can therefore reactivate best price determination in the document if necessary, even if the customer is not normally designated for best price determination.

Pricing behavior

Several prices can be stored for one article (e.g. for different scale quantities and customers, customer groups, all customers, etc.), all of which are valid in principle.

If best price determination is required, the system automatically finds the most favorable price for the customer for a document line.

Example: The customer orders an item. The system determines the best price for the customer. If no best price determination is desired, the system will not (anymore) find the most favorable price for the customer for a document line, but the most specific customer price.

Pricing date

The pricing date in the offer, order and complaint is the order date. For credit notes and invoices, the posting date is the pricing date.

The prices in case of a non-best price determination (hierarchical price determination) are found according to priority.

1. Hierarchy level: The lowest hierarchy level of a customer has priority over the next higher level. This only applies when working with customer hierarchies, e.g. in the context of association structures.
2. Sales type: Campaign, Customer, Customer price group, All customers
3. Sales order type: sales order type filled, no sales order type
4. Type: article, article price group
5. Variant code: Variant code filled, no variant, This only comes into effect when working with variant codes for articles.
6. Unit code: Unit code filled, no unit code
7. Currency code: Currency code filled, no currency code This is only used if the customer works with foreign currencies.
8. Responsibility unit code: Responsibility unit code filled, no responsibility unit code.
9. Minimum quantity
10. Start date: Newest start date, Older, Start date not filled

If a campaign is selected in the sales document, the other active campaigns of the customer are not taken into account in pricing. These campaign prices have priority over all other prices. If no campaign is selected in the document, only the campaigns for the customer/contact of the sales document are taken into account, not for all customers in the hierarchy.

First, pricing takes place at the level of the customer. If the customer belongs to another customer in a hierarchy, this customer is not considered for the time being. If no valid price is found at the customer level, the search continues at the next hierarchy level. If the customer belongs to several customers on the next level, an error message is displayed. The number of hierarchy levels is unlimited. If no valid price is found at the customer level, the search continues at the customer price group level using the same logic.

The following logic applies within a layer:

A price with a variant has a higher priority than a price without a variant, provided that the type of sale and the type are the same.

The same applies to the currency: first the price with currency, then without currency. But this criterion comes after the variant.

After that, the minimum quantity is compared: The higher minimum quantity (within the validity) is taken.

Finally, the start date is checked: A newer price has a higher priority than an older one. Basically, only prices valid on the order date are taken.

Behavior of the discount determination

Discount determination with and without best price determination works in the same way as price determination.

Pricing according to hierarchies

In the best price or best discount determination, entries from customers higher in the hierarchy are also included (see also "Managing hierarchies"). In order to be able to use this functionality, the hierarchy type code to be used in pricing must first be defined in the "General" info tab in the Accounts Receivable & Sales setup.

All customers stored via the defined hierarchy type code are then taken into account accordingly in the price/discount determination. The best price and the best discount in the corresponding combinations (validity, minimum quantity, units, currency, unit of responsibility...) are transferred to the document line. It does not matter in which hierarchy level the price was determined. If necessary, different prices (customer price, customer price group price, etc.) are determined in the different hierarchy levels.

Pricing by unit of responsibility

This service area extends the two standard modules Sales Prices and Sales Discount by the possibility to define them also per responsibility unit. I.e. both prices and discounts can be different for different units of responsibility. To do this, the desired unit of responsibility must be maintained in the "Unit of responsibility code" field in the corresponding sales price or sales discount line.

UK suggested retail price

Advanced fields in Advanced Sales Price Proposals

The function "Extended sales price proposals" include the price fields extended in KUMAVISION base365 (BOOSTER): * Price unit * Current UK price (price unit) * New UK price (price unit) * Unit of responsibility * Sales order type

The fields are taken into account when calculating the price proposal as well as when saving it in the sales price table.

Sales price proposal based on sales conditions

When creating the sales price proposal, the new price can be calculated in Microsoft Dynamics Business Central™ based on factors to be entered manually. However, in KUMAVISION base365 (BOOSTER) there are already sales conditions for the calculation of sales prices, see Sales Conditions. These sales conditions can be used to create the sales price proposal instead of the factor.

Procedure: The "Suggest item price..." function is called up in the Extended Sales Price Suggestion. The option cannot be set for the Suggest item price option. In the options, the calculation base must be set to Sales condition and in the Sales condition code field the desired sales condition is selected, on the basis of which the new prices will be calculated. Only conditions of the type Price condition and without currency code can be selected. Quantity factors are not taken into account. After the action has been performed, the new prices are proposed in the book sheet and can be transferred to the sales price table according to Microsoft Dynamics Business Central™ Standard.

> Note

Already in the sales price proposal standard is looked for the field Only amounts over in the sales price table. If you have not entered any prices there, new sales prices will only be calculated if the filter -1 is entered there.

Prices (from version 20.0)

Function management setup

The new price management must first be activated in the function administration. To do this, call up the "Function administration" via the user search.

The "Function update: New sales pricing" function must be set to the "All users" value in the "Activated for" column.

> Note

Please note that to use the previous pricing, you must not activate this feature. After activation it is not possible to deactivate this feature.

Price information in the contact management

Especially in the telephone sales of trading companies, a quick price statement is indispensable. Users can call up the following information directly via the "New customer price information" function:

- Item availability
- Pricing of the item for the corresponding customer
- Storage of the price or the agreed discount in the master data
- Provide price information and save it
- Display of existing price information (also already expired)

To call up the price information, open the desired contact card and then run via the "Belonging" > "Prices and discounts" ribbon, select the "New price information" function.

Note

The price information is available for contacts with an existing customer master. If the contact is not yet a customer, the standard route via an offer must be taken for the price information. If the "Price information" function is called from the cockpit, users receive a message.

The price information card opens. Fill in the price information card according to your request using the table below:

Field	Description
No.	Enter the desired item number for the price information.
Variant code	If the article you have specified for the price information is variant-managed, enter the desired variant in the field.
Quantity	Enter the number of pieces for which the customer wants a price quote.
Unit code	The base unit code of the article is preset as the unit code. It can be changed depending on the article for this price information.
Date	The date is the date of the price information. The field can be changed if necessary.
Currency code	The currency code of the customer is stored in the currency code. If required, a different currency code can be entered here for the price information.
Price unit	The price unit of the item is displayed in the Price unit field. This can be changed for a specific price information.
Responsibility unit code	The responsibility unit code field displays the responsibility of the customer.
Sales order type	If necessary, specify a sales order type for the price information.
Description / Description2	The Description, Description 2 fields are information fields pulled from the item data.
Base unit code	The Base Unit Code field is an information field that is pulled from the item data.
Cost price (MW)	The Cost Price (MW) field is an information field that is pulled from the item data.
Min. contribution margin %	The Min. contribution margin % field is an information field that is drawn from the item data.
Storage location	In the field Storage location the stored storage location of the customer is preset. If required, a different storage location can be entered here for the price information.
UK price	The UK price can be changed if necessary.
Line discount amount %	The Line discount amount % field can be changed if necessary, e.g. to 2.
Line discount amount	Specifies the calculated line discount amount based on the percentage line discount.
Line amount Without VAT	Specifies the net amount of the sales line.

Field	Description
Minimum quantity	Specifies a possible minimum purchase quantity. This specification is necessary if the prices for the customer are to be saved permanently in the price list.
Start/End date	Specifies a validity period for which the prices have been agreed. This specification is necessary if the prices for the customer are to be saved permanently in the price list.
Allow line discount	Activate the switch if you want to apply a line discount for the article line (if any).
Allow Rech. discount	Activate the switch if you want to apply an invoice discount (if available).
Price calculation method	In this field you specify the price calculation method you want to be considered for pricing. The following options are available: **Lowest price** Microsoft Business Central Standard Pricing **KUMAVISION base Lowest price** Best price determination **KUMAVISION base price priorities** Without best price determination
Price Price List Code	Specifies a possible price list. Specifying the price list code is mandatory for saving sales prices.
Discount price list code	Specifies a discount price list. Specifying the discount price list code is mandatory for saving sales prices.
Comments	Indicates possible remarks.
Automatically save information when exiting	When the switch is activated, the price is automatically saved.

On the basis of the price and discount data taken or, if necessary, modified, the line amount without VAT is calculated, which serves as a price information for the customer.

The non-editable fields Line Amount (MW) without VAT, Cost Amount (MW), Contribution Margin (MW) and Contribution Margin % show users the total values for this price request.

The editable fields Remark, Minimum quantity, Start date and End date are used to permanently store the prices or discounts with these details for the customer in the price list.

To save prices, you can use the "Save sales price" function in the ribbon. If the "Save information automatically when exiting" field is checked, the price will be saved automatically.

The line discounts are saved in the same way using the "Save line discount" function. During the execution of the function, a duplicate check is performed first. If a customer/article/variant combination already exists in the selected price list, users will be informed about it in a separate mask with the possibility to remove these price lines.

Price origin

In the sales documents, the "Price origin" field is available for information on the price of origin. Depending on the origin, the following information is given in the "Price origin" field:

Field	Description
Item / Selling price	Depending on how the sales price without VAT or sales price (price unit) without VAT is determined, the "Price origin" field is then set to item or purchase price.
Blanket order	If the order is created from a blanket order, the "Price origin" is set to "Blanket order".
Manual	In case of any manual input of the sales price without VAT or sales price (price unit) without VAT, the field is set to "Manual".

Note

With the price origin Blanket order and Manual, the price is no longer determined again when the quantity is changed, contrary to the standard. For the other two options, the standard behavior remains unchanged.

Analogous to the price origin, the field "Line discount origin" is stored per line. The basic logic and sense of the price origin are applied accordingly to the discount origin.

Saving prices to documents

Often, due to the high number of potential articles, price maintenance in the retail sector is not carried out in advance, but customer-specifically within an offer. Especially with regard to the tele-sales area, prices are agreed by telephone and created in the system.

The Save Prices / Discounts section gives users the option of conveniently saving the prices individually agreed within an offer or order, so that these are directly available to the article the next time it is used.

To save the individual prices within an offer or order, proceed as follows:

First create an offer / order with the desired article lines. In the columns "Sales price" or "Line discount" the values with the agreed prices/discounts are changed.

Then select the rows for which the prices / discounts are to be saved. Via the "Rows" info tab, select the "Row" > "Linked information" > "Price / discount calculation" > "Save price / discount" menu item.

The "Save sales price / line discount" mask opens on which you activate the "Save prices" and "Save line discounts" buttons. In addition, there are other options for saving prices that can be activated/deactivated individually.

Field	Description
Save prices	If users want to save the prices, this field must be activated. The other "price-relevant" parameters can only be set after activation. If this field is deactivated, the prices will not be saved.
Price list code	Specifies a possible price list. Specifying the price list code is mandatory for saving sales prices.
Debtor no.	Via the customer number, users can specify for whom the prices are to be saved.
Start date	Here you can specify a start date from which the prices are to apply. The current working date is preset here.
End date	Here you can enter an end date until which the prices should be valid.
Adopt minimum quantity	The "Adopt minimum quantity" indicator is used to specify that the quantities of the respective selected purchasing lines are adopted as minimum quantities in the price list. If this field is deactivated, no minimum quantities are transferred to the price table.
Apply variant code	The "Adopt variant code" indicator is used to specify that the variants of the respective selected sales lines are adopted as variants in the price list. If this field is deactivated, no variants are transferred to the price table and the price is therefore valid for all variants.
Show prices after creation	If this checkbox is activated, the newly created prices are displayed in the "Price list line" window after creation. This allows manual checking and, if necessary, revision.

Meaning of the mask fields for discounts:

Field	Description
Save line discounts	If users want to save the line discounts, this field must be activated. The other "discount-relevant" parameters can only be set after activation. If this field is deactivated, the line discounts will not be saved.
Debtor no.	Via the customer number, users can specify for whom the prices are to be saved.
Start date	Here you can specify a start date from which the line discounts are to apply. The current work date is preset here.
End date	Here you can enter an end date until which the line discounts should be valid.
Adopt minimum quantity	The "Adopt minimum quantity" indicator is used to specify that the quantities of the respective selected sales lines are adopted as minimum quantities in the price list. If this field is deactivated, no minimum quantities are transferred to the price list.
Apply variant code	The "Adopt variant code" indicator is used to specify that the variants of the respective selected sales lines are adopted as variants in the price list. If this field is deactivated, no variants are transferred to the price list and the line discount is thus valid across variants.
Show line discounts after creation	If this checkbox is activated, the newly created line discounts are displayed in the "Price list line" window after creation. This allows manual checking and, if necessary, revision.

Then confirm your selection with "OK".

Sales conditions

Sales conditions are a new form of price or discount definitions. The Sales Condition application area allows you to flexibly calculate the "Sales price" and "Line discount %" fields in the sales line using freely definable calculation lines.

You can define the costing lines in a standardized way already in the master data.

Sales conditions allow you to variably calculate a sales price or a line discount % in a sales price or sales line discount, and ultimately a variable price or discount calculation in a sales line.

Sales conditions are first defined as an independent dataset in the sales master data and then assigned to one or more records in the price list, depending on whether the sales condition is used to calculate a sales price or a line discount %.

Plant sales conditions

To create a new sales condition, access the sales condition overview via the application search and click on "New".

A new sales conditions card opens where you can create the desired sales condition using the tables below.

Inforegister General

Field	Description
No.	Assignment of a unique, identifiable no. of the sales condition by sequential number by stored number series or manual assignment.
Description	Description of the sales condition
Calculation basis	Definition of the condition usage. The following selection options are available: - Price condition (Cost price) - Price condition (EK price (newest)) - Discount condition - Price condition (EK price)
Currency code	Currency code for the use of the sales condition

Sales condition subform

The sales condition rows define the calculation steps for calculating a sales price or a sales discount when applying the condition. When defining the sales condition rows, note in particular that the sequence of the subsequent processing of the calculation steps for calculating the sales price or line discount % is determined by the sequence of the rows you have entered in the window.

Field	Description
Description	Description of the sales condition line
Operators	+ adds the entered percentage / currency amount -subtracts the entered percentage / currency amount
Value	The value of the percentage or currency amount that will be added or subtracted via the operator is entered here. Calculation Net percentage: calculates the percentage value on the calculation base (EK price or cost price) Subsequent percentage: calculates the percentage value on the final value of the previous line in the sales condition. Currency amount: adds or subtracts the entered value in the amount of the currency.

Example 1:

Sales condition 001Knife discount
-10% Calculation of subsequent percentageBasic condition
+ 5% Calculation of subsequent percentage

Result:

The cost price of the item is calculated as 3.040, -€10
% of 3.040,00 = 304,003040,00
- 304,00 = 2736,005
% of 2736,00 = 136,802736,00
+ 136,80 = 2.872,80

Example 2:

Sales condition 001Knife discount
-10% Calculation net percentageBasic condition
+ 5% Calculation net percentage

Result:

The cost price of the article is calculated as 3040,00 €10
% of 3.040,00 = 304,003040,00
- 304,00 = 2736,00
5% of 3040,00 = 152,002736,00
+ 152,00 = 2.888,00

Via the action "Translations" you have the possibility to store a translation for the individual calculation descriptions. This translation will be used instead of the German description when transferring to the documents, provided that a language code is stored in the document. If no translation is available, the German description will always be used.

Field	Description
Target language	Translation language selection
Value	Translation of the calculation description

Note

The sales conditions are not printed in the KUMAVISIONs standard documents. If they are printed project specific, the translation is available in the respective document.

Assignment sales condition in sales price and sales line discount

The assignment of a sales condition is always done via the field "Price condition no." of the respective price list. The currency of the condition must be the same as the currency of the "Sales price" or "Sales line discount".

Price list records with the "Sales condition no." field filled in always have the value 0 in the "Sales price" field in the price lists, the price is calculated when entering it in the sales lines. The same applies to the "Line discount %" field.

The calculation of the sales price or the line discount % always takes place at runtime when the respective data record is used in a sales document with its data.

Sales prices or sales line discounts with specified sales condition

The sales prices with specified condition number are used like normal sales prices to determine the best price. Whether or not a sales price is included as a valid sales price for pricing in a special sales document is

therefore not dependent on the sales condition data. Only the value of the sales price is determined dynamically and the sales price then participates with this determined price in the best price determination.

Function: "Get price" in sales document

The "Get Sales Price" function, available by default in every sales document, lists the price list records applicable to a sales line for users to select. Users can select a specific sales price and transfer it to the sales rows, thus manually bypassing the automatic sales price determination when entering the item no. or sales row quantity.

The same applies analogously to the "Retrieve line discount" function (also callable in the sales document). The function has been extended to the extent that now when displaying a data record of the price list with assigned "Sales condition no." instead of the 0 defined in the master data, the value calculated on the basis of the data of the sales line using the sales condition lines is displayed. This applies to each row of the window that refers to a sales condition.

If a sales price is included in the best price determination, the currency and the unit of the sales line may differ from the currency and the unit of the data record of the price list. Therefore, the Sales Price table has been extended with the information "Currency code (Calculated)", "Unit code Calculated" and "Sales price (Calculated)". The first two fields contain the data of the sales line from which the calculation call has been started. The "Sales price (calculated)" field contains the calculated sales price in the currency and the unit of the sales line, unlike the default "Sales price" field which contains the price in the currency and the unit code of the "Price list" (master data) record.

By clicking in the Sales condition no. field, you can use the hyperlink to go to a window that shows you the calculation of the sales condition up to the determined sales price. The same applies in analogy to the sales line discounts.

Price unit

The price calculation of a document line of the sale from the standard system is based on the formula:

Net amount = quantity * sales price * (100 - discount%) / 100

In practice, other calculation formulas are also encountered. One example is the price calculation using price units. Typically, this price calculation is used for goods that have a very low unit price, e.g. screws. When using price units, the price specification of the document line must always be interpreted in the unit code of the document line.

Example 1:

The basic unit of the article is Piece, the unit of the document line is also Piece. The price in the document line is given in a multiple of 1000 (= price unit). The price entered by users is to be interpreted as the price for 1000 PIECES.

Example 2:

The basic unit of the article is Piece, the unit of the document line is Package. The unit PAKET is defined in the table of article units for the article, where 1 PAKET = 50 PIECES. The price in the document row is given in multiples of 1000 (=price unit). The price entered by users is to be interpreted as the price for 1000 PAKET.

In addition, users can already manage the prices agreed with customers in the master data by specifying a price unit.

Note

Price units do not represent a conversion between units that cannot be defined in the article unit table by fixed conversions. E.g. the article is managed in the basic unit Piece. The document line is also recorded in PUNCH, but the price calculation of the document line is not based on PUNCH, but on weight. The mapping of such weight-based document pricing is another pricing method and is not mapped in this section.

Article price groups

In view of the fact that in wholesale identical articles are not to be priced individually in both purchasing and sales, but a price is to be stored for an entire group of articles with the same price, the functionality of the article price groups is a time saver and a reduction in the amount of maintenance required for pricing.

An example of an item price group can be colors. A group of colors of the same container always costs the same, no matter if it is red, yellow or green color. Thus, price maintenance in sales can be done via an article price group "color". The prices stored via an article price group are fully integrated into the pricing routine in Microsoft Dynamics Business Central™.

Price agreements for item price groups can be recorded in the same way as item prices, i.e. in particular:

- the sales type can accept all options (All customers / Customer price group / Special customer) even for item price groups,

- Campaign awards are supported,

- Customer hierarchies are supported (see chapter Hierarchies),

- Sales conditions are supported,

- Quantity-based, date-based and currency-based prices are supported,

- unit-dependent prices are also supported, as follows: If a price (defined for an article price group) is to apply to a special article unit, this must be entered in the line. It is up to the user to ensure that this unit is then also defined as an article unit for the articles of this article price group.

Note

Variant-dependent price definitions are not supported for article price groups. The following applies here: If an article with variants belongs to an article price group, the prices of this article price group automatically apply to all variants of this article.

To define an article price group, call up the "Article price groups" via the user search.

Via "New" in the ribbon you can define a new item price group using the table below.

Field	Description
Code	Specifies a meaningful abbreviation of the item price group
Description	Indicates the description of the item price group
Sale	Specifies the use for the sales area
Purchasing	Specifies the usage for the purchase area

After successfully creating the article price group, you can define the prices via the menu ribbon using the menu item "Prices" > "Sales prices" in the same way as for standard price maintenance.

Graduated prices

The calculation of the value of the "Sales price" and "Line discount %" fields of the sales line is based on the price or discount agreements between the customer and the item stored in the price list.

The possibilities of price and discount agreements are very diverse. For example, agreements for all customers, for customer price groups / customer discount groups or for special customers can be stored on the customer side and agreements for article groups or for special articles can be stored on the article side.

If users enter an item in a sales line in a sales document for a customer, the application automatically calculates the value of the "Sales price" and "Line discount %" fields of the sales line. The calculation is performed by comparing the value of the "Quantity" field of this specific sales line with the minimum quantities stored in the aforementioned master data and thus runs through a best price determination among all sales prices or line discounts found.

In principle, the standard system carries out the best price determination described above separately for each sales line of a sales document. In practice, it can happen that users enter one and the same article several times in one sales document. This may be necessary, for example, if the article is to be delivered on different delivery dates. KUMAVISION base365 (BOOSTER) therefore enhances the price or discount calculation of Microsoft Dynamics Business Central™ in that not only the quantity of the specific sales line that the user is currently entering is used for the price or discount calculation of this line, but the sum of the quantities in all sales lines of the same sales document with the same item number.

Price relevant fields for this functionality of the sales line are:

- Type and no.

- Variant code

- Unit code and quantity per unit

- Alternative with value <empty>

- Allow line discount and allow calculation discount

Only those sales lines that have the same values within these fields will be used to calculate totals via the "Quantity" field.

As a rule, sales lines with the following values are not included in the totals

- Delivery no. or return no. with value not equal to <empty>. (i.e. invoice or credit memo lines created by a delivery schedule).

- Blank frame order no. with value not equal to <blank> (i.e. order lines that refer to a blanket order line)

- Alternative with value not equal to <empty>

Via the action "Update scale prices" the scale prices are calculated. The calculation of the scale prices always takes place also with the release of the document.

If the sales price or line discount % is changed manually in a document line, neither the price discount nor the line discount will be recalculated when calculating the scale prices for these lines. Moreover, this line is not included in the total quantity for the calculation of the scale prices and discounts.

This also applies to document lines with a link to a blanket order or blanket agreement, as well as to alternative lines and when invoicing posted deliveries or returns.

If, exceptionally, no distributed scale price determination is to take place in a document, this function can be switched off via the switch Price/discount minimum quantity per line. This may be necessary, for example, if you want to explicitly show a customer the quantity scale prices or discounts in an offer.

If lines have already been entered in the sales document, the system asks whether this change should be made. Confirm with "Yes" if you want to switch off scale pricing for the document.

Note

Please note that this functionality is available to you only if in Accounts Receivable & Sales Setup the price calculation method is set to "KUMAVISION base Lowest price" and the "Price/Discount minimum quantity per line" switch is disabled.

Prices/discounts depending on the type of order

For different sales situations (e.g. the differentiation of an article sale in the "new customer business" and in the "spare parts business") it is necessary to be able to agree also on different conditions (prices and discounts) for this.

Therefore, in KUMAVISION base365 (BOOSTER) it is possible to store the sales prices and line discounts depending on the sales order type.

These prices are then taken into account during pricing if the corresponding sales order type is specified (in the sales header).

You can specify the sales order type in the field of the same name in the respective sales price line for the required item.

When a sales order is created with the corresponding sales order type, the corresponding price is determined for the item line.

Analogous to the sales prices, the sales line discounts are maintained. These can now also be stored depending on the sales order type.

Debtors resource prices

Customer specific prices can be stored in KUMAVISION base365 (BOOSTER) also for resources. The call of the resource prices is done via the customer or the resource.

Resource prices can be created per customer, per customer price group or for all customers. They apply to specific resources or a resource group and, like item prices, can be given a start and end date.

The logic of best price determination or, depending on the institution, no best price determination also applies to the resources VK prices.

> Note

Resource prices are not integrated into pricing with hierarchy code.

Close prices and discounts

The correct price and discount determination depends on the use of start and end date in the corresponding price lists. In KUMAVISION base365 always the newest price is valid, otherwise the same constellation as the currently valid price. Analogously, this is also the case for line discounts.

In principle, however, it is possible to automatically assign an end date to existing price or discount entries as soon as an entry is made with a new start date and the same constellation. This makes it easier for users to understand the price or discount found.

To do this, the "Close prices and discounts automatically" switch must be activated on the Prices info tab in the Accounts Receivable & Sales setup.

If a new price or a new discount is entered in the corresponding table with a new start date, the system automatically sets the end date in previous entries that have the same constellation and previously had no end date to 1 day before the new start date.

> Note

The "old" prices and discounts are closed only if the new price or discount entry has no end date.

Best price determination controllable

In Microsoft Dynamics Business Central™, the so-called best price determination applies. This means that in the customer/article constellation, the system always finds the most favorable price and discount available for the customer that is valid at the time of document entry. A so-called net best price determination is made, i.e. the lowest sales price and the best line discount for the customer are used. Prices and discounts are always independent of each other in the price list. Therefore, it may happen that a sales line including line discount is used for best price determination only with the price or the stored line discount with another line (price or discount). This is also valid for KUMAVISION base365 (BOOSTER).

However, there are often customers who are excluded from this rule, but receive individual prices slightly higher than the prices generally available in the system.

For this reason KUMAVISION base365 offers the possibility to switch off the best price determination either generally for all customers or customer specific. The deactivation of the best price determination corresponds to a hierarchical price determination.

Facility general

In the "Accounts Receivable & Sales Setup" on the "Prices" info tab, the "Price calculation method" field is used to control whether and to what extent best price determination should take place.

The "Price calculation method" field can be assigned the following option values:

Option value	Description
Lowest price	In principle, Microsoft Business Central Standard pricing is to be used.
KUMAVISION base price priorities Without best price determination	There shall be no best price determination.
KUMAVISION base Lowest price Best price determination	Best price determination should be carried out according to the settings for the respective customer.

Setup controlled best price determination at the debtor

Independent of the general definition of best pricing in the Accounts Receivable & Sales setup, a different pricing method can be defined for a specific customer.

You can define this on the respective customer card via the "Price calculation method" field. The options are analogous to those in the Accounts Receivable & Sales setup.

If the "Without best price determination" option is set, it will cause that the customer-specific price will always be found for this customer, even if it is higher than the generally valid sales price.

If a new sales document is created for a customer, the sales document will now also (automatically) receive the valid pricing meta in the "Invoice details" info tab.

The following hierarchy applies to determine the price calculation method:

1. Manual entry in the sales document

2. Debtors price group

3. Debtors card

4. Accounts receivable and sales facility

Pricing behavior

Several prices can be stored for one article (e.g. for different scale quantities and customers, customer price groups, all customers, etc.), all of which are valid in principle.

If best price determination is required, the system automatically finds the most favorable price for the customer for a document line.

Example: The customer orders an item. The system determines the best price for the customer. If no best price determination is required, the system does not (any longer) find the most favorable price for the customer for a document line, but the most specific customer price.

Pricing date

The pricing date in the offer, order and complaint is the order date. For credit notes and invoices, the posting date is the pricing date.

The prices in case of a non-best price determination (hierarchical price determination) are found according to priority.

1. Hierarchy level: The lowest hierarchy level of a customer has priority over the next higher level. This only applies when working with customer hierarchies, e.g. in the context of association structures.

2. Sales type: Campaign, Customer, Customer price group, All customers

3. Sales order type: sales order type filled, no sales order type

4. Type: article, article price group

5. Variant code: Variant code filled, no variant, This only comes into effect when working with variant codes for articles.

6. Unit code: Unit code filled, no unit code

7. Currency code: Currency code filled, no currency code This is only used if the customer works with foreign currencies.

8. Responsibility unit code: Responsibility unit code filled, no responsibility unit code.

9. Minimum quantity

10. Start date: Newest start date, Older, Start date not filled

If a campaign is selected in the sales document, the other active campaigns of the customer are not taken into account in pricing. These campaign prices have priority over all other prices. If no campaign is selected in the document, only the campaigns for the customer/contact of the sales document are taken into account, not for all customers in the hierarchy.

First, pricing takes place at the level of the customer. If the customer belongs to another customer in a hierarchy, this customer is not considered for the time being. If no valid price is found at the customer level, the search continues at the next hierarchy level. If the customer belongs to several customers on the next level, an error message is displayed. The number of hierarchy levels is unlimited. If no valid price is found at the customer level, the search continues at the customer price group level using the same logic.

The following logic applies within a layer:

A price with a variant has a higher priority than a price without a variant, provided that the type of sale and the type are the same.

The same applies to the currency: first the price with currency, then without currency. But this criterion comes after the variant.

After that, the minimum quantity is compared: The higher minimum quantity (within the validity) is taken.

Finally, the start date is checked: A newer price has a higher priority than an older one. Basically, only prices valid on the order date are taken.

Behavior of the discount determination

Discount determination with and without best price determination works in the same way as price determination. Prices and discounts are always independent of each other in the price list. Therefore it can happen that a sales line incl. line discount only with the price or the stored line discount with another line (price or discount) are used for the best price determination.

Pricing according to hierarchy

In the best price or best discount determination, entries from customers higher in the hierarchy are also included (see also "Managing hierarchies"). In order to use this functionality, the hierarchy type code to be used in pricing must first be defined in the "General" info tab in the Customers & Sales setup.

All customers stored via the defined hierarchy type code are then taken into account accordingly in the price/ discount determination. The best price and the best discount in the corresponding combinations (validity, minimum quantity, units, currency, unit of responsibility...) are transferred to the document line. It does not matter in which hierarchy level the price was determined. If necessary, different prices (customer price, customer price group price, etc.) are determined in the different hierarchy levels.

Pricing by unit of responsibility

This service area extends the sales prices and sales discounts by the possibility to define them also per responsibility unit. I.e. both prices and discounts can be different for different units of responsibility. For this purpose, the desired unit of responsibility must be maintained in the "Unit of responsibility code" field in the corresponding sales price or sales discount line of the price list.

UK suggested retail price

Extended fields in Extended VK price proposals

The function "Extended sales price proposals" include the price fields extended in KUMAVISION base365:

- Price unit

- Current UK price (price unit)

- New UK price (price unit)

- Unit of responsibility

- Sales order type The fields are taken into account when calculating the price proposal as well as when saving it in the sales price table.

Sales price proposal based on sales conditions

When creating the sales price proposal, the new price can be calculated in Microsoft Dynamics Business Central™ based on factors to be entered manually. However, in KUMAVISION base365 (BOOSTER) there are already the sales conditions for the calculation of sales prices, see Sales Conditions. These sales conditions can be used to create the sales price proposal instead of the factor.

Procedure: The "Suggest item price..." function is called up in the Extended Sales Price Suggestion. For the Suggest sales price option, the option cannot be set up. In the options, the calculation base must be set to Sales condition and in the Sales condition code field, the desired sales condition is selected, on the basis of which the new prices are to be calculated. Only conditions of the type Price condition and without currency code can be selected. Quantity factors are not taken into account. After the action has been performed, the new prices will be proposed in the book sheet and can be transferred to the sales price table according to Microsoft Dynamics Business Central™ Standard.

Note

Already in the sales price proposal standard is looked for the field Only amounts over in the sales price table. If you have not entered any prices there, new sales prices will only be calculated if the filter -1 is entered there.

Document process ID in sales

In the sales process, it is helpful if related documents can be tracked from the quotation to the complaint with a common ID. For example, when creating a complaint, it should be possible to track the credit note, the return delivery, the purchase complaint and, if necessary, the new resulting order via a common document ID. For this purpose, there is a new field Document Process ID in the sales header and lines in the sales documents.

Establishment

To use document tracking, a number series must first be created in the Accounts Receivable & Sales setup.

To do this, first call up the Accounts Receivable & Sales setup via the user search. On the Accounts Receivable & Sales setup card in the "Number series" info tab, you now have the option of entering a number series in the "Document process ID" field. You then exit the setup.

Process

The "Document process ID" field is automatically filled with a sequential number from the number series in the "Start" document in the sales header. The document process ID can be viewed in the document lines in the field of the same name. The document process ID is then transferred to all documents and their lines resulting from the "Start" document.

Example:
A sales quotation is created as a "Start" document. In the document header, a document process ID is automatically assigned to this process. This document process ID is then transferred to the documents resulting from the process. The sales quotation is converted into a sales order. Thus, the sales order would automatically be assigned the document process ID of the original sales quotation as well.

Offer - Order - Archived sales documents - Delivery - Invoice - Sales complaint (only if the lines are created via the "Retrieve document lines to be cancelled" function)

Via the menu item "Line" in the info tab of the same name, the "Navigate Doc.Process.ID" can be called up under the menu item "Linked information". On the Navigate Doc.Process.ID card, all documents for the respective document process ID are displayed. By clicking on the number in the "Number of entries" field, you can display the corresponding document.

Letter Salutation

In addition to the formal and informal form of address that can be defined for a contact, KUMAVISION base365 (BOOSTER) provides an additional form of address, the document form of address. It is used in sales documents in the Sales to contact field.

The reason for this is that there are contacts without first names in the system. If such a contact is selected as a contact person for a sales document, only the last name of this person is printed in the document in Microsoft Dynamics Business Central™ Standard.

To avoid this, KUMAVISION base365 (BOOSTER) enters the result of the document title formula into this field, so that a contact without a first name can be addressed with the appropriate name and title in the document.

Establishment

The setup of the document salutation should be created for each salutation code. To do this, call up the "Salutations" via the user search.

First select the salutation line for which you want to set up the formula. Then select the "Formulas" menu item via the ribbon.

For each language code, enter a corresponding document reference formula.

Print salesperson in sales documents

In KUMAVISION base365 (BOOSTER) there is a possibility to store two salesmen on the customer or in the sales documents. Depending on the use of these two codes in the companies, it is necessary to print one or the other sales code on the printed document to the customer. For example, if the sales representative is entered in sales code 1 to determine commissions and the internal contact person for the customer is in sales code 2, the customer should have the internal contact data displayed in the document.

For this purpose, a selection can be made in the respective documents for the printout of the salesperson in the "Commission" info tab in the "Printout salesperson" field.

Alternatively, a general default setting can also be set in the Accounts Receivable & Sales setup in the info tab "KUMAVISION" via the field "Salesperson proof".

Types of communication according to the 2012 data protection amendment

On 01.9.2012, a decisive change in the data protection amendment takes effect, which in many cases changes the way customer data is handled.

In particular, it concerns the use of personal data for own business purposes, i.e.: advertising. To this end, far-reaching amendments have been adopted for Section 28 of the BDSG (Federal Data Protection Act).

Ultimately, the processing or use of personal data for advertising purposes will be made more difficult in the future; as of September 1, 2012, use will clearly - and more clearly than before - depend on the consent of the respective person. This becomes problematic because this change does not only affect new data, but also existing data. (Source: GFM News)

Non-personally addressed advertising - e.g., via Postwurf special - is not affected by the tightening of the data protection amendment.

The data protection amendment contains a so-called "opt-in", according to which a customer must expressly consent to the disclosure of data for the purpose of advertising. If this has only been done by telephone, the company must subsequently confirm it in writing. In addition, the customer must be informed in every advertising letter which company stored his or her data for the first time.

The following assessments were made for the implementation of the stricter data protection amendment in the CRM module of:

In principle, personal contacts may now only be used for advertising purposes (i.e., the segmentation of addresses) with the prior consent of the person. This applies in particular to e-mail campaigns. A postal letter is permitted up to the point of objection. Contacts of the type company may always be contacted by any means.

Communication types in contact management

The contacts are extended in the info tab "Communication" by the communication types letter, e-mail, telephone and fax with the respective characteristic Allowed Yes or No. The default setting is empty, which means undefined. The communication type fields must be filled so that the selection of person addresses can be carried out.

If a change is made in one of the fields between the specifications Allowed Yes or No, an additional table Communication log items documents when and by which user the change was made.

In addition, the user must always enter a comment (e.g. according to telephone from xx.xx.xx) (mandatory entry). This ensures that a change is not made by mistake and that information about the changes can be provided quickly at any time in the event of queries.

The log items can be accessed and viewed directly from the contacts via the "Associated" > "Linked information" > "Communication log items" ribbon.

If a communication type is not explicitly set to Yes or No but remains empty, the system always assumes that this communication type may not be used for the person contact. To initially set the communication type to No for all contacts, the report 5049015 Initialize Comm. Allowance must be run once.

These settings on the contact have no effect on the creation of direct mails via the corresponding mail icon on the contact. Similarly, individual activities can be created for the contact. Only if activities are created via the Log segment function, the check for the permitted communication types is performed.

Segmentation of personal contacts

When creating segments, a communication type must be selected before adding contacts to the segment.

In this way, the system ensures that only contacts who have agreed to this type of communication are added to this segment. Before logging the segment, the system checks again that the contacts in the segment have still not objected.

To select a communication type, an activity template must be selected in the segment header. It is recommended to select one activity template per communication type. * Fax * E-mail * Letter * Phone

to create.

The Add contacts function checks whether the contacts matching the search criteria are also permitted for the selected communication type. Only contacts that are allowed for this communication type are entered in the segment. A corresponding message confirms that the communication types have been taken into account.

Note

A subsequent change of the communication type in the segment header does not retroactively change the selected contacts.

So if the communication type for an action is to be changed completely, then this must be changed in the activity template and the activity template must be dragged into the segment header again. This will run the check again.

automatic delivery of additional sales lines

In an order, in addition to the "real" article items (items with stock flow), cost items are often entered, e.g. for freight costs, which are directly related to the article. Also the items of the type "service" are used more and more often.

The basic idea in the procedure is that with the order release these orders do not have to be processed actively in the sales department. I.e. the goods are delivered to the customer via a logistics process (one- or two-stage). In the daily invoicing run (periodic billing), all orders pending invoicing are invoiced.

This would create the problem in Microsoft Dynamics Business Central™ Standard that all items that are not stock items would not be delivered. However, if these items are not delivered, they will also not be invoiced.

A subsequent posting in the sales order could be performed, but this would lead to considerable effort as all invoices would have to be posted manually.

With the functionality enhancement "Automatic delivery of additional sales lines", the scope of functions has been extended so that these items are also invoiced directly when posting the logistics documents.

setup

kumavision module setup

In order to be able to use the function of "Automatic delivery of additional sales lines", the switch of the same name must be activated in the "KUMAVISION module setup" first. Otherwise, the function cannot be executed in the system and the corresponding setup will not be visible for users.

automatic delivery of additional sales lines setup

In the "Automatic delivery of additional sales lines setup", all the

- Items of type=Service
- resources
- G/L accounts

that should be delivered automatically. This table can be seen as a global setup for sales.

Field	Description
Type	Indicates what type the record is. You can choose from: - Item - Resource - G/L account
No.	Indicates the number of the article, resource or G/L account. This field is interdependent with the "Type" field. If at this point the setup record has its validity for all items, resources or G/L accounts, the "No." field will not be narrowed down further and will remain empty .
Description	Specifies the description of the selected item, resource or G/L account in the "No." field.
Print Line	Indicates if this item should be printed on the delivery bill, if applicable (Print Line = Yes/NO).
Delivery time	Indicates whether "Deliveries" of these items should be posted with the first delivery or last delivery of the order.

procedure

The facilities from the "Automatic delivery of additional sales lines facility" only apply if logistics documents are used in sales orders. I.e. in case of direct delivery from the order, users must enter the quantities themselves.

In case of mixed documents (lines with logistics and lines without logistics) the logic always takes effect when posting the logistics document. If the lines without logistics are delivered before (from the document), users can also post the lines manually.

Before posting the delivery, the system checks whether the transaction contains a line that is stored in the setup table, e.g. the G/L account for freight costs. If this is the case, the quantity to be delivered is entered automatically. This does not create a separate delivery bill, but is included in the same delivery bill as the goods entry.

Note

For these items mentioned above - except for items of the type Service - no items arise on delivery.

Print alternative line totals

With the switch "Print alternative row totals" in the company data, totals rows in sales quotation documents can be printed separately. If the switch is enabled, one sum line totals all lines of a bundle or subtotal, the second sum is in parentheses and totals all lines that are marked as alternative.

If the switch is deactivated, and rows in a bundle or subtotal are marked as alternatives in sales quotations, no sum of alternatives will be printed in the sales quotation document.

Financial Accounting

Check VAT statement for completeness

Different accounting schemes can be created for VAT accounting. To ensure that these are consistent and complete for all entries and VAT product and VAT business posting groups, there is a "Check VAT statement for completeness" report. Accounting staff can use this when creating and reconciling the preliminary return. The report "Check VAT accounting for completeness" can be called up and run from the VAT accounting ribbon under the menu item "Check accounting scheme...".

Differentiated direct posting of G/L accounts

In purchasing, sales and service, it is possible to use a switch on the G/L account card to specify whether the G/L accounts can be used in the respective processes. If the respective switch is activated in a G/L account, the G/L account can be used in the respective process. If the user wants to use a G/L account in a document that is not activated for the process, the system will issue a corresponding error message.

Shipment Processing

Prerequisite

The dispatch processing assumes that the basics of Microsoft Dynamics Business Central™ and KUMAVISION base365 (BOOSTER) operation are known and that the corresponding user in the system has the required authorizations to execute the respective functions.

!!!note "Note The shipping processing module is an activation module, the use of which is only possible with additional licensing and activation.

General

Shipping processing enables the mapping of shipping orders. These contain article items, manual document lines, e.g. for a simple sample parts shipment and information on the load carriers used. Different open logistics documents (goods issue, warehouse picking) and posted deliveries can be combined in one shipping order and thus form one shipment.

Within a packaging order, the article items can be assigned to the load carriers and the load carriers in turn to other load carriers. In this way, multi-level packaging structures are created. A load carrier ID can be generated for each load carrier. When the shipping order is sent (posted), the assigned logistics documents and the packaging material consumption are posted.

> Note

The term load carrier in the setup master data of shipping processing and the term packaging material in the application are synonyms and describe the different types of load carriers/packaging materials that are basically available.

In the shipping order lines, a load carrier describes a concrete unit, possibly marked with a load carrier ID. The terms load carrier and package are synonymous in this context.

> Note

Since each load carrier is specified by definition with the quantity 1, the shipping order is not suitable for posting the consumption of packaging aids, e.g. 10 meters of stretch film or 4 pieces of edge protection.

Establishment

Before you can use the shipping process, you need to set up the following in the system:

Shipping and load carrier setup

Field	Description
Shipping order numbers	Define the number series for shipping orders here.
Assign today's date	The field is currently not used by the system.
Default load carrier (packaging material)	The field is currently not used by the system.
Booking type	Define here which posting option, Deliver or Deliver and Invoice, should be used when posting a shipping order.
Company ID	Enter the company ID here. The company ID is assigned by GS1.
Load carrier ID numbers	Define the number series for load carriers here. The number from the load carrier ID number series and the company ID together make up the load carrier ID/package ID.
Assign load carrier ID	during order release If you check this box, the load carrier ID/package ID is automatically assigned when a shipping order is released.
Calculate check digit for load carrier ID	With the help of this field it is possible to generate a load carrier ID according to the NVE. Therefore the activation of this field has an effect on the calculation and input of the load carrier ID. The load carrier ID is composed of the "Company ID" and an individual number. If now the calculation of the check digit was activated, the system checks during the automatic generation or manual input of the load carrier ID whether the ID string is NVE conform, in which the character length without check digit is 17 characters long. Furthermore, the system checks whether the ID string consists only of digits, so that a check digit can be calculated. If these conditions are not correct, the system issues a corresponding message when generating the load carrier ID.

Load carrier

Inforegister General

Field	Description
Code	Enter the code for a load carrier here. A number series for load carriers does not exist.
Description	Enter the description of the load carrier here.
Stock	This is the stock of the load carrier, if the load carrier is linked to an article.
Item no.	Enter an article number here if an article exists for this load carrier. The specification is not mandatory.
Article category	The field is currently not used by the system.
Unit	Enter the unit of the load carrier here. The specification is not mandatory.
ID Mandatory	If this field is activated, a check is made when a shipping order is released whether the load carrier/package has a load carrier ID/package ID.
Load carrier ID numbers	Define a special number series for the load carrier here. The number from the load carrier ID number series and the company ID together make up the load carrier ID/package ID.If the "Calculate check digit for load carrier ID" checkbox has been activated in the "Shipping and load carrier setup", the system checks whether the ID string is "NVE compliant" when generating the load carrier ID automatically and also when entering it manually. For more information, see "Shipping and Load Carrier Setup".

Note

A load carrier inventory management with indication of batch or serial numbers is currently not provided.

Inforegister dimensions

Field	Description
Length	Enter here the length of the load carrier in the unit of length commonly used in your company.
Wide	Enter here the width of the load carrier in the unit of length commonly used in your company.
Height	Enter here the height of the load carrier in the unit of length commonly used in your company.
Weight	Enter here the weight of the load carrier in the weight unit commonly used in your company.

Associated data - Load carriers - Storage locations of origin

The origin storage locations are required if the load carrier is linked to an article. In the origin storage location lines, it must be specified in which storage location the load carrier stock is to be reduced. When using a storage location with storage bins, a storage bin marked as standard must be specified in the storage bin contents for the item linked to the load carrier.

The fields in the General group are used to filter the displayed origin storage location rows.

Field	Description
Type of origin	Specify here whether this record applies to a customer, vendor, work center group, or all customers. **blank** This record applies to all processes in which a shipping order is posted. The Origin code field remains empty. **Debtor** This record applies to sales deliveries to the customer specified in the Origin Code field. **creditor** This record applies to return deliveries to the vendor specified in the Origin Code field. **Workplace Group** This origin type is not used in shipping processing. **All debtors** This record applies to sales deliveries to any customer.
Origin code	Specify here the customer, or vendor depending on the Origin type field.
Type	The type item or All items is possible.
Code	Enter here the article no. of the article linked to the load carrier. The field is preset with the article no. from the load carrier card. No code is required for the type All items. **Note** The All items type means that when the shipping order is posted, the item specified on the load carrier card is reduced in stock.
Start date	Enter here a date from when, from the specified storage location, the load carrier stock is to be reduced.
Storage location type	Shipping processing only uses records with the storage location type Load carrier.
Location code	Enter here the storage location from which the load carrier stock is to be reduced when posting the shipping order.

Storage location

The storage location map has been extended by the Shipping Processing field.

Field	Description
	Specify here whether shipping processing is relevant for this storage location.
	blank Shipping processing is not relevant for the storage location. Also with this option it is possible to create a shipping order for documents with a storage location with this indicator.
Shipping processing	**package** Packages are to be used at this storage location. Shipping orders should not be used. This option enables a simplified package entry in the sales order, purchase complaint and stock transfer order without shipping order. Also with this option it is possible to create a shipping order for documents with a storage location with this indicator
	Shipping Order Shipping orders are to be used at this storage location.

Processes

The basis for shipping processing is the shipping order. The shipping order offers the possibility to map a shipment consisting of several packages (load carriers). A simple entry of packages is already possible in sales orders, purchase complaints and stock transfer orders. When the delivery is posted, a shipping order is automatically created and posted, and the packaging stock is reduced (see section Packing unit in outgoing documents).

The manual creation of a shipping order (see section Shipping order for logistics documents and Shipping order for posted documents) allows to relate the different packages of a shipment and thus to map a multi-level packaging structure. In addition, the document items can be assigned to the packages.

Note

For the creation of a shipping order, the storage location from which sales items are is shipped (consumed) is irrelevant.

Package in outgoing documents

The possibility to record packages in outgoing documents can be used in sales orders and purchase complaints. It is used to easily record in a document the type and quantity of load carriers used. The prerequisite is that the storage location specified in the document header contains the value Packages in the field "Shipping processing". An assignment of the document items to the respective load carrier, as well as an assignment of the load carriers among each other ("box on pallet") is not provided.

When the delivery is posted, a shipping order is created and posted that contains all document items and the load carrier information. When the shipping order is posted, the load carrier stocks are reduced, provided that an origin storage location is specified for the load carrier.

> Note

If the storage location specified in the document header has the value Packages in the "Shipping processing" field, at least one package must be specified in the document.

> Note

If an article (inventory-managed load carrier) with serial number or batch number management is assigned to the load carrier, there is no stock reduction. The document can be posted without error message.

This option is also available in the stock transfer order. Relevant for the entry of the load carriers is the issuing storage location (transfer. from code) in the stock transfer order. When the stock transfer issue is posted, the shipping order is created and posted.

> Note

When the shipping order is posted, the load carrier stocks on the
Destination storage location (app. by code) of the stock transfer order reduced, regardless of
the origin storage location lines at the load carrier.

Field	Description
Load carrier code	Enter the code of the load carrier here.
Load carrier description	The load carrier description is transferred from the load carrier card and cannot be changed.
Load carrier quantity	Enter the number of load carriers used here.
Load carrier Gross weight (scale)	Enter the gross weight of the filled load carrier here.

> Note

When entering the load carrier code in a sales order or in a purchase complaint, a check is made to see whether an appropriate data record exists for the customer or vendor in the origin storage location lines of the load carrier. If this is not the case, a corresponding error message appears.

Manual shipping order

Manual creation of a shipping order header:

Shipping order header Inforegister General

Field	Description
No.	The number of the shipping order is assigned by the system. The prerequisite is the number series in the shipping and load carrier setup.
Delivery condition code	Enter here the delivery condition code relevant for the shipping order. The specification is mandatory. When the first document is accepted into the shipping order, the delivery condition code is overwritten with the value from the document.
Delivery code	Enter the delivery code relevant for the shipping order here. The specification is mandatory. Only goods issue documents with the same deliverer code can be transferred to the shipping order.
Carrier transport type code	Enter the carrier shipment type code relevant to the shipping order here.
Interface	Only relevant in conjunction with an additional app for transmitting information to shippers (not included in the basic scope of shipping processing)
Forwarding order/ waybill no.	Enter the number of the forwarding order or bill of lading here.
Assigned user ID	Specifies the ID of the user who is responsible for the document
Single-package shipment	Set the indicator so that separate, posted shipping orders are created for each load carrier/package when the shipping order is sent (posted). **Note** When entering the load carrier code in a sales order or in a purchase complaint, a check is carried out to see whether an appropriate data record exists for the customer or vendor in the origin storage location lines of the load carrier. If this is not the case, a corresponding error message appears.
Status	Release the shipping order before posting.
For type	The field is filled by the system when the first document is accepted.
For no.	The field is filled by the system when the first document is accepted.
Sell to contact no.	The field is filled by the system when the first document is accepted.
Delivered to code	The field is filled by the system when the first document is accepted.
Delivered to Name	The field is filled by the system when the first document is accepted. The entry can be changed in the shipping order.

Field	Description
Delivered to country/region code	The field is filled by the system when the first document is accepted. The entry can be changed in the shipping order. The entry is mandatory.
Delivered to zip code	The field is filled by the system when the first document is accepted. The entry can be changed in the shipping order.
Delivered to contact	The field is filled by the system when the first document is accepted. The entry can be changed in the shipping order.

Information register deliverer/forwarding agent

Field	Description
Collection date	Enter the pickup date for the shipping order here.
Pick-up time	Enter the pickup time for the shipping order here.
Date of arrival	Enter the delivery date for the shipping order here.
Arrival time	Enter the delivery time for the shipping order here.

Menu item "Shipping order..."

With the help of the menu item "Send shipping order" (F9), the shipping order is posted depending on the posting type in the shipping and load
carrier setup. The prerequisite for this is that the status of the shipping order is released. When the shipping order is posted: * The posting of the assigned logistics documents and the associated origin documents * The booking of the packing material consumption * For single-package shipments, a separate, booked shipping order is created for each load carrier/package. The related bundled shipping orders
contain the reference to the original shipping order in the "Single-package shipment parent order no." field. * The archiving of the posted shipping order(s).

Menu item "Send and print.."

With the help of the menu item "Send and print" (Shift + F9) the dispatch order is posted and the dispatch order document (Report 5049200) is printed. The prerequisite here is also the prior release of the shipping order.

"Release" menu item

Using the menu item "Release" (Ctrl + F9), the status of the shipping order is changed from Open to Released. When the shipping order is released, a series of checks take place: * The fields Delivery condition code, Delivery code, Delivery to name, Delivery to country/region code and Delivery to zip code must be filled in * At least one load carrier must be specified * Either all article lines and manual lines must be assigned to the load carriers or no article line and manual line may be assigned to a load carrier. * In the case of single-package shipments, the load carriers may only be located on packaging structure level 1 and the document lines must be
assigned to the load carriers.

"Reset status" menu item

Using the "Reset status" menu item (Ctrl + F8), the status of the shipping order is changed from Released to Open.

"Actions" menu item

The menu item "Actions" contains the menu items Shipping, Functions, Logistics documents and Posted documents.

"Shipping" menu item

Via the menu item "Shipping" the functions "Send shipping order" (F9), "Send and print" (Shift + F9), "Release" (Ctrl + F9) and "Reset status" (Ctrl + F8) can be called.

"Functions" menu item

The following functions can be called up via the "Functions" menu item:

"Manual line"

The "Manual line" function allows you to enter shipping order lines (see section Shipping order with manual lines (without logistics documents and without posted documents)).

Field	Description
Description	Enter the description for the shipping order line here.
Quantity	Enter the quantity for the shipping order line here.

"Calculate packaging structure"

The function can be used to recalculate the packing structure. (This function is executed automatically when assigning the packaging materials and assigning the document lines to the packages).

"Assign Load Carrier ID"

With the help of the function, a load carrier ID is already assigned per load carrier in a shipping order with the "Status" Open. The prerequisite is that a number series for the load carrier ID is specified in the shipping and load carrier setup and the load carrier is marked as ID Mandatory.

"Logistics documents" menu item

The menu item "Logistics documents" can be used to call up the functions "Get goods issue" and "Get warehouse picking" (see section Shipping order for logistics documents).

"Posted vouchers" menu item

The "Get posted documents" menu item can be used to call up the "Get posted sales deliveries", "Get posted service deliveries", "Get posted apportionment outbound" and "Get posted return delivery" functions (see section Shipping order for posted documents).

"Belonging" menu item

Via the menu item "Associated" > "Shipping order" > "Remarks", multi-line remarks can be entered for the shipping order.

Field	Description
Date	Enter the entry date of the remark here. The current working date is suggested default value
Comment	Enter the comment for the shipping order here.

Shipping order lines

The shipping order lines specify the article items or manual shipping order lines to be shipped (see section Shipping order with manual lines (without logistics documents and without posted documents)) and the load carriers used. Several load carriers can be assigned to each other and thus form a multi-level packaging

structure within the shipping order. Article items or manual shipping lines can also be assigned to one or more load carriers.

Field	Description
Document line type	The field is filled by the system with the value "empty", article or load carrier.
Document line no.	The field contains the item no. or the code of the load carrier.
Packaging structure	The field is filled by the system.
Description	The field contains the item description from the origin document line, the description from the manual shipping line or the description of the load carrier.
Serial no.	The field displays the serial number from the assigned logistics document or posted document.
Batch no.	The field displays the batch no. from the assigned logistics document or posted document.
Quantity	The field is filled by the system.
Movement quantity	The field is filled by the system. Reduce the movement quantity to divide the document line into several load carriers.
Unit	The field contains the unit from the origin document line or the unit of the load carrier.
Load carrier ID	The load carrier ID can be entered manually or calculated by the system. The prerequisite for system-side calculation is the ID Mandatory indicator on the load carrier card and a number series for load carrier IDs. The load carrier ID consists of the company ID and the next number from the load carrier ID number series.If the "Calculate check digit for load carrier ID" checkbox has been activated in the "Shipping and load carrier setup", the system checks whether the ID string is "NVE compliant" when generating the load carrier ID automatically and also when entering it manually. For more information, see "Shipping and Load Carrier Setup". **Note** The load carrier ID is mapped without a check digit. A check digit is usually required to display the load carrier ID in a barcode. In this case, depending on the barcode type used, the check digit must be calculated when the barcode is printed.
Weight per unit	The field contains the gross weight from the origin document line or the weight of the load carrier. The value can be changed in the shipping line.

Note

If the warehouse picking or picking logistics operations are used, an item tracking code with the serial no. warehouse or batch no. warehouse indicator must be entered for serial/batch no. managed items.

"Manage" menu item

Via the menu item "Manage" > "Delete line" marked shipping order lines can be deleted.

"Functions" menu item "Split line" menu item

The function is used to split a document line with the type article into two document lines. The prerequisite is that the quantity in the document row is greater than 1 and the transaction quantity is less than the quantity. A new document line is created for the difference between the quantity and the movement quantity.

Menu item "Insert packaging material"

With the help of this function, one or more load carriers/packaging materials can be added to the shipping order. When selecting the load carrier/packaging material, the desired quantity can be specified. A shipping order line with the quantity 1 is created for each load carrier/packaging material. The packaging structure is incremented from 1 to n.

"Mark position" menu item

With the help of this function, one or more shipping order lines can be marked in order to subsequently assign them to another shipping order line. Marked lines are displayed in red.

Menu item "Delete marker"

The function can be used to delete previously set markers.

Menu item "Add to package"

This function can be used to assign one or more previously selected shipping order lines to another shipping order line. Selected shipping order lines with the document line type Article or "empty" can only be assigned to a shipping order line with the document line type Load carrier. Selected shipping order lines with the document line type Load carrier can only be assigned to a shipping order line with the document line type Load carrier. With the assignment of a shipping order line to another shipping order line, a multi-level packaging structure is created, which is mapped in the "Packaging structure" field. When assigning a shipping order line with substructure, the complete structure is added to the other shipping order line.

Note

Load carriers should always be assigned from "bottom to top". This means that the pallet, for example, should be on level 1 (lowest level). The first layer of cardboard boxes should represent level 2. An intermediate layer (anti-slip mat) forms level 3 and the next layer of cartons forms level 4.

"Remove from package" menu item (Ctrl + Alt + E)

The function can be used to remove one or more previously marked shipping order lines from a load carrier/ package. If the selected shipping order line is a load carrier/package with a substructure, the selected shipping order line is moved to packaging structure level 1.
The line retains its substructure.

"Line" menu item "Origin documents" menu item

The function can be used to call up the associated origin document for a document line with the type Article. These can be: * Sell order * Purchasing complaint * Service order * Stock transfer order * Booked sales delivery * Booked service delivery * Booked return delivery * Posted apportionment output

Menu item "Logistics document line"

With the help of this function, the corresponding logistics document goods issue or warehouse picking can be called up for a document line with the type article.

Infoboxes Shipping order infobox

Field	Description
Shipping note	Indicates whether a remark exists for the shipping order.
Customer No./ Vendor No.	The field is filled with the information in the "For Type" field in the shipping order header.
Gross weight	Sum of all gross weights of the shipping order lines on structure level 1.
Tara	Sum of the tare over all charge carrier rows, independent of the structure level.
Net weight	Sum of net weights across all item and manual shipping order lines, regardless of structure level.
Number of packages (1st level)	Total number of packages at structure level 1.
Number of packages (total)	Sum of packages at all structural levels.
Interface	Indicates whether an interface is used for the shipping order.

Infobox shipping order line

Field	Description
Tara	Dead weight of the load carrier from the load carrier card.
Net weight	For load carrier rows without substructure, the net weight is empty. For load carrier rows with substructure, the net weight is the sum of the gross weights of the next substructure levels. For item lines, the net weight is identical to the gross weight of the item times the quantity. **Note** In shipping processing, the net weight of the item is identical to its gross weight. Reason: In shipping processing, the already packed item "Paint in can" is considered. The gross weight of the "Paint in can" item is used as both net and gross weight in shipping processing.
Gross weight	For load carrier rows without substructure, the gross weight is equal to the weight of the load carrier. For load carrier rows with substructure, the gross weight is the sum of the net weight(s) plus tare. For item lines, the gross weight is identical to the gross weight of the item times the quantity.
Length	Length of the load carrier.
Wide	Width of the load carrier.
Height	Height of the load carrier.

Shipping order for logistics documents

In a previously manually created shipping order, goods issues or warehouse picks can be transferred to the shipping order using the "Actions" > "Logistics documents" function. When the first document is accepted, the delivery address in the shipping order header is filled with the delivery address of the origin document. When each additional document is accepted, its delivery address is compared with the data in the shipping order. If the two addresses differ, a message appears informing the user that the address data is different. The user can confirm the message and continue with the transfer. The document lines are created in this case. The data in the shipping order header remains unchanged.

Get goods issues

This function can be used to transfer goods issues to the shipping order. The following requirements must be met: * The goods issue must not already be included in another shipping order. * The "to be delivered" field in the goods issue lines must contain a quantity

   Note

In two-stage logistics, picking must be registered first, before the goods issue can be transferred to the shipping order.

When the goods issue lines are transferred, the shipping order lines are created:

Field	Description
Document line type	The field is filled with the value Article by the system.
Document line no.	The field is filled with the article number by the system.
Packaging structure	The field is not filled by the system.
Description	The field contains the item description from the origin document line.
Serial no.	If the goods issue line contains an item tracking line with serial no., the serial no. is transferred to the shipping order line.
Batch no.	If the goods issue line contains an article tracking line with batch no., the batch no. is transferred to the shipping order line.
Quantity	The field is filled by the system.
Movement quantity	The field is filled by the system.
Unit	The field contains the unit from the origin document line.
Load carrier ID	The field is always empty for item lines.
Weight per unit	The field contains the gross weight from the origin document line. The value can be changed in the shipping line.

Get stock picking

With the help of this function, warehouse picks can be transferred to the shipping order. The following requirements must be met:

- Warehouse picking must not already be included in another shipping order.

When the warehouse picking lines are transferred, the shipping order lines are created:

Field	Description
Document line type	The field is filled with the value Article by the system.
Document line no.	The field is filled with the article number by the system.
Packaging structure	The field is not filled by the system.
Description	The field contains the item description from the origin document line.
Serial no.	If the warehouse picking line contains a serial no., the serial no. is transferred to the shipping order line.
Batch no.	If the warehouse picking line contains a batch no., the batch no. is transferred to the shipping order line.
Quantity	The field is filled by the system.
Movement quantity	The field is filled by the system.
Unit	The field contains the unit from the origin document line.
Load carrier ID	The field is always empty for item lines.
Weight per unit	The field contains the gross weight from the origin document line. The value can be changed in the shipping line.

Packaging structure for shipping order

Adding the load carriers/packaging materials to the shipping order and assigning them to each other, as well as assigning the article lines to the respective load carriers/packaging materials is described in section Shipping order lines.

Send shipping order

Before sending (posting) the shipping order, it must be released. When the shipping order is released, a series of checks are performed:

- The fields Delivery condition code, Delivery code, Delivery to name, Delivery to country/region code and Delivery to zip code must be filled in
- At least one load carrier must be specified
- In the case of single-package shipments, the load carriers may only be located on packaging structure level 1 and the document lines must be
  assigned to the load carriers.

When the shipping order is posted, the following takes place depending on the posting type in the shipping and load carrier facility:

- The posting of the assigned logistics documents and the associated origin documents
- The booking of the packing material consumption
- For single-package shipments, a separate, booked shipping order is created for each load carrier/ package. The related bundled shipping orders
  contain the reference to the original shipping order in the "Single-package shipment parent order no." field.
- The archiving of the posted shipping order(s).

Shipping order for posted documents

Get posted documents

In a previously manually created shipping order, the following posted documents can be transferred to the shipping order using the "Actions" >
"Posted documents" function, provided that the posted document is not already included in another shipping order : * Geb. sales delivery * Geb. service delivery * Geb. stock transfer output * Geb. return delivery

When the first document is accepted, the delivery address in the shipping order header is filled with the delivery address of the origin document. When each additional document is accepted, its delivery address is compared with the data in the shipping order. If the two addresses differ, a message appears informing the user that the address data is different. The user can confirm the message and continue with the transfer. The document lines are created in this case. The data in the shipping order header remains unchanged.

When the posted document lines are accepted, the shipping order lines are created:

Field	Description
Document line type	The field is filled with the value Article by the system.
Document line no.	The field is filled with the article number by the system.
Packaging structure	The field is not filled by the system.
Description	The field contains the item description from the origin document line.
Serial no.	If the origin document line contains an item tracking line with serial no., the serial no. is transferred to the shipping order line.
Batch no.	If the origin document line contains an article tracking line with batch no., the batch no. is transferred to the shipping order line.
Quantity	The field is filled by the system.
Movement quantity	The field is filled by the system.
Unit	The field contains the unit from the origin document line.
Load carrier ID	The field is always empty for item lines.
Weight per unit	The field contains the gross weight from the origin document line. The value can be changed in the shipping line.

Packaging structure posted documents

Adding the load carriers/packaging materials to the shipping order and assigning them to each other, as well as assigning the article lines to the respective load carriers/packaging materials is described in section Shipping order lines.

Send shipping order

Before sending (posting) the shipping order, it must be released. When the shipping order is released, a series of checks are performed:

- The fields Delivery condition code, Delivery code, Delivery to name, Delivery to country/region code and Delivery to zip code must be filled in
- At least one load carrier must be specified
- In the case of single-package shipments, the load carriers may only be located on packaging structure level 1 and the document lines must be
  assigned to the load carriers.

When the shipping order is posted, the following takes place depending on the posting type in the shipping and load carrier facility:

- The booking of the packing material consumption
- For single-package shipments, a separate, booked shipping order is created for each load carrier/ package. The related bundled shipping orders
  contain the reference to the original shipping order in the "Single-package shipment parent order no." field.
- The archiving of the posted shipping order(s).

Shipping order with manual lines (without logistics documents and without posted documents)

Manual document lines can be created in a previously manually created shipping order using the "Actions" > "Functions" > "Manual line" function:

Field	Description
Description	Enter the description for the shipping order line here.
Quantity	Enter the quantity for the shipping order line here.

The shipping order line is created:

Field	Description
Document line type	The field is empty and not editable.
Document line no.	The field is empty and not editable.
Packaging structure	The field is empty and not editable.
Description	The field contains the captured description.
Serial no.	The field is empty and not editable.
Batch no.	The field is empty and not editable.
Quantity	The field contains the recorded quantity.
Movement quantity	The field is filled by the system.
Unit	The field is empty and not editable.
Load carrier ID	The load carrier ID is determined by the system.
Weight per unit	The field is empty, but editable.

Packaging structure manual lines{ #packaging-structure-manual-lines }

Adding the load carriers/packaging materials to the shipping order and assigning them to each other, as well as assigning the manual document lines to the respective load carriers/packaging materials, is described in section Shipping order lines.

Send shipping order

Before sending (posting) the shipping order, it must be released. When the shipping order is released, a series of checks are performed:

- The fields Delivery condition code, Delivery code, Delivery to name, Delivery to country/region code and Delivery to zip code must be filled in
- At least one load carrier must be specified
- In the case of single-package shipments, the load carriers may only be located on packaging structure level 1 and the document lines must be
  assigned to the load carriers.

When the shipping order is posted:

- The booking of the packing material consumption
- For single-package shipments, a separate, booked shipping order is created for each load carrier/ package. The related bundled shipping orders contain the reference to the original shipping order in the "Single-package shipment parent order no." field.
- The archiving of the posted shipping order(s).

Shipping processing with V-LOG interface

In addition to the standard delivery bill, wholesale companies usually require other shipping documents. Above all, the package label for the respective shipper. A connection to the corresponding shipping software is often adapted to the specific project. In KUMAVISION base365 (BOOSTER) there is therefore a standard connection to the shipper software V-LOG. With V-LOG, shippers such as UPS, DHL, DPD or various other shippers or forwarders can be handled automatically. However, this also means that data required for the shipping software, such as delivery address, number of packages, weight, etc., can be transferred in a standardized manner.

If the interface mentioned is used, some settings must be made in advance, which are explained in more detail below.

Number series

Create and configure a new number series for future shipping orders in the "Shipping and Load Carrier Setup" as needed.

Load carrier setup

Create and configure the necessary load carriers in the "Load carrier setup".

Storage location

The storage location must be set up with which type of shipping processing is used for this storage location. The "Shipping processing" field must contain the "Shipping order" selection. Only storage locations with this setup will be included in the interface.

V-LOG setup

The interface is activated in the V-LOG setup. The endpoint URLs must be entered for the web service and the V-LOG client must be entered. This setup is usually done by KUMAVISION together with you.

field	description
Active	After configuration of the Webservice Endpoint, the V-LOG integration can be activated.
Webservice Endpoint URL	Must be configured according to MHP's specifications.
V-LOG Client	Must be configured according to MHP's specifications
Printer	Indication on which printer the label should be printed
Status Request Cooldown (min)	Cooldown between successive, manually triggered status updates of a V-LOG line. A manually triggered V-LOG status update can only be done by the user every <Status Request Cooldown> minutes.
V-LOG franking check	Defines whether the V-LOG franking is checked before the shipping order is released and thus denied if necessary.
Use XML formatting	The following values are transferred in XML format if this option is set: 'Send_Date', 'Send_DateTime', 'inch_value', 'send_height', 'send_length', 'send_width', 'send_value of goods' For new installations this option is automatically activated. For existing installations, the option can be used to test whether the remote station can handle the XML values. Recommendation: Use the new XML formatting

Delivery agent

In the carrier overview, "V-LOG" is set as the default shipping provider for the respective carrier via the "Default shipping provider" field.

This value is a configuration template. Without this default, the shipping provider must be selected again/ manually for each shipping order. The desired shipping provider can be manually overwritten in the shipping order at any time despite this preconfiguration.

The communication with V-LOG is mainly based on numeric key values. If shipping orders of a carrier are to be transferred to the V-LOG interface, the numeric value of the desired carrier is required in the V-LOG Code field. This numerical value must be requested from MHP on a case-by-case basis.

Carrier note

Each carrier can be separately assigned a carrier note including a description and a freely configurable, numeric V-LOG carrier code. These can later be assigned to a shipping order.

Call up the carrier notes for the respective carrier line via the menu ribbon.

field	description
Delivery agent	Indicates the respective delivery agent.
V-LOG Deliveryman Note Code	The available V-LOG delivery person codes have been fixed in coordination with MHP. Further information can be found in the table below.
Description	The description serves as a template. If a value is stored here, it will be automatically taken over as description in the assignment when the carrier note is assigned to a shipping order later on.
Numeric V-LOG delivery code	The numeric V-LOG delivery code can be assigned individually.

V-LOG Deliverer Notes Code	Description	MHP Field Name
DEL	Delivery Advice	
SUR	Other Information	
SIN	Tail Lift Required	
SE	Secured	Secured
INV	Consignemt Group (for separate invoice)	
RE	Invoice Text	
COD	Collection of Goods	COD for Collection
AVI	Advice Information for Collection	Advice Infomation for Collection
C01	Order Text 1	Order Text 1
C02	Order Text 2	Order Text 2
I01	Invoice Text 1	Invoice Text 1
I02	Invoiced Text 2	Invoice Text 2
I03	Invoiced Text 3	Invoice Text 3
I04	Invoice Text 4	Invoice Text 4
EAV	Email Address	Email Address

Assignment of delivery text

It is possible to transmit a free additional text (250 characters) to the deliverer via the "Deliverer text" field in the respective shipping order.

Assignment of carrier notes

In the shipping order, predefined carrier notes can be linked manually to the shipping order via the corresponding drilldown.

Posted shipping order

The "Shipping processing" report (Report 5049200) can be printed from the posted shipping order. If the posted shipping order is called up from the origin documents, the origin document lines in the posted shipping order are highlighted in blue.

Warehouse and Logistics

Warehouse and Logistics

Number of delivery note copies

In Microsoft Dynamics Business Central™ Standard, a fixed number of invoice copies can be stored for a customer. This means that the number of invoices specified there is printed with each invoice posting.

Similarly, a fixed number of delivery note copies can be stored for a customer in KUMAVISION base365 (BOOSTER). This allows the wholesaler to respond to the wishes of his customers or to store the number of delivery note copies required by the forwarding agent for foreign customers. This number of copies is printed automatically when the delivery bill is posted.

To store the fixed number of delivery note copies, first call up the desired customer card.

On the "General" info tab, you can then specify the number of delivery note copies in the "Number of delivery note copies" field.

Item statistics for inventory turnover

In Microsoft Dynamics Business Central™ Standard, article statistics can be called up from the article card. However, only currency values such as sales, contribution margin, etc. can be displayed in the standard. The display of quantities was missing.

Therefore, the item "Inventory turnover" can now also be called up in the call "Article statistics" in the row view.

As rows, the quantities of item items (not value items) are cumulated according to the filters entered.

Presented are:

- Receipts (quantity) - item items with item type Receipt
- Purchases (quantity) - item items with item type purchase
- Actual message (quantity) - item item with item type output
- Assembly actual report (quantity) - article item with item type assembly output
- Total positive movements (quantity)
- Sale (quantity) - item item with item type sale
- Consumption (quantity) - item item with item type
- Consumption for assembly (quantity) - article item with item type Consumption for assembly
- Total negative movements (quantity)
- Stock transfer (quantity) - Purchasing (quantity) - Article item with item type stock transfer

All quantities except for stock transfers are shown as positive.

When you drill down, the item items of the corresponding item type are displayed.

Article references in goods receipt

When retrieving origin document lines in the goods receipt, the reference numbers from the document lines are also displayed in the window in addition to the article number. This also allows filtering on the supplier article number when creating goods receipt documents.

Negative stock control per storage location

In Microsoft Dynamics Business Central™, the prevention of negative stock can be set for all storage locations. In the company, however, it is necessary to enable individual storage locations for posting to negative stock.

In the storage location, it is possible to set how negative bookings are to be handled for this storage location, in deviation from the standard setting in the warehouse setup.

To do this, call up the "Storage locations" via the user search. On the respective storage location card, you can set this up in the "General" info tab in the "Prevent negative stock" field.

If Prevent negative stock = No is set up in the storage facility, the field with the same name in the storage location has the option

- Standard (No)
- No
- Yes

Conversely, if Prevent negative stock = Yes is set up in the storage facility, the field of the same name in the storage location has the option

- Standard (Yes)
- No
- Yes

The basic setting at the respective storage location always corresponds to the standard option and can then be set differently.

> Note

The display on the item master (default (Yes) or default (No)) always corresponds to the setting in the warehouse setup.

When posting stock issues, the system always checks in the following sequence:

- Setting on the article
- Setting at the storage location
- Setting in the warehouse facility and then the booking is performed or prevented, depending on the setting.

Batch certificate management

With the batch certificate management, you have the option of storing certificates resulting from external work and assigning them to the deliveries. This means, for example, that certificates for external sterilization can be stored for the deliveries and automatically printed out for the customer when the delivery bill is printed out.

Establishment

Advanced production facility

In the extended production setup, the number series for the certificate documents is stored first. To do this, first call up the "Extended production setup" via the user search.

In the field "Batch certificate number" the number series for the certificate documents is stored. If no number series has been defined in advance, you can define it via "Select from complete list" and then assign it to the "Batch certificate number" field.

Debit card

If a customer is also to receive the batch certificates when the delivery bills are printed out, this must first be set up on the corresponding customer card.

To do this, call up the desired customer card. On the "General" information tab, in the "Print batch certificates" field, you have the option of activating the switch if the batch certificates are to be printed out for this customer when the delivery bill is printed out.

Manage batches

To manage the batch certificates, call up the "Batch certificates" via the user search.

The batch certificate overview opens where you can view the batch certificates already entered or create a new batch certificate via "New".

To create a new batch certificate, the "No." field is automatically assigned based on the number series set up. Alternatively, manual assignment is possible.

The "Description" and "Certificate No." fields can be filled manually with the information of the certificate. All other fields on the "General" info tab are automatically filled by the system after the certificate is imported.

Then run the "Import" function in the ribbon to make the selection of the certificate image file.

You can then use the functions "Get batches from purchasing delivery", "Get batches from batch no. information" and "Get batches from article items" to assign the certificate to the batch.

Furthermore, the following functionalities are available in the menu ribbon:

Function	Description
Export	Allows you to save the image file present in the header record.
Open	This allows the image file present in the header record to be displayed.
Delete	Deletes the image file present in the header record.

Batch No. Information Card

The batch certificate no. for which the batch was assigned is displayed on the batch no. information card via the "Batch certificate no." field. The batch certificate card can be called up directly via the batch certificate number.

Automatic postings for stock transfer orders

If the checkbox "Transfer order issue automatically posts inbound" is activated for a storage location, an inbound posting for a transfer order is automatically posted as soon as the outbound transfer order has been posted at the transfer storage location.

This makes sense especially if there is no personnel at the destination storage location who can confirm the information of the goods by an inbound posting.

To make this setup, first call up the desired storage location. Then activate the checkbox "Transfer order output bay automatic input" and confirm your setup with "OK".

Get origin document lines

In Microsoft Dynamics Business Central™ Standard Logistics Documents:

- Warehouse putaway,
- Warehouse picking,
- Goods receipt,
- goods issue

the pending documents can be retrieved by function call "Get origin document" into the documents. All lines still to be delivered are transferred to the logistics document. Lines that are not required must now be deleted manually.

The function "Get origin document lines" has been extended in KUMAVISION base365 (BOOSTER) to the view on the document lines. The voucher lines are grouped by voucher and voucher line and can be sorted by article number, etc. in the overview. Individual item lines can be selected. As a result, the selected lines are then transferred to the logistics document.

This function has been implemented in the following logistics documents:

- Goods Receipt,
- warehouse putaway,
- goods issue and
- warehouse picking

Unique Device Identification UDI (EUDAMED)

Abbreviations

Abbreviations	Comment
DUNS	Data Universal Numbering System
ESG	Electronic Submissions Gateway
UDI Data Dicitonary	Overview of UDI datasets published by the EU Commission (last accessed on 03.09.2021).
EUDAMED	European Database on Medical Devices
UDI	Unique Device Identification
UNC	Uniform Naming Convention
XSD	XML Scheme Definition
XML	Extensible Markup Language

Introduction

For reporting UDI data into EUDAMED, data from the article master as well as new data to be specified are used. The UDI information can be written to an XML file or printed. XML files containing UDI data exported from GUDID can be imported into Microsoft Dynamics Business Central™.

> Note

The Unique Device Identification UDI (EUDAMED) module is an activation module, which can only be used with additional licensing and activation.

Facilities UDI - EUDAMED in KUMAVISION

To set up the UDI EUDAMED interface, call up the "UDI setup" via the user search.

UDI Establishment

In the "UDI Setup" the basic setups are made:

Field	Description
Standard allocation point	The standard allocation point.
Standard manufacturer SRN	The manufacturer's Stadard SRN

Actions Ribbon

Field	Description
Initilize	Creates the default master data. Must be executed once after activating the module.
New Base DI	Creates a new DI (BASIC DI, UDI DI, Secondary DI, etc.)

Ribbon Belonging

The menu ribbon contains the option for central master data maintenance. The following descriptions are taken from the UDI Data Dicitonary of the European Commission:

Field	Description
Annex XVI	„Field stores the reference to the Intended purpose other than medical of the Device (UDI-DI). Field stores the values regarding the Intended purpose of the Device other the medical one`s as they are descubed in the Annex XVI of MDR Regulation."
CMR Categories	"Mentions if the Device has a CMR (Carcinogenic,Mutagenic or toxic to Reproduction (CMR)) substance in it`s composition"
Clinical Size Types	„Device Clinical Sizes can be provided if applicable. Several Clinical Sizes can be added for the Device. Clinical Size will be defined by the Type, Precizion, Value (either Range, single value or Text) and Measuring Unit The Type of Clinical Size (example : length, width, etc.)"
Device Certificate Types	"When registering the Device, for Devices covered by Product certificates, user will have to provide identification details of the Product Certificate covering the Device. Property defines the type of Product Certificate associate with the Device."
Issuing Entities	„Assigned Issuing Entities that will generate the DI Codes allocated for all DI`s inside Eudamed (Basic UDI DI, UDI-DI, Unit of Use DI, Secondary Di, Package level DI). The Commission shall designate one or several entities to operate a system for assignment of UDIs ('issuing entity')"
MDN Codes	„The Nomenclature Code(s) associated with the UDI-DI. The corresponding CND Nomenclature Code will be stored in the field"
Measure Units	"Device Clinical Sizes can be provided if applicable. Several Clinical Sizes can be added for the Device. Clinical Size will be defined by the Type, Precizion, Value (either Range, single value or Text) and Measuring Unit Clinical Size Measure Unit"
Multi Component Devices	"Property defines if the Basic UDI-DI is refering to a System which is a Device in itself, Procedure pack which is a Device in itself (in accordance with the Art. 22(4) MDR) or Kit. Property is applicable for Standard Devices (not Systems or Procedure Packs) Option Kit is only applicable in case of IVDR Devices and System which is a Device in itself, Procedure pack which is a Device in itself are applicable only in case of MDR Devices"
Notified Bodies	„When registering the Device, for Devices covered by Product certificates, user will have to provide identification details of the Product Certificate covering the Device. Property stores the reference to the Notified Body that issued the Product Certificate"

Field	Description
Risk Classes	"Risk Class of the Device associated with the Basic UDI-DI. Device Risk Class is dependent directly on the Applicable Legislation of the Device."
Special Devices	„Property defines if the Device is a Special Device Type anf if so, the type of Special device Type. In case the Device is a Standard Device having the option System or Procedure Pack (which is a Device in itself) or a System or Procedure Pack - field is not supplied."
Storage Handling Conditions	„References the Storage and Handling Conditions associated to the Device (UDI-DI)"
Type of Subastances	„Field stores the details regarding the type of medicinal substance registered (Substance which can be considered a Medicinal Product or Substance which may be considered a medicinal product derived from human blood or plasma)"
Warning Values	„Field stores the Type of Critical Warnings or Contra-Indications, being required in this case."
Product Designer	"Details of the Product Designer (Original Manufacturer) who Manufactured (produced) or Designed the Device. Reference to an Organisation details provided in case the Manufacturer that designed and manufactured the device is not present in EUDAMED."
Base DI List	List of all (also assigned) DIs (BASIC-DI, UDI-DI, Secondary DI, etc.)
Change Log Entries	List for all changes of UDI information

Base DI List

This list is the central list in which all DIs are stored. This applies to DIs that are already in use (e.g. Basic UDI-DI or UDI-DI) as well as to DIs that are not in use and have been acquired from the corresponding allocation bodies. UDI master data records can be stored for Basic UDI-DI, UDI-DI and EUDAMED DI.

Field	Description
Code	Contains the corresponding UDI-DI (e.g. GTIN or HIBC)
Allocation office	Contains the corresponding allocation point (e.g. GS1)
Description	Optional field for a more detailed description of the UDI record which is not reported to EUDAMED.
DI Type	Describes the DI type (e.g. Basic UDI-DI, UDI-DI or Secondary DI).
Use in EUDAMED	Indicates whether the DI is part of an EUDMAED data set.

Ribbon

Field	Description
EUDAMED Create record	Creates a EUDAMED data set (Basic UDI-DI, UDI-DI and EUDAMED DI)
New	Creates a new row in the Base DI list
Audit Trail	Opens the change log of the EUDAMED data set
Open DI Card	Opens the EUDAMED data set
Open DI versions	Opens the DI version overview
Open article links	Opens the artiecl link belonging to the EUDAMED data set

Basic UDI Card

The Basic UDI master data can be entered in the Basic UDI card. The fields are to be filled according to the UDI Data Dictionary. Fields that do not originate from the Data Dictionary are listed in German and in the following.

Information register General

|Field| Description| |Description |A free description text can be assigned.| |Released| Indicates whether the version of the record has been released.| |Active |Indicates the version that is currently being edited or was last edited.| |Internal version |Specifies the version.|

Ribbon

Field	Description
Create new version	Creates a new version of the UDI master data set
Release version	Releases the current version.
Export	Creates an XML file from the UDI master data set which can be uploaded to EUDAMED.
Open DI versions	Opens the overview of existing DI versions of a UDI master data set
Audit Trail	Opens the change log of the EUDAMED data set

UDI-DI Card

The UDI-DI master data can be entered in the UDI-DI card. The fields are to be filled according to the UDI Data Dictionary. Fields that do not originate from the Data Dictionary are listed in German and in the following.

Information register General

Field	Description
Description	A free description text can be assigned.
Released	Indicates whether the version of the record has been released.
Active	Indicates the version that is currently being edited or was last edited.
Internal version	Specifies the version.

Ribbon

Field	Description
Create new version	Creates a new version of the UDI master data set
Release version	Releases the current version.
Export	Creates an XML file from the UDI master data set which can be uploaded to EUDAMED.
Open DI versions	Opens the overview of existing DI versions of a UDI master data set
Open item links	Assigns a UDI-DI to an article and, if applicable, its variant and unit code.
Audit Trail	Opens the change log of the EUDAMED data set

Actions - Functions

Field	Description
Copy UDI data	Copies the UDI master data from another UDI master data set
Delete Basic UDI Link	Deletes the assigned Basic UDI.
Delete Secondary UDI link	Deletes the assigned Secondary UDI.
Delete Unit of Use DI link	Deletes the assigned Unit of Use DI.
Delete Direct Marking DI link	Deletes the assigned Direct Marking DI.
Related Delete Legacy Device Shortcut	Deletes the associated legacy device.
Delete Product Designer Link shortcut	Deletes the assigned link to the Product Designer.

EUDAMED-DI Card

The UDI-DI master data can be entered in the EUDAMED-DI card. The fields are to be filled according to the UDI Data Dictionary. Fields that do not originate from the data dictionary are listed in German and in the following.

Inforegister Basic UDI

Field	Description
Description	A free description text can be assigned.
Released	Indicates whether the version of the record has been released.
Active	Indicates the version that is currently being edited or was last edited.
Internal version	Specifies the version.

Ribbon

Field	Description
Create new version	Creates a new version of the UDI master data set
Release version	Releases the current version.
Export	Creates an XML file from the UDI master data set which can be uploaded to EUDAMED.
Open DI versions	Opens the overview of existing DI versions of a UDI master data set
Open article links	Assigns a UDI-DI to an article and, if applicable, its variant and unit code.
Audit Trail	Opens the change log of the EUDAMED data set.

Actions - Functions

Field	Description
Copy UDI data	Copies the UDI master data from another UDI master data set
Delete Secondary UDI link	Deletes the assigned Secondary UDI.
Delete Unit of Use DI link	Deletes the assigned Unit of Use DI.
Delete Direct Marking DI link	Deletes the assigned Direct Marking DI.
Delete UDI-DI device link	Deletes the assigned UDI-DI.
Delete EUDAMED ID link	Deletes the assigned EUDAMED ID.
Delete Product Designer Link shortcut	Deletes the assigned link to the Product Designer.

labels interface

general

The "Label Interface" module *(Label Interface - LIF)* allows you to capture a data structure consisting of several pieces of information linked to the item. This data structure can be used as a basis for dynamic generation of labels in the software solutions "Loftware NiceLabel Cloud" (edition "Business" or higher), "Loftware NiceLabel On-Premise" (edition "LMS Enterprise" or higher) or "Seagull Scientific BarTender" (edition "Automation" or higher). Here, the data structures are individually filled from the Microsoft Dynamics 365 Business Central™ processes at runtime and transferred to the label programs via web service call.

Label templates are usually designed in the label programs and linked to the received data structures via integration/automation scenarios and output on printers.

general functionality

The label programs themselves usually consist of various components, whereby two areas are particularly important for the integration of the label interface:

Label Designer

- NiceLabel Designer - Pro
- BarTender Designer

Automation Builder / Integration Builder

- NiceLabel Automation Builder - Pro
- NiceLabel Automation Builder
- BarTender Integration Builder

While the Label Designer is used to create the different label designs and define the graphical layout of the labels, the Automation / Integration Builder is used to define the workflow from receiving the data ("trigger"), through the different steps of opening the correct label template, assigning variables and print settings, to creating and reporting back to the source system. For more details, refer to the respective sections ["Additional Setup of NiceLabel Cloud"](#), ["Additional Setup of NiceLabel On-Premise"](#) and ["Additional setup of BarTender"](#).

components

The "Label Interface" *(Label Interface - LIF)* Work Clearance Module consists of a base, which contains the basic table structures, views and logics, as well as an interface deployment for the integration of various output scenarios.

In the standard of the label interface here are the interface implementations

"KUMAVISION Label Interface - NiceLabel Cloud"
"KUMAVISION Label Interface - NiceLabel On-Premise Webservice"
"KUMAVISION Label Interface - BarTender Webservice"

are included.

In addition, the interface implementation **"KUMAVISION Label Interface File Extension"** is available as a separate app, which enables file export within an on-premise environment. Since access to the file system is not possible for a SaaS environment, this interface implementation had to be outsourced to a separate app.

general setup

In order for Microsoft Dynamics 365 Business Central™ to successfully transfer data to the label programs, a basic setup is required. Furthermore, various optional settings are possible. These are described in the following subchapters.

general activation of the label interface

The label interface is an enabling module for the KUMAVISION base / BOOSTER and can be activated via the "KUMAVISION Module Setup" page, provided that this module has been licensed.

labels position code overview

The data structures used for the transfer to the label programs consist of so-called "key-value pairs", i.e. a list of values, each of which has a unique identifier. These identifiers are stored uniquely across the various labels, regardless of how they are used. To create and maintain these identifiers, open the "Label position code overview" page.

Define the list of unique identifiers to be used in the label data structures here.

field	use
Code	Unique code for the identifier. The code can contain a maximum of 20 characters. In the label structures, the codes to be used are selected at a later point and linked to the respective data.
Description	Description of the identifier to clarify the content. The maximum length of the description is limited to 80 characters.

label interface setup

The Labels Interface Setup is the central starting point for the basic setup of the label interface.

Basic setup parameters are set here and, among other things, the interface implementation to be used is selected. Depending on the "Output Interface" selected, additional content may appear at this point. Special features of the integrated interface implementations can be found in the sections "Additional setup of NiceLabel Cloud", "Additional Setup of NiceLabel On-Premise" and "Additional Setup of BarTender".

inforegister general

field	use
Position code printer	Defines the position code to be used for specifying the selected printer. If a value is stored here, this value will automatically be taken over into the label structure lines when a new label structure is created.
Position code print quantity	Defines the position code to be used for specifying the number of labels to be created. The label programs basically offer the possibility that the number of labels to be printed is transferred and evaluated via a variable. The "Position code print quantity" is provided for this purpose. If the "Position code print quantity" is used, this variable must be evaluated/set up in the label programs. The depositing of the "Position code print quantity" in the label interface equipment has here for the production of the data structure the following effect: a) "*Position code print quantity*" is not stored Per unit of measure from the document line, for which labels are to be printed, a line is created in the transfer file (e.g. document quantity = 100 for which labels are to be printed => 100 lines in the transfer file). b) "*Position code print quantity*" is stored For articles without article tracking, a line is created in the transfer structure. For the variable "Position code print quantity", the corresponding quantity from the document line is transferred. For articles with batch tracking, per batch from the document line (article tracking) a line with the corresponding quantity in the transfer structure is created. For articles with serial number tracking, per serial number in the transfer structure a line with the quantity 1 is transferred. .
Log label printing	Use this field to specify whether the creation of labels should be logged. If this switch is activated, an archiving entry is automatically created in the "Label printing archive" table when a label is created. The list of archived print jobs can be viewed via the "Label printing archive overview" page
Output Interface	This selection field can be used to specify which interface implementation is to be used for creating labels. In the standard label interface, the interface implementations **"KUMAVISION Label Interface - NiceLabel Cloud"**, **"KUMAVISION Label Interface - NiceLabel On-Premise Webservice"** and **"KUMAVISION Label Interface - BarTender Webservice"** can be selected here. In addition, the interface implementation **"KUMAVISION Label Interface File Extension"** is available as a separate app. Further implementations are individually possible.

Inforegister File Export

The Inforegister is available after installing the **"KUMAVISION Label Interface File Extension "** app.

field	use
Structure file export path	Target directory of the structure file, which is accessed by the external label programs.
Label file export path	Destination directory of the label file, which is accessed by the external label programs.
Delimiter	Delimiter must be used in the export function for the label file.
Text Encoding	Specifies the character encoding for the label file (Windows, UTF8, UTF16, MSDOS)
Pictogram Export Path	Specifies the export path of the pictograms stored in KUMAVISION for the access of the label programs.
Pictogram file type	Indication of the file type of the pictograms, either .jpg or .bmp. KUMAVISION cannot distinguish which file type is stored in the database, therefore this entry must be set here accordingly, so that the external label programs can work without error.

Label printer

Via the action "*Label printer*" of the page "*Label interface setup*" the page "*Label printer setup*" is opened.

In this list, a printer can be stored per label code and user for the output of the label. This ensures that when the data structures are output, the label can be passed on by the label program to the correct printer of the respective user.

The following sequence is taken into account when assigning a printer in the transfer process:

1. an assignment is available for the selected label structure code and the selected user.
2. an assignment exists for the selected label structure code and all users (user name = "" (empty))
3. an assignment exists for all label structure codes (label code = "" (empty)) and the selected user
4. an assignment exists for all label structure codes (label code = "" (empty)) and all users (user name = "" (empty)).

labels pictograms (legacy)

Using the Labels Pictograms, images (pictograms) can be managed in the BC database and assigned to individual labels. This functionality is no longer used in connection with the "NiceLabel Cloud" and "BarTender Webservice" integration and is only included for legacy reasons. To add pictograms to labels, they should instead be used in the label programs themselves and assigned to the labels. Via parameter switches *(exemplary "PAR_*" codes in the label position code overview)* it can be switched out of BC if necessary whether symbols should be displayed on the respective label or not.

Label structure

The label structures basically map the data structures that are to be used for the respective label. Here it comes to the assignment of the position codes to the respective data records and fields of the Business Central entities. The label structure lines define which data is to be displayed in the label and where this information comes from.

The label structure is created independently of a specific item and can therefore be used for multiple items.

field	use
Code	Defines the unique code for this label structure. The field can be assigned a code with a maximum length of 20 digits.
Name	The name can be used to store a short description of the label structure. The maximum length of the name is 50 characters.
Label type	The label type can be used to classify labels. The field is only used for assignment and does not contain any process logic. The following label types are available for selection: - Empty - Warehouse - Product - Shipping - Goods receipt
Status	Indicates the status of the current label structure. A label can only be created from a label structure that is in the "Certified" status. The following statuses are available for selection here: - New - Certified - In development - Expired
Version numbers	Defines the number series to be used for assigning the version numbers. Specifying a version number series is optional
Active Version	Displays the currently active version at the label structure. This refers to the version that has the status **"Certified"** and is between the "*From date*" and "*To date*" from the date range of the current working date.
From Date	Indicates from which date the respective label structure is valid and used.
To Date	Indicates until which date the respective label structure is valid and used. If this field remains empty, the label structure will be used until it is replaced by another active version.

Label structure lines

The label structure lines map the individual positions within the label structure that are to be output in the data structure for the respective label. Here the position codes are linked to the individual origin types of the data.

Fields of the label structure lines:

field	use
Position code	Defines a unique position code that stands for a value in the label. For example, a position code "ART_NR" can be selected here to assign the article number from the article master record to it. At this point you can select from the list of created position codes or enter new position codes in the list.
Position description	Indicates the description of the position code. This is taken from the "Position code labels" table, but can also be changed individually at this point.
Origin type	The origin type defines from which data source the data for the corresponding position code comes. For example, the "Text" origin type can be used to specify that the value from the "Origin value" column is to be used, or to obtain data from the article master and linked tables. The selection of origin types and their subspecies is listed separately in the "Possible combinations - Origin type / Origin subspecies"section.
Origin subspecies	The origin subspecies details the specification from the "Origin type" field. Here, for example, it is possible to specify that for the origin type "Item" the description of a field or its content (value) from the item master should be used. The selection of origin types and their subspecies is listed separately in the "Possible combinations - origin type / origin subspecies" section.
Origin Field No.	The "Origin Field No." can only be specified for origin types that refer to a given table in the "Origin Type" field. The field number uniquely identifies the field whose value or description is used. For the possible table data, see the listing of origin types and origin subtypes in the "Possible combinations - origin type / origin subtype" section.

field	use
Origin code	The field "Origin code" can only be used in three cases:

The field "Origin code" can only be used in three cases:

Case 1:
This is the origin type "Pictogram" and the origin subtype "Database". Here, the code of a pictogram can be selected from the master data of the labels pictograms. This possibility is only available for legacy reasons and is only used in combination with the extension "KUMAVISION Label Interface File Extension" which has to be installed separately.

Case 2:
This is the origin type "Article tracking" and the origin subtype "Expiration date" or "Manufacturing date". In these cases, it is possible to specify at this point how the date should be formatted.

Formatting Year:
<YYYY>: By this code, the year is output with four digits.
<YY>: By this code, the year is output with two digits.

Formatting Month:
<MM>: By this code, the month is output as a number.
<MONTH>: By this code the month is written out with its name.

Formatting day:
<DD>: By this code the day is written out as a number.

Example 1:
<MONTH> <YYYY> equals December 2022

Example 2:
<YYYY>-<MM>-<DD> equals 2022-07-09

Case 3:
This is the origin type "*Item attribute*". For both origin type "*Designation*" and origin type "*Value*", this field must be used to define which unique attribute to use. Select the LookUp button to select the appropriate attribute for mapping.

field	use
Origin value	The Origin value field is automatically calculated with the origin subtype "*Path*" except for the origin types "*Text*" and "*Pictogram*". For origin type "*Text*", the text to be statically output for the respective position code is stored in this field. For origin type "*Pictogram*" with origin subtype "Path", the file path for the pictogram is specified here. (This option is used if the pictograms are not managed in the database, but are stored in a file directory.) This option is only available for legacy reasons and is only used in combination with the separately installed extension "KUMAVISION Label Interface File Extension". For other origin types, the origin value is calculated automatically. See the listing of origin types and origin subtypes in section [_"Possible combinations - origin type / origin subtype"_]().
LanguageCode	Defines the language code to be used for the translation. The value stored here is only used for the "*Origin types*" "*Article translation*", "*Eudamed UDI DI*" and "*Eudamed Legacy*" in combination with the "*Origin subspecies*" "*Value*" as well as for the origin type "*Article attribute*" with the origin subspecies "*Designation*" and "*Value*". This makes it possible to integrate different translations into the label structure with different item codes.

possible-combinations-type-of-origin/subspecies-of-origin

The following table lists the possible combinations between "*origin-type*" and "*origin-subspecies*" with the corresponding result (origin value).

origin type	origin subspecies	origin value
Text	" " (empty)	Manual input of a text to be output for the position code.
Pictogram	Path	Manual input of a file path to the pictogram to be used for the position code. This option is only available for legacy reasons and is only used in combination with the separately installed extension "*KUMAVISION Label Interface File Extension*".
Pictogram	Database	Automatic calculation. Shows the name of the pictogram from the database that will be used for the position code. This option is only available for legacy reasons and is only used in combination with the separately installed extension "*KUMAVISION Label Interface File Extension*".
Article	Description	Automatic calculation. Returns the field description of the field selected via "Origin field no." from the table "Article".
Article	Value	Automatic calculation. Returns the field content of the field selected via "Origin field no." from the "Article" table. Returns the field description of the field selected via "Origin field no." from the "Article" table.
Article Attribute	Description	Automatic Calculation. Returns the field description of the field selected via "Origin field no." from the "Item attribute value" table. If the specified field is the "Attribute name" field and a code has been specified in the "Language code" field, the value of this field is obtained on the basis of the associated entry of the Article attribute translation table. If no translation for the specified language exists here, the output will be with the default value.
Article Attribute	Value	Automatic Calculation. Returns the field content of the field selected via "Origin field no." from the table "Article attribute value". If the specified field is the "*Value*" field and a code has been specified in the "Language code" field, the value of this field is obtained on the basis of the associated entry in the Article attribute value translation table. If no translation for the specified language exists here, the output will be with the default value.
Article variant	Description	Automatic calculation. Returns the field description of the, over "Origin field no." selected, field from the table "Article variant".

origin type	origin subspecies	origin value
Article variant	Value	Automatic calculation. Returns the field content of the field selected via "Origin field no." from the "Item variant" table.
Article translation	Description	Automatic calculation. Returns the field description of the field selected via "Origin field no." from the table "*Article translation*".
Article translation	Value	Automatic calculation. Returns the field content of the field selected via "Origin field no." from the table "Article translation". The field "Language code" can be used to define for which language the article translation should be filtered.
Article unit	Description	Automatic calculation. Returns the field description of the field selected via "Origin field no." from the table "Article unit".
Article Tracking	Value	Automatic calculation. Returns the field content of the field selected via "*Origin field no.*" from the table "Item unit".
Article Tracking	Serial No.	Automatic Calculation. Returns the serial number entered for the item code for the item.
Article Tracking	Batch No.	Automatic Calculation. Returns the batch number entered for the item for the position code.
Article tracking	Ext. batch no.	Automatic calculation. Returns the external batch number entered for the article for the position code.
Article Tracking	Expiration Date	Automatic Calculation. Returns the expiration date entered for the item code for the item.The formatting of the value can be influenced via the "*Origin Code*" field.
Item Tracking	Date of Manufacture	Automatic Calculation. Returns the manufacturing date entered for the item code. The formatting of the value can be influenced by the field "*Origin code*".
Debitor	Description	Automatic calculation. Returns the field description of the field selected via "*Origin field no.*" from the table "*Customer*".

origin type	origin subspecies	origin value
Customer	Value	Automatic calculation. Returns the field content of the field selected with "*Origin field no.*" from the table "Customer".
Vendor	Description	Automatic calculation. Returns the field description of the field selected with "*Origin field no.*" from the table "Vendor".
Vendor	Value	Automatic calculation Returns the field content of the field selected via "Origin field no." from the "Vendor" table.
Vendor	Description	Automatic calculation Returns the field description of the field selected via "*Origin field no.*" from the table "*Item reference items*". This table is pre-filtered for customers.Returns the field content of the field selected with "*Origin field no.*" from the table "*Item reference items*". This table will be pre-filtered on accounts receivable.
Vendors Ref.	Description	Automatic calculation. Returns the field description of the field selected with "*Origin field no.*" from the table "*Item reference items*". This table will be pre-filtered on creditors.
Vendors Ref.	Value	Automatic calculation. Returns the field content of the field selected with "*Origin field no.*" from the table "*Item reference items*". This table will be pre-filtered on vendors.
Company data	Description	Automatic calculation. Returns the field description of the field selected with "*Origin field no.*" from the table "*Company data*".
Company data	Value	Automatic calculation. Returns the field content of the field selected with "*Origin field no.*" from the table "*Company data*".
Barcode Reference	Barcode	Automatic Calculation. Returns the article reference number based on the article number, the variant code, the article unit and the reference type "*Barcode*".
Barcode reference	Text	Automatic calculation. Returns the article reference number based on the article number, the variant code, the article unit and the reference type "*Barcode*".

origin type	origin subspecies	origin value
Printer	" " (empty)	Automatic calculation. Returns the printer to be used for the combination of label structure and user ID.
Print quantity	" " (empty)	Automatic calculation. Gives the calculated number of the required label quantity.
Document no.	" " (empty)	Automatic calculation. Indicates the document number of the original document in case of a print process triggered by a document process. If label printing is triggered from a document (e.g. goods receipt, production order), the document number can be output via this.<br
Posting code	Value	Automatic calculation. Returns the content of the posting code from the transaction. If label printing is triggered from a document (e.g. goods receipt, production order), the posting code can be output via this.
Storage location code	Value	Automatic calculation. Returns the content of the storage location code from the transaction. If label printing is triggered from a document (e.g. goods receipt, production order), the storage location code can be output via this.
Storage location code	Value	Automatic calculation. Returns the content of the storage location code from the transaction. If the label printing is triggered from a document (e.g. goods receipt, production order), the bin code can be output via this.
Eudamed UDI-DI	Description	Automatic calculation. Returns the field description of the field from the UDI-DI data selected via "Origin field no.".
Eudamed UDI-DI	Value	Automatic Calculation. Returns the field content of the field selected via "Origin Field No." from the UDI-DI data.
Eudamed Legacy	Description	Automatic Calculation. Returns the field description of the field selected via "Origin Field No." from the UDI-DI data.
Eudamed Legacy	Value	Automatic Calculation. Returns the field content of the field selected via "Origin Field No." from the UDI-DI data.

copy label structures

If a new label structure is to be created based on an existing label structure, this process can be supported by copying the existing label structure.

To do this, a new label structure is created first and then a processing for copying an existing structure is called up via the "*Copy structure*" action.

In this processing, the code of the existing label structure whose lines are to be copied into the new structure must be specified in the "*Copy from label code*" field.

The "*Copy with values*" button can be used to specify whether the manually entered origin values (origin type "Text" and origin type "Pictogram" with sub-type "Path") are also to be copied. If the check box is activated, the values are copied. If, on the other hand, the check box is deactivated, the origin values for the corresponding items remain empty after copying and must be entered manually.

After processing has been started via the "OK" button, the lines from the selected label structure are copied to the new label structure.

Note

This functionality can also be used to revise existing label structures by first copying lines from another label structure and then revising them. If lines already exist in a label structure and the "Copy structure" functionality is executed, the currently existing lines are deleted before the new (copied) lines are entered.

label structure versions

Versions can be created for the label structures. This gives you, among other things, the option of creating new / changed versions that are to be used by the system from a specific start date. The currently valid version of a label structure is displayed in the "*Active version*" field. Data from previous versions that have already expired are still available. The validity of a label structure can also be controlled by a start and end date.

In the "*Version numbers*" field, you can assign an individual number series to be used for determining the version numbers for the selected label structure.

In the "*Active version*" field, the currently valid version number for the label structure is displayed. The calculation date for this is the current date.

The "Active version" is determined as follows:

- The calculation date is the current date.
- It is checked whether there are label structure versions that have the status "Certified" and lie within the period "From date" and "To date" on the version map.
- If several label structure versions are found, the label structure version with the highest version number is used as the "Active version".

Tip

If you work with versions, then the version numbers should be entered with leading zeros, because the field version number is a code field and a sorting is done alphanumerically.

creating a new label structure version

To create a new version of a label structure, select the action "*Versions*" within the desired label structure.

Then select the action "New" in the following window "*Label structure version overview*".

If a number series for "*Version numbers*" has been stored in the underlying label structure, a new number can be entered automatically on the basis of the number series by confirming the empty "*Version code*". If no number series has been stored, the version code must be filled in manually. When creating the new label structure version, the "From date" field is automatically suggested with the current date and can be adjusted if necessary.

You can now enter the required data in the label structure lines either manually or from an existing label structure / label structure version by calling the action ["Copy structure](#).

version matrix

If you work with different versions of the label structures, you can display the differences between the versions by means of a version matrix.

After selecting the action "*Version matrix*" from the label structure, the filter view is opened.

By means of the action "*Show matrix*" in this window, the version matrix with the comparison values is displayed.

change log

If required, changes to the label structures and versions can be tracked and adjustments are directly visible from the label structure views by calling the "Change Log" action. The standard functionality of change logging is used here. In order for this logging to take label structures into account, the following tables must be set up in Change Logging according to the standard Admin documentation see [Microsoft Dynamics 365 Business Central™ Online Help (F1)](#).

- Table 5488108 - "KVSKBALabelStructureHeader"
- Table 5488109 - "KVSKBALabelStructureLine"
- Table 5488116 - "KVSKBALabelStructureVersion"

article / label link

The label structure itself basically provides a framework for a label that decides which items (item codes) a label should contain and how the values for these items are calculated. The structure is generally valid and can be used for several articles. The assignment of label structures to articles is done via "*Article / Label links*".

The call of the "*Article / label link*" is possible thereby both from the label structure, and from the article or the article variant.

In the article / label links, it is stored which article is linked to which label structure. In addition, when using a label structure, additional parameters such as article units, language codes, customer numbers and vendor numbers can be specified for an article. These parameters are used when selecting the correct label structure and are applied when calculating the label for the corresponding article.

As an example, by specifying the item unit and the customer number, an OEM label can be defined for a specific customer.

field	use
Article no.	Number of the article to which a label structure will be linked.
Variant code	Variant code of an article to which a label structure is linked.
Label code	Code of the label structure to be used.
Article Description	Description 1 of the article to be linked to a label structure.
Label Name	Name of the label structure to be linked to an item.
Article unit	Specification of the article unit with which the label data (label content) is to be calculated.
Language code	Preset of the language code with which the label data (label content) should be calculated.
Customer no.	Specify the customer number with which the label data (label contents) are to be calculated.
Vendor no.	Specify the vendor number with which the label data (label contents) are to be calculated.
Print in goods receipt	If the label should be printed at the goods receipt, the checkbox must be activated.
Print in production order	If the article linked to a label structure is a production article, this checkbox must be activated so that a corresponding label is printed when production is completed.
Print at goods issue	If the label is to be printed at the goods issue, this checkbox must be activated.
Quantity outer packaging	This field only has an effect if a label is printed at goods receipt (i.e. the "Print at goods receipt" field is activated) and the "Print quantity item code" = "Empty" in the label interface setup.
Quantity sample label	If additional labels are to be printed, e.g. as reserve samples of an article, the desired quantity of the additional labels can be entered here. In these cases, the print quantity is increased by the "Sample label quantity".

calculation logic for "quantity repackaging"

> Note

The field "Quantity repackaging" has only an effect, if "Print in goods receipt" of the "Article / label link" is activated and "Position code print quantity" in the "Label interface setup" does not contain a value.

If both conditions are met, the "Quantity repackaging" will be used to calculate the print quantity as follows:

Example without item tracking:
Order quantity = 100, unit = pieces, quantity repackaging = 1 => 100 labels (100 / 1)
Order quantity = 100, unit = pieces, quantity outer packaging = 2 => 50 labels (100 / 2).

Example with item tracking "serial number":
Order quantity = 100, unit = pieces, quantity outer packaging = 1 => 100 labels (100 / 1)
Order quantity = 100, unit = pieces, quantity of repackaging = 2 => 50 labels (100 / 2)

Label content / label preview

The process for generating labels is fundamentally a process-automated path in which the data structures from Microsoft Dynamics 365 Business Central™ are generated automatically in the background at various points in the application and transferred to the automation interfaces of the label programs. There, the respective set-up process steps are executed and the print data is generated and transferred to the respective printer. Manual intervention should not be necessary here.

In order to nevertheless be able to trace the generation of the label content in Microsoft Dynamics 365 Business Central™ and to see a preview of the generated label for checking purposes, the "*Label content*" view has been created, which can be called up from the "Label structure" or from the "Article / Label link" via the "Display content" action.

If the call was started from the "*Article/label link*", the data stored in the link will already be transferred to the "Label content" view.

In the case of the call from the label structure, only the label code can be preset.

In the header information of the "*Label content*" view, entries can be made manually, e.g. to preassign a serial number or an expiration date.

In the editable fields in the content header, sample data for the calculation of the label data can be entered. These values are then used for the calculation of the individual position codes of the label layout.

There are the following mandatory entries:

field	use
Article no.	Number of the article for which the label is to be created. This number is also used when determining the content data for the origin types article, article variant, article unit, article translation, debtors ref., creditors ref. as well as for the barcode origin types and is passed on as a filter or parameter for calculating the corresponding data.
Variant Code	Code of the article variant for which the label is to be created. This code will also be used when determining the content data for the origin types article variant, article translation, debtors ref., creditors ref. origin types and will be passed as a filter or parameter for calculating the corresponding data.
Label Code	Indication of the label code on the basis of which the label content is to be calculated.

The following fields can be filled with additional parameters for label generation:

field	use
Article unit	Indication of the article unit with which the label will be calculated from the label structure. This code is also used when determining content data for the origin types Article Unit, Accounts Receivable Ref, Accounts Payable Ref and the Barcode Origin Types.
Language Code	The language code is used to calculate content data for the origin type Item Translation.
Serial No.	Dient used as content value for the item codes with the origin type Item Tracking and the subtype Serial No. .
Batch no.	Dient as content value for the item codes with the origin type item tracking and the subtype batch no. .
Ext. batch no.	Dient as content value for the item codes with the origin type item tracking and the subtype ext. batch no. .
Expiration Date	Dient as content value for the item codes with the origin type Item Tracking and the subtype Expiration Date .
Date of manufacture	Dient as content value for the item codes with the origin type item tracking and the subtype date of manufacture.
Customer No.	Used when determining content data for the origin types "Customer" and "Customer Ref.
Vendor No.	is used when determining content data for the origin types "Vendor" and "Vendor Ref.
Label Printer Name	Indication of the "Label Printer", will be filled automatically depending on the setup.
Document No.	Indication of the document number.
Booking code	Indication of the booking code
Storage location code	Indication of the storage location code
Storage bin code	Storage bin code specification
NiceLabel Cloud API identifier (only for "Output Interface" "KUMAVISION Label Interface - NiceLabel Cloud")	Indication of the unique trigger ID for the NiceLabel Cloud connection. Will be filled automatically based on the label structure .

calculate content

By calling the action "*Calculate content*" you can now trigger the process in Microsoft Dynamics 365 Business Central™ that calculates the row values based on the stored label structure.

label preview

For the "NiceLabel Cloud" and "BarTender Webservice" interface implementations, the possibilities to display an online preview of the generated label in Microsoft Dynamics 365 Business Central™ have been generally created. For this purpose, the "normal" printing process is simulated in the label program and redirected to a PDF file. This is in turn sent back by the label program as a response to Microsoft Dynamics 365 Business Central™ and displayed.

Info

In order to be able to distinguish this preview functionality in the label programs from the print process itself, an additional variable parameter "*PreviewFormat*" is therefore passed to the label program with the value "*true*" for each preview action. In a normal print action, this parameter is assigned the value "*false*". This allows the label program to react differently depending on the value of this parameter.

After selecting the action "*Preview label*" the label will be displayed in the FastTab "Preview label".

create structure file for label program

It is possible to create a structure file via the label interface, which holds all defined position codes and their example values in a file, to use them for the design of the label as a basis for the data structure. To create a local structure file, select the action "*Create structure file*".

The data structure is then generated and downloaded to the local download directory. A feedback message indicates whether the generation was successful.

The generated file is then located in your local "Download" directory and contains your user ID, the label code and the date and time of creation as file names. When using the "*Output interfaces*" "KUMAVISION Label Interface - NiceLabel Cloud" or "KUMAVISION Label Interface - BarTender Webservice", the result consists of a Json file that lists the variables and their value. In case of "*Output interface" "*KUMAVISION Label Interface - NiceLabel On-Premise Webservice", a XML file containing the variables and values will be created.

The structure of the data structure corresponds 1:1 to the structure that is also used for sending to the label program.

manual transfer to label program

After the label content has been calculated with the article-specific data, the label data can be created and transferred to the external label program. To do this, the data is transferred to the respective interfaces of the label programs and a response is awaited. To create a label manually, select the action "*Create label file*".

The data structure is then generated and transferred to the label program. A feedback message indicates whether the generation was successful.

creation of labels (automated process)

Example: Goods receipt posting

If the checkbox "*Print in goods receipt*" is activated in the article/label link, a label is automatically created for an article when the goods receipt is posted.

The article used in the following example has been created accordingly and ordered in advance. Furthermore, the goods receipt has been created for this purpose, since the following is only about the automated creation of the labels.

Post the goods receipt. A success message appears after the transfer to the label program.

In this example, the PDF file created by the labeling program contains 3 pages for three items that are mentioned in the "*Quantity current delivery*" of the goods receipt.

Software NiceLabel On-Premise

General information about NiceLabel On-Premise

Required Version / Edition

In order to use the „NiceLabel WebService" connection, „Loftware NiceLabel On-Premise" version „LMS Enterprise" or higher is required.

Additional setup of NiceLabel On-Premise

Label Interface Setup

The "*Labels Interface Setup*" is exactly the same as the default setup when using the "*Output Interface*" "*KUMAVISION Label Interface - NiceLabel On-Premise Webservice*". No separate settings need to be made here.

Label Structure

To allow data to be passed to NiceLabel via WebService, an additional field information named "*NiceLabel On-Premise WebService URI*" has been added to the label structure. This field is only visible if the "Output Interface" is set to "NiceLabel On-Premise Webservice".

Feld	Verwendung
NiceLabel On-Premise WebService URI	Defines the unique URL of the NiceLabel Automation Builder that will be used to transfer the data to NiceLabel.

Using NiceLabel On-Premise

The following sections present basic setup steps in NiceLabel On-Premise label software that can be used to perform integration.

> Note

The steps presented here are only examples and do not replace the NiceLabel documentation, nor any training that may be required!

NiceLabel Automation Builder

NiceLabel Automation Builder is the central interface application for creating and managing integrations. Creating a new configuration in NiceLabel Automation Builder is basically divided into two parts: "Data Filter" and "Trigger" creation. The following summary can be used to create a basic configuration.

XML Data Filter

Since the data from Microsoft Dynamics 365 Business Central™ is passed to the NiceLabel On-Premise integration in XML format, it is necessary to create a "XML Data Filter". Therefore, add a new "XML data filter" to your configuration.

Name the data structure and then use the "*Import data structure*" action to open a structure file from Business Central see "Create structure file for label program".

After selecting the file, the data structure should be generated automatically.

To use the XML nodes as variables in NiceLabel, set the "Element property" "Usage" to the value "*Variable value*" for each element in the structure.

Create trigger

Next, you need to create a unique trigger that contains the individual action steps. To do this, select the "*Configuration Items*" tab and then select the "*Webservice*" action in the "*Insert Trigger*" area.

Set the according port for http communication and keep it in mind as this will be used as a part of the URI in the further course and will be stored in Microsoft Dynamics 365 Business Central™ for the label structure.

Normally, the label program is set to read variables from a label. Since in this example an integration is created across labels and the label to be used is transferred as a parameter via the data structure, the variables for the integration must be created manually. This is done in the "Variables" tab via the action "*Add variable*".

Tip

Use in each case as variable name the identical designation of the parameter from the BC label structure line, then in the further process an automatic mapping of the information is possible.

So that the response to BC can be designed dynamically depending on the label preview or label printing, the variable "*ResponseData*" is also inserted. It is used and assigned in the later actions for the return!

Use Data Filter

First of all, in the integration you need to assign the parameters received from NiceLabel to the variables within the label management.

To do this, add the action "*Use data filter*" in the "*Actions*" tab.

Then, in the "*Filter*" area, select as "Name" the XML data structure you have already created. If you have named the variables identically to the position codes from Microsoft Dynamics 365 Business Central™, you can start the automatic mapping of the data structure information to the variables via the button "*Automatically map*" in the area "*Data mapping*". If the variables have been named differently, a manual mapping is required here.

Open label

The next step is to open the correct label. Since the name of the label template from BC is given as a structure line, a variable can be referenced here. Insert the action "*Open label*", activate the checkbox "*Data source*" in the Settings area and select the variable containing the label name as "*Label name*".

Preview: Print Redirection to PDF

In order for us to redirect the print data to a PDF file in the case of the label preview, we need to add the "*Print redirection to PDF*" action. In the settings of this action, a file name is specified and the option "*Overwrite file*" is activated. Since this action step should only be performed if it is a label preview, the condition that the [PreviewFormat] variable must have the value "*true*" is added in the "*Show options for execution and error handling*" area!

Print label

The next action is to print the label. For this the action "*Print label*" is inserted. It is specified via the properties that the quantity of labels to be printed is defined via a variable.

Preview: Read data from file

In the case of a label preview, the content of the generated PDF file must be read at this point and transferred to the "ResponseData" variable. For this purpose, a new action "*Read data from file*" is inserted. In the properties the "File name" is set to the same value as in section ["Preview: Print redirection to PDF"](#). Furthermore, in this scenario the "retries" are set to 20. In addition, this action should only be performed if it is a label preview. Therefore, the "condition" for execution is set to "*[PreviewFormat] = "true"*".

Set response data of the configuration

The last step is to specify in the general trigger settings that the variable value of "*ResponseData*" is to be used as "*Response Data*" information.

For this purpose, the response data must be set to the value "[ResponseData]" in the "*Settings*" menu item of the trigger in the "Communication" section.

NiceLabel Cloud Software

general information about nicelabel cloud

Required Version / Edition

"NiceLabel Cloud" version "Business" or higher is required to use the "NiceLabel Cloud" connection.

Additional setup of NiceLabel Cloud

Using NiceLabel Cloud APIs

To use NiceLabel APIs you need to log in to the ["API Developer Portal"](#), create a subscription and connect it to your Control Center. For more information on how to create an account for the developer portal and connect it to the NiceLabel subscription, see the ["NiceLabel"](#) page.

labels interface setup

When using the "Output Interface" "NiceLabel Cloud", within the "Labels Interface Setup", in addition to the standard information, you need to provide a "NiceLabel Cloud API Subscription Key".

field	use
NiceLabel Cloud API Subscription Key	Defines the "Primary Key" from the Developer Portal profile details. This key information is used as an authentication component for API usage. In detail this key is used in the header information of the http request as "Ocp-Apim-Subscription-Key"

label printer

In NiceLabel Cloud it is possible to store "cloud printers" among others. These printers are not connected to the current Microsoft Dynamics 365 Business Central™ system and therefore are not available there as printers. To be able to add these printers as printers in the BC processes, it is necessary to retrieve the information about the added printers from NiceLabel Cloud using the API.

For this purpose, a new action "*NiceLabel Printer*" has been added.

Within the opened page you can connect to the NiceLabel Cloud API using the action "*Refresh Printer List*" and get the list of cloud printers stored there.

These printers will also be displayed for selection in places where printers can be assigned or deposited.

label structure

In NiceLabel it is possible to define any number of automation flows. These flows are used to control the respective functions and execution steps. Basically, it is possible to run the NiceLabel interface with a unique automation and handle all setting parameters through variables and their consideration in the NiceLabel Automation Builder.

Each automation in NiceLabel Cloud is named by a so-called unique "trigger ID". In order to send the label data structure from BC to the correct unique trigger, it is necessary to assign the "NiceLabel Cloud API identifier".

field	use
NiceLabel Cloud API Identifier	Defines the unique "Trigger Name" from NiceLabel automation to be used for this label structure.

This must match the "*Trigger Name*" of the automation from NiceLabel Control Center.

using nicelabel cloud

The following sections present basic setup steps in NiceLabel Cloud label software that can be used to perform integration.

Note

The steps presented here are only examples and do not replace the NiceLabel documentation, nor any training that may be required!

nicelabel automation builder

NiceLabel Automation Builder is the central interface application for creating and managing integrations. Creating a new configuration in NiceLabel Automation Builder is basically divided into two parts: "Data Filter" and "Trigger" creation. The following summary can be used to create a basic configuration.

json data filter

Since the data from Microsoft Dynamics 365 Business Central™ is passed to the NiceLabel cloud integration in JSON format, it is necessary to create a "JSON Data Filter". Therefore, add a new "JSON data filter" to your configuration.

Name the data structure and then use the "*Import data structure*" action to open a structure file from Business Central [see "Create structure file for label program"](#).

After selecting the file, the data structure should be generated automatically.

To use the JSON parameters as variables in NiceLabel, set the "Element property" "Usage" to the value "*Variable value*" for each element in the structure.

Create trigger

Next, you need to create a unique trigger that contains the individual action steps. To do this, select the "*Configuration Items*" tab and then select the "*Cloud*" action in the "*Insert Trigger*" area.

Assign a unique name and a "Unique identifier". This identifier will be used as a "Cloud Trigger" in the further course and will be stored in Microsoft Dynamics 365 Business Central™ for the label structure.

Normally, the label program is set to read variables from a label. Since in this example an integration is created across labels and the label to be used is transferred as a parameter via the data structure, the variables for the integration must be created manually. This is done in the "Variables" tab via the action "*Add variable*".

Tip

Use in each case as variable name the identical designation of the parameter from the BC label structure line, then in the further process an automatic mapping of the information is possible.

So that the response to BC can be designed dynamically depending on the label preview or label printing, the two variables "*ResponseData*" and "*ResponseType*" are also inserted. These are used and assigned in the later actions for the return!

use data filter

First of all, in the integration you need to assign the parameters received from NiceLabel to the variables within the label management.

To do this, add the action "*Use data filter*" in the "*Actions*" tab.

Then, in the "*Filter*" area, select as "Name" the JSON data structure you have already created. If you have named the variables identically to the position codes from Microsoft Dynamics 365 Business Central™, you can start the automatic mapping of the data structure information to the variables via the button "*Automatically map*" in the area "*Data mapping*". If the variables have been named differently, a manual mapping is required here.

label open

The next step is to open the correct label. Since the name of the label template from BC is given as a structure line, a variable can be referenced here. Insert the action "*Open label*", activate the checkbox "*Data source*" in the Settings area and select the variable containing the label name as "*Label name*".

initialization of the "responseType" variable

At this point the variable "ResponseType" is set to the default value "*application/json*". To do this, a new action "*Set Variable*" is added, in the properties of the action the "Name" of the variable is set to "ResponseType" and the value is set to "application/json".

initialization of the "responseData" variable

At this point the variable "ResponseData" is set to the default value "{}". To do this, a new action "Set Variable" is added, in the properties of the action the "Name" of the variable is set to "ResponseData" and the value is set to "{}".

preview: print redirection to pdf

In order for us to redirect the print data to a PDF file in the case of the label preview, we need to add the "*Print redirection to PDF*" action. In the settings of this action, a file name is specified and the option "*Overwrite file*" is activated. Since this action step should only be performed if it is a label preview, the condition that the [PreviewFormat] variable must have the value "*True*" is added in the "*Show options for execution and error handling*" area!

print label

The next action is to print the label. For this the action "*Print label*" is inserted. It is specified via the properties that the quantity of labels to be printed is defined via a variable.

preview: read data from file

In the case of a label preview, the content of the generated PDF file must be read at this point and transferred to the "ResponseData" variable. For this purpose, a new action "*Read data from file*" is inserted. In the properties the "File name" is set to the same value as in section . Furthermore, in this scenario the "retries" are set to 20. In addition, this action should only be performed if it is a label preview. Therefore, the "condition" for execution is set to "*[PreviewFormat] = "true"*"".

preview: set responseType "pdf"

Since the return value for a label preview consists of the PDF document, the ResponseType must also be converted. For this purpose, another action is inserted which sets the "*ResponseType*" variable to the value "*application/pdf*" in the case of a label preview.

set response type and response data of the configuration

The last step is to specify in the trigger settings that the variable values are to be used as "*response type*" and "*response data*" of the cloud trigger.

For this purpose, the response type must be set to the variable "ResponseType" and the response data must be set to the value "[ResponseData]" in the "*Settings*" menu item of the trigger in the "Communication" section.

seagull scientific bartender

general information about bartender

required version / edition

To use the "BarTender WebService" connection, "Seagull Scientific BarTender" version "Automation" or higher is required.

Additional BarTender setup

labels interface setup

The "*Labels Interface Setup*" is exactly the same as the default setup when using the "*Output Interface*" "*BarTender Webservice*". No separate settings need to be made here.

label structure

To allow data to be passed to BarTender via WebServices, additional field information has been added to the label structure. These fields are only visible if the "Output Interface" is the BarTender integration.

field	use
BarTender Webservice URL	Defines the unique URL from the BarTender Integration Builder that will be used to transfer the data to BarTender.
BarTender Authentication	If set, defines how to authenticate to the BarTender service. Possible selections here are: - "None" => Do not use authentication - "Basic" => Use a Basic Authentication
BarTender Username	Defines the username for login, if "*BarTender Authentication*" is set to authentication type "*Basic*".
BarTender Password	Defines the password for logging in, if "*BarTender Authentication*" is set to the authentication type "*Basic*".

using bartender

The following sections present basic setup steps in the BarTender label software that can be used to perform an integration.

> Note

The steps presented here are to be understood as examples only and do not replace the BarTender documentation, nor any training that may be required!

bartender integration builder

The BarTender Integration Builder is the central interface application for creating and managing integrations.

When a new integration is created, the "trigger" for the integration method can be selected. For the BC integration, the option "*Web Service*" should be selected here.

service

The name of the integration, which can be changed via the menu item "*Integration*", is used by default as the service name for the web service.

input data

In the menu item "*Input data*" the option value "*JSON variables*" can be selected as "*Input format*". Then use the action call "*New example*" to select the structure file created from the BC label structure, see ["Create structure file for label program"](#).

Thus, the variable content from Microsoft Dynamics 365 Business Central™ is read in and provided as sample input data.

Response

In the menu item "*Reply*" it is possible to specify in which format and with which content a reply is to be sent back to Microsoft Dynamics 365 Business Central™. Since the return of the encoded PDF stream is required at this point with regard to a label preview, the response should be specified to a new variable to be stored. This ensures that the content of the variable is filled independently by an action.

variables

In the menu item "*Variables*" generally predefined integration variables can be changed or new user-defined integration variables can be added.

In this example no integration variables are presupposed, so that at this point no data must be changed or entered.

actions

Using the menu item "*Actions*" it is possible to store various processing steps similar to a workflow system, which are to be executed on the basis of the data received. The actions offered here are subdivided into the areas:

- Print
- Convert
- Input
- Output
- Execute
- File
- database

and provide a large number of substeps that can be linked together as desired. For details and further examples please refer to the BarTender documentation.

task

In the current example it should be made possible that based on the label data in case of a label preview the label is printed as a local PDF and the content of the PDF is returned to BC as a response stream. If it is not a label preview, the printer named in the label data is to be selected and the label is to be printed on this printer.

realization

1. distinction on label preview First of all, a "Select Case" action is necessary to be able to check whether the action at hand is a label preview. Within this action it is therefore determined that in case the variable "*PreviewFormat*" has the value "*true*", a different further processing is to take place.

2. label preview In this example, the label template to be printed is passed from the BC label structure by means of the variable "ETI_DOKUMENT", so that the document to be opened must branch to this variable in this action step. By means of this variable handling of label templates, it is possible to reduce the number of integrations, since the data structure designates the label to be used.

   In the print options, it is specified that a redirection of the print to a PDF should take place. Furthermore, the "*Advanced Print Options*" is used to specify the location of the PDF.

   In the "*Named Data Sources*" tab, the assignment of variables that are transferred with the data integration to the named data sources that are used within the Label Designer is done.

   In the next step, the generated PDF must be converted to a Base64-encoded form and stored in a variable for the integration's response. For this purpose a new action "*Power Shell command*" is inserted. This action gets as "*Source*" the value "*Embedded Commands*" and as command the following powershell command:

   [convert]::ToBase64String((Get-Content -path "< Dateiname aus den erweiterten Druckoptionen>" -Encoding byte))

Furthermore, this specifies that the field "Save issued commands and errors in variable" should be the variable from section ["Reply"](#)

1. no label preview => print For the second distinction case, where there is no preview but the document is to be printed, a "Print document" action is added. Here also the document is given by the label structure from BC.

   In the print options, both the print to be used and the print quantity can be specified variably via the label structure data from BC. For this the use of the variables is necessary. These are always defined in BarTender via "%< name of variable >%" (e.g. %ART_NR% or %ETI_DRUCKER%).

   In the tab "Named data sources" the assignment of variables, which are transferred with the data integration, to the named data sources, which are used within the label designer, is done.

1.2.2 factory365

KUMAVISION factory365

With KUMAVISION factory365, you can easily master the balancing act between costs, resources, logistics and adherence to schedules. Because the integrated industry software is perfectly tailored to the needs of the manufacturing industry and offers all functionalities in one system.

- Continuous connection between design and production
- Project management with concurrent calculation
- Pre-, post- and concurrent article costing
- Transaction-related storage of objects such as documents, drawings and certificates
- Role-based interface
- Order proposal with integrated frame processing
- Demand forecasts for inventory optimization
- Flexible management of all types of storage

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Basic Setup

Mandatory field check

The mandatory field check allows to define customer-specific mandatory fields to support the creation of master or document data. Certain values are predefined, which are checked after the input is completed. Here a mandatory field can be defined in dependence to other fields with the result:

Cancel: The fields must be filled Note: The fields can be filled

You can set up mandatory field validation for the following data: Master data:

- Article
- Debtor
- Vendor
- G/L account
- Resource
- Workplace
- Workstation group

Document data:

- Sales header & line
- purchase header & line
- Service header, service item line and service line
- Delivery schedule

A "Variable mandatory field check" can be activated for the master data, e.g. of the articles. I.e. fields can be defined individually, which must be compellingly indicated by the user with new creation or change of master data. Only when all entries are complete, the master data record can be marked with "Maintenance completed" or the document can be "Released" and used in the system (e.g. when posting a delivery).

The check for completeness of the information is performed as soon as the user sets the Maintenance field in the respective master data card to the value "Maintenance completed", or via the "End article maintenance" function.

If not all mandatory fields have been filled in, an error message or a note appears, depending on the configuration of the individual mandatory field. After "Maintenance completed" has been entered, the fields of the master data record can no longer be changed. However, connected tables (e.g. remarks) can still be changed.

To be able to edit the master data record again, select the function - "Edit article".

Mandatory field check setup

The use of the mandatory field validation can	be activated separately for the individual areas:
For articles	In stock facility
For accounts receivable, sales header and lines	In Accounts Receivable & Sales Setup
For Accounts Payable, Purchasing Header and Lines in	Accounts Payable & Purchasing Setup.
For G/L accounts	In financial accounting setup
For resources	In resources facility
For workstation groups and workstations	in production facility
For scheduling agreement headers	In scheduling agreement setup
For service	In service facility

Setup mandatory fields

The mandatory fields are defined via the application search "Mandatory fields setup tables".

When called, the "Mandatory fields setup tables" are opened. In this list, the corresponding checks can be viewed per table

From the list of checks, the existing checks can be edited or new checks can be added.

This chapter explains how to create checks for a table and the parameters required for a check.

Click on "New" to create a new test record.

Field	Description
Table no.	This field contains the number of the table for which this check is intended.
Table name	This field contains the description of the table for which this check is intended and is
Number of fields	Specifies the number of condition fields automatically

Via the menu item "Mandatory fields" you can define the mandatory fields for the corresponding test record.

Then select the "New" menu item on the "Mandatory fields card" to define the corresponding mandatory fields for the desired test record.

The mandatory field map opens. The mandatory field map consists of three info tabs: "General", "Field definition" and "Condition definition". These areas and their meaning are explained below.

Inforegister General

Field	Description
Table no.	The table no. is automatically filled with the table no. that has already been defined in the test record in the "Table no." field.
Action	The "Action" field is used to control what type of check it is. The following selection options are available: **Note:** If the check is defined as "Note", the user will receive a note message when processing the mandatory field check. However, this message does not influence the release of master data or documents. It is rather to be seen as information, with the help of which the user can still add data, which may be informative, but is not mandatory for processes. **Abort:** If a check is defined as "abort", an abort message follows with the processing of the mandatory field check. This means that the release of master data or documents cannot be completed because process-relevant information is missing.

Info tab Field definition

In the "Field definition" info tab you can set up the check for a mandatory field using the table below.

Field	Description
Field no.	This field contains the number of the field for which this check is intended
Field name	This field contains the description of the field for which this check is intended and is automatically filled when the "Field no." is assigned.
Comparison type	The "Comparison type" field serves as a comparison operator, with which the value of the field in the data set is checked against the value from the "Comparison value" and / or "Maximum comparison value" fields. The following comparison operators are available here: **<>** **=** **>** **<** **>=** **<=** **>=<=** **Note** Depending on the definition of the "Comparison value" and "Maximum comparison value" fields, the selection of the comparison operator may be limited
Comparative value	The "Comparison value" field checks the value of the field in the record in dependence with the "Comparison type" field
Maximum comparison value	The "Maximum comparison value" field checks the value of the field in the record in dependence with the "Comparison type" field when selecting the comparison type ">=<=". Thus it is possible to define from-to ranges. Here, the "Comparison value" field takes the "from role" and the "Maximum comparison value" field takes the "to role". Note - This input is provided for computable operands only.

Example:
You want to set a mandatory field check for the "Description" field in table 27 (Articles) so that the Description field must always contain a value. Otherwise, the user would receive a hint or abort message.

For this purpose, the "Description" field with the number "3" is specified in the "Field no." field. The operator "<> " is used as comparison type and the field "Comparison value would contain "" (empty, no entry).

Inforegister condition definition

In the "Condition definitions" info tab, you can further restrict the mandatory field range using the table below.

Field	Description
Condition Field no:	Specification of the field on which the condition is to be checked
Condition field name	This field contains the description of the field for which this condition is intended and is automatically filled when the "Condition Field No." is assigned.
Comparison type Condition	The "Comparison type condition" field serves as a comparison operator, with which the value of the field in the data set is checked against the value from the "Value condition" and / or "Maximum condition value" fields. The following comparison operators are available here: <> = > < >= <= >=<= **Note** Depending on the definition of the "Value condition" and "Maximum condition value" fields, the selection of the comparison operator may be limited
Value condition	The "Value condition" field checks the value of the field in the record in dependence with the "Comparison type condition" field
Maximum condition value	The "Maximum condition value" field checks the value of the field in the record in dependence with the "Comparison type condition" field when the comparison type ">=<=" is selected. Thus it is possible to define from-to ranges. Here, the "Comparison value" field takes the "from role" and the "Maximum comparison value" field takes the "to role". **Note** This input is provided for computable operands only.

Example:
In the previous example, a mandatory field check has been set on table "27" (Items). In the field definitions, the check has been set to the "Description = ``" field. As a result, each item must contain a value in the "Description" field. Otherwise, the user would contain a hint or abort message.

If you now want to restrict that the description should only contain a value for certain articles, e.g. if it is a production article, this is to be set up in the "Condition definition" info tab as follows:

For this purpose, the "Procurement method" field with the number "5419" is specified in the "Condition field no." field. As comparison type the operator "=" is used and the field "Value condition would contain the value "1" (production order.

Then confirm your setup with "OK".

Notes in documents / master data

Field	Description
Locked/Locked (User)	Field that activates the lock of the master record (as before). However, the field can now no longer be changed directly.
Locked (user)	Here the master record can now be locked by the user. The value is transferred to the Locked/Locked (user) field if the master record is not locked by the mandatory field check or maintenance is locked. When maintenance is complete, the lock is transferred back to the Locked field by the user.
Care	This indicates whether the record is currently in maintenance or not.
Status mandatory field check	This field displays whether the mandatory field check was not performed (no check), completely checked, or incompletely checked. **Note:** The lookup on the field can be used to view the missing required fields. Locked from This shows whether the record is locked by the mandatory field check or by the user.

Basics

Name 3 in address data

Many users often deal with larger entities or corporations in their external correspondence. If these contact details are transferred to Microsoft Dynamics Business Central™, the Name and Name 2 fields are not sufficient. For the company name alone, the Name and Name 2 fields are occupied. For further details such as departments or building information, another field such as "Name 3" is missing. This is consistently available for all addresses in the master data and documents.

Purchasing

Tolerance (time) in both directions

In the standard Microsoft Dynamics Business Central™ a tolerance time can be set for the procurement run to avoid too many change notifications. This refers to the length of time that a requirement cover (e.g. a purchase order) can be received earlier than a requirement originator (e.g. an order) requires this.

The setup is done in Microsoft Dynamics Business Central™ Standard first centrally in the production setup via the field "Standard tolerance period" and can be overridden article specific in the article or inventory data with the field "Tolerance period".

In KUMAVISION factory365 the standard fields were renamed to "Standard tolerance period too early" and "Tolerance period too early".

Furthermore, the production setup was extended by the "Standard tolerance period too late" and the article or stock data by "Tolerance period too late". Thus, in KUMAVISION factory365 tolerances can be defined in both directions in the replenishment procedure "lot-by-lot".

!!!Note "Note Basically, the lot accumulation period must be defined if the tolerance period is to be used. Here the rule applies that the lot accumulation period must be larger than the tolerance period.

Tolerance setup

Global

Enter the term "Production setup" via the user search and select the corresponding link.

Via the "Planning" info tab, you have the option of entering the tolerance times in the "Standard tolerance period too early" and "Standard tolerance period too late" fields.

Specific

To set and define specific tolerances, open the desired item or inventory data card for this purpose. On the "Planning" info tab, you can define the tolerances in the "Tolerance period Too early" and "Tolerance period Too late" fields.

Note

The specific tolerances override the global tolerances from the production setup.

Optimized planning parameters

In Microsoft Dynamics Business Central™, reservations must not be used for the planning parameter "minimum stock". Otherwise, this could lead to untraceable proposal lines.

In KUMAVISION factory365, the planning parameters for the replenishment procedures "Fixed order quantity" and "Replenish to maximum stock" have been optimized so that the "Reserve" field is set to "Never" by default.

When the replenishment procedure is changed to "Fixed order quantity" or "Replenish to maximum stock", the system automatically checks whether any reservations still exist. If this is the case, a message appears informing you to delete them.

Manufacturing

Comfort navigation for production bill of materials and routings

This service area gives you direct navigation to the production bill of materials and routing from the parts card. This facilitates navigation to the production-related master data.

> Note

For further information see „comfort navigation for production bill of materials and routings "

For further information, see "Convenient navigation for production BOM and routings".

In KUMAVISION factory365, the insight via the Assist call has been extended so that it can also be called at the following places in the system:

- From the E+D order line to the production bill of materials, routing with its versions
- From the design monitoring line to the production bill of materials, routing with its versions
- From the MRP monitoring line to the production bill of materials, routing with its versions

Replace article in parts list Comfort

Via the "Replace article BOM comfort" function, you have the possibility to replace a certain article with another one across all BOMs. Furthermore, you have the possibility to replace phantom BOMs with another one.

> Note

For more information see „replace article in parts list comfort"

In KUMAVISION factory365 you also have the possibility via the comfort card to consider only active versions for the replacement via the field "Consider only active versions".

Secondary operations

General

In Microsoft Dynamics Business Central™ it is possible to assign tools and personnel to an operation. However, these assignments are only managed by the system for information purposes.

Through the secondary operations in KUMAVISION Factory, it is possible to manage the capacity and costs of the tools as well as the personnel assignments.

The superior, leading operation (primary operation) defines the main process of an activity. All assigned personnel or tool assignments dependent on it are defined as secondary operations. These are linked to the primary operation via permanently assigned fields. Dates and quantities are managed in the primary operation and automatically derived into the secondary operations. This means that the secondary operations always run in parallel and within the start and finish times of the primary operation.

It is possible to edit the secondary operations, for example, to load an assistant only 50% of the time (to be loaded at the same time = 0.5) in the case of multiple machine occupancy.

Tool management

With this extension of the operation tool table it is possible to manage and post specific tools for a machine in terms of capacity and costing. Tools can thus be managed as an independent capacity in production planning (by work center or work center group), as an article in warehouse, logistics and disposition, as an asset in the financial area or also as a cost object for controlling.

Detailed Personnel Planning

The extension of the operation personnel table enables employee-specific operation and capacity planning and management per operation. It is recommended to plan at the work center group level and confirm or schedule at the employee work center level. Each employee is then set up as a work center and the work center group as a consolidated calendar.

Outlook Industry 4.0

The management of additional production factors such as energy or CO_2 certificates will become increasingly important in the future in order to describe the accompanying processes of production more comprehensively and transparently. With secondary operations, an approach has been found that plans and manages these in a capacity-relevant manner.

Establishment

Production facility

First, call up the production setup via the user search. On the "General" info tab, the fields must be set up according to the following table for the secondary operations:

Field	Description
Separator Work gang no. Personnel	Primary operation = prefix + separator.personnel + suffix (base operation no.personnel)
Basic operation no. Personnel	Suffix for operation personnel
Separator operation no. Tool	Primary operation = Prefix + Separator.Tool + Suffix (Base operation no.Tool)
Basic operation no. Tool	Suffix for operation personnel

Work plan facility

To set up the secondary operations, call up the desired routing via the item card. If you have not yet created a task list, create one first.

>   Note

Please note that the routing for the secondary operations must be defined "Type=Parallel".

Then select the operation line. Via the menu selection "Work operation" you can assign these to the work operation via the selection "Tools" or "Personnel".

Tools

Field	Description
Type	This field defines the selection of the capacity. Depending on the assignment, a secondary operation is created • Blank = Standard • Workstation group • Workplace
No.	Depending on the type, the field is filled as follows: • Blank (default): The field is not editable • Workstation group: Enter workstation group code • Workstation: Enter workstation code

Personal

Field	Description
Type	This field defines the selection of the capacity. Depending on the assignment, a secondary operation is created • Blank = Standard • Workstation group • Workplace
No.	Depending on the type, the field is filled as follows: • Blank (default): The field is not editable • Workstation group: Enter workstation group code • Workstation: Enter workstation code

On the routing, the secondary operations can be displayed by clicking on the "Display secondary operations" item in the line menu.

The secondary operations are inserted, the operation number of which is composed of the primary operation + separator for personnel, tool + current operation number personnel, tool.

The line values of the primary operation are copied to the secondary ones and can be edited here.

If you enter a routing separately from an article, the secondary operations are set up in the same way.

Standard catalog codes forms secondary operations

The attachment tables (-> secondary operations) for the operation can be preset by means of a standard catalog code (standard operation). As soon as a standard catalog code is inserted in the routing line, the operation attachment tables (tool, personnel, remarks, test specification) are updated.

This procedure can be used, for example, to preset tool sets as the standard catalog.

To set up a standard catalog, first call up "Standard catalogs" via the user search.

Via "New" in the menu ribbon you can create a new standard catalog under specification of a code and description.

Via the menu tab "Associated" > "Catalog" you have the possibility to assign tools / personnel to the standard catalog.

Then insert the standard catalog into a parallel routing on the desired line in the "Standard catalog" field. Secondary operations are created for the individual tools. Thus, capacity management and cost allocation can be tracked at the desired detail level for each individual tool.

Secondary operations in the production order

Secondary operations can also be edited directly in a production order. The individual secondary operations can be edited and fine-tuned by production planning. It is important that the scheduling lies within the start-end dates of the primary operation.

Using the example of a firmly planned production order, you have to call up the routings via the "Line" call in the info tab of the same name.

Execute the "Show secondary operations" function in the ribbon under the "Start" menu tab to display the secondary operations.

Deleting / inserting a secondary operation

To delete a secondary operation or add another one, first select the line of the primary operation.

Then select the "Tools" or "Personnel" menu item under "Associated" in the ribbon.

The Tools / Personal Edit card opens, where you can insert a secondary operation via "New" or delete an existing one via "Delete". Confirm your change with "OK".

Editing a secondary operation

If the capacity of a secondary operation is to accompany the process with a certain percentage, proceed as follows:

Change the field: "Simultaneously debit and debit the processing time with equal proportions.

As a result, the cycle time of the operation is maintained within the start-finish time of the primary operation, the Erw. capacity requirement is reduced and the target operation costs are reduced to the percentage share.

Note

Of course, the primary operations can still be processed in addition to the secondary operations. The secondary operations are then automatically assigned the default values of the primary operation.

Overproduction

With this functionality you can define which deviation of the target production quantities you want to allow in percentage.

To do this, call up the production setup via the user search. On the "General" info tab, activate the "Check overproduction" check box.

On the item card, you can then define the desired percentage of overproduction on the "Procurement" info tab in the "Overproduction %" field.

When this function is activated in the production setup, the system checks the Overproduction % field on the item card to see if the quantity completed is greater than the Maximum overproduction quantity. If this is the case, an error message appears.

Note

The check of the overproduction quantity is done per operation. Thus, a deposit of a work plan is a prerequisite.

Example With an FA quantity of 1000, a maximum overproduction quantity of 20% = 200 is calculated. This results in a tolerance quantity of 1000..1200 and from 1201 an error message of the finished quantity appears.

Capacity quantities in FA Overview

The following status fields have been added to the FA overviews:

- Allocated capacity requirements
- Actual time (according to workstation group filter)
- Remaining time (as the difference between the two fields)

These fields are in the overviews:

- Releasing production orders (Microsoft Dynamics Business Central™ Standard)
- Releasing E+D order
- Releasing E+D order (costing)

Automatic article tracking upon release of the FA

By means of the functionality "Automatic article tracking when FA is released" the steps:

- Manually open the article tracing
- Calling the function for determining the serial number from the item-specific number series
- Closing the mask: Article tracing
- Repeat steps per actual message line determined automatically.

Triggers for automatic generation of item tracking are:

- Status change to Released FA, item tracking lines are created
- Update production order" function
- Erect the FA from planning proposal
- Establish the FA from sales order

Establishment

Article card

The items with stored item tracking can be set up for automatic assignment in the "Item tracking" info tab via the "Set up production autom. item tracking" field.

Field	Description
<empty>	No item tracking lines are generated.
Firmly planned	If the item is used in a FA line and the status of the FA is Fixed Scheduled, then when one of the events listed below is performed, the application will automatically establish item tracking lines to the FA line
Released	If the item is used in a FA line and the status of the FA is Released, then when one of the events listed below is performed, the application will automatically establish item tracking lines to the FA line

Article pursuits

Item tracking is set up using the Microsoft Dynamics Business Central™ standard.

Number assignment for automatic article tracking

The automatic assignment of the article tracking is only valid for "actual messages of production" and not for consumption messages. Thus, this assignment only affects output-side usage in the Production application area. Serial numbers If only serial numbers are ticked, an automatic generation of n item tracking line and quantity 1 will take place. Batch numbers If only batch numbers are checked, an automatic generation of an article tracking line with 1 batch and corresponding quantity will take place. Serial and batch numbers If both fields of the item tracking code are checked, n item tracking lines are created with serial numbers and quantity 1 and always the same batch numbers for all quantity = 1.

> Note

The serial numbers or batch numbers are always generated from the number series stored on the article card ("Serial number" or "Batch number" field). If the number series is missing there, a message is displayed.

Procedure

The automatic generation of the article tracking lines takes place for all FA lines of the production order for which an automatic creation is set in the article. It is always filled up to the maximum possible FA line quantity.

It applies: n lines with serial number and quantity 1, or 1 line with batch number and quantity=maximum possible quantity or combination of both).

The user can manually change these automatically generated item tracking lines afterwards (if desired).

A new execution of one of the above events (e.g. a status change of the FA) will take into account any article tracking lines that have already been created, regardless of whether they were previously created manually or automatically. Then, if necessary, article tracking lines will be created automatically only up to the difference to the maximum possible quantity.

Example:
The FA was created in Planned status. The FA line has the quantity 7 and an article with automatic serial number generation for status Fixed Planned. In the Planned status, the user already manually enters 4 serial

numbers for the FA line. After that, the user will change the status of the FA to Fixed Planned. The application will generate only the 3 missing serial numbers for the FA line.

Note

It should also be noted:
1. If the user manually changes the Quantity field in an FA line, this will not result in the automatic generation of item tracking lines.
2. A manual reduction of the quantity in the FA line below the already deposited article tracking lines to the FA line is not allowed by default.
3. A manual increase of the quantity in the FA line must be compensated by the user by manually entering item tracking lines (default behavior).
(Therefore, the above function "Update production order" should be used if possible, because a manual change of the quantity in the FA line also affects other data, which are also not automatically trailed).

Optimized absenteeism management

For the recording of absences from machines for maintenance / repairs etc., the Microsoft Dynamics Business Central™ process requires that you first register the absences, then transfer the registered absences as absenteeism items and update the calendar afterwards.

In KUMAVISION factory365, this process has been optimized so that the individual steps can be executed directly when the function is called. To maintain the absence times in KUMAVISION factory365, proceed as follows:

Call up the "Logged absences" via the user search.

Via the menu items "Reasonable. Absence time (workstation)" or "Appropriate absence time (workgroup)" in the menu ribbon. Absence time (work group) in the menu ribbon, you can enter the absence times for a work center or for a work group.

The entry screen opens, where you can enter the absences using the table below.

Field	Description
Start/end time	Enter the start/end time of the missing time
Start/End date	Enter the start/end date of the absence time Note - The "End date" field must be filled in because the "Logged absences" table is used to calculate the resource calendar. If the absence time extends, you can change the end date later.
Capacity	Enter the capacity that cannot be used during the downtime. For example, if there are 3 production lines, there will not necessarily be downtime on all lines.
Description	Enter a brief description for the cause of the absenteeism
Overwrite	If this field is activated, the items for the respective time in this workstation group will be overwritten.
Apply	If this field is activated, the absence times are taken over as absence time items
Update calendar	If this field is checked, the calendar will be updated automatically

Confirm your entry with "OK". If the "Apply" and "Update calendar" fields have been activated, the registered absences have automatically been adopted as absence items and the calendar updated accordingly.

Shipping units

When manufacturing complex articles, the situation can arise in shipping that the manufactured article must be broken down again into so-called shipping units that can be sensibly transported. In order to be able to map this process in Microsoft Dynamics Business Central™, this scope of services supports shipping units in manufacturing and logistics.

The shipping units can currently cover three different scenarios, which are described below.

Establishment

Design & development facility

In the Design & Development setup, you have the option of using the "Use shipping units for logistical structure explosion" switch on the "Execution" info tab to control whether you want to visually display the logistical structure explosion divided into the corresponding shipping units in an E+D order. For this option you activate this switch. In the E+D order, the option "logistical" can then be selected in the process for the visualized representation via the "Structure resolution" field.

Shipping units

Via the "Shipping units" you can define them in general by assigning a code (abbreviation) and an associated description.

Assignment in the master data

Shipping units can already be preassigned in the planning phase. For this purpose, a shipping unit code can be entered in the lines of the production bills of material. This code does not yet have a fixed reference to a production order. When a production order is created, this shipping unit code is transferred.

Assignment in process

If there is an existing production order, shipping units can be assigned in the components. This can be done in the component lines as well as in released and finished E+D orders in the lines. In addition, the project module has also been integrated so that the assignment from the project structure Project structure out of the project. For this purpose, the fields "Shipping unit code", "Project-specific shipping unit", "Component as shipping unit" and "Transfer quantity to shipping unit" can be displayed in the respective screens.

Note

In the FA components list there is only the "shipping unit code" and "project specific shipping unit".

Relocation of components

Components combined to form a higher-level shipping unit

A production order is set up whose components are to be transferred to a production warehouse for assembly. The components are grouped into shipping units that are easy to transport. From a released (and a completed) E+D order, these components can be inserted into a stock transfer order.

To do this, first select the desired lines and then execute the "Transfer selected shipping units" function via Lines > Function.

It is checked that the components to be transferred have already been consumed. If the correspondingly marked components have been consumed, then a stock transfer order is created, which transfers the shipping units from the component storage location to the FA storage location. The information from the transfer route is used for the "In Transit Code". In the FA shipping units list you can now see that the "Quantity in Outbound Document" is changed.

In the drilldown the corresponding shipping unit item is displayed and via the function "Display document" it is possible to switch to the corresponding document. If the storage locations are subject to goods issue or goods receipt, these can be created and posted according to the standard.

No new item items are created in the background because the components have already been consumed. New shipping unit items are created by the postings. Via these, the status can be checked from the shipping unit overview (opens by the lookup on a shipping unit). After posting the receipt, the order is completed. The shipping unit can now no longer be shipped, as it has already delivered the complete quantity.

Shipping individual components as a shipping unit

It may be necessary to create suitable logistics documents for the customer or the transport, for individual components of a production order. With the "Component as shipping unit" identifier in the E+D order lines (and the Project structure) you have the possibility to define a shipping unit that is specific for a single component in the production order. If the check mark is set, a shipping unit is automatically created that has the item number of the component as the shipping unit code and corresponds to the FA component line in terms of quantity, unit and description.

The "Transfer quantity to shipping unit" field can be used to control whether only a partial transfer of the component is to take place. The field is preset with the quantity available for stock transfer. This is the difference between the posted quantity and the quantities that are already in shipping or have been shipped. Therefore, it is necessary that at least the quantity of the component to be shipped is posted as consumption.

If the stock transfer is to take place, you can enter the corresponding lines in the E+D order or the Project structure and transfer them to a stock transfer order using the "Transfer selected shipping units" function. The rest of the procedure is the same as that described in the section "Components combined to form a higher-level shipping unit".

Shipping units in sales

If a production item is sold, the shipping units stored in the production order can also be inserted in a goods issue that was created from a sales order. For this purpose, the function "Insert shipping units" can be used in the goods issue.

> Note

The "Insert shipping units" function is only available once you have already inserted corresponding lines in the goods issue using the "Get origin documents / document lines" function.

If the sales line was reserved on a corresponding item line, then the shipping units from this production order will be automatically inserted. If there is no reservation, a selection of items is opened and the user can decide which item should be sold. After selection, the shipping units belonging to the item are inserted into the goods issue.

If the production order belonging to the item is not yet finished, the user must confirm that he wants to continue.

The original line remains, but the quantities are removed, since this item is automatically posted in the background after posting the shipping units. The posting of the goods issue with shipping units is now done as in the standard. After complete posting, the original item is also delivered and can be invoiced.

Project-specific or cross-FA shipping units

In connection with the plant engineering solution, it is also possible to use shipping units across FAs within a project. For more information, see Shipping preparation.

Shipping units item

When inserting a shipping unit into a document, items are written. These can have 4 statuses:

- Outbound (Shipment): a stock transfer was created or a goods issue was created from a sales order without anything being posted.
- In Transit: The goods have left the warehouse but have not yet arrived, i.e. the goods issue has been posted but the goods receipt has not.
- Receipt: The receipt of the goods has been recorded, but not yet booked.
- Delivered: The goods have been delivered completely. The items are used to track the quantities in the shipping units overview, even if the posted documents should already be deleted.

Warehouse and Logistics

Other line types in logistics

In Microsoft Dynamics Business Central™, in the following logistics documents:

- Warehouse Storage,
- Warehouse picking,
- Goods Receipt,
- Outgoing goods

only the processing for the line type "article" can be performed. This service area has been extended in KUMAVISION factory365 by the logistics documents for the processing of the other line types from purchasing and sales.

Establishment

Logistics facility

In the logistics setup you have the possibility to set up whether additional line types are possible for the goods receipt and the goods issue.

First call up the "Logistics setup" via the user search.

On the "General" info tab via the "Additional types for receipt" and "Additional types for delivery" buttons you can activate the line types.

Storage location

The single-stage logistics process for goods receipt and goods issue must be activated on the storage location card.

Financial accounting

In Financial Accounting, the G/L accounts for the purchasing or sales process must be enabled for direct posting in the chart of accounts.

General

After successful activation can now be used in the sales processes:

- Article,
- Article additions/deductions,
- Resources,
- G/L accounts

as well as in the purchasing processes:

- Article,
- Article Additions/Discounts
- G/L accounts

be processed via the logistics documents. This means that load carriers, freight services, handling costs, services and article-neutral expenses can be sent and collected via delivery bill.

All logistics documents and book sheets are extended by two new columns:

Field	Description
Document lines type	The document line type knows the same option as in the document lines themselves: , G/L account, item, resource, WG/asset and addition/deduction (item). Depending on the type, the document line no. then corresponds to a G/L account, article, resource, WG/asset or article addition deduction. When creating logistics documents, not only the lines of type=article, but all lines - except text modules (type = empty) and the line types for document structuring (heading, From subtotal, End subtotal/bundle, Bundle) are then transferred.
Document lines no.	This corresponds to the field number in the corresponding document

External Production With Provision

General

A work process that is outsourced (also called extended workbench) occurs particularly frequently in contract finishing processes and also in the assembly of subassemblies. Outsourcing is also a possible alternative to in-house processing when capacity bottlenecks occur in the company itself. Components are often provided that are required for further processing at the external manufacturer. In most cases, the product already machined is also provided.

In the case of external production with provision, the standard functionality of external production has been extended by a provision. The provision allows you to define the components that are sent along for external production or that are also provided by the external manufacturer. For logistical processing, a stock transfer order can be created for the purchase orders from the external work worksheets. The corresponding logistics documents can be printed out for the posted stock transfers.

When posting the external production order, depending on the setup of the components, the debit is made from the external production warehouse in the corresponding quantity.

Establishment

The following sections describe how to set up external production with provision of materials. The basic facilities for manufacturing/production apply as a prerequisite for setting up external production with provision. For more information, please refer to the [Microsoft Dynamics Business Central™ Helpsite (F1)](#).

Production bill of material, version

In the following, only the special features of external production with provision are discussed. As a prerequisite for setting up external production with provision, the facilities for manufacturing/production apply. For further information, please refer to the [Microsoft Dynamics Business Central™ Helpsite (F1)](#).

Inforegister lines

In the production BOM (version), the fields "Connection code" (this field identifies the component as a raw material provision relevant to logistics) and "Provision type" must be set.

Provision type option	Description	Note
Empty	No provision (Business Central Standard)	
Order-related	the components are not sent via a stock transfer order until the external production orders are created. The issue storage location in the FA components is set to the storage location of the external worker (entered at the work center group under origin storage locations) when the stock transfer order is created. Furthermore, the posting method is changed to "Reverse" in the respective FA component line.	Connection code must be maintained
Neutral	the external processor receives a certain quantity of goods in advance. The stock transfer order required for this must be created manually or via a planning worksheet. When a production order is created, the external processor only receives the order for external processing and, if necessary, a stock transfer of the product already processed. The components to be provided are already at the external processor. Here, too, the posting method of the FA components is changed to "backwards". The issue storage location in the components is already set to the external processor when the production order is created or within the planning (is entered at the work center group under origin storage locations). When using this type of provision, it is recommended to set up storage data for the respective components at the storage location of the external processor.	Connection code must be maintained
Supplier	Here, the component is only in the production BOM for information ("info section"). The procurement is done by the external processor. This setting is also used when the customer provides parts. Here no stock or issue posting takes place.	No transfer to the FA

Note

A component defined on a production BOM of an item can be linked to a specific operation using connection codes. Thus, it can be defined at which operation an item is needed or consumed. In order to use the functionality of the provision, the connection code must be defined

The connection code must first be stored in the operation before the setting for the component can be made in the production BOM. Otherwise, an error message will be displayed when trying to certify the BOM.

Work plan, versions

In the following, only the special features of external production with provision are discussed. As a prerequisite for setting up external production with provision, the facilities for manufacturing/production apply. For further information, please refer to the [Microsoft Dynamics Business Central™ Helpsite (F1)](#).

Information register: lines

Field	Description
Third party article	This field marks the operation as "Provision of semi-finished products" relevant to logistics. The external operation can be transferred to a stock transfer order. The registration takes place in the FA-operation or as booked capacity item with quantity without time and value.
Standard catalog code	The standard catalog code is used for external labor pricing
Connection code	Connection code selection

> Note

The connection code must be maintained for the use of the provision in the operations.

Workstation group

In the following, only the special features of external production with provision are discussed. As a prerequisite for setting up external production with provision, the facilities for manufacturing/production apply. For further information, please refer to the [Microsoft Dynamics Business Central™ Helpsite (F1)](#).

Usually, the following settings are made when creating a workstation group for external work:

Inforegister General

In the "Department code" field, the workstation group is assigned to a separate department (e.g. external work).

Information register booking

On the workstation group, the vendor must be stored in the "Vendor no." field that performs the external work.

The posting method must be set to "manual", as the postings are posted via the external labor order.

In the product posting group, a separate posting group for "external labor" should be set up and assigned to better distinguish the origin of non-cash items in accounting.

> Note

The product posting group defines G/L accounts that are posted when sales and purchase postings are made.

The cost price calculation type is usually set to "piece" for external work In this case, you should then also activate the "Special cost price" check box.

If you have agreed with the vendor on a different price for each process for external work, select the Special cost price check box.

> Note

If you use the "special cost price" indicator, then you must enter the "Cost price per unit" field in the operations. The cost price in the "Posting" info tab of the work center group is then not taken into account.

Inforegister Planning

The "Unit code" field is usually set to days, since external processing is usually calculated in days.

As a rule, a separate company calendar is created for external processing.

Navigate menu tab

In addition, the external work prices and the origin storage location can be stored via "Belonging" > "Workplace group".

Determination of prices for external work

In Microsoft Dynamics Business Central™ Standard, a price for the external work (i.e. the price that will later be used in the purchase order) can only be stored on the work center group card or the operation (if the work center group is set up with "special cost price"). Different prices per vendor, per scale quantity, per activity (standard catalog code) or period-dependent prices cannot be maintained.

In KUMAVISION factory365 you have your own price table for the external work orders. The prices for the external work can be stored in different places. Thereby the entries of the external work prices override the prices of the work group card or the work operation.

Third-party work prices Prices (with the option of graduated prices) can be stored for the following combinations via the external work prices:

- Workstation group (MUST)
- Article (MUST)
- Vendor (MUST)
- Standard catalog (external work activity)
- Start and end date
- Minimum quantities (graduated quantities)
- Price units (conversion factor weight share)

The external work prices can be called from the following masks with appropriate filtering:

- Article card/list
- Workplace group card / list
- Accounts payable card / list

!!!Note "Note If more than one operation of an item should be processed via external labor, then you must assign different standard catalog codes in the operations, so that you can also define different prices.

Origin camp location

With the origin storage locations you can control which storage locations should be used for the provided components. For external processing you must use the type "all items".

The call of the origin storage locations is made from the workstation group map/list.

- Type of origin: workplace group
- Origin code: which specific workstation group
- Type: All items or a specific item
- Code: for specific article: Item number
- Storage location code: which storage location is to be controlled

Relocation routes

With the help of the stock transfer routes you have the possibility to create the link between the vendor warehouse (i.e. the warehouse of the external processor) and your own warehouse.

To set up the stock transfer routes, call them up via the user search.

The stock transfer routes overview opens. In the info tab "Stock transfer route matrix" you can now make the assignment for your own warehouse (stock transfer from code = own warehouse (e.g. BLUE)) and the vendor warehouse (e.g. external).

By clicking on the Assist button you get to the transfer route specification on which you enter in the field "Transit Code = Own-LOG". This field must be filled with an appropriate code, the other fields can remain empty if no fixed deliverer is defined.

You can then close the Stock Transfer Route Specification and Stock Transfer Route Matrix windows.

Process of external production with provision

Initial situation: Production is planned and a released FA has been created.

Outside Work Worksheet

Calculate external labor

In the external worksheets it is possible to calculate which released production orders should be sent to the vendor. Here, it is possible to filter on the workstation group, the vendor or the FA number, among other things.

The external work sheet then lists the pending external work calculated according to the filtering.

The vendor is taken from the work center group, the price depending on the stored prices. If there is already an external work for a FA, it will not be charged twice.

Work in the external work worksheet

Change of the creditor: The vendor can be changed per line (order), thus the external labor price stored in the new vendor is also used.

Perform event reporting

With the function "Execute event message" and the activated check mark "Accept event message" the proposal line can be transferred into an order. The stock transfer order for the provision of the FA components

(provision type "order-related") or the processed product can be created via the "Create stock transfer orders to external manufacturers" button.

Proposal lines in which the "Accept event message" checkbox is not activated remain in the external work worksheet without a purchase order being generated.

!!!Note "Note In order to be able to subsequently generate the stock transfer order for the provisions, the external work order must be deleted again and recalculated.

Released production order

Pursuit of the foreign work

The tracking of external labor is done at the line level in the production order. To do this, select the corresponding line and call up the "External work tracking" via Line.

The linked documents can be viewed and called up via the window called up by this function.

Order

In the external work order, the activity or operation of the item is ordered. Accordingly, the description of the item line in the purchase order does not contain the name of the item, but the operation description.

The columns FA no., FA line no., work center group no. and operation no. should be shown, as they represent the reference to production.

In the respective order line, you can use the "Line" menu tab to call up the FA components assigned to the operation via the connection code.

Calling up the article tracking via the "Line" menu tab is only possible if it is the last operation. In this case, the article tracking of the respective FA line is then displayed.

The order type FREMD is automatically preset for orders from the external work worksheet, but can be changed manually. This can be used to preset certain data, such as payment terms and other fields.

If the purchase order is delivered, the operation is confirmed at the same time.

Note

If it is the last operation of a production routing, the receipt to stock (item actual message) is posted.

Book delivery

Depending on the setup of the storage location where the production order and thus the external production order was created, the delivery of the external production is to be posted directly via the purchase order or the corresponding logistics documents. The basic process of creating logistics documents or entering delivery quantities is no different for an external production order than for an order for articles.

An exception here is article tracking and putaway in two-stage logistics if the external production order is not the last operation on an article. In this case, no article tracking can be assigned or created and no putaways are created after posting the goods receipt, since this is not a stock movement of an article.

Note

As already mentioned, external production is the ordering of activities or operations on an item. Therefore, only a capacity item is generated within the production order when posting. Only if it concerns the last operation an article item (item type "actual message") and thus a stock movement is generated additionally.

If FA components are assigned to the operation or order line as a provision via the connection code, they are automatically posted in the background when the delivery is posted in the corresponding quantity. A special feature here are FA components with article tracking, this must be assigned to the respective FA components. Due to this, as already mentioned, the call of the FA components is available in the purchase order as well as in the logistics documents.

!!!Note "Note If the provision type "order-related" is set in the FA components, the article tracking is automatically inherited when posting the stock transfers for the provision. If the provision type "neutral" is set, the supplier must report the article tracking used on his delivery documents and this must then be entered accordingly in the FA components before posting the external production.

Stock transfer

In the stock transfer header, the field Stock transfer order type indicates that the stock transfer is for external production. If you do not receive a separate message from your external processor about the receipt of the provision at his storage location, you should set the switch "Outbound automatically posts inbound" in the stock transfer order, because otherwise the provision is in transit and you would have to post the stock receipt to the vendor again.

!!!Note "Note Alternatively, you can perform the setup globally on the corresponding storage location card for third-party manufacturers. To do this, activate the switch "Transfer order output posts automatic input". The switch in the stock transfer header is then preset according to this setup.

The posting of the stock transfer order issue is again done depending on the setup of the storage location either directly via the stock transfer order or the logistics documents (goods issue or warehouse picking).

For FA components with article tracking and the provision type "Order-related", the article tracking is automatically transferred to the article tracking of the FA components when the stock transfer issue is posted.

Article Attributes

General

Item attributes are used to classify and retrieve articles based on their characteristics. Characteristics can be assigned to each article. Either individually or via the characteristics preassigned to the article category.

In the following, the functional enhancements of the item attributes in factory365 are explained in more detail. Basic information on this area is provided in the [Microsoft Dynamics Business Central™ Online Help](#).

Establishment

Before you can define the article attributes and assign them accordingly, the following setups must be made in the system:

Units

For the later creation of the article attributes, the creation of the required units must be defined in advance. To set up the units, call up the "Units" via the user search. Via "New" in the menu ribbon you can create a new unit with the help of the table below.

Field	Description
Code	Assign a unique abbreviation of the unit. If you are working with eCl@ss, enter the eClass identifier for the unit here.
Description	Enter a description of the unit here. For example, "kilogram" for kilogram.
International Standard Code	Enter the international standard code here.
Short name	Enter a short name for the unit here. This can be the common abbreviation for a unit, e.g. "kg" for kilograms. The abbreviation is displayed in the info boxes.
SI Dimension name	Maintain the SI dimension name for the base unit here. In the list you see the dimension name and in brackets the unit: • "None-SI Dimension" = No SI Dimension • "Time" = Time (second) • "Length" = Length (meters) • "Mass" = mass (kilogram) • "electric current" = current intensity (ampere) • "thermodynamic temperature" = Thermodynamic temperature (Kelvin) • "amount of substance" = amount of substance (mole) • "luminous intensity" = luminous intensity (candela)
Is base unit	Specify here whether the unit is a base unit. For example, set the check mark for meters and make sure that no check mark is set for centimeters.
Quantity per unit	In the Quantity per base unit of measure field, enter how many of the base unit's units the new unit of measure contains
Base unit code	Assign the base unit for the unit here. For example, for centimeters, maintain the unit code of meters.
Base potency	Define here, for an administration the base power for the conversion. For example, maintain the power of ten for centimeters.
Exponent	Define here, for an administration the exponent for the conversion.
SI Notation	Specify the SI notation here.
SI Name	Enter the SI name here.
DIN notation	Enter the DIN notation here.
ECE Name	Enter the ECE name here.
ECE Code	Enter the ECE code here.

Field	Description
NIST Name	Enter the NIST name here.
IEC classification	Specify the IEC classification here.
Parent size DIN	Enter the parent size DIN here.

Note

If you work with the eCl@ss import, you can import the units via this. Further information can be found in the section "Importing eCl@ss 7.0".

Item Attribute Map

Before you can work with the article attributes, you have to set up the required characteristics and their attributes. To do this, call up the "Article attributes" via the user search. Via "New" in the menu ribbon you can define a new article attribute with the help of the tables below.

Note

If you work with the eCl@ss import, you can import the article attributes via it. For more information, see the section "Importing from eCl@ss 7.0".

Inforegister General

Field	Description
Code	Here you can define a unique code for the attribute, by using codes as unique keys you prevent input errors.
Name	Assign a name for the attribute
Type	Specifies the type of attribute. You can choose from the following: • Option • Text • Integer • Decimal number • Date **Note** Please note that by assigning the type, the "Data type" field is automatically pre-populated by the system.
NAV data type	This field is updated when the "Type" field is maintained and sets the data type defined in the database. *
Constant	Set the switch in the Constant field if you want to define a constant for the formula calculation. In the Default value field, you define the value to be used for the formula calculation. For example, for PI you create 3.14 or the number of decimal places you want.
Default value	Define the value of the constant in the "Default value" field. This value will always be output when the attribute is assigned. This makes sense for the formula calculation, for example.
Locked	Indicates that the item attribute cannot be used for the processes. The system sets the locked indicator if you have not maintained the code and name. When the locked indicator is released, the system also checks that both fields have values.
Duty	Marks the attribute as a "mandatory attribute".
Sorting	Set the sorting criterion for tabular display here. If you leave the field empty, sorting will be done according to the Name attribute.

Inforegister option

Depending on the type=option, the "Option" info tab is displayed with the following fields:

Field	Description
Attribute selection expandable	Allows to expand the attributes selection. The system automatically sets a check mark.
Values	Specifies the values of the attribute.

Furthermore, the following function calls are available in the menu ribbon:

Field	Description
Article attribute values	Opens the item attribute value card where you can define the values for the item attribute.
Update attribute values	Use this call to transfer the data records from the reference table to the article attributes.
Update reference table	Use this call to transfer the data records from the article attribute values to the reference table

Information register unit

Field	Description
Unit code	Here you can assign a unit code, by the assignment the field unit is assigned in the background and possibly also overwritten. Only for numeric types, and for option if integer or decimal was assigned here.
Unit	Specifies the base unit in relation to the unit code.

Inforegister Formula

Field	Description
Formula	In the "Formula" field you can define a formula for determining a value. The formula is composed of already created attributes and the mathematical operator. The following mathematical operators are supported: '^' Potentiation: Specify the value to be exponentiated on the left and the power on the right '%' Percentage calculation '/' Division '*' Multiplication '+' Addition '-' Subtraction '<' Less thanThe value returns a one if the result is positive, and a zero if the result is negative '>' Greater thanThe value returns a one if the result is positive, and a zero if it is negative '=' EqualThe value returns a one in the case of a positive result, and a zero in the negative case **Example:** You want to show the formula for area calculation in the attribute. Here, the predefined attribute "Length" * the predefined attribute "Width" is specified in the field as follows: Length*Width
Minimum value	Here you can define a minimum value in the case of a numeric attribute when defining default attributes for article categories. This is checked when entering attribute values for articles, variants as well as article versions.
Minimum value	Here you can define a minimum value in the case of a numeric attribute when defining default attributes for article categories. This is checked when entering attribute values for articles, variants as well as article versions.

Inforegister Factory eClass

In the "Factory eClass" info tab, you can assign the standardized eClass data to the article attribute in the fields provided. Alternatively, this data can be imported via the eCl@ss import. You will find further information on this topic in the section provided for this purpose.

Inforegister Factory Article Synchronization

For a simple and unambiguous recording, values of the article card can be synchronized with the article attributes, so that the data must be maintained only in one place. The necessary setups are made on the "Factory article synchronization" info tab of the respective article attribute. The synchronization setup is described below:

> Note

Please note that you can only synchronize fields of the article map that are linked to only one field value on external tables. Normally, these are all fields of the article card.

Note

Please note that you set the field Type=Option, so that the system has the possibility to provide the selection values of the source table as an option as well

Field	Description
Target field ID	Specify here the field of the item that contains the assignment. For example, the field ID 47 if you want to synchronize data about the customs position.
Field name	Specifies the name of the assigned field in "Target Field ID".
NAV Tables ID	In this field you specify which table should be synchronized to the options table. For example, the table ID 260 for synchronization of data from the table Customs position.
Table designation	Specifies the name of the assigned field in "NAV Table ID".
NAV Key Field ID	In this field you specify the primary key of the source table, these are usually "Code" or "No.". This value is transferred to the code field of the item attribute values table. For example, the field ID 1 for the field No. of the table Customs item.
Field name	Specifies the name of the assigned field in "NAV Key Field ID".
NAV Description Field ID	In this field you specify the information field of the source table that you want to synchronize. This value is transferred to the value field of the item attribute values table. For example, the field ID 2 for the Description field of the Customs Item table.
Field name	Specifies the name of the assigned field in "Description field name". After the field assignment, the system automatically determines the "Data type" field.

Assignment synchronization

The synchronization is finally assigned with the following functions in the menu ribbon:

Update attribute values

Use this call to transfer the data records from the reference table to the article attributes.

If changes are made in the article attribute values table, the new data records or corrections are transferred to the target table.

Note

A maintenance in the reference table does not lead to an automatic update of the article attribute values, these must be taken over via Update attribute values.

Update reference tables

Use this call to transfer the data records from the article attribute values to the reference table.

Synchronization logic

When synchronizing, note the following:

Article

If a field defined in the article attribute card is changed on the article card, this value is transferred to the article attributes; if the article attribute is not yet assigned, the assignment is made by the system.

Article variant

If the affected article has article variants, the changes are also transferred there. Deviating from this are fields that can be maintained in the tables themselves. These are for article variants:

- Description
- Description 2
- Sale locked
- Purchasing locked
- Service locked
- Production locked

Article version

If the affected article has article versions, the changes are also transferred there. Deviating from this are fields that can be maintained in the tables themselves. These are for article versions

- Material
- Drawing no.
- Drawing format
- Manufacturer code
- Finished parts list no.
- Work plan no.

Please note that expired article versions will not be updated.

Attributes maintenance

If you maintain the assignment of the attributes, these changes are transferred to the articles as well as to any existing article variants and article versions in the case of defined synchronization.

Call Usage

The "Usage" call in the ribbon displays the records that currently have the corresponding item attribute assigned in the system. The fields of the "Usage" table are explained below:

Field	Description
Table	The table ID of the item, item category and item variants or version used by the system. This field is not displayed to you.
No./Code	Indicates the article no. from the article, article variant or article version as well as the code from the article category and the Lfd. No. from the catalog article.
Variant code	The variant code from the article variant or article version. The field remains empty for articles and article categories.
Article version code	Specifies the item version code from the item version. For article, article category, article variant the field remains empty
Description	Specifies the description.

Via the menu ribbon - Navigate, the call "Show map" is additionally available, with which you can display the corresponding map.

Article attributes assignment

KUMAVISION factory365 allows you to use article attributes not only for the article, but also for catalog articles, article variants and article versions and provides the full range of functions here.

The following inheritance logic must be observed:
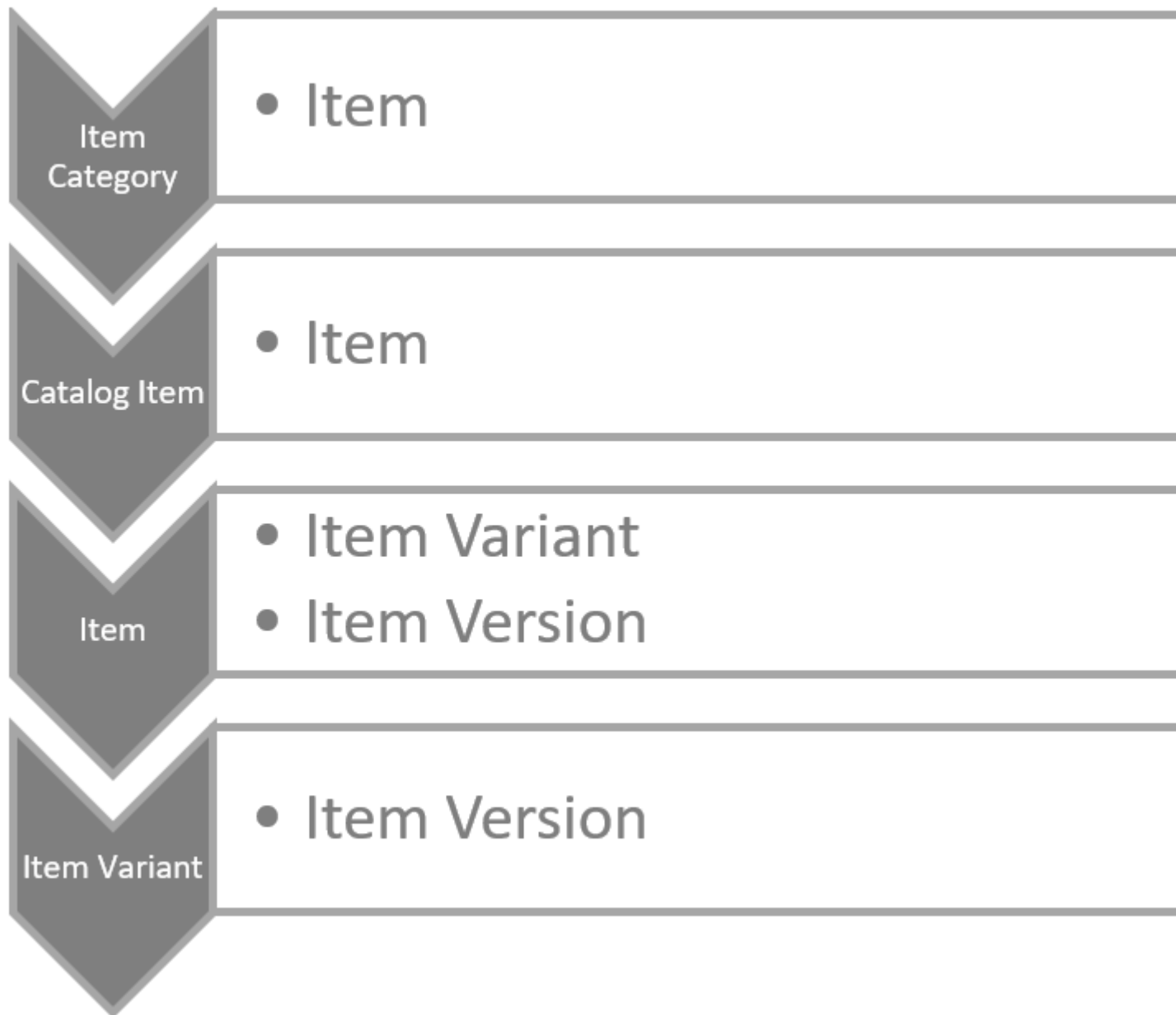
The diagram shows you horizontally what can be derived from which element and vertically how it is inheritable in itself.

Article

On the article card, you can assign the attributes for the article via the "Attributes" call in the menu ribbon. In the "Article attributes" info box on the article card, the data of the assigned attributes are displayed directly.

Article category

On the article category card, you can use the "Attributes" call in the ribbon to assign the attributes for the article category. In the "Article attributes" info box on the article category card, the data of the assigned attributes is displayed directly.

If you assign this article category to an article, the attributes from the article category are transferred to the article.

If changes are subsequently made to the attributes of the article category, they will be inherited by the assigned articles.

Note

Please note that the attributes of the parent article categories are inherited by the child article categories. However, the inherited attributes cannot be changed in the subordinate article categories. Per article, article variant as well as article version these can always be adapted individually.

Catalog items

On the catalog item card, you can use the "Attributes" call in the ribbon to assign the attributes for the catalog item. In the "Article attributes" info box on the catalog article card, the data of the assigned attributes are displayed directly.

If an article is created from a catalog article, the attribute definitions are taken from the catalog article.

Note

Please note that after the article creation, no more maintenance of the attributes via the catalog articles is possible, but only on the corresponding article card.

If you subsequently assign an article category to the created article, any article attributes stored will be inherited by the article.

Article variant

When creating new article variants, the attribute assignments of the article are transferred one-to-one to the variant and can be adjusted there according to your requirements.

To do this, call up the "Attributes" callup in the ribbon in the article variant in order to assign the type attributes for the variant. The data of the assigned attributes are displayed directly in the "Article attributes" info box.

Note

Changes to the values of the article attributes are not transferred to the variants.

Article version

When creating new article versions, the attribute assignment of the article or variant is transferred one-to-one and can be adjusted there according to your requirements.

To do this, call up the "Attributes" callup in the ribbon in the article version in order to assign the attributes for the article version. In the "Article attributes" info box on the article version, the data for the assigned attributes are displayed directly

Note

In the article version, you cannot define print control for sales.

The transfer of new attributes from the associated article or variant is performed depending on the definition via the "Automatically transfer attributes to versions" field in the Design & Development setup:

Field selection	Description
Not	No attributes are transferred.
New only	New attributes are only transferred to the versions in New status.
Until Certified	New attributes are transferred to the article versions with the statuses New and Certified.
until Certified and reset to New	New attributes are transferred to the article versions with the statuses New and Certified. If the article version has certified, this is reset to New, so that manual editing or checking becomes necessary.
All	Basically the attributes are transferred.

Note

Changes to the values of the article attributes for the article and the article variant are generally not transferred to the article version. There is no provision for transferring attributes from an old article version to a new article version; the attributes from the master record of the article or article variant are always transferred.

Attribute search

The standard allows to control the overview in the article overview via attribute filters. The extension of the attribute usage to article variant as well as article version make this filter possibility incomplete, because it is not usable for article variant, article version as well as catalog articles, for this reason there is the article attribute search.

You can call the attribute search directly via the user search or accordingly from the documents listed below:

- Assembly parts list
- Assembly order
- Project plan line
- Production parts list
- Request
- Frame order
- Order
- Invoice
- Return
- Purchase credit
- Offer
- Framework order
- Order
- Blanket order
- Take back
- Credit

When calling from the documents, the data of the source line are determined and maintained as header data. If you have not yet made any selection other than setting the type to article, no initialization is performed either.

Note

In the listed documents, you can use the attribute search, filter by article and transfer directly to the document. Please note that the article version is not taken into account for consuming documents.

If you want to transfer a catalog article, you must first create it as the correct article via the catalog article. Afterwards, please start the search again or enter the newly created article directly.

In the header area of the attribute search, you can have the search lines suggested via the fields Article category, Article, Article variant as well as Article version by maintaining the fields.

The maintenance of the fields should be done hierarchically from article category to article version. According to the hierarchy, the sequence selections are restricted.

If you do not enter data hierarchically, the higher data will be determined and filled in by the system. For example, if you start with the article version, the system determines and maintains the article category, article and article variant as defined in the article version.

Import from eCl@ss 7.0

The system allows you to import the entire eCl@ss master into the system. The eCl@ss structure with its classification (Classification CC), property (Property PR) and value (Value VA) is implemented in the factory as follows:

eCl@ss structure	KUMAVISION Factory
Classification	Article category
Feature	Article attribute
Value	Item attribute value

To import the eCl@ss master, first call up the "Import eCl@ss structure" via the user search.

The import mask opens on which you can select the import file in the respective fields via the Assist button [...].

The following selections are available:

Field	Description
	Use the Assist button to specify the unit import file.
	The units (Units UN) are imported into the Units table, for this the following mapping is made.
Units (UN)	Column heading = Field unit StructuredNaming = Structured name ShortName = Short name Description Definition = Record note Source = Record note Comment = Record note SINotation = SI Notation SIName = SI Name DINNotation = DIN notation ECEName = ECE Name ECECode = ECE Code NISTName = NIST Name IECClassification = IEC classification IrdiUN = IrdiUN The characters 11 to 16 in code NameOfDedicatedQuantity = Parent size DIN
	The primary key thus corresponds to the characters 11-20 of the IrdiUN (unique identifier plus version status)

Field	Description
	Use the Assist button to specify the classification import file.
	The classifications (Classification CC) are imported into the Article Category table, for this the following mapping is made:
Classification (CC)	Column heading = Item category field Supplier = Supplier ID IdCC = Identification + version number Identifier = Indentification VersionNumber = Version VersionDate = Publication date / version date RevisionNumber = Revision CodedName = eClass Coded name Code PreferredName = Description Definition = Record note ISOLanguageCode = ISO language code ISOCountryCode = ISO country code Note = Record note Remark = Record note Level = Indirect indentation Indentation = Level - 1 FMD subclass = Is not imported MKKeyword = Is not imported MKBSA = Base attribute yes, if the MKBSA is not equal to 2. IrdiCC = IrDiCC
	The primary key thus corresponds to the CodeName.

Field	Description
Features (PR)	Use the Assist button to specify the feature import file. The characteristics (Property PR) are imported into the article attributes. Supplier = Supplier ID IdPR = No takeover Identifier = Identifier Code VersionNumber = Version VersionDate = Publication date RevisionNumber = Change number of the feature PreferredName = Name ShortName = Short name Definition = Record note Note = Record note Remark = Record note FormSymbol = No takeover IrdiUN = The characters from 11th position in unit code ISOLanguageCode = ISO language code ISOCountryCode = ISO country code Category = Type class AttributeType = No takeover Reference = Record note DefinitionClass = Assignment ICS subject group classification DataType = Data type Here also the data type and NAV data type are determined DigitsBeforeComma = Number of digits before the decimal point DigitsAfterComma = Number of decimal places NumberOfCharacters = Length string IrdiPR = IrdiPR CurrencyAlphaCode = Currency code
Classification Feature (CC_PR)	Use the Assist button to specify the classification feature import file. The assignments of the characteristics (Property PR) to classifications (Classification CC) are stored in the assignment table.

Field	Description
Characteristic values VA	Use the Assist button to specify the characteristic values VA import file. The values (Values VA) are first temporarily imported by the system into the article attribute values and not directly stored in the database, here the following mapping is made: Supplier = Supplier ID IdVA = Is not imported Identifier = Identifier Code if short name Blank. VersionNumber = Version RevisionNumber = Revision VersionDate = Publication date PreferredName = Value ShortName = Short name Definition = Record note Reference = Record note ISOLanguageCode = ISO language code ISOCountryCode = ISO country code IrdiVA = IrdiVA DataType = Data type The primary key is assigned by Microsoft a consecutive number, the factory has added a code field for better manageability, with which the selection is simplified. This is normally filled with the short name, otherwise the system uses the identifier.
Characteristic values fixed (PR_VA_restricted)	Use the Assist button to specify the feature values fixed import file. The assignment of the values (Values VA) to the attributes (Property PR) can only be imported if the value definitions have been read in and the attributes have been read in beforehand. IrdiPR = Based on the value, the system determines the article attribute that was previously read or processed. IrdiVA = Based on the value, the system determines the temporarily imported value definition and writes the record with the attribute ID and the data from the value definition to the database.
Characteristic values extensible (PR_VA_suggested)	Use the Assist button to specify the feature values fixed import file.

Field	Description
Error behavior	Select here how the system should react in case of an import error. You can choose from the following: Protocol message: All import messages will be displayed in an error message. Error: An error message appears.
Sort interval	Enter a sort interval if you wish for the import.
Purchasing Print ID Sale Print ID Service Print ID	Enter the print control before importing so that the data is already entered in the item attributes on the item attribute card in the "Print control" info tab.

Confirm your selection with "OK" to start the import.

Computer-Aided Design (CAD) Transfer

General

This service point enables you to import data from the PDM system into KUMAVISION factory365 as article as well as production BOM. Each imported file will be saved in KUMAVISION factory365 as PDM process and in a second step created as article and bill of material(s). A readout of the articles to the PDM system is also possible. The solution serves as a basis for the customer-specific definition of the interface.

Prerequisite

The following Microsoft Dynamics Business Central™ license extensions are required for this credit:

- KUMAVISION factory365
- Anveo EDI Connect Business or higher,

Establishment

Before you can use the data exchange from a PDM system in KUMAVISION factory365, some settings have to be made in the system, which are explained in the following.

Design & development facility

Call up the design and development facility via the user search. On the setup card on the "PDM" info tab, the following fields must be set up for data transfer:

Field	Description
Ignore New PDM Articles	If the switch in this field is activated, newly imported articles (marked by the article field "New PDM article") are excluded from the planning.
PDM connection code	You can use this value during mapping to assign a connection code to the components. This is helpful if you are already working with connection codes in the routing For more detailed information on connection codes, please refer to the [Microsoft Dynamics Business Central™ Helpsite (F1)]().
Last Lfd. No. Change log	Used internally by the system. Represents the last Lfd. No. processed from the system.
PDM Base Hyperlink	The hyperlink for the PDM system call is stored in this field. *Note*:In the hyperlink, %1 must be entered at the point where the hyperlink expects the article number.
PDM separator multiple articles	Specifies the separator for separating the articles to be displayed in the PDM system by calling "Call PDM" via the article overview.

Article categories

Via the article categories you have the possibility to define or group articles that are relevant for the PDM exchange.

To do this, call up the "Article categories" via the user search.

You can create a new article category via "New" in the ribbon or edit an existing article category via "Edit". For further information on the topic of "Article categories", please refer to the [Microsoft Dynamics Business Central™ Helpsite (F1)](#).

Via the field "PDM exchange" you can define for which, and if a data transfer for the corresponding article category should take place. The following selection options are available:

Selection option	Description
No	No data exchange between KUMAVISION factory365 and PDM system
In-depth	Inbound data exchange from PDM system to KUMAVISION factory365.
Based on	Outgoing data exchange from KUMAVISION factory365 to PDM system.
Both	Inbound and outbound data exchange between KUMAVISION factory365 and PDM system.

Finally, the item category is assigned to the corresponding items in the "Item category" field on the item card.

Change log setup

To define the PDM relevant data, the change log has been extended to use it for the PDM interface. This means, in the log setup fields can be marked as "PDM change" for the tables listed in the subchapters. These fields are analyzed by the system to determine which records are PDM relevant, have been updated and need to be exported.

To set up the change log, first access the change log setup via the user search and activate the "Activate change log" field.

The "Tables" menu item in the ribbon takes you to the "Edit - Proto. settings (Tab.) - Trans.

In the table definition, the "PDM Logging" column can be used to specify whether all field changes or only certain field changes are relevant for the PDM interface.

The change log can be used to specify the article fields from which the data record is to be transferred in the event of changes in the following tables.

- Article (table no. 27)
- Article version (table no. 5026352)
- Material (Table No. 5026357)
- Finished parts list header (table no. 99000771)
- Finished parts list line (table no. 99000772)
- Finished parts list version (table no. 99000779)

Selection	Description
Some fields	Selecting "Some fields" logs certain field changes that are relevant to the PDM interface. The field list of the specified fields can be viewed via the Assist button [...].
All fields	By selecting "All fields", all field changes in the table are logged. The change log items have the "PDM Entry" flag, which indicates that PDM relevant data has been adjusted.

PDM status

Via the "PDM Status" you can define if the corresponding locked fields should be set on the article card during the later transfer to KUMAVISION factory365. The definition is done once in the "PDM Status".

To do this, call up the "PDM status" via the user search. Via "New" in the menu ribbon you can define a new PDM status using the table below.

By selecting "Yes" or "No" you determine whether the fields in the article are to be set during transfer. If the selection "Yes" is set, then the current status of the field remains, this means, a locked indicator cannot be

changed by transmission. Exception here is the field "New PDM article", which can remove a lock again, here it is to be noted that with New PDM article no, as well as Set locked, the lock indicator is set.

Field	Description
Code	Indicates the "code" (abbreviation) of the PDM status. *Note*: For the assignment of the locked license plates, the code must be identical to the code in the transmitting PDM system.
Description	Indicates the description of the PDM status.
Set Locked	If activated, the fields "Locked" and "Locked (user)" are automatically set on the respective item card during transfer. As a result, the item is locked for the processes in the system.
Set Locked Sale	When activated, the "Sale locked" field is automatically set on the respective item card during the transfer. As a result, the item is blocked for the sales process in the system.
Set locked purchase	When activated, the "Purchasing blocked" field is automatically set on the respective item card during the transfer. As a result, the item is blocked for the purchasing process in the system.
Set Locked Production	When activated, the "Production locked" field is automatically set on the respective item card during transfer. As a result, the article is blocked for the production process in the system.
Set Locked Service	When activated, the "Service locked" field is automatically set on the respective item card during transmission. As a result, the item is blocked for the service process in the system.
Set Locked Production Consumption	If activated, the field "Blocked prod. consumption" is automatically set on the respective article card during the transfer. As a result, the item is blocked for production consumption in the system.

Materials

Via the table "Materials" you can create the materials your articles consist of. During the later transfer to KUMAVISION factory365 these materials will be transferred directly on the respective article card.

To create the materials in the system, call up the "Materials" via the user search.

Via "New" in the ribbon you can define a new material using the table below.

Field	Description
Code	Indicates the "code" (abbreviation) of the material. *Note*:For the assignment of the materials, the code must be identical to the code in the transferring PDM system.
Description	Indicates the description of the material.
Specific gravity (g/m³)	Indicates the specific gravity of the material.

Article map

For the PDM transfer, the following fields are available on the article card on the "Article" info tab:

Field	Description
Material	The "Material" field identifies the item, from which material it is made. The information can be transmitted via the PDM system. Further information on the subject of materials can be found in the section of the same name.
PDM status	The "PDM Status" field indicates the status of the article in the PDM system. At the same time, the system sets the defined blocked indicators on the respective article card. For more information on PDM status, see the section with the same name.
PDM Status Description	Indicates the description of the respective PDM status set.
New PDM article	If the field "Ignore new PDM articles" is activated in the Design & Development setup, the switch is set here when an article is created for the first time. If the switch is set, the article will be ignored in the planning worksheets and order worksheets **Note**: If you deactivate the switch, no locked indicators will be removed if work is being done without PDM status. The system does not know at this time whether none, only one specific or all processes must be unlocked. For a deliberate control of the locked indicators refer to the use of the PDM Status.
Ignore for PDM Export	If the switch is set, the data of the respective article will be ignored for the export.

PDM Call

From the article map and the article overview you have the possibility to call up the PDM system directly via the call "Call up PDM" in the menu ribbon. The PDM system is called directly with the corresponding article information from which you have started the call.

Note: Please note that this functionality is only available to you if the fields "PDM Base Hyperlink" and "PDM Separator Multiple Items" are set up in the Design & Development setup.

Task maintainers

For a periodic execution of the readings in and out, the mappings are defined in the queue items.

To do this, call up the task queue items via the user search.

The following facilities are to be made for this purpose:

Field name	Import	Export
Type of object to be executed	CodeUnit	CodeUnit
ID of the object to be executed	5327312	5327312
Labeling of the object to be executed	EDI Job Handler	EDI Job Handler
Description	PDM Import	PDM Export
Task queue - category code	PDM	PDM
Recurring task	Yes	Yes
Number of minutes between executions	240	240
Parameter string	RECEIVE(Folder=210, ProcessFollowing=True)	RUN(ProjectFilter=PDM,FormatFilter=NAV,CodeFilter=EXPORT 10 SURFACE, ProcessFollowing=True)

The number of minutes between executions can be customized, as well as the definition of the days of the week.

For more information for the task queue, see the [Microsoft Dynamics Business Central™ Helpsite (F1)](#).

Anveo EDI

For completeness, the EDI setup is described below. Further information can be found in the manual provided by the Anveo Group.

EDI setup

Via the EDI setup you can import the bitmaps, for example. To do this, call up the "EDI setup" via the user search.

Via the call "QuickInstall" in the menu ribbon, you can import the essential facilities, such as the bitmaps.

> Note

Running Quickinstall is a must. This will import the QuickInstall.nav file.

Import EDI configuration data...

In the next step the essential mappings for the PDM connection are read in. To do this, call up "Import EDI configuration data..." via the user search.

> Note

The mapping is provided by KUMAVISION AG and is parameterized together with a KUMAVISIONS employee.

EDI formats

The basic processing types are mapped in Anveo EDI via the EDI formats. To do this, call up the "EDI formats" via the user search.

For the interface to the PDM system, the formats 020 XML files and 100 NAV processing are used.

EDI value translations

The translation tables are maintained in Anveo EDI via the EDI value translation. By calling up "EDI Value Translations Overview" via the user search, you can access the overview of the same name.

> Note

The translation tables are used individually for each project and are not part of any installation package.

EDI project

The grouping of the interface as well as processes are realized via the EDI projects.

The PDM project is used to group all mappings to the PDM system.

File directories

The file directories are defined via the EDI communication channels.

Data exchange directories

The following directory structure is generally defined for file exchange with a PDM system:
\ExchangeDir\ERPRequest
\ExchangeDir\ERPRequestResponse
\ExchangeDir\PDMRequest
\ExchangeDir\PDMRequestResponse

EDI communication channel overview

For each of the data exchange directories an EDI communication channel must be created. To do this, call up the "EDI communication channel overview" via the user search. Via "New" in the menu ribbon you can define a new EDI communication channel.

EDI Transmissions Folder Overview

An EDI transfer order must also be defined for the exchange. To do this, call up the "EDI transmissions folder overview. Via "New" you can define a new EDI transmission folder.

The transmission folder is assigned to the communication channel in the Folder Code field.

Via the function call Set up you reach the EDI data transmission setting.

Here you define the read-in or read-out directory as well as the file extension.

It is recommended to archive the imported files. The archive directory is also to be maintained in the EDI file transfer settings card in the Archive folder field via the Action field to be activated after reading in.

Mapping

An operation record is created for each import. This is done by an inserted element Operation. The operation record is initialized by filter values.

The import can contain several data sets, in this respect it is important to keep the file as a reference in Microsoft Business Central. The referencing corresponds to the element. To store the information, the PDM Process table is now set as a loop before the element.

The element Part is imported into the article PDM Item. For this purpose, a loop item for the table PDM Item is integrated before the element .

Processing

In-depth

EDI processing queue

The processing queue is the log of Anveo. All processes are logged in this table.

PDM operations

The read-in data is stored in the PDM operation card. The operation forms a bracket over the different components of the import. The data to be processed in Microsoft Business Central are then stored in the PDM table and PDM link.

Based on

Processing stack

On the basis of a batch processing

Plant engineering

General

The "Plant Engineering" deliverable describes complementary deliverables to the standard Microsoft Dynamics Business Central™ project.

The following diagram depicts the process of plant construction from the quotation phase to the service and maintenance phase:
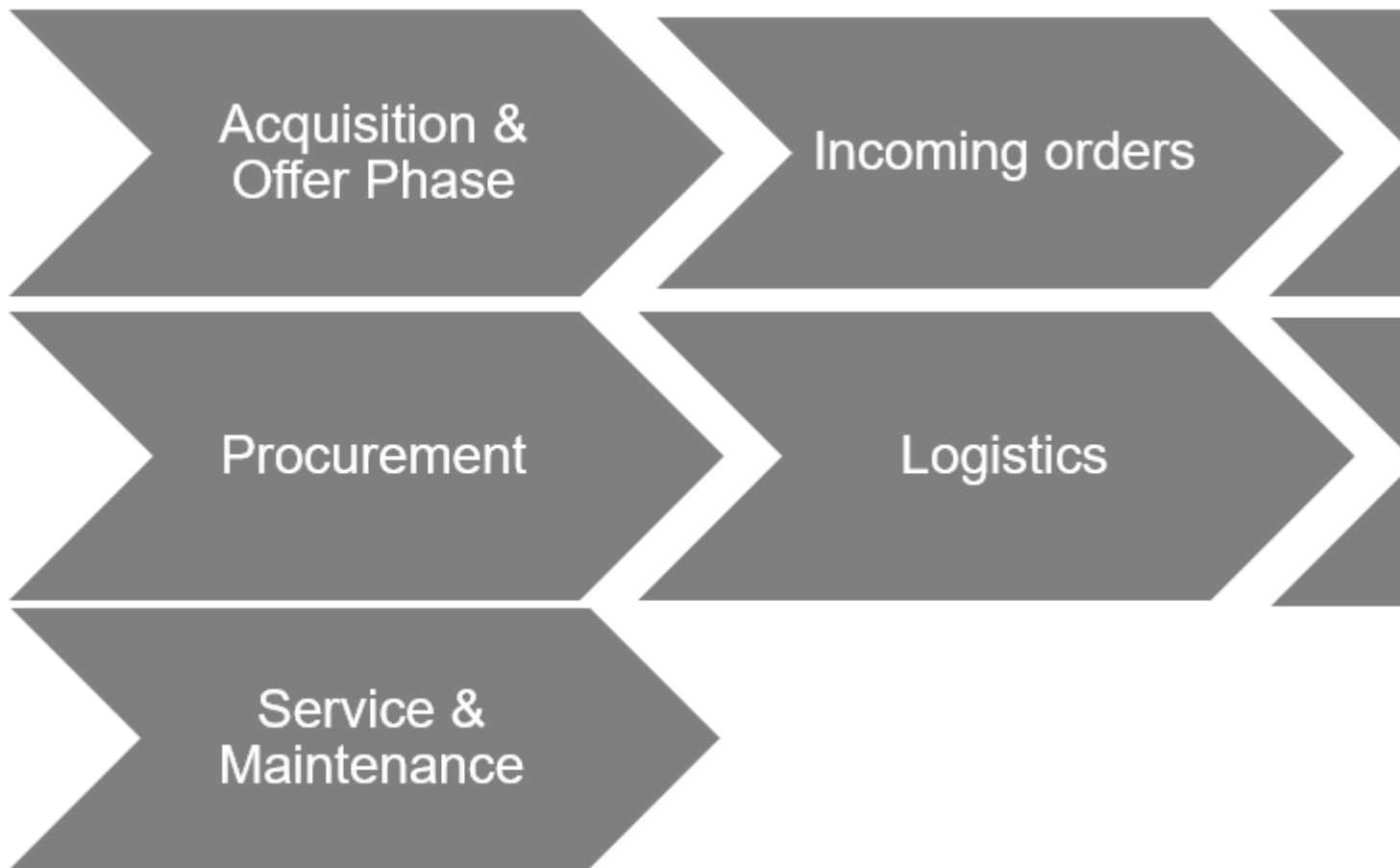
Resource master data

Resources include employees or machines. Resource management allows you to plan capacity and deployment in detail and for an unlimited period of time.

Furthermore, resources can be grouped into resource groups. Purchase and sales prices can be recorded in detail and budgeted and invoiced for resources and resource groups.

Establishment

To create a resource in KUMAVISION factory365, the following setups have to be done in advance:

Number series for resource

Set up the number series for the resources so that when a new resource is created, the system automatically assigns a sequential identifiable number for the resource.

To do this, call up the "Number series" via the user search. You can create a new number series via "New" in the menu ribbon.

Afterwards, the created number series is stored in the "Resources setup" in the "Resource numbers" field.

Further information can be found in the [Microsoft Dynamics Business Central™ Helpsite (F1)](#).

Units

Set up the "Units" table according to your individual requirements to be able to make the assignment when creating a resource (base unit code).

Call up the "Units" via the user search and create the units according to your requirements (for resources it is recommended to set up the unit "Hour").

Further information can be found in the [Microsoft Dynamics Business Central™ Helpsite (F1)](#).

Basic calendar

The "Base calendar" can be used for several processes in KUMAVISION factory365. In connection with the resource, you can store a corresponding base calendar, with the help of which, for example, the different holidays in a (federal) country can be taken into account.

Example:
In Germany, January 6 (Epiphany) is viewed completely differently - while in Baden-Württemberg and Bavaria, for example, this is handled as a normal holiday, in North Rhine-Westphalia it is a normal working day. With the help of the stored calendar, resource availability can be calculated accordingly.

To create a base calendar, call up "Base calendar" via the user search. You can create a new base calendar via "New" in the menu ribbon.

The assignment of the possible different base calendars is done when the resource is created on the respective resource card.

Further information can be found in the [Microsoft Dynamics Business Central™ Helpsite (F1)](#).

Qualifications

Qualifications can be stored in the resources according to your skills. To define the qualifications, first call them up via the user search.

Via "New" in the ribbon you can create a new qualification with the help of the table below.

Field	Description
Code	Assign a meaningful abbreviation for the qualification.
Description	Assign a description for the qualification.

Further information can be found in the [Microsoft Dynamics Business Central™ Helpsite (F1)](#).

Working Time Template

The working time templates allow you to store the different working time models of your employees in the system. Call up the "Working time templates" via the user search.

Via "New" in the menu ribbon, you can define a new working time template that can be assigned to a resource when it is created. Further information can be found in the [Microsoft Dynamics Business Central™ Helpsite (F1)](#).

Capacity units

Resource management and capacity determination of production work with different unit tables. For linking the units, the resource unit is assigned to the capacity unit.

To do this, call up the capacity units via the user search. Via the menu item "Edit list" in the menu ribbon you can edit already existing capacity units and thus link the resource unit of the capacity unit in the field "Resource units".

Resources

To create a new resource in the system, first call up the "Resources" via the user search. Via "New" in the menu ribbon you can create a new resource with the help of the table below.

Inforegister General

Field	Description
No.	Specifies the number of the resource according to the specified number series. Alternatively, a manual assignment can be made.
Name	Specifies the name of the resource.
Name 2	Specifies the name 2 of the resource.
Type	Indicates what type of resource it is. Choice between "Person" or "Machine".
Base unit	Specifies the base unit of the resource e.g. "hour", "piece".
Number of text modules	Specifies the number of stored text modules. The text modules are stored in the ribbon - Navigate - Text modules. Further information on the topic of "Text modules" can be found in the section of the same name.
Search Keyword	Specifies an alternative name / abbreviation that you can use to search for the record. The system will automatically preset the field with the field content "Name", a manual change is possible.
Res. group no.	Specifies the resource group assigned to the resource.
Locked	If active, the resource cannot be used in the processes
Privacy lock	Specifies whether to restrict access to data of the data subject in daily operation.
Locked (user)	Field that activates the lock of the master record (as before). However, the field can now no longer be changed directly.
Care	This indicates whether the record is currently in maintenance or not.
Status mandatory field check	This field displays whether the mandatory field check was not performed (no check), completely checked, or incompletely checked. The lookup on the field can be used to view the missing mandatory fields.
Locked from	This shows whether the record is locked by the mandatory field check or by the user.
Corrected on	Date of the last correction.

Field	Description
Plan resource	Indicates whether the resource is a planned resource. The field is set automatically when the planning resource is assigned with the resource group and cannot be edited by the user. As soon as the "Plan Resource" switch is active, the calls "Resource Capacity" and "Set Resource Capacity" are not executable, because a "Plan Resource" must not have any capacities Basic calendar code Specification of the base calendar **Note:** You can define non-working days in the base calendar. For more information, see section "Base calendar" or [Microsoft Dynamics Business Central™ Helpsite (F1)]().
Specific calendar	Indicates that the base calendar was used, for a custom calendar.
Working Time Template	By assigning a working time template, the capacity quantity per weekly working day is determined when creating the resource capacity. If no working time template is assigned, this is skipped when the capacity creation function is executed.
Use timesheet	If the switch is activated, the resource is available for bookings via the timesheets.
User ID of the time sheet owner	Specifies the user ID of the timesheet owner.
User ID of the timesheet approver	Specifies the user ID of the timesheet approver.

Field	Description
	Defines the type of linking of the resource. The link is taken into account in the resource utilization.
	The following options are available:
	Workstation group
	when the resource is linked to a workstation group.
Workplace type	*Workplace*
	when the resource is linked to a workstation group.
	Resource
	if the resource is not linked.
Job no.	Defines the linked workstation (group) depending on the workstation type.
External resource	Marks the resource as External so that it can also be used in the procurement process.
Vendor no.	Specifies the vendor to which the external resource belongs. The system automatically determines the company contact number by entering the vendor number.
Company Contact no.	Indicates the company contact to which the resource belongs.
People contact no.	Specifies the person contact number to which the external resource belongs.

Invoicing information register

Field	Description
EK price	Specifies the purchase price of a unit of the resource.
Indirect costs %	Indicates the percentage of the last purchase price of the resource from which indirect costs arise, such as freight/travel costs or similar associated with the purchase of the resource.
Cost price	Indicates the cost of one unit of the resource.
VK Price / DB Calculation	Indicates the relationship between the fields "Cost price", "Sales price" and "DB %". The choices are: • DB=VK-EP • VK=EP+DB • No reference
DB %	Specifies the profit margin at which you want to sell the resource. You can enter a contribution margin manually or have it entered according to the "VK Price / DB Calculation" field.
UK price	Indicates the price of one unit of the resource. You can enter the price manually or have it entered according to the "VK Price / DB Calculation" field.
Credit delivery valuation group code	Specifies the item group code for the supplier rating. Further information on the topic of supplier evaluation can be found in the section provided for this purpose.
Product posting group	Specifies the product type of the resource to perform transactions for this resource with the corresponding G/L account. VAT - Product booking group Specifies the VAT details of the involved resource to perform transactions according to the posting matrix.
Standard Accrual Template	Specifies how revenues and expenses are accrued from periods.
Automatic. Text module	Specifies that a text module is added to the documents for this resource.
IC partner Deposit G/L account no.	Specifies the number of the IC G/L account in your partner's company to which the amounts of the respective resource are posted.

Field	Description
Product Commission Group Code	Specifies the product commission group.
	With the help of commission groups, resources can be grouped and commissioned separately.
	This classification into commission groups is inherited in the sales process in the posted documents.
	For further information, please refer to the "Commission management" section.

Inforegister Personal Data

Field	Description
Function	Specifies the function of the resource.
Address / Address 2	Specifies the address of the resource.
Location	Specifies the location of the address of the resource.
Zip code	Specifies the postal code of the resource's address.
Country/Region Code	Specifies the country/region of the resource's address.
Social security no.	Specifies the social security number of the resource (person).
Training	Indicates the education of the resource (person).
Convention	Specifies the convention for the resource (person).
Date of employment	Indicates the date when the resource was hired.

Qualification

On the respective resource card, you have the option of assigning a qualification to the respective resource via "Qualifications" in the menu ribbon. If no qualifications have been set up in the table of the same name, they must be created beforehand.

Depending on the "Projects setup" in the "Check resource qualification" field, the system checks whether the necessary qualifications for an activity type are available when a resource is entered in the project plan lines.

Set capacity

The capacity of a resource is the amount of work that can be done within a defined period of time (one day). To calculate and define the capacities of the resource, call up the "Define capacity" function via the menu ribbon in the "Navigate" menu tab.

The "Calculate Res. Capacity" mask opens on which the filtering of the resource is already preset. By specifying the start/end date, the capacity items can be determined and defined.

Note

The capacity is calculated on the basis of the assigned base calendar and the assigned working time template on the respective resource card.
If no allocation of one/both fields has been made, no calculation of capacity can be made.

Note

If capacity items already exist for the calculated resource, the Calculate Res. Capacity application deletes them and creates new items.

Resource capacity

By calling up "Resource capacity" via the user search, you have the option of viewing the capacity of the resources.

The "Set capacity" function is also available via the "Planning" menu selection on the "Resource capacity matrix" info tab.

The difference between the call on the resource map and the call in the resource capacity is that when calling from the resource map a pre-filtering is set on the resource. The call via the resource capacity is not, so that the capacity can be calculated over all available resources.

Plan resource

General

Especially in the initial stage of a project, usually no actual employee resources can be assigned behind positions, it is worked with a substitute, a so-called "planned resource".

A planned resource is equivalent to a normal resource, but has no capacities itself. A resource group is also defined for each department or team, which serves as a bracket for resources. All resources of a team are assigned to the resource group of the team.

(Plan) resource

To create a planning resource in the system, first call up the "Resources" via the user search. A planning resource is usually created in the same way as a conventional resource. For further information on creating resources, please refer to the "Resources" section.

Resource Group

To actually make a resource a "planned resource", it is necessary to assign the resource to a resource group intended for this purpose.

Call up the resource groups via the user search.

Via "New" in the menu ribbon you can create a new resource group by entering an abbreviation and a description.

Then assign the resource that is to be used as a "planned resource" in the future to the resource group in the "Accumulation resource no. " field.

Note

Please note that only resources with the status "Maintenance completed" can be assigned.

By assigning the resource as an accumulation resource, the system automatically sets the "Planned resource" field on the resource card and it is not editable by the user.

Note

As soon as the switch "Plan resource" is active, the calls "Resource capacity" and "Set resource capacity" are not executable, because a "Plan resource" must not have any capacities.

Capacity

A planned resource corresponds to a normal resource, but has no capacities. An overview of which capacities are available and their requirements is shown in the resource group availability.

Posting behavior of the planning resource

No consumption postings may be made for a planning resource, posting via the billing document is possible. Especially for the case that the planning resource is to be settled instead of the executing resource.

Create timesheet

Via the function "Create timesheet..." in the menu ribbon under the menu tab "Actions" you can create a timesheet for the respective resource.

To do this, enter the start date from which the timesheet is to be created. As well as the number of periods.

Using the timesheets, the resource can record and submit for your projects, the corresponding project tasks and the times for the corresponding period.

Further information on this topic can be found in the [Microsoft Dynamics Business Central™ Helpsite (F1)](#).

Project Management

Projects in Microsoft Dynamics BC™ are dynamic business transactions that extend over a longer period of time. These can be planned, controlled and invoiced in detail with the help of activities and budgets.

You can track the use of working hours, machine running times and material for individual projects. This is managed via project tasks and their associated project plan lines, via which the expenses and revenues are managed.

A project consists of a three-tier structure:

Stage	Description
Project	Bracket with the essential key data
Project tasks	Project tasks subdivide the project into different tasks, such as project management, incidental project costs, design and development, production, but also meetings, for example.
Project plan lines	Project plan lines represent the means for task completion such as items, resources, or even item

The development of a project can thus be traced down to the smallest detail.

In addition, with the help of integrated invoicing in the Accounts Receivable & Sales and Accounts Payable & Purchasing modules, all related revenues and expenses are recorded.

The project structure and its processes are shown in a diagram below:
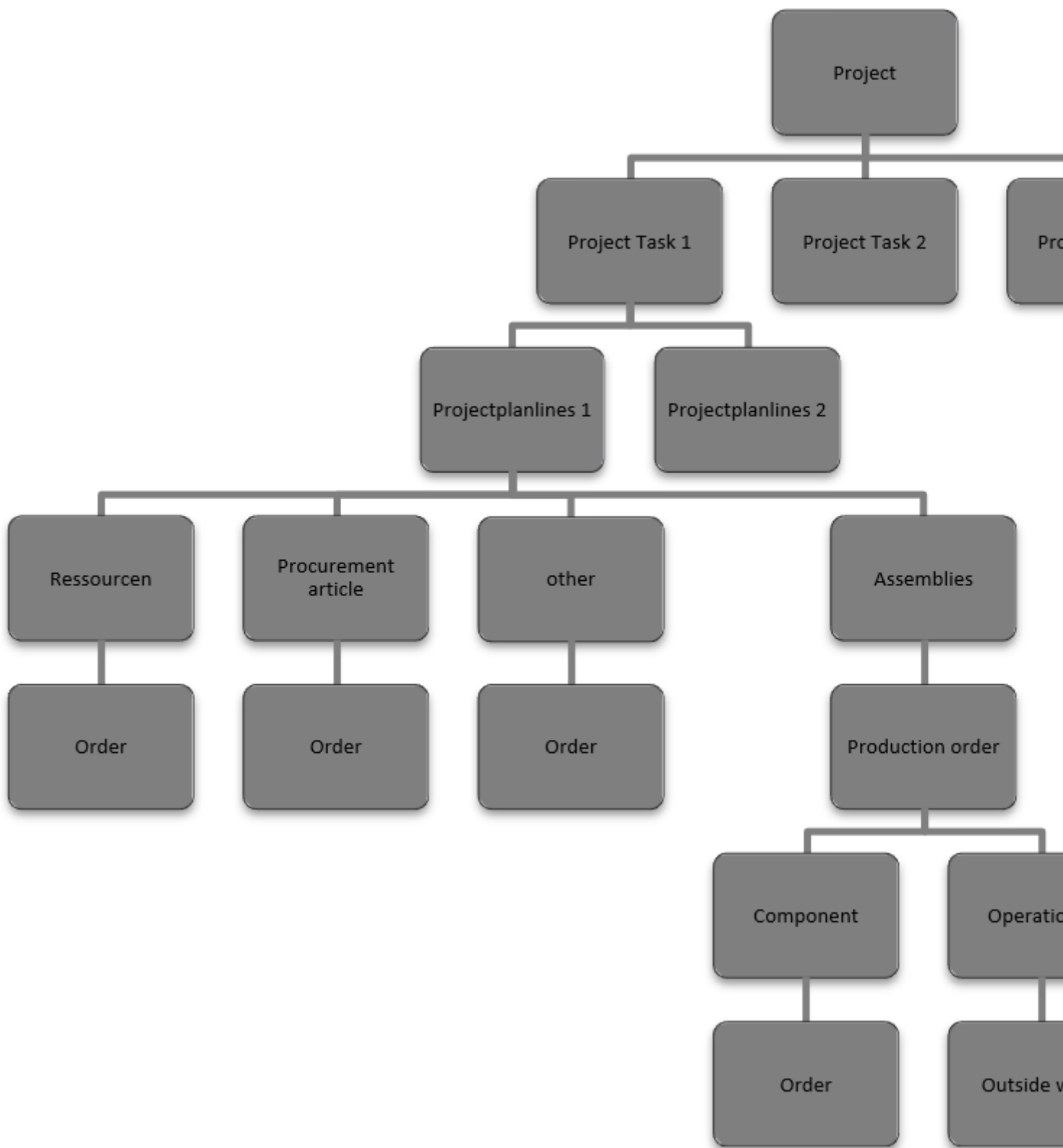
Project facility

Establishment projects

In the "Project setup" the necessary settings for the later project creation and implementation are made.

In the following the fields are explained to you on the basis of the table below:

Inforegister General

Field	Description
Automatic posting of project item prices	Cost changes are automatically regulated as soon as the batch processing "Stock reg. fakt. Sett. Prices" is executed.
Apply consumption link by default	Specify whether project items are linked to project planning lines by default.
Allow budget/billed line definition	Specifies whether the type of project lines can be "Budget and Billable" by default.
WIP Standard Method	Sets the default method to be used for calculating the circulating stock.
Default WIP booking method	Defines how to apply the default working capital method when posting the working capital in the G/L item.
Default project booking group	Sets the default booking group to be applied when creating a new project.
Logo position on documents	Sets the position of the company logo on the business documents.

Inforegister numbering

Field	Description
Project numbers	Specifies the number series to be used for assigning the numbers of a project.
Project WIP numbers	Specifies the number series to be used for assigning the numbers of the project GDP documents.

Inforegister plant engineering

Field	Description
Project type Dimension	If you define a dimension here, you can define in the project types which dimension value for the dimension should be assigned to a project by the system when assigning the project type. By setting project type dimensions, you can create analyses about your projects according to the dimension value.
Check resource qualification	When entering a resource in the project plan lines, the system checks whether the necessary qualifications for an activity type are available. The following selections are available: **No** check is made when resources are used **Planning onlyWhen** maintaining project plan lines, the resource is checked against the necessary qualifications **Booking onlyIt is** checked for the sufficient qualification at the time of booking **Planning and BookingCombination of** Planning Only and Booking Only
Sale position no. from project plan lines	If the check mark is set, the project task is transferred to the sales document as item no., otherwise the item is calculated individually for each order.
Use dimensions from project references	If the checkmark is set, the dimensions defined in the referenced project plan line are used instead of the standard dimension line determination of the tables concerned.

The switch takes into account the following tables:

- purchase Row
- FA line
- FA Components
- Stock transfer
- Assembly order
- Assembly order items

Information register production

Field	Description
When the project status changes, automatically change the FA status to	You can use this switch to specify whether any existing production order should also be changed from status to status when the status of the project is changed, and if so, to which FA status.

Inforegister Logistics

Field	Description
Create project storage location	For the procurement and logistics processes, you use this to specify whether the system should create a project storage location for each project. The project storage location hereby represents the place of performance of the project.
Stock entry	entry storage location code For the procurement and logistics processes you define here a warehouse from which the warehouse setup for the financial accounting is to be copied. The field "Stock entry one location code" can only be maintained if the storage location creation is activated ("Create project storage location").
Preferred transit code	For the procurement and logistics processes, enter the transit code for the project warehouse transfer route here. The "Preferred transit code" field can be maintained only if the storage location creation ("Create project storage location") is enabled.
Preferred delivery code	For the procurement and logistics processes, enter the delivery agent code for the project warehouse transfer route here. The field "Preferred delivery code" can only be maintained if the storage location creation ("Create project storage location") is activated.
Preferred carrier transport code	For the procurement and logistics processes, enter the delivery agent transport type code for the project warehouse transfer route here. The field "Preferred delivery transport code" can only be maintained if the storage location creation ("Create project storage location") is activated.

Inforegister Outlook ToDos

Field	Description
Step CRM task	If you are working without a project outline, use this field to specify the increment for creating new project tasks.
Separator CRM task	If you work without a project breakdown, use this field to specify the separator for creating new project tasks.
Counter CRM task	If you work without project breakdown, set the counter for creating new project tasks in this field.

Inforegister Commitment

Field	Description
Smallest FA status for target cost consideration	Define here from which FA status the target costs are to be displayed as planned costs.

Inforegister Version comparison

Field	Description
First archiving version no.	In this field, specify the first archiving number of a version number assignment.
If only in left version, If only in right version, If version identical, If versions different,	If subordinate line differs You can use these fields to specify the visual display in the version comparison. You can choose from: **None:** Display in black font color (serves as an identifier that no deliberate setup has been done yet) **Standard:** Display in black font color **StandardAccent:** Display in blue font color **Strong:** Display in black font color, bold **StrongAccent:** Display in blue font color, bold **Attention:** Display in red font color, italic **AttentionAccent:** Display in blue font color, italic **Favorable:** Display in green font color, bold **Unfavorable:** Displayed in red font color, italic, bold **Ambiguous:** Displayed in yellow font color **Subordinate:** Displayed in gray font color

Field	Description
Compare only set up fields	With this switch you can globally define whether only set up fields should be compared or possibly individual comparison setups should be allowed via the "Version comparison field setup".
	If the switch is activated, individual comparison setups can be made via the "Version comparison field setup" via the "Consider in field comparison" column.
	If the switch is deactivated, the "Consider in field comparison" column is not editable.

Project accounts

In the projects for plant construction, consumption and sales postings are displayed on a project chart of accounts, which is used for project controlling. The selection of the corresponding project accounts is controlled via the project account setup.

Project Chart of Accounts

The project chart of accounts is used for project controlling and contains all sales and cost accounts that are to be used for a differentiated project view. The project chart of accounts is not dependent on the FIBU chart of accounts.

In the "Account type" field you can choose between five options:

Field	Description
Account	A bookable account can be selected.
Headline	Text line in which a heading can be entered as a structure feature.
Total	A sum defined by the "Total" field.
From-Sum	An initial marker for a totaling project account series that ends with the To Total account type.
To-Sum	An end marker for a totalizing project account series that starts with the From Total account type. The total is defined using the Totalization field.

After you have set up the project account, select "Actions" > "Indent Chart of Accounts" in the ribbon. Then select the "Yes" option in the message window.

Project account setup

The procedure is almost identical to setting up the posting matrix in the financial accounting area.

The project account setup determines the project accounts to which consumption and revenues are posted or budgeted in plant engineering. The project account setup is a matrix that defines the consumption and sales accounts for product posting groups. Here, the setup can be controlled by the project type and/or the activity type. Each project item is assigned either a consumption account or a sales account depending on its item type (consumption or sales). When determining the project account, the field contents of the project item are used.

Project Roles

The project roles define in the later projects which role (e.g. project manager) the resource takes in the respective project.

To define the project roles in advance, call them up via the user search. Via "New" in the menu ribbon you can create a new project role with the help of the table below.

Field	Description
Code	Assign a meaningful abbreviation for the project role.
Description	Assign a description for the project role.
Type	**Assign an applicable type. You can choose from the following:** • Responsible • Project Manager • Sale to contact no. • Invoice to contact no.

Service type

It is important for the later task planning in the projects to set up the activity types. To do this, call up the activity types via the user search.

Via "New" in the menu ribbon you can define a new service type with the help of the table below.

Field	Description
Code	Assign a meaningful abbreviation for the activity type.
Description	Assign a description for the service type.
Type	Specifies the type that the record is. You can choose from the following: • Account • Headline • Total • From-Sum • To-Sum
Counting up	Here you can now specify the interval or other filter specification of numbers of the service type. The results of the specified service type are added to a total balance. For the From sum or Heading type, this field must be left blank. For the To-total type, the field is automatically filled when the chart of accounts is indented. Only the types that are between a From total and a To total are added together.
Qualifications	Indicates the number of qualifications required for the service type. Via a LookUp on the number, qualifications can be assigned to the activity type and already existing ones are displayed to you. Further information on the subject of qualifications can be found in the section of the same name.
Usage	**NoneThere is** no task scheduling, the fields are not editable in the project task. **Task planningYou** can enter planning directly in the project tasks. **ForecastThere is** no task planning, the fields are not editable in the project task. **BothYou** can enter planning directly in the project tasks.

Field	Description
Type planning	Via the type of planning you determine the type with which the task planning is to be entered in the planning line. **You can choose from the following:** - Resource - Article - G/L account
Planning no.	Via the planning no. you determine, depending on the type of planning, with which account the task planning is to be displayed in the planning line.
Work type code	Specifies the work type code for the activity type.
Art Forecast	Specifies the type forecast for the service type. You can choose from the following: • Resource • Article • G/L account
Forecastnr.	Specifies the forecast no. in the context of the "Type Forcast" field.
Forecast work type code	Specifies the forecast work type code.
Cross country skiing articles	Identifies a project task with the assigned activity type as a "long-run item".

Project types

When creating a new project, you can define the type of project by assigning a "project type". Here you can already enter some data such as a project template, order type or similar.

To define the project types in advance, call up the project types via the user search. Via "New" in the menu ribbon you can define a new project type with the help of the table below.

Stage	Description
Code	Assign a meaningful abbreviation for the project type.
Description	Enter a description for the project type.
Project booking group	Enter the project booking group for the project type to be used when assigning the project type. Please note that if the "Template project no." is maintained (see below), this information is ignored. (see below) this information will be ignored.
Project number series	Specify the project number series for the project type to be used when creating a project and assigning the project type.
Template Project No.	Specifies the project no. to submit the project for the project type.
Project type Dimension value	Specifies the dimension value for the project type.
Dimension code	Specifies the dimension code.
Dimension Value Prefix	Specifies the dimension value prefix.
Task breakdown	Specifies a task breakdown for the project type. **Please note** that if the "Template project no." is maintained (see above), this information is ignored. (see above) this information will be ignored.
Reserve	Specifies the reservation method for the project type. The following are available for selection: • Never • Optional • Always
Order type	In the project type, you can set up an order type for the creation of sales documents, if required. This will be used when creating the documents.

Project breakdown

The project structure helps you to enter and maintain your project tasks quickly and efficiently with predefined numbering.

Call up the "Project outline" via the user search.

Via "New" you can create a new project outline using the table and procedure below.

Field	Description
Code	Define a unique code for the record here.
Description	Define a short description for the outline here.
Status	Indicates the status of the outline. The following are available for selection: • New • Certified • In development • Expired **Note** Please note that only project members with the status "Certified" can be used in the processes.

To define the outline for the created dataset, call up the "Outline structure" menu item via the ribbon.

Field	Description
Level	Level or indentation of the task.
Description	Enter a description for the layer here
Increase	Define with which intervals the system should assign tasks, 1 for one step, 10 for ten steps etc. Based on the increment, the Counter field is initialized.
Counter	Here you can define with which value the level should be started and how wide the level can be. For example, enter 001 if the layer can reach a maximum value of 999. Please note that the Project task field only has a maximum width of 20 characters.
Separator	Define a separator here, e.g. period, comma, hyphen
Count type	• Numeric • Alphanumeric please specify alphanumeric if your counter contains letters.
Bookable	Specify whether it is possible to post on the level
Example	Represents the current definition, as a project task.

Project Document Text Template

For easy editing/creation of the document texts in the projects, you can define project text templates in which you specify how and when which data record is to be printed in which document.

To do this, call up the "Project document templates" via the user search.

Via "New" you can create a new project document template using the table below.

Field	Description
Project table	Use this field to specify for which table the definition is valid. **The following selection is available:** • Project Task • Project planning line
Line type	Use this field to specify for which line type the definition is valid. **The following selection is available:** • Plan • Contract • Plan and contract
Position	In this field, specify how the definition is valid for which position. **The following selection is available:** • Pretext • Post text
Service Contract Offer	Printing In this field, specify whether the text should be printed on Service contract offer.
Service contract printing	Use this field to specify whether the text should be printed on the service contract.
Service offer printing	Use this field to specify whether the text should be printed on the service offer.
Service Order Printing	Use this field to specify whether the text should be printed on the service order.
Service Geb. Invoice Printing	Use this field to specify whether the text should be printed on the service invoice.
Service Geb. Credit Print	Use this field to specify whether the text is to be printed on the service credit note.
Service Geb.	Delivery Print In this field, specify whether the text is to be printed on the service delivery.
Service work ticket printing	In this field, specify whether the text should be printed on service work ticket.
VK offer pressure	In this field, specify whether the text should be printed on VK offer.
VK Order Printing	Use this field to specify whether the text should be printed on VK Order.
VK Geb. Invoice Print	Use this field to specify whether the text should be printed on VK Geb. Rechnung.

Field	Description
VK Geb. credit print	Use this field to specify whether the text should be printed on VK Geb. Gutschrift.
VK Blanket order printing	Use this field to specify whether the text should be printed on VK Blanket Order.

Project planning

In the following, you will be introduced to project planning. It will be shown how a project can be structured and how plan values can be stored.

Project Assistant

For a quick and easy creation of a project KUMAVISION factory365 offers a wizard for project creation.

For this, it is first necessary that the user has assigned the role center "Project Manager" in the user customization.

On the start page of the "Project Manager" role center, the "New Project" call is located in the activities area.

After clicking on the call, the wizard will be started.

Creation progress

The "Creation progress" screen is used for the navigation/status overview of the project wizard.

This is divided into four sub-areas with their respective statuses:

- Copy project
- General project data
- Sale to data
- Invoice to data

Furthermore, the current processing step with the overall progress status is displayed.

In the lower area of the mask you have the following selection options:

Copy project

Field	Description
Project type	Specifies the type of project it is.
Template Project No.	Specifies the project no. to submit the new project. If a project template is already stored in the project type, it will be preset automatically.
Transfer from project: (Copy project awards, Copy quantity, Copy milestones, Copy document texts)	From the "Template Project No.", if it is activated, the following data can be transferred from the template to the new project: • Copy project prices • Copy quantity • Copy milestones • Copy document texts
Copy risks	Here the risks from the "Template project" can be taken over for the project to be created. The following selection options are available: • No • Risks only • With values • with probabilities
Project task no. from	Here the project tasks can be taken over from the "Template project" for the project to be created. Specification of the "Project task no. from" value.
Project task no. until	Here the project tasks can be taken over from the "Template project" for the project to be created. Specification of the "Project task no. to" value.
Start date / End date	Specifies the scheduled start/end date of the project.
Origin	**Set:** **None:** Do not create plan lines when copying **Project plan lines:** Project plan lines to be copied from the template project using the project plan lines **Project items:** Generate project plan lines based on the project items from the template project.

Field	Description
	Depending on the project plan line origin, you can define which line type(s) you want to transfer:
Line type	**Project plan lines:** - Budget + BillableAll project plan lines - BudgetOnly budget marked project plan lines - BillableOnly billable marked project plan lines. **Project item:** - Consumption+SalesAll project plan lines - Consumption Only consumption marked project items - SaleOnly sale marked project items

General project data

Field	Description
Responsibility unit code	With this field the project can be assigned to a unit of responsibility. Analogous to assigning a sales / purchase document to a unit of responsibility, projects can only be viewed by members of the same unit of responsibility.
Responsible	Specifies the person who is responsible for the job.
Project Manager	Specifies the person who is responsible for project management.
Project description / Project description 2	Specifies the project description
Start date / End date	Specifies the start date / end date of the project.
New storage location code	Specifies a new storage location code.

Sale to data

Field	Description
Sale to contact	Specifies the contact at the customer who is responsible for the order.
Sales to debtor	Specifies the customer no. to which the cost of the project is to be charged. If you have previously maintained the "Sales to contact" field, this field will automatically default to the linked customer.

If you have gone through the project wizard and have filled in all the necessary fields with the corresponding data, you can create the project by clicking on "Create project".

The project map will be opened for you after creation in order to be able to enter further information. Alternatively, you can close the project map.

Project map Inforegister General

On the "General" info tab, the general data of the project are defined first. These are explained in more detail below:

Field	Description
No.	Specifies the number of the project of the correspondingly defined number series.
Description / Description 2	Specifies the description of the project.
Project type	Indicates what type the project is. If the following data has already been stored in the project type, it will be transferred to the project when the project type is assigned: • Project booking group • Project number series • Template Project No. • Project type Dimension code • Dimension code • Dimension Value Prefix • Task breakdown • Reserve • Order type
Sell to deb. no.	Indicates the number of the customer who usually bears the costs for the project.
Sell to deb. template code	To create a project to a contact, the corresponding contact number is specified and the "Sales to deb. template code" field is filled with the appropriate template.
Sell to contact no.	Indicates the contact of the customer, who usually bears the costs for the project. In the Planning and Offer statuses, it is also possible to work with pure contact addresses. When the status changes to Open, a customer is created for the contact. **Note** Pleace note, that in case of using contacts, the field "Sales to deb. template code" or "Invoice to deb. template code" must be maintained. To deb. template code" field must be maintained.
Sell to name / name 2 / name 3	Specifies the name of the customer who usually bears the costs for the project.
Sell to address / address 2	Specifies the address of the customer to whom you usually send the invoice.

Field	Description
Rech. to deb. no.	Indicates the number of the customer who usually bears the costs for the project. By assigning the "Sales to customer no." field, the "Invoice to customer no." field is automatically preassigned with the "Sales. To customer no." field automatically. If there is a different invoice recipient, the corresponding number must be changed manually.
Rech. to deb. template code	Specifies the "Rech. an Deb. template code".
Rech. to contact no.	Specifies the contact no. of the invoice recipient.
Rech. to Name / Name 2 / Name 3	Specifies the names of the invoice recipient.
Rech. to address / address	Specifies the address of the invoice recipient.
Rech. to zip code	Specifies the postal code of the invoice recipient.
Rech. on site	Specifies the location of the invoice recipient.
Rech. to country/ region code	Specifies the country/region code of the invoice recipient.
Rech. to contact	Specifies the name of the customer who usually bears the costs for the project.
Phone no. / Mobile phone no.	Specifies the stored phone number of the customer.
E-mail	Specifies the deposited e-mail address of the customer.
Search Keyword	Specifies the search term of the project. This is automatically pre-populated with the description of the project and can be changed manually.
Responsibility unit code	With this field the project can be assigned to a unit of responsibility. Analogous to assigning a sales / purchase document to a unit of responsibility, projects can only be viewed by members of the same unit of responsibility.
Responsible	Specifies the person who is responsible for the job.
Locked	Please transfer from the customer or other master data
Task breakdown	Specifies the task breakdown to be used for the project.

Field	Description
Archived version	Indicates the number of archived versions. A lookup makes it possible to view the versions.
Corrected on	Indicates when the project data of the project map was last changed.
Project Manager	Specifies the person who manages the project.

Inforegister Tasks

On the "Tasks" info tab, the project tasks that are/will be planned in the project are first defined. This is the first "rough planning" for the project.

Task breakdown

The task outline is used for the systematic and clear presentation of the project tasks and enables a uniform structure across the projects by means of predefined outline structures. The task outline is assigned to the project in the "Task outline" field in the project map. Using the following functions, you can insert the task outline into the project task lines.

Insert Outline Structure Function

You can call up the "Insert Outline Structure" function on the respective project card via the ribbon. This function inserts a completely new outline structure at the end of the structure details.

Insert outline structure to postable" function

You can call up the "Insert outline structure up to bookable" function on the respective project card via the ribbon. This function inserts an outline structure up to and including the first bookable outline structure.

Project tasks

If you have previously inserted an outline structure in the project task rows, you have the option to insert a new row below an outline structure level via the [...] Assist button.

The system inserts a new line with the position numbering and description of the layers above.

Now enter the project tasks that occur / are planned in the project using the table below.

Field	Description
Project task no.	Specifies the number of the project task
Description	Specifies the description of the project task
Project Task Type	Specifies the type of project task. The choices are: • Account • Headline • Total • From-Sum • To-Sum
Service type	In this field, assign the activity type for the project task in case of an account. With the activity type you influence the project account determination and have the possibilities to influence the maintenance of the project plan lines.
Previous milestone	Indicates a dependency on a previous milestone.
Milestone	Specify here that the task is a milestone. A task can only be set as a milestone if type=total. Due to the type=total, the values for a milestone can be easily tracked using the flowfields for costs and revenues. Based on the flowfields, the user can also dive into the plan lines or project items to analyze the milestone situation.
Milestone date	Set here when the milestone is due.
Belongs to Milestone	Specify here to which milestone the task belongs.
Status	Indicates the status of the project task. If a project task is finished, the corresponding plan lines are set to 100% during task progress.
Cross country skiing articles	The checkmark "Long run item" identifies a project task as a task for long run items. For more information on "cross-country skiing articles", see the section with the same name.
Task	See a possible CRM task created from this here

Field	Description
Task status	Status of the task, see for details there
Distribution type	Define here which distribution type should be used to distribute the possibly created project plan lines between start and end time.
Maintenance is necessary if you carry out quick planning directly via the project tasks and the planning type is set to Resource.	
Start date	Specifies the start date for the project task. If you have activated date maintenance at task level, you can change the planning date of the start line via the task.
The system creates a new project plan line with the type text and the default text code stored in the setup. The date is transferred to the Planning date field.	
End date	Specifies the end date for the project task. If you have activated date maintenance at task level, you can change the planning date of the end line via the task. The system creates a new project plan line with the type text and the default text code stored in the setup. The date is transferred to the Planning date field.
Working days	The number of working days between the start and end dates, provided that the planning type is Resource and the resource capacity has been defined for the resource.
Budget (cost price)	Specifies the budgeted cost price for the project task depending on the time period of the "planning date filter".
Actual cost amount	Specifies the cost amount for the consumption of items, resources, and expense line items posted to the project task depending on the "Planning Date Filter" period.
Archived consumption Cost amount (MW)	See consumption in an archived version for comparison.
Billable (sales amount)	Specifies the billable sales amount for the project task depending on the period of the "planning date filter".

Field	Description
Invoiced (sales amount)	Specifies the billable sales amount for the project task depending on the period of the "planning date filter".
Purchase commitments Amount (MW)	See here the purchase order commitment (MW) (values of open purchase orders) for the project task.
Actual messages (MW)	See here the value for the production orders/articles already created for the project task.
Capacity costs (MW)	See here the value for the capacity costs (machine and personnel costs) already paid for the project task.
Consumption costs (MW)	See here the value for the material consumptions already done for the project task.
Planned consumption costs production order (MW)	Indicates the planned consumption costs (planned material requirements) based on a generated production order.
Planned capacity costs production order (MW)	Indicates the planned capacity costs (planned machine usage) based on a generated production order.
Initial order Amount (MW)	Represents the sales amount of the initial order.
Follow-up order(s) Amount (MW)	Represents the sales amount of the follow-up order.
Variance(s) Amount (MW)	Represents the amount generated via the forecast.
Actual progress %	Indicates the actual progress of the project task in %.
Actual progress date	Indicates the date of the actual progress of the project task.
Forecast (MW)	If you set the forecast to "Project task", use this field to specify the total costs you currently expect for the project task. For the calculation of the forecast (MW), the system determines it as follows: (Consumption (cost price) Time commitment Amount (MW) Purchase commitments Amount (MW) Stock commitment Amount (MW) Production commitments Amount (MW)) Actual progress % Forecast(MW)

Engage/disengage

The function Project Tasks Move In and Move Out only works with defined task breakdown in the project map as well as project task type Account.

You can call up the "Engage/disengage" functions via the "Tasks" info tab using the "Line" menu selection.

Indent:
When the function "Indent" is called, the current line is indented one level down and bracketed by a from-sum and a to-sum line.

The description of the indented line is assigned to the from/to sum line. The new project task gets the description from the default. The already entered plan lines are also assigned to the new line.

Disengage
When the Move function is called, the current line is moved up one level. If it is not the last position of the task block, the next number of the upper range is used. If it is the last position, the task block is deleted and the task number is assigned to the from total.

Task numbering
Task determination is based on the outline structure and depends on the current position and project task type of the row.

If a line is inserted between existing positions, the system inserts a continuing line to the upper line.

If a line is inserted at the bottom, the next project task number is inserted based on the top line.

Document texts Project tasks

You can describe a project task in detail using a long text. This long text is printed on the documents you define.

To define a document text for a task, first select the desired task line in the "Tasks" info tab.

Using the "Line" menu selection on the "Tasks" info tab, you then select the "Document text" menu item.

You can now decide whether you want to enter a pre-text or a post-text for the line.

The project document text map opens.

Call up the "Format Editor" via the menu ribbon and enter your desired text in the editor text field. After confirming the entry with "OK", your text will be displayed in the "Preview" field.

Using the fields below, you can define on which documents the text should be displayed.

Field	Description
Project task printing	Use this field when you add printing to project tasks reports
Project line print	Use this field when you add printing to project plan lines reports
VK offer pressure	Use this field to specify whether the text should be printed on VK offers.
VK Order Printing	Use this field to specify whether the text should be printed on VK orders.
Proforma invoice printing	Use this field to specify whether the text should be printed on proforma invoices.
VK Geb. Invoice Print	Use this field to specify whether the text should be printed on VK Geb.
VK Geb. credit print	Use this field to specify whether the text should be printed on VK Geb. credit notes.
VK Blanket order printing	Use this field to specify whether the text should be printed on VK blanket orders.
VK Complaint print	Use this field to specify whether the text should be printed on VK Complaints.
VK Geb. delivery pressure	Use this field to specify whether the text should be printed on VK Geb. deliveries.
VK Geb. retraction pressure	In this field, specify whether the text should be printed on VK Geb. Rücknahmen.
EK request pressure	Use this field to specify whether the text should be printed on EK requests.
EK Order Printing	Use this field to specify whether the text should be printed on EK orders.
EK Geb. Invoice Print	Use this field to specify whether the text should be printed on EK Geb. invoices.
EK Geb. credit print	Use this field to specify whether the text is to be printed on EK Geb. Gutschrift.
EK Frame order print	Use this field to specify whether the text should be printed on EK Geb. blanket orders.
EK Complaint Printing	In this field, specify whether the text should be printed on EK Reclamation.
EK Geb. Delivery Print	In this field, specify whether the text should be printed on EK Geb. delivery.
EK Geb. return print	Use this field to specify whether the text should be printed on EK Geb. returns.

Field	Description
Service Contract Offer	Printing Use this field to specify whether the text should be printed on service contract offers.
Service contract printing	Use this field to specify whether the text should be printed on service contracts.
Service offer printing	Use this field to specify whether the text should be printed on service offers.
Service Order Printing	Use this field to specify whether the text should be printed on service orders.
Service Geb. Invoice Printing	In this field you can specify whether the text should be printed on service invoices.
Service Geb. Credit Print	Use this field to specify whether the text is to be printed on the service bid credit notes.
Service Geb. Delivery Print	In this field, specify whether the text is to be printed on Service Geb. deliveries.
Service work ticket printing	Use this field to specify whether the text should be printed on the service work ticket.

The reports listed here print the project texts depending on the "Show additional text" switch:

- Project plan lines
- Project analysis
- Budget comparison project
- Account proposal project
- Project offer

Create tasks

Via "Create tasks" you can create tasks or Outlook tasks such as a meeting invitation.

When you create a task, a project task is created for you in the background. The project task is created within the From task you selected.

You can create the tasks in the project area using the Tasks call in the Project Map, Project Tasks as well as from the Project Team.

Note

Please note that the creation of an Outlook task is only possible with the corresponding setup. Further information about the connection / setup can be found in the [Microsoft Dynamics Business Central™ Helpsite (F1)](#).

Note

The plan lines can only be changed via the CRM task (contact tasks).

In the "Project setup" you define how the project task no. is created via the fields "Step size CRM task", "Separator CRM task" as well as "Counter CRM task". Further information can be found here.

Alternatively, you can also create a task directly from a contact card by entering a project number.

Create activity

Via "Create activity" you can create activities and/or communications such as telephone calls from Microsoft Dynamics Business Central™ and file associated documents. The time defined at this point is transferred to the timesheet.

You can call the "Create activity" function from the project map, project overview, project task, project plan line as well as from the project team map.

Assign the activity type as well as description of the activity. The seller code is determined based on your registration.

In the project fields, specify to which project task the document should be assigned and to which plan item the times should be recorded.

If you have selected the project plan position, the system will create an entry for you in the work time table (the prerequisite for this is the use of working times).

For further information on the topic of "Creating activities", please refer to the Microsoft Dynamics Business Central™ Helpsite (F1).

Milestones

Milestones serve as intermediate goals within a project. Based on these goals, "smaller stages" can be logged as project progress within a project or dependencies to further milestones or tasks can be defined.

In KUMAVISION factory365 you have the possibility to assign milestones to the project tasks.

Establishment

In the "Projects setup" you can globally control the behavior for all milestones via the "Milestone behavior" field. You can choose from the following options:

Field	Description
Behavior milestone	Define here how the system should behave when maintaining milestones in the area of date violations: **NoneThe** milestone is ignored **WarningThe** system alerts you to a violation **ErrorThe** system prohibits you from a time violation

Capture

A milestone is entered on the respective project card on the "Task" info tab in the respective task line via the "Milestone" field. In the following, the relevant fields on the task line for the identification of a milestone are explained in more detail:

Field	Description
Milestone	In this field, specify that the task line is a milestone. A task line can only be set as a milestone with type=sum. Due to the type=total, the values for a milestone can be easily tracked using the flowfields for costs and revenues. Based on the flowfields, the user can also dive into the plan lines or project items to analyze the milestone situation. When you mark a project task as a milestone, any maintained "Belongs to Milestone" field is cleared.

Field	Description
Milestone date	In this field you can set the due date of the milestone. **If you have not set the Milestone behavior to None in the project setup, the system checks:** • If the project task is marked as a milestone • The project end date is not before the milestone date • The project start date is not after the milestone date • If the milestone has already been assigned project tasks, the milestone date also checks against existing project plan lines as well as project items of the assigned tasks. The milestone date of the associated project task is also updated with the milestone date of the milestone in this process. If a milestone date is not already maintained, this is initialized with the end date of the project. When deactivating (unchecking) the "Milestone" field, the milestone date will be cleared.
Belongs to Milestone	Specify here to which milestone the task belongs. Maintaining the field updates the Milestone Summary field and the Milestone Date checks are run as described there.

Milestone behavior For maintenance start and end date

The maintenance of start and end date in the project task is checked against a possibly assigned milestone. See also description for milestone date

For care status

If the status of a milestone is set to completed, the system will ask you whether all associated project tasks should also be set to completed and will also execute this if confirmed.

Note

If you also use KUMAVISION Down Payment Accounting, it will also check here if a down payment plan by milestone is maintained and generate the down payment invoice assigned for it.

When care summation

You can assign the milestone to the project tasks defined in the "Filter criterion" by maintaining the "Total" field.

The same checks or updates are performed as for the assignment via the Belongs to milestone field.

For maintenance project task type

If the project task type is set to Account, the start and end dates will be processed, with all other settings any milestone information will be deleted.

Cross country skiing articles

By means of the long run articles a long run planning and administration can be accomplished. Article items with a long procurement time are created as project plan lines in the project. Later, these articles can be used as components in project-related production orders. In this way, the requirements for these long-run items are triggered directly from the project, even without a production order already existing or the position of the component in the production order being known. If the production order is then created and the components are defined in the order, the requirements coverage of the component can be linked directly to the long-run item in the project.

Establishment

The cross-country items are set up in the project via the project tasks. For this purpose, separate tasks should be created in the project for long-run items. The "Cross-country item" check mark identifies a project task as a task for a cross-country item.

Note

The checkmark "Long-run article" in a project task means that only project plan lines of the type "Article" and "Text" may be created for this project task. The lines with the type "Article" represent the long-run articles. The lines with the type "Text" can be used for groupings or notes.

If now for the project task, project plan lines are entered, the items with the type "Article" are automatically provided with the indicator "Long run article".

Note

Transferring project plan lines that are marked as "long-run items" to project book sheets or posting these lines is not allowed and is intercepted by corresponding error messages.

After the project plan lines have been created for the corresponding long-run items, procurement documents / procurement processes can be triggered for these project plan lines in order to achieve the corresponding coverage of requirements for these long-run items.

Note

The created procurement documents should be compellingly reserved for the project plan lines. On the one hand, the quantity in the procurement document is then considered reserved, and on the other hand, only reserved procurement quantities can be transferred from the project plan line "Long-run items" to the corresponding FA component. Only the quantity that is already covered by the procurement documents can be assigned to an FA component, regardless of the quantity of the project plan line itself.

Cross-country skiing articles as components in FA and E+D order

If a long-run item has been defined in the project, it can also be viewed in project-related production orders. In this case, the "Long-run item" label is managed in the FA components in the "Long-run item" field itself.

In order for a component to be recognized as a long-run item in the production order and in the E+D order, the following criteria must be met:

- Project number must be set as project reference in the FA component.
- The article number, variant code and storage location code must match between the project plan line marked as a long-run item and the FA component.

In addition, the quantity that has already been linked / used for this FA component by a long-run item project plan line can be viewed in the "Long-run item linked quantity (base)" field.

The fields "Long-run item" and "Long-run item linked quantity (base)" can also be viewed accordingly in the lines of an E+D order.

Although it is possible to display directly for an FA component or E+D order line whether it is a long-run item, the available quantity of the long-run item cannot be displayed directly. This is due to the fact that it is calculated based on the reservations for the long-run project plan lines, taking into account the due date of the FA component and the planning date of the project plan lines. Further, there is the fact that a long-run article project plan line can serve several FA components, but there can also be several long-run article project plan lines for one article. Therefore, the available quantity of a long-run article is always calculated at runtime. This is done in the "Long-run article overview" screen. This overview can be called from the FA components and E+D order lines respectively.

To do this, call up the cross-country skiing article overview via the "Line" > "Line" > "Cross-country skiing article overview" info tab.

By means of the "Long-run item overview" mask, not only the quantity available for allocations can be viewed. This screen is also used to set or cancel links between FA components and long-run item project plan lines. In this way, the procurement quantity already reserved for the project plan line is transferred to the FA component or, in the case of cancellation, written back from the FA component to the project plan line.

Note

The "Long run item overview" screen can be called up not only for FA components or E+D order lines. It can also be displayed for the entire production order / E+D order. The overview can also be used from the project. Here it can be called up for project plan lines, project tasks and the entire project. The information and handling of the "Cross-country items overview" mask is described in the following sections.

Structure of the cross country skiing article overview

The "Long-run item overview" screen shows the quantities available for links to the long-run item project plan lines for FA components. Furthermore, this mask offers the possibility to directly set links between FA components and long-run article project plan lines and thus to transfer the already reserved quantity from the project plan line to the FA component. It is also possible to delete these links.

The structure of the cross-country article overview, the individual calls and functions of the mask are described below.

Data areas of the cross country skiing article overview Origin address

In the upper area of the long run article overview, the field "Called from" shows from where the long run article overview was called. E.g. from the FA component, the production order or the project.

Overview post

The summary items are displayed in the rows area. The overview items are formed on the basis of FA components and project plan lines and are created as main items and sub-items. If the long-run item overview is called up from a production order or E+D order, the main items are created on the basis of FA components. The associated sub-items are created on the basis of the project plan lines, which are possible requirement coverers for these long-run items. If, on the other hand, the long-run article overview is called up from a project, the main items are created on the basis of project plan lines and the sub-items are created by the FA components as possible requirements originators.

Note text

This area displays a short note text for the selected item. (If a note exists for this item).

Post details

In the info boxes area, the details of the respective item are displayed. The item origin (FA line / project plan line), the item type (main item / sub-item), item and variant information as well as the due date and the storage location where the item is required are displayed. In addition, the quantity information is displayed here and whether the item is to be considered "Available". The quantity display in the overview items is explained below.

Quantity display in the cross country article overview

The aim of the long-run item overview is to show how FA components can be covered by the long-run item project plan lines already in the MRP. For this purpose, the quantities of the long-run items must also be displayed accordingly. The display of the quantities in the long-run item overview depends on whether they are main items or sub-items. In addition, there are separate fields for each reference (FA component, project plan line) that represent the quantities. Basically, for each main item, the sum of the sub-items is also calculated.

Example:

If the main item is an FA component, the sum of the quantities of its sub-items (project plan lines) that can be used to cover the requirements of the FA component is also formed for this main item. If the main item is a long-run project plan line, the FA components that could be covered by this project plan line are displayed as sub-items.

Basically, the quantity fields have the following meaning:

Quantity fields FA component

Field	Description
Residual quantity (base)	Displays the remaining quantity of the FA component line to the base unit. The remaining quantity represents the portion of the expected component quantity that has not yet been consumed.
Reserved quantity (base)	The quantity in base unit that has already been reserved for the component line from procurement documents or warehouse stock is displayed here.
Linked quantity (base)	This field displays the quantity in base unit that has already been linked to project plan lines for long-run items.
Open quantity (base)	The "Open quantity" for the base unit is displayed here. The open quantity is the quantity that still has to be covered by reservations or links to long-run article project plan lines in order to ensure procurement for the remaining quantity of the FA component. Open quantity = Remaining quantity - Reserved quantity

Quantity fields Project plan line

Field	Description
Quantity (base)	This field displays the quantity of the project plan line as a long-run item for the base unit. This field is purely informative and shows the planned quantity of the project plan line.
Linked quantity (base)	This field displays the already linked quantity of the project plan line with FA components.
Available range (base)	In this field the quantity of the project plan line available for links to the base unit is displayed. The available quantity is the reserved quantity of a project plan line, because only the quantities that are reserved on procurement documents or warehouse stock can be passed on to an FA component.

Note

For a main item (FA component or project plan line), sub-items can be displayed that have the "Unavailable item" checkmark set. These items cannot be covered or used to cover requirements.

An item is marked as "not available" if there is a date conflict between the FA component and the planning line. I.e. the FA component cannot be covered in time based on the planning date of the project plan line. Another reason would be if the quantity of the FA component is already completely covered (the remaining quantity is completely reserved) or if there is no available quantity in the project plan line. These items are then no longer used for requirements coverage, but they are still displayed to show the overview of the links that already exist between the project plan lines and FA components and to indicate date conflicts. These positions are marked accordingly and provided with a note text.

Actions of the cross country skiing article overview

The mask "Long run article overview" has actions with which the view of the mask can be controlled, but also links between long run article project plan lines and FA components can be created or deleted again. The individual actions are described below:

Action	Description
Recalculate	By means of this action the data in the mask are recalculated and displayed. This action is used to update the mask.
Set shortcut	This action sets links between the long-run article project plan lines and the corresponding FA components.
Delete link	This action deletes the links between the long-run article project plan lines and the corresponding FA components again.
Show post	By means of this action, the already existing links between the project plan line and FA component can be displayed for a position / item.

Setting and deleting long-run article links

Setting and deleting links between long-run article project plan lines and the corresponding FA components is triggered from the long-run article overview. The actions "Set link" and "Delete link" are used for this purpose.

The setting and deletion of links is explained below on the basis of the call of the cross-country article overview for an FA component. The reason for this is that the setting and deletion of links always starts from the FA component, regardless of how the "Cross-country skiing article overview" screen was called up. Depending on the call, only the filtering of corresponding FA components takes place, which are then processed one after the other, in which the links are set or removed accordingly.

Setting links

When setting a long-run article link for a FA component line, the system checks whether this component corresponds to a long-run article in project plan lines. For this purpose, the system checks whether the component has a project reference and whether these project plan lines marked as long-run articles have the same article / variant / storage location combination. If this is the case, the corresponding project plan lines are used as possible default lines. In this case, the planning date of the project plan lines is filtered so that they

are before or the same as the due date of the component. The date filtering is important so that the requirement-covering documents for the project plan line can also be used for the FA component line. The link can now be set until the FA component "open quantity" is 0 (zero) or there is no more available quantity in the filtered long run item project plan lines.

The link is set with the "Set Link" function for the FA component line.

After the link has been set, a corresponding "long-run article link item" is also created. This item records which FA component was linked to which project plan line with which quantity. The fields "Linked quantity (base)" in the FA component and the project plan line are also calculated on the basis of these items.

The linking items can also be viewed in the cross-country article overview.

The link transfers the reservation (proportionate to the linked quantity) from the project plan line to the FA component. This also results in a direct link of the requirement-covering document (e.g. a purchase order) with the FA component.

However, the link also has a direct effect on the project plan line. In order to reduce the demand for the long-run article for the project accordingly and to minimize redundancy of the demand between the FA component and the project plan line, the quantity of the project plan line itself is also reduced.

Delete shortcuts

The deletion of link items has two integrated steps. Firstly, resetting the existing link according to the long-run item link. The other is the transfer of the reservation without the long-run item link.

In the first stage, using the long-run article link items, the link is undone by moving the reservation in the amount of the linked quantity from the FA component to the project plan line listed in the item.

In the second stage, the system checks whether there is still a reserved quantity for the FA component beyond the link. I.e. after deleting the link, there is still a "Reserved quantity" for the FA component, which may have been set by manual reservations. If this is the case, the reservation is also transferred to the first matching project plan line. The aim of this transfer is to always concentrate the existing requirement coverage for the long-run items of a project at the long-run item project plan lines. If the surplus reservation quantity were only cancelled in this way, it would then be available for other projects/consumption. However, the transfer ensures that the demand cover remains reserved for the project.

The link for the FA component is deleted again using the "Delete link" function.

By deleting the link, the long-run article link item is deleted and therefore the linked quantity in the FA component and the corresponding project plan line is also reduced / set to 0 (zero).

Furthermore, the "Open quantity (base)" is also set high again in the FA component, since there is no longer any requirement coverage for the remaining quantity of the FA component.

On the other hand, the quantity and the available quantity in the project plan line and the available quantity in the project plan line are set high. As a result, the reservation on the demand cover passes from the FA component to the project plan line and the demand cover is still available to the project.

Calls of the cross-country skiing articles overview from the production and project

As described in previous sections, the long-run article overview can be called for FA components and project plan lines. However, it can also be called for FA lines, production orders as well as project tasks and the entire project.

This section describes the calls and explains the structure of the summary items per call.

Call for FA components / E+D order lines of the MRP type "warehouse part

The "Long-run item overview" screen can be called up for FA components and E+D order lines of the MRP type "Stock item" using the action "Long-run item overview".

In both cases, the long-run article overview for the respective referenced FA component is called.

Here you can now view the possible, requirements-covering long-run article project plan lines for the component and create or delete a link between the FA component and the project plan line.

The individual actions for this can be taken from the previous section.

Call for FA lines / E+D order lines of the MRP type "Production part

The "Long-run item overview" screen can be called up for FA lines and E+D order lines of the MRP type "Production part" using the action "Long-run item overview".

In both cases, the long-run article overview is called for the referenced FA line.

The FA components of the respective FA line that have been identified as long-run items are displayed as the main items in this call.

As a sub-item, the project plan lines are shown for the respective FA components, which can serve as requirement cover if necessary.

If the actions "Set link" or "Delete link" are used for a FA line, the displayed FA components are run through one after the other and the selected functionality is performed for the individual FA component.

Call for a production order / E+D order

The "Long-run item overview" screen can be called up for an entire production order or an E+D order.

In both cases, the long run article overview for the referenced production order is called. In the case of the E+D order, it is the production order that is listed in the header of the E+D order.

All FA components of the production order that have been identified as long-run items are displayed as main items in this call.

As a sub-item, the project plan lines are shown for the respective FA components, which can serve as requirement cover if necessary.

If the actions "Set link" or "Delete link" are used for the entire production order, the displayed FA components are run through one after the other and the selected functionality is performed for the individual FA component.

Call for a project plan line

The "Long-run item overview" screen can also be called up for a project plan line. For this purpose, the respective project plan line must be marked as "Long-run item".

In the called cross-country article overview, the corresponding project plan line is displayed as the caller.

The corresponding project plan line is displayed as the main item in this overview. The FA components that could be covered by this project plan line are displayed as sub-items for this project plan line.

If the actions "Set link" or "Delete link" are executed from this view, they do not refer to the project plan line as the main item, but to the individual FA components as sub-items. I.e. the individual FA components are gone through one after the other and the selected action is executed there for each individual component. The assignment of the long-run item therefore always takes place from the view of the component.

Call for a project task

The "Long-run item overview" screen can also be called up for a project task. For this purpose, the respective project task must be marked as "Long-run item".

In the cross-country item overview, the corresponding project task is displayed as the caller.

As main items, the corresponding project plan lines for this task are displayed in this overview, which are marked as "long-run items". For each main item, the respective FA components that could be covered by this project plan line are then displayed as sub-items.

If the actions "Set link" or "Delete link" are executed from this view, they do not refer to the project plan lines as main items, but to the individual FA components as sub-items. I.e. the individual FA components are gone through one after the other and the selected action is executed there for each individual component. The assignment of the long-run item is therefore always done from the component's point of view.

Call for entire project

The "Cross-country item overview" mask can also be called up for an entire project.

In the cross-country article overview, the corresponding project is displayed as the caller.

All project plan lines for this project that are marked as "long-run items" are displayed as main items in this overview. For each main item, the respective FA components that could be covered by this project plan line are then displayed as sub-items.

If the actions "Set link" or "Delete link" are executed from this view, they do not refer to the project plan lines as main items, but to the individual FA components as sub-items. I.e. the individual FA components are gone through one after the other and the selected action is executed there for each individual component. The assignment of the long-run item is therefore always done from the component's point of view.

Handling of long-run article links

This section describes the handling of long-run article links for different actions in the processing of production orders / E+D orders and in the project.

Within the framework of production order / E+D order processing Separating and reintegrating separate production orders

In E+D orders, individual subassemblies can be outsourced to separate production orders or reintegrated from a separate production order. In this case, the noted requirements coverage (reservations) is also outsourced or reintegrated. Therefore, the long-run article link items are also outsourced or reintegrated with the separate production order.

Deleting an FA component

When an FA component is deleted, the system checks whether it is a long-run item. If this is the case and there are reservation items for the FA component, the reservation is transferred to the corresponding long-run item project plan line before the component is deleted.

For more information, see the section "Deleting cross-country article links".

Deleting a production order/ individual FA lines

When deleting the entire production order or individual production order lines, the system checks for the entire production order or the corresponding production order line whether it contains components that are marked as long-run items. If this is the case, the reservations are transferred to the corresponding long-run article project plan lines before these components are deleted.

For more information, see the section "Deleting an FA component".

Reducing the quantity in an FA component

If an FA component is marked as "long-running" and a quantity reservation exists for this component, then the existing reservation is converted to a long-running article project plan line before the quantity is reduced. After the reduction of the quantity, the system restores the reservation for the FA component according to the following scheme:

If the new "Expected quantity (base)" is smaller than the originally reserved quantity, then the reservation is only made according to the new "Expected quantity (base)". If, on the other hand, the new "Expected quantity (base)" still exceeds the originally reserved quantity, the reservation is set back to the originally reserved quantity.

This ensures that after the quantity reduction, the portion of the reservation that is no longer needed is assigned to a corresponding project long-runner and the component retains its reservation again up to the maximum previously reserved quantity.

Cancellation of the reservation from a FA component

If an FA component is marked as a "long-run item", it is not possible to cancel the reservation for this component manually (call the reservation reversal directly from the FA component). This is due to the fact that reservations for long-run items in the production order are not simply cancelled and made available again for all consumptions, but are moved to the corresponding long-run item project plan lines. As a result, the reserved requirements coverers still remain linked to the project.

The cancellation of the reservation for a FA component that is marked as a long-run item is therefore aborted by an error message. Instead, the "Delete link" function in the "Long-run item overview" is to be used to transfer the existing reservation to a corresponding long-run item project plan line.

If the reservation was transferred to the project plan line, it can be cancelled there for the respective project plan line. This then represents a conscious decision, so that the reserved requirement cover for the long-run article is to be decoupled from the project.

Cancellation of the reservation from the demand deck

If an FA component is marked as a "long-run item" and has a reservation for the requirement cover, the reservation cannot be cancelled directly from the FA component.

However, it is possible to cancel the reservation from the demand-covering document. This is due to the fact that changes to the requirement-covering document must be possible. E.g. if the planned delivery date cannot be met.

If a reservation is cancelled in a requirement-covering document that references an FA component for a long-run item, the long-run item link for this component is also adjusted accordingly.

Consumption posting of a FA component

After posting the consumption for a FA component that is marked as a "long-run item", the long-run item link is adjusted to the reserved quantity again. This is due to the fact that the reserved quantity may be consumed with the consumption posting (reservation to stock). Therefore, the long-run article link must also be reduced accordingly.

Status change in the production order

When status changes are made in the production order, the long-run article links for this production order must also be taken into account accordingly. There are two options that must be taken into account:

Change from "Firmly Planned" to "Released":
With this status change, the long-run article link items must also be moved from the firmly planned production order to the released production order in parallel with the reservations.

Change from "Released" to "Finished":
If a production order is terminated, all remaining (unused) reservations for long-run items that are linked to the production order are distributed again to the corresponding long-run item project plan lines and are thus still available in the project.

In the context of editing project plan lines

When editing project plan lines that are marked as "long-run items", the system must perform appropriate checks and actions with regard to long-run item links (long-run item link items). These are described below.

Creating book sheets for cross-country article project plan lines

It is not possible to create project book sheets for project plan lines that are marked as "long-running items". This is prevented by a corresponding error message. The purpose of this is that project plan lines for long-run items must not be posted. A project plan line for long-run items offers the possibility to generate requirements in advance for parts that are needed during production and have a long procurement time. It serves the long-run article only as a trigger of the procurement, the actual consumption takes place as a component in the production order.

Booking cross country article project plan lines

Posting project plan lines that are marked as "long-run items" is not permitted. A project plan line for long-run items offers the possibility to generate requirements in advance for parts that are needed during production and have a long procurement time. It therefore only serves as a trigger for procurement, the actual consumption of the component takes place in the production order.

Deleting long-run article project plan lines with link items

If a project plan line that is marked as a "long-run article" is deleted, the long-run article links of this project plan line to the corresponding FA components are also deleted. However, the reservation that has already been

transferred to the requirements planner remains in the FA components. If it was the only long-run article project plan line for the article / variant / storage location combination, then the "Long-run article" check mark is also removed from the corresponding FA components, since there is no longer a reference to a long-run article in the project.

Project plan lines

In the project plan lines you can define the "detailed planning" for the project. Per project task line you have the possibility to define which items, resources and expense financial accounting items should be used.

To do this, first select the desired project task line and then call up the project plan lines via the "Tasks" info tab.

Define the project plan line using the table below.

Field	Description
Project task no.	Specifies the number of the associated project task. Automatically preset by the system.
Line type	Specifies the type of planning line. **The following are available for selection:** • Budget • Billable • Budget and billable
Order type	Initial orderWhen the first sales order is created, the order type is set to initial order **Follow-up orderWhen** creating a follow-up order, the order type is set to Follow-up order **DeviationWhen** maintaining the forecast, the project plan lines created during the forecast release (archiving) are marked as a deviation. **Plan lineInitial** value when creating a new plan line
Planning date	The planning date of the plan line is initialized depending on the set working date with the working date (working date <> today) or with the set start date of the project. If the start date is not set on the project card, the working date is always assigned.
Planned delivery date	Specifies the scheduled delivery date of the item associated with the project planning row. For a resource, the scheduled delivery date is the date when the resource will be used for the project.
Desired delivery date	Specifies the date when the customer wants the order to be delivered.
Promised delivery date	Specifies the date on which you committed the delivery of the order based on the result of the Delivery Date Commitment function.
Goods issue date	Specifies the goods issue date.
Planned goods issue date	Specifies the date when the goods should be delivered from the warehouse. If the customer requests a specific delivery date, the application calculates the scheduled delivery date by subtracting the transportation time from the requested delivery date. If the customer does not want a delivery date or the requested delivery date cannot be met, the application calculates the contents of this field by adding the transportation time to the delivery date.

Field	Description
Start date	If you work with the "Distribute planned quantity" function, the specified day from which the times were distributed is displayed in this field.
End date	If you work with the "Distribute planned quantity" function, the specified day up to which the times are distributed is displayed in this field.
Belongs to Milestone	If the associated project task is assigned to a milestone, this is displayed in the field.
Document no.	If the project plan line is created by the system, the document no. of the originating document is specified here. The field can also be maintained manually if required.
Type	Specifies the type of planning line. The following are available for selection: • Resource • Article • G/L account • Text As soon as you create a new project planning line with type=article as well as storage location, so a new stockkeeping data card for the entered article no. and the storage location code of the project is created by the system. During the initial creation, the data is transferred from the article card to the inventory data.
No.	Indicates the number of the item, resource or G/L account. **Note** In the "Nr" field, the Assist button is available to you for article/resource search in a simplified way. **Type=Article:** The characteristics for the search can be defined in the characteristic search. In the column Number of result the number of articles with the defined characteristic are displayed. **Type=Resource:** Resource search based on qualifications. If qualifications have been stored in the specified activity type, these are checked against the qualifications of the resources. If these match, the check mark is set in the "Qualified" field.
Description	Specifies the description of the item, resource or G/L account.

Field	Description
Cross country skiing articles	If the associated project task is marked with Long run item=Yes, the marker is automatically set on the project plan line.
Long-run article Linked quantity (base)	This field displays the already linked quantity of the project plan line with FA components.
Belongs to Milestone	If the associated project task is assigned to a milestone, this is displayed in the field.
Article version code	If you work with article versions, then you specify here the article version for the procurement.
Storage bin code	Indicates the storage bin where the items are picked/put away.
Quantity	Specifies the quantity of units of the resource, item or G/L account.
Distribution type	Specifies the distribution type for the "Distribute planned quantity" function. **The following selection options are available:** • Empty • Forward • Backward • Manual
Belongs to line no.	If you work with the function "Distribute plan quantity", the field "Belongs to row no." indicates to which base row the "distributed" row belongs.
Distributed quantity	If you work with the function "Distribute planned quantity", the field "Distributed quantity" shows how much of the quantity has been distributed.
Distributed quantity (Original)	If you work with the "Distribute planned quantity" function, the field represents the originally defined quantity.
Distributed purchase price (MW)	See here the cumulative cost amount of the distributed lines.
Reserved from	Specifies the reservation of.
Vendor no.	For a quick procurement of your project requirements, the possibility was created to transfer positions directly from the project plan lines into the planning proposal, inquiry, order, invoice as well as credit note. In this field, specify the vendor from which you want to procure this item.
Purchasing document type	If you have transferred the plan line, you will see the document type of the purchasing document here.

Field	Description
Purchase document no.	If you have transferred the plan line, you will see the no. of the purchasing document here.
Cost price	Maintain here in project currency the cost price of the position.
Calculation tracking lines available	If a check mark is set here, an article calculation has already been created for the position.
Cost amount	Indicates the cost amount of the position in project currency.
UK price	Maintain here in project currency the sales price of the position.
Line amount	Specifies in project currency the line (sales) amount of the item.
Quantity to be transferred in book. sheet	Specifies the quantity to be transferred to the project book. sheet.
Invoiced amount (MW)	See here the already invoiced amount in client currency of the positions.
Actual progress %	Indicates the actual progress of the project plan line in %.
Actual progress date	Represents the maintenance date of the Actual Progress.
Forecast (MW)	If you set the forecast to "Project plan line", use this field to specify the total costs you currently expect for the project task. **For the calculation of the forecast (MW), the system determines it as follows:** (Consumption (cost price) Time commitment Amount (MW) Purchase commitments Amount (MW) Stock commitment Amount (MW) Production commitments Amount (MW)) Actual progress % Forecast (MW)
Service type	This field shows you the transferred activity type from the project task.
Sales account no.	You will see the sales account determined by the system in this field.

Field	Description
Consumption account no.	You will see the consumption account determined by the system in this field.
Procurement method	If you set the procurement method to stock transfer, the system creates a stock transfer route from the standard storage location to the storage location of the project planning line if it is different. If a stock data card already exists, it will be updated based on the default. With the procurement method simulation a calculation FA is created in the background. If you want to trigger a purchase order for the item, set the procurement method to purchase, this will update the inventory data for the item and storage location.
Sales document Document type	Specifies the document type of the sales document.
Sales document no.	Specifies the sales document no. of the sales document.

Document texts project plan lines

You can describe a project plan line in detail using a long text. This long text is printed on the documents you define.

Call up the project plan lines via the desired project task using the call of the same name on the "Tasks" info tab.

Select the project plan line for which you want to enter a document text. Then call up the "Document texts" menu selection via the ribbon. You can now decide whether you want to enter a pre- or post-text for the line.

The entry of the pre- or post-texts is done in the same way as for the tasks. Further information can be found in the section "Document texts for tasks".

The reports listed here print the project texts depending on the "Show additional text" switch:

Project plan lines Project analysis *Budget comparison project* Account proposal project *Project offer

Distribute plan quantity

It often happens that tasks take longer than one working day, for a more accurate resource planning it is now necessary to distribute the estimated hours over the working days.

Note

Before splitting, in the case of the Budget and Billable line types, it is necessary to clarify how billing is to be performed:
-Flat rate billing

The line must be divided into a billing and budget line beforehand on the project task via Functions\Split plan line. Billing is then done via the original plan line.

-Resource statement

The line type remains unchanged and is then settled via the line item.

The prerequisite for the distribution is that the line type is Budget.

To distribute the planned quantity, call up the "Distribute planned quantity" function via the menu ribbon.

The Distribute Planned Set screen opens where you can specify the following distribution criteria:

Field	Description
Project no.	Specifies the project no. of the project. The project no. is automatically preset by the system.
Task no.	Specifies the task no. to be distributed. The task no. is automatically preset by the system.
Description	Specifies the description of the task no. to be distributed. The description is automatically preset by the system.
Type planning	**Specifies the planning type of the distribution. You can choose from the following options:** EmptyNo distribution is made. ForwardStarting from the start date, the system compares the available resource capacity and creates a new project plan line for the capacity quantity until the quantity of the line to be distributed is distributed. Backward Starting with the end date, the system compares the available resource capacity and creates a new project plan line for the capacity quantity until the quantity of the line to be distributed is distributed. Manual Enter the quantity and date manually here.
Consider resource group assignment	If you activate the switch, only resource assigned to the resource to be distributed will be offered.
Start date	Define here from which day the times are to be distributed.
End date	Define here up to which day the times are to be distributed.

Field	Description
	Specify here how it wants to distribute:
Resource selection	NoneThe system starts from the first resource and tries to distribute the quantity in the period until the quantity is distributed. ResourceThe system considers the resource filter and distributes as for resource. QualificationThe system checks against the qualifications assigned to the activity type of the project task/project plan lines and searches for those resources with matching qualifications and distributes the quantity as under none.
Resource filter	Set a filter here to specify under resource selection defined decision.
Quantity New line	Set the quantity for the distribution here in case of manual distribution.

Confirm your entry with "OK" to distribute the planned quantities.

The daily residual amount is calculated as follows:

Resource capacity * Quantity in order (Proj.) * Quantity in assembly order * Quantity in service order * FA time requirement Remaining quantity available for the day

If the line to be distributed is a budget and billable line, the line will be split into a budget and billable line in the course of quantity distribution. The billing line item is inserted before the original line item.

FA Calculation

The calculation in KUMAVISION factory365 has been extended so that also project plan lines can be calculated. New cost prices can be calculated and taken over, however, deviating from the calculation for sales, no sales prices.

Establishment

Call up the "Evaluation & costing setup" via the user search. Via the info tab "General" you have the possibility to set up the costing on project plan lines in the field "Cost E+D order (project)".

The following selection options are available to you:

Selection option	Description
Calculate only	A simulated FA is created and a calculation is generated.
Calculate+Advertise	A Simulated FA and a calculation are created and the created FA is then opened via page 5232961 "Simulated E+D order (calculation)".
Calculate+Take Over	A Simulated FA and cost estimate are created and the cost price is transferred to the project plan line.

Preparation of a calculation

A prerequisite for creating a cost estimate is that a project plan line has the type "Article" and the procurement method "Simulated".   To create the cost estimate, call up the function "Calculate production cost estimate" for the desired project plan line via the menu ribbon > "Actions" > "Functions" > "Costing".

　　Note

Please note that the project must not be in "Order" or "Finished" status.

Already when selecting the procurement method "Simulated", the calculation is performed automatically.

In addition, a cost estimate can also be created subsequently using the "Calculate production cost estimate" function.

Through the costing, a simulated FA is set up and a costing is performed depending on the setup, the FA is then also displayed or the costing result is taken over as the cost price for the project plan line.

The calculation can be checked via the "Calculation tracking lines" action.

Transfer of the calculation into a sales quotation

If a project plan line is transferred to a quotation, a cost estimate existing for the project plan line is automatically linked to this quotation line as well.

From the quotation, you can view the reference to the simulated FA of the project plan line. To do this, select the "Functions" menu item via the "Line" info tab and execute the "Costing tracking lines" function.

Post calculation

If the cost estimate has to be changed subsequently or a new costing run has been carried out, the newly calculated cost price can be adopted again in the costing proposals using the "Adopt costing proposal (preferred)" function. The price is also adopted in any existing sales document.

Addition in simulated production order

Simulated production orders additionally have the identifier "FA used in calculation" on the info tab "General". This indicates whether the respective production order is used in one or more calculations.

A lookup on the identifier will display the "Calculation Tracking Lines (Sales + Project)" overview.

If a calculation is linked in project and sales in parallel, only the information for the project plan line is displayed in the "Calculation tracking lines (sales + project)" overview, as this is the leading document.

Information register booking

Field	Description
Status	Indicates the current status for the project.
Project booking group	Specifies the booking group set up for the project according to the booking matrix setup.
WIP method	Specifies the method used to calculate the working capital value for the project.
Allow budget/ billable lines	Here you can control whether you want to allow project plan lines of the type "Budget" or "Billable".
Apply consumption link	Indicates whether consumption items, e.g. from the project posting sheet or purchasing line, are linked to project planning line.
% completed	Indicates the percentage of the project's expected resource consumption that has been posted as used.
% Invoiced	Specifies the percentage of the project's invoice value that has been posted as invoiced.
% of overdue plan lines	Indicates the percentage of the project's planning lines for which the planned delivery date has expired.

Status

The course of a project is largely determined by the status. The individual options are described in detail below:

Planning:
In this project phase you can perform preliminary calculations. In addition, the project structure can be defined, i.e. you can define project tasks as well as associated project plan lines. No bookings can be made yet.

Offer:
The project is offered to a customer. Preliminary calculations are also possible at this stage. You can also change the structure and budget of the project. Postings cannot be made.

Open (=order):
Expenses from purchasing as well as from time recording are now recordable and postable. With the posting of sales invoices and credit notes, project revenues can be posted to the project. Postings are only possible in this phase.

Completed:
You can no longer change the project structure and budgets. This status is used to perform recalculations The real costs of a project can be compared with the budgeted amounts. Completed projects can no longer be posted.

Inforegister dates

Field	Description
Start date	Specifies the date when the project starts.
End date	Specifies the date when the project should be completed.
Establishment date	Specifies the date when the project was created.

Foreign Trade Information Register

Field	Description
Currency code	Specifies the currency code for the project. By default, the field is empty. If you enter a foreign currency code, the project will be planned and invoiced in this currency.
Invoice currency code	Specifies the currency code to be applied when creating invoices for the project. By default, the currency code is based on the currency code that has been stored on the customer card.
Exchange rate calculation (cost price)	Specifies how project costs are calculated when you change the Currency Date or Currency Code fields in a project plan row. **The choices are:** *MW fixed* The project costs in the local currency are fixed. A change in the currency exchange rate changes the value of project costs in a foreign currency. *FW fixed* The project costs in the foreign currency are fixed. A change in the exchange rate changes the value of the project costs in the local currency.
Exchange rate calculation (sales price)	pecifies how project sales prices are calculated when you change the Currency Date or Currency Code fields of a project plan row. **The choices are:** *MW fixed* The project prices in the local currency are fixed. A change in the currency exchange rate changes the value of the project prices in a foreign currency. *FW fixed* The project prices in the foreign currency are fixed. A change in the exchange rate changes the value of the project prices in the local currency.

Inforegister WIP and revenue recognition

Field	Description
WIP posting date	Indicates the posting date that was entered during the last execution of "Calculate WIP project".
Total WIP invoice value	Indicates the total WIP sales amount that was last calculated for the project.
WIP maintenance amount (total)	Indicates the total WIP maintenance amount that was last calculated for the project.
Deactivated sales amount	Indicates the amount of declared sales that was last calculated for the project.
Deactivated cost amount	Indicates the declared cost amount that was last calculated for the project.
Disabled DB	Specifies the disabled DB for the project.
Disabled DB %	Indicates the deactivated contribution margin in percent for the project.
Posting date WIP to G/L item	Indicates the posting date entered during the last execution of "Post WIP to G/L Project".
Total WIP invoice value in G/L accounts	Indicates the total WIP sales amount that was last posted for the project.
WIP balance for G/L accounts (total)	Indicates the total WIP balance that was last posted to the project.
Deactivated sales amount in G/L accounts	Indicates the total declared sales amount that was last posted for the project.
Deactivated cost amount on G/L accounts	Indicates the total deactivated cost amount that was last posted for the project.
Deactivated DB on G/L accounts	Indicates the contribution margin that will be realized for this project.
Deactivated DB (financial accounting) %.	Indicates the contribution margin in percent that will be realized for this project.

Inforegister Forecast & Commitment

On this Inforegister the Forecast & Obligo information of the project is presented. At this point, the Inforegister is mentioned for the sake of completeness.

For further information, please refer to the section "Forecast & Commitments".

Project storage location

For the correct representation of the transfer of risk, goods are transferred from their production site to the construction site or to the customer and not directly delivered and thus consumed. The project is then debited upon acceptance by means of a deliberate consumption posting.

For this purpose, a project storage location is always created for a project.

After defining the "Sale to customer no. ", a new storage location can be created based on the customer details.

The system offer the user to create a storage location based on the customer card as well as possible delivery addresses.

The respective storage location can be called up via the project map by calling up "Storage location" in the menu ribbon.

Note

If there is only one "project warehouse", it will be updated when the project is changed.

If there are several "project warehouses", they must be updated manually.

Establishment

For the project storage location, the following setups must be made in advance in the "Projects setup":

Field	Description
Create project storage location	For the procurement and logistics processes, you use this to specify whether the system should create a project storage location for each project. The project storage location hereby represents the place of performance of the project.
Stock entry entry storage location code	For the procurement and logistics processes you define here a warehouse from which the warehouse setup for the financial accounting is to be copied. The field "Stock entry one location code" can only be maintained if the storage location creation is activated ("Create project storage location").
Preferred transit code	For the procurement and logistics processes, enter the transit code for the project warehouse transfer route here. The "Preferred transit code" field can be maintained only if the storage location creation ("Create project storage location") is enabled.
Preferred delivery code	For the procurement and logistics processes, enter the delivery agent code for the project warehouse transfer route here. The field "Preferred delivery code" can only be maintained if the storage location creation ("Create project storage location") is activated.
Preferred carrier transport code	For the procurement and logistics processes, enter the delivery agent transport type code for the project warehouse transfer route here. The field "Preferred delivery transport code" can only be maintained if the storage location creation ("Create project storage location") is activated.

Attachment

To create a project storage location, click "Associated" > "Setup" > "Storage location" on the project map in the ribbon.

During creation, the (new) fields are set as follows:

Field	Description
Address fields	According to customer or delivery address
Project no.	Project number of the project
Debtor no.	Customer number of the project

Note

When creating the project storage location, you must create the necessary stock transfer routes. The system supports you in this in such a way that it carries out the essential setups when creating the project warehouse on the basis of the information stored in the project setup. To set up the stock transfer routes, the system determines the warehouse that was defined as the storage location in the "Components of storage location" field in the production setup.

Storage location determination

The system determines the storage location hierarchically when creating a new project plan line with an item:

1. Project storage location if available
2. Unit of responsibility, if any
3. Company data, if available

Stock data

When creating an article position in the project plan line, in case of the storage location found, a stockkeeping data card is directly created in the background for the article and the corresponding project warehouse.

In the project plan line, the procurement method can then be defined directly on the inventory data card via the "Procurement method" field.

If the procurement method "Stock transfer" is selected, a stock transfer route is directly created in the background according to the settings in the "Setup projects" for the standard warehouse.

Project Team

A project team can be defined for each project. The definition takes place on the project card in the menu ribbon under "Project team".

Create the project team members using the table below:

Field	Description
Project no.	Specifies the number of the project to which the project team is assigned. This field is filled in automatically.
Type	Here you define which type the project member has. You can choose between resources (internal and external employees) and contacts (project members of the customer or further project participants). In the case of the contact type, the system fills the Company no. field using the customer no. of the project card, from which the company name is also derived.
No.	Here you can select depending on the type of member. Type=Resource: Selection of the respective resource no. Type=Contact: Selection of the respective contact no. Type=User: Selection of the respective UserID
Roll code	Specifies the role of the project team member. To assign code to the roles, roles must have been previously set up in the table of the same name.
Roll	Specifies the name of the role.
Start date	Specifies the start date for the deployment of the resource. The start date automatically defaults to the project start date and can be changed manually.
Name	Specifies the name of the resource, contact or user.
E-mail	Specifies the e-mail address of the resource, contact or user.
Phone no.	Specifies the phone number of the resource, contact or user.
Cell phone no.	Specifies the cell phone number of the resource, contact or user.
End date	Specifies the end date for the deployment of the resource. The end date automatically defaults to the end date of the project and can be changed manually.
Company no.	Specifies the company number of the contact as soon as the Type=Contact field.
Company name	Specifies the company name.
Business relationship	Indicates the business relationship
Seller code	Specifies the seller of your company
People Contact No.	Specifies the persons contact no.
Planned quantity	Specifies the plan quantity of the project team member.

Field	Description
Quantity plan lines	Specifies the amount of plan lines for the project team member.
Residual quantity Plannable	Indicates the remaining quantity that can be planned by the project team member.
Amount of time	Indicates the amount of time already recorded for the project by the project team member.
Project quantity	Specifies the project quantity for the project team member.
Total consumption	Indicates the total consumption of the project team member.
Rest plan lines	Specifies the remaining amount of plan lines for the project team member.
Rest plan	Specifies the remaining plan quantity of the project team member.

Note

If the fields "Responsible" and / or "Project Manager" are maintained on the project card, the project team records are also created with the Responsible / Project Manager role.

If you maintain a resource in the project plan lines, data records are also generated for this project team.

Please note that when creating from the project plan line, the team record is not deleted when changing the resource or deleting the record.

Risk Management

Risk management allows you to calculate, monitor and counteract project risks. Using the task management within the risk line, you can define preventive measures.

To calculate and monitor the project risks, call up the "Risk management" via the menu ribbon. The corresponding fields are explained in more detail below:

Field	Description
Comments	This field indicates whether a comment of the risk line is deposited.
Risk no.	This field must be filled. It controls the position of the risk line and thus the clarity of the entire risk list.
Description	This field can be used to store a description for the risk.
Risk type	In this field you enter the type of risk. **This field offers the following options:** - RiskIndicates the risk - HeadingSpecifies a heading - SumWith this option you can create a sum over several risk rows. You define the range using the "Total" field. - From-totalAs in the chart of accounts, you can create a from-total - to-total over several rows in Risk Management. - To-totalAs in the chart of accounts, you can create a from-total - to-total over several rows in Risk Management.
Counting up	This field specifies which risks are added together. This field works for the "From-total", "To-total" and "Total" risk types. When using the "From-total" and "To-total" risk types, the system automatically fills the "Add up" field of the row with the "To-total" risk type.
Number of open tasks	Indicates the number of open tasks (measures) generated by the task creation.
Entry date	In this date field, you store the date on which the risk may occur.
Responsible	In this information field a user can be assigned as responsible for this risk.
Damage (MW)	This field is used to specify the amount of damage.
Cum. Damage (MW)	This field is automatically filled based on the "Damage (MW)" field and indicates the cumulative damage.
Probability %	In the "Probability %" field, the probability of the risk that could occur is indicated.

Field	Description
Cum. Damage assessed (MW)	This field is automatically filled based on the calculation of the "Damage (MW)" and "Probability %" fields.
Damage n. Completion (MW)	This information field can be used to specify the damage after the completion of the project.
Cum. Damage n. Completion (MW)	This field is automatically filled with the cumulative value of the field "Damage n. Completion".
Prob. n. completion %	This information field can be used to indicate the probability of the risk after completion of the project.
Cum. Damage assessed n. closure (MW)	This field is automatically filled based on the calculation of the fields "Damage after completion (MW)" and "Probability after completion %". It describes the assessed damage after completion of the project.
Active	This identifier controls whether the risk is active or not.
Identified by	This field is automatically filled with the user name that entered the risk line.
Identified on	This field is automatically filled with the working date on which the risk line was created.
Cause Description	A description of the cause can be stored here.
Damage description	A description of the possible damage can be stored in this field.
Measure costs (MW)	The measure costs of the risk can be entered here.
Cum. Measure costs (MW)	This field is automatically populated based on the "Measure Costs (MW)" field and indicates the cumulative measure costs.
Damage Actual (MW)	In this field you enter the actual damage.
Cum. Damage Actual (MW)	Based on the "Damage Actual (MW)" field, this field is automatically filled.

Project effort

In the following, the individual areas are explained in more detail, through which the project, effort and consumption can be assigned.

Thus, on the one hand, the expenses of the resources are recorded in the form of working hours, and on the other hand, article consumption is recorded via stock or project purchasing.

This results in the actual values of a project. Subsequently, these actual values are compared with the planned values.

Personnel / benefit expenses

The implementation of projects includes consumption as well as sales. Project consumption primarily includes the expenditure of resources. Resources can be employees, machines and subcontractors.

Resource expenditures are always made in the resource base unit via the timesheet. All person resources should have this code as the base unit on the resource card.

Record timesheet

Using the time sheet, the resources can record their expenses with a corresponding description on the projects. For each resource, the time sheet must have been created beforehand for the corresponding period. For more information, see "Creating timesheets" or the Microsoft Dynamics Business Central™ Helpsite (F1).

Release of the transmitted working times

The submitted working times of the employees are then approved by the timesheet approver.

To release the transferred working times, call up "Time sheet for manager" via the user search.

The time sheet for manager card opens on which the transferred working times are listed. Via the menu ribbon you have the possibility to approve or reject the transmitted working times via the calls "Approve"/"Reject".

Further information on this topic can be found in the Microsoft Dynamics Business Central™ Helpsite (F1).

Project book sheet

The time sheet is used to record the project time consumption. To ensure that the projects are also debited with the posted project time items, i.e. the project time items are transferred to so-called project items, the posted time consumptions must be entered via the project book.sheet.

The project posting sheet is used to post project items of all types. For example, material from the warehouse can also be posted here as project consumption. At this point, only the transfer of project items from the project time items will be discussed.

The menu item "Suggest project book. sheet lines" creates an input mask in which the filters for the retrieval can be set specifically.

This function is used to retrieve project time items that have not yet been transferred to project items. As a rule, each project manager retrieves the project time items for which he is responsible. For this purpose, each individual project can be edited or the "Responsible" filter can be used.

The call fills the project book.sheet with all necessary data from the project time item. One book.sheet line is created per project time item.

After updating, the project book sheet is empty again and the corresponding project items have been created.

External resources

External resources can be purchased via purchasing documents.

For external resources, a vendor can be specified on the resource card. This creditor is the invoicing party, e.g. a personnel service provider. In the case of a freelancer, the freelancer must be created as a resource and as a vendor and linked accordingly.

If an external resource is entered in the project plan lines, this vendor is transferred to the field of the same name in the project plan line. Thus, a cost price determination can be carried out specifically for the combination resource / vendor. Also a creation of a purchase order of the external resource from the project plan line takes place with the creditor of the project plan line.

In addition to cost prices, sales prices and purchase prices can also be defined for external resources.

Cost of materials

In addition to the time spent on resources, projects also have material costs. This is managed via articles. The demand is defined and planned in the planning lines. The missing parts are ordered or produced via purchasing or production.

Project Purchasing

Plant engineering allows you to trigger purchasing documents directly from the project plan lines.

Create purchase request

Using the "Create purchase request" function, you can send the request to the supplier directly from the project plan line.

The following requirements must be met:

- it is not a position already transferred
- for each line a vendor no. is maintained
- the project is not in the "Locked" status
- if it is an item without a planning date, it must be a comment line

Otherwise, a corresponding message appears.

After a successful check, a window will open where you can make the following decisions:

Field	Description
Create new document	Specify whether you want to create a new document or attach the items to an existing purchase request.
Document date	Specify which document date the purchase request should receive.
Attach to document	If you want to add to an existing purchase request (Create new document = No), you can specify the document to be updated here. Determine to which document you want to assign the selected lines. A list of possible documents is displayed for this purpose.
Lines outline	Specify here whether a row outline should be created when a new document is created. When adding documents, you will not be offered the choice and the outline type of the existing document will be kept.

Confirm your selection with "Ok".

Subsequently, all selected lines marked on the line type "Budget" or "Budget and Invoiceable" are transferred to the purchasing request. In addition, the project no. in the header of the purchasing document is maintained with the project no. from the project from which it was generated. The requested quantity corresponds to the remaining quantity of the project planning line minus the quantity already reserved for it.

The document number of the generated request is displayed in the "Purchasing document number" field. By clicking on the number you can open and view the document.

You can convert the purchase request to a purchase order later in the process. In doing so, the "Purchasing document number" field in the project plan line is adjusted with the number of the purchase order.

If one of the following fields is changed in the project plan line, the system tries to transfer the change to the purchase line as well:

- Description
- Description 2
- Type
- No.
- Work type
- Variants code
- Quantity
- Unit code
- Cost price
- UK price (MW)
- Line discount %
- Planned delivery date
- Storage location
- Stockyard
- Currency code

Note

Please note that the new currency code must match the currency code of the purchase document, if not, an error message will appear.

Create order

Using the "Create Purchase Order" function, you can directly create a purchase order for the project plan line out.

The following requirements must be met:

- it is not a position already transferred
- for each line a vendor no. is maintained
- the project is not in the "Locked" status
- if it is an item without a planning date, it must be a comment line

Otherwise, a corresponding message appears.

After a successful check, a window will open where you can make the following decisions:

Field	Description
Create new document	Specify whether you want to create a new document or attach the items to an existing purchase order.
Document date	Specify which document date the purchase order should receive.
Attach to document	If you want to add to an existing purchase order (Create new document = No), you can specify the document to be updated here. Determine to which document you want to assign the selected lines. A list of possible documents is displayed for this purpose.
Lines outline	Specify here whether a row outline should be created when a new document is created.

When adding documents, you will not be offered the choice and the outline type of the existing document will be kept. Confirm your selection with "Ok".

Subsequently, all selected lines marked on the line type "Budget" or "Budget and Billable" are transferred to the purchase order. In addition, the project no. in the header of the purchasing document is maintained with the project no. from the project from which it was generated. The quantity to be ordered corresponds to the remaining quantity of the project planning line minus the quantity already reserved for it.

Depending on the maintenance of the field "Reserve", the order line will be created in such a way that the project no. as well as the project task will be taken over from the plan line into the purchase line when reserving "Never". By posting the document, the position is directly debited to the project.

From Reservation "Optional" onwards, the fields (Project no. and Project task) are not filled and the project consumption must be done manually.

The project line type is always set to Budget.

Note

KUMAVISION factory365 specific referencing fields are filled in the background, so that the purchase order item is considered in the project chart of accounts or also in the commitment consideration.

If one of the following fields is changed in the project plan line, the system tries to transfer the change to the purchase line as well:

- Description
- Description 2
- Type
- No.
- Work type
- Variants code
- Quantity
- Unit code
- Cost price
- UK price (MW)
- Line discount %
- Planned delivery date
- Storage location
- Stockyard
- Currency code

Note

Please note that the new currency code must match the currency code of the purchase document, if not, an error message will appear.

Planning proposal

Alternatively, you can generate the purchase requisition/purchase order conventionally via the planning proposal. To do this, select the "Planning proposal" function via the respective project plan line.

Project manufacturing

As for project purchasing, plant engineering offers the possibility to trigger the manufacturing or assembly processes directly from the project plan lines. The following options are available for this purpose:

Planning proposal

Using the "Planning proposal" function, you have the option of generating a production order via the planning proposal.

The production document number is displayed in the "Reserved by" field. By clicking on the number you can open and view the document.

Assembly order

Microsoft Dynamics Business Central™ enables an assembly order for an assembly item to be generated from a sales order via the so-called "order assembly". In the course of the sales delivery, the corresponding assembly order is posted in the background.

This functionality has been transferred to plant engineering. This means that you can enter the assembly item directly in a project plan line and generate the assembly order accordingly via the fields "Quantity for order assembly" and "Quantity for order assembly (basis)". The document number of the generated assembly order can be seen in the "Reserved by" field and the document can be called up directly from this point.

If a sales order with the corresponding item already exists in the system, it can be viewed via the fields "Sales document type = order" and "Sales document no. ".

Otherwise, they can be created from the project card via the "Tasks" > "Line" > "Documents" > "Create sales order..." info tab.

As soon as the sales line of the related assembly item is delivered via the order, the assembly order is posted.

Please refer to the [Microsoft Dynamics Business Central™ Helpsite (F1)](#) for the maintenance and handling of assembly items.

Project accounting

The sales document forms the commercial basis vis-à-vis the customer. From the project tasks, the sales calculation can be transferred into a quotation and / or order.

General behavior Project type

In the project type, you can set up an order type for the creation of sales documents, if required. This will be used when creating the documents.

Status

When creating documents, it should be noted that this is only possible from the project tasks / project plan lines if the project has the required status:

1. Quotation can be created only with project status "Quotation" as well as "Order".
2. Order as well as complaint can be created only with project status "Order
3. An offer can only be converted into an order if the project status is "Order".
4. Only project plan lines with the Billing item "Yes" flag (line type "Budget and Billing" as well as "Billing") can be transferred to a sales document.

Document quantity

The documents can be created from the project plan lines as well as from the project tasks. The system uses the field "Quantity to be transferred to invoice" to determine the quantity of documents (offer, order, invoice, credit note and complaint).

Address data

The sales header takes over the address data from the project header. This means the sales to information of the project is transferred to the sales to information of the offer or order the same with the invoice to data. The delivery address is derived from the sales to address.

Position numbering

The item numbering in the sales documents depends on the creation of the plan lines as well as on the task breakdown.

Task planning

If you have used the task planning, the position number is filled with the planning project task.

Use of the project outline

The position numbering is based on the project task. The from line has the project task as item no., the plan line supplemented by the extension of the next level of the project outline.

Consecutive numbering

If there is no project structure, the item number is determined on the basis of the project task no. '.' and the consecutive number. If the maximum length of 20 characters is exceeded, the project task will be shortened so that the sequential number can be added up to the maximum value of 99. When the consecutive number reaches 100, an error message appears.

Order type

The order type represents whether the order is the initial order or a follow-up order. If, when creating a new sales document, it is determined that a document already exists, the system switches the order type to follow-up order.

Updating the vouchers

The project is the leading bracket in plant engineering and thus allows updating sales documents from within the project.

An update from the sales documents and thus an indirect change of the project plan by the order department is not possible. However, a maintenance of order specific data such as the assignment of the article tracking is allowed.

The project plan is updated by posting results, which are made by the system in the background.

Posting result depending on the line type

Please note that only lines with the line type "Billable" and "Budget and Billable" will be included in the sales document.

Billable lines do not create any items in case of deliveries, in case of billing they create a project item with the item type "Sales".

Budgetable and billable lines also generate project items with the item type "Consumption" for deliveries.

Function support

Below you will find the functional support for VK documents generated from a plant engineering project in tabular form:

Function call via	Function	Support
Manage rows	Attribute search	Disabled
Lines Article availability according to	Event	Active
Lines Article availability according to	Period	Active
Lines Article availability according to	Variant	Active
Lines Article availability according to	Storage location	Active
Lines Article availability according to	BOM level	Active
Rows\Line\Related information	Reservation item	Reference to project plan line
Rows\Line\Related information	Item tracking lines	Reference to project plan line
Rows\Line\Related information	Select replacement item	Disabled
Rows\Line\Related information	Dimensions	Reference to project plan line
Rows\Line\Related information	Comments	Active
Rows\Line\Related information	Article Allocation of additions/ deductions	Disabled
Rows\Line\Related information	Delivery date commitments	Reference to project plan line
Lines\Row\Linked information\Order assembly	Program production lines	Disabled
Lines\Row\Linked information\Order assembly	Calculate multilevel price	Disabled
Lines\Row\Linked information\Order assembly	Calculate multilevel costs	Disabled
Rows\Line\Related information	Document line tracking	Active
Line\Line	Calculation tracking lines	Disabled
Rows\Line\Related information	Incoming orders	Active
Lines\Row\Linked information\Document texts	Pretext	Active
Lines\Row\Linked information\Document texts	Post text	Active

Function call via	Function	Support
ROW FEATURES	Get price	Disabled
ROW FEATURES	Retrieve line discount	Disabled
ROW FEATURES	Unfold parts list	Disabled
ROW FEATURES	Insert text modules	Active
ROW FEATURES	Reserve	Reference to project plan line
ROW FEATURES	Demand creator	Reference to project plan line
ROW FEATURES	Select catalog item	Disabled
ROW FEATURES	Calculate manufacturing cost estimate	Disabled
Line order direct delivery	Order	Disabled
Line order special order	Order	Disabled

Offer for sale

You can create a sales quotation directly from the project via the project plan lines. The function calls can be found on the one hand on the project map via the "Tasks" info tab and on the other hand via the project plan lines.

If the document creation is triggered from the project plan line, the system tries to transfer all selected project plan lines to the sales quotation.

When creating from the project tasks, all the billable lines of the tasks are transferred to the sales document.

If you want to create a sales quotation for all lines, the "Tasks" info tab can be used to call up the quotation. By means of the row selection you can control which task rows are to be considered.

> Note

Please note that only project tasks of line type="Budget and Billable" or "Billable" can be transferred in a UK document

Sales documents are created at the project customers. For this purpose, the information stored in the project is used. Thus, sales to customer, invoice to customer, the delivery address and the payment terms of the project are used to create the sales documents.

After commissioning, the sales quotation can be converted into an order in the system as usual using the "Create order" function.

Sell order

If the customer has already ordered the project, you can also create a sales order directly from the project via the project plan lines. The function calls can be found on the one hand on the project map via the "Tasks" info tab and on the other hand via the project plan lines.

If you want to create the sales order over all lines, the call via the "Tasks" info tab is suitable at this point. By means of the row selection you can control which task rows are to be considered.

Sales documents are created at the project customers. For this purpose, the information stored in the project is used. Thus, sales to customer, invoice to customer, the delivery address and the payment terms of the project are used to create the sales documents.

The order processing corresponds to the standard order processing.

Delivery

Maintain the quantity to be delivered in the "Quantity to be delivered" field. In case of an activated item tracking please maintain the concerned serial no. or batch no. via the item tracking. Item tracking maintenance from the order is the same as item tracking maintenance from the project plan lines.

Invoice

Maintain the quantity to be invoiced in the "Quantity to invoice" field. Please note that if item tracking is enabled, no item tracking can be specified for the billing case.

Dimension expansion

For easy evaluation of the projects, the creation as well as assignment of dimensions has been optimized.

Dimension specification by the activity type

Dimension specifications can be assigned to the activity type, so that when the activity type is selected in the project task, the dimension is assigned to the task.

Project type

In the project setup you can define that for reporting purposes a dimension Project type is maintained and assigned to the system in parallel to Project type.

Project Chart of Accounts

For effective project controlling, all project movements can be assigned and evaluated via a separate chart of accounts.

Down payment accounting

Within financial accounting, KUMAVISION's "Down Payment Accounting" module enables the simple planning, creation and management of down payment invoices. The add-on module is fully integrated into the standard processes of accounts receivable and accounts payable, such as dunning and payment transactions, and can likewise be used for plant engineering in KUMAVISION factory365.

Note

Please note that the "Down payment accounting" module is an add-on module that requires additional licensing. If you do not have this license integrated in your solution, the following functionality from this section will not be available to you.

The following adjustments were made for this purpose:

Down payment plan

The following fields have been added to the down payment plan in KUMAVISION factory365:

Field	Description
Project task no.	Contains the project task number you assigned.
Maintenance	is possible only for projects.
Milestone	Define herewith that when completing a milestone, the defined down payment invoice is generated by the system in the background. The FiBu department then only has to post and send this.

You can access the down payment plan for projects as well as project tasks via Down payment plan in the project card.

By maintaining the project task, you specify that you want to set the down payment schedule at the project task level.

Note

Please note that if you select a project task defined as a milestone, the system will also activate the milestone billing functionality (the Milestone field defined with a check mark). A combination of the source types Project as well as Project task is not allowed.

Down payment plan by milestone

If you have assigned a milestone for invoice creation in the down payment plan, the down payment invoice is created when the status of the milestone changes to completed.

For more information, see "Down payment accounting".

Forecast & Commitment

The goal of a project forecast is to determine a preview of the expected costs at the end of the project (Estimate at Completion EAC) as well as the currently achieved project value (Earned Value EV) on the basis of the current project planning, the costs already incurred and the assessment of the project manager.

You can forecast the following areas in KUMAVISION factory365:

- Project
- Project Task,
- Project planning line
- Project task account

In the following, the fields on the "Forecast & Commitments" info tab are first explained in more detail:

Field	Description
Planned cost price (MW)	Indicates the planned cost price (MW) for the project. **Forecast on You can enter the forecast at the following level:** **Empty:** No forecasting **Project:** In addition, in the "Forecast (MW)" field on the "Forecast & Commitment Amounts" info tab, specify the total costs you currently expect for the overall project. **Project Task:** On the corresponding task line, in the "Forecast (MW)" field, you can see the total costs that you are currently calculating for the project task. **Project planning line:** On the corresponding project plan line, in the "Forecast (MW)" field, you can see the total costs that you are currently calculating for the project plan line. **Project task by account:** On the project plan line aggregated by project account (Project task - Edit - Project plan line aggregated by project account) you can see in the "Forecast (MW)" field the total costs you are currently calculating for the account. **Note:** If you change the "Forecast to" setting, any existing forecast items will be disabled. **Note:** Please note that the field "Forecast Maintainable" must be activated for the maintenance of the field "Forecast (MW)".
Forecast Maintainable	Check the box to maintain the "Forecast (MW)".
Actual progress %	The solution enables you to define an objective progress definition by the project manager or consultant on the levels project - project task - project plan lines in addition to the calculated progress definitions. The definition is made in the Actual progress % or Forecast (MW) field. The Actual progress date field is also always defined with the current date.

Field	Description
	If you set the forecast to "Project", use this field to specify the total costs you currently expect for the entire project.
	For the calculation of the forecast (MW), the system determines it as follows:
Forecast (MW)	(Consumption (cost price) Time commitment Amount (MW) Purchase commitments Amount (MW) Stock commitment Amount (MW) Production commitments Amount (MW)) Actual progress % Forecast (MW)
Actual progress date	Specifies the date of actual progress for the project.
Stock commitment Amount (MW)	Indicates the amount of stock allocated/reserved for the project.
Purchase commitments Amount (MW)	Specifies the amount of the captured order lines for the project.
Time commitment Amount (MW)	Specifies the amount of recorded working hours for the project.
Production commitment (MW)	Indicates the amount of production items recorded for the project.
Cost price (MW)	Specifies the cost price of the project in client currency.
Last booking day	Specifies the last booking day for the project.
Planned costs for production order (MW)	Indicates the amount of production orders assigned/reserved for a project.
Capacity costs (MW)	Specifies the capacity items for the project.
Consumption costs (MW)	Indicates the consumption costs for the project.
Actual messages (MW)	Specifies the value of the actual messages for the project.

When you change the "Forecast MW", the Forecast Argumentation window always opens. In the Forecast Argumentation window you can define or influence the creation of the plan lines. If you exit this window by clicking Cancel, your entry will be discarded. To save the change, you must have maintained the "Argumentation" field.

Note

Please note, a subsequent deletion of the Forecast Argumentation is only possible in reverse chronological order (the last record then the second to last etc.).

Field	Description
New value	Enter the new total value for the position here. In this field, the value from the forecast (MW) is transferred when creating from the project task as well as project plan line. The system also determines the "Additional Cost Amount (MW)" value from this. The "Additional cost amount (MW)" value is also transferred to the Additional sales amount (MW) field.
Additional purchase price (MW)	In this field, the system displays the budget change in absolute terms in client currency.
Argumentation	Here you can justify why the task was budgeted again.
Order type	Use the Order Type field to specify which type of budget adjustment you currently want to make. **You can make the following selections in the option field:** Option value - Description '' - Empty, No definition Initial commissioning - First commissioning, planning Follow-up order - Budget change, but with sales increase Deviation - Budget change, without sales adjustment. The Additional sales amount (MW) field is not editable. **Please note** that you can already make a global setup in the project setup, so this selection is hidden.
Project Contract Item No.	If the point was created as a project plan line, this field refers to the generated plan line.
Additional sales amount (MW)	In this field, maintain the extent to which the budget change is also converted as an increase. The field is initialized by the additional cost amount (MW) for the order types initial order and follow-up order.

Establishment

For the later forecast creation within a project, some settings have to be made in advance. In the following, the facilities for the possible forecast levels are explained in more detail:

Project

Forcasting at the project level requires the following fields to be set up in the "Projects setup":

Field	Description
Art Forecasting	Specify here whether and if so via which type (and no.) you want to transfer the determined budget variance to the project. **No budgetingThe** defined forecast has no deviation on the plan lines **ResourceThe** defined forecast is created with a project plan line of the type Resource. **ArticleThe** defined forecast is created with a project plan line of the type Article. **G/L accountThe** defined forecast is created with a project plan line of the type G/L account. **Project accountThe** defined forecast is created with a project plan line of type "Rework".
No. Forecasting	Specify here whether and if so via which no. you want to transfer the determined budget variance to the project.
Only deviation in the forecast	Define here whether the forecast should create pure deviation plan lines or (deactivation of the switch) these can also be set to billable.
Forecast project task no.	At this point, define on which project tasks the recorded forecast deviation should be realized. The system records a new project plan line with the variance amount in the project task when versioning the forcast. **The following applies:** - positive deviation = creation negative project plan line - negative deviation = creation of positive project plan line - neutral: No creation of a project plan line
Service type for project forecast	In case of forecasting on project, you define here with which activity type the project task for the deviation should be created.

Project Task

Forcasting at the project task level requires the following fields to be set up in the "Projects setup":

Field	Description
Art Forecasting	Specify here whether and if so via which type (and no.) you want to transfer the determined budget variance to the project. **No budgetingThe** defined forecast has no deviation on the plan lines **ResourceThe** defined forecast is created with a project plan line of the type Resource. **ArticleThe** defined forecast is created with a project plan line of the type Article. **G/L accountThe** defined forecast is created with a project plan line of the type G/L account. **Project accountThe** defined forecast is created with a project plan line of type "Rework".
No. Forecasting	Specify here whether and if so via which no. you want to transfer the determined budget variance to the project.

In addition, the following fields must be maintained in the "Activity types":

Field	Description
Art Forecast	Define here with which type of project plan line the forecast position should be created.
Forecastnr.	Define here, depending on the type of forecast, to which master record the project plan line should be linked.
Forecast work type code	In case of the type Forecast resource, define here a work type with which the forecast should be created. (Optional)

Project plan line

When forcasting to project plan line, the system uses the values directly from the respective line, therefore no further setup is required.

Project task account

Forcasting at project task account level requires the following fields to be set up in the "Projects setup" or in the

"Activity types":

Field	Description
Type Forecasting	Specify here whether and if so via which type (and no.) you want to transfer the determined budget variance to the project. **No budgetingThe** defined forecast has no deviation on the plan lines **ResourceThe** defined forecast is created with a project plan line of the type Resource. **ArticleThe** defined forecast is created with a project plan line of the type Article. **G/L accountThe** defined forecast is created with a project plan line of the type G/L account. **Project accountThe** defined forecast is created with a project plan line of type "Rework".
No. Forecasting	Specify here whether and if so via which no. you want to transfer the determined budget variance to the project.

In addition, the following fields must be maintained in the "Activity types":

Field	Description
Art Forecast	Define here with which type of project plan line the forecast position should be created.
Forecastnr.	Define here, depending on the type of forecast, to which master record the project plan line should be linked.
Forecast work type code	In case of the type Forecast resource, define here a work type with which the forecast should be created. This setup is optional.

Capture

You define the level at which you want to make the forecast on the project map on the "Forecast and Commitment Amounts" info tab in the "Forecast on" field.

Note

Please note that the "Forecast maintainable" switch must be activated for maintaining the forecast. This ensures protection against error recording.

Project

You can enter the forecast at the project level on the respective project card, on the "Forecast & Commitment Amounts" info tab in the "Actual Progress %" field.

Note

The "Actual progress %" field is automatically pre-populated with the calculated progress from the system for the first time when "Forecast on=Project" is selected.

Project Task

You can enter the forecast at the project task level on the project card on the "Tasks" info tab or in the project task card (info tab "Lines" > "Line" > "Project task card").

The fields "Actual progress %" and the field "Forecast (MW)" are available for the entry. You can thus maintain the forecast either as a percentage or with an absolute amount. The fields calculate each other.

Project plan line

You can enter the forecast at the project plan line level in the project plan line as well as in the project task cards on the "Project plan lines" info tab.

The fields "Actual progress %" and the field "Forecast (MW)" are available for the entry. You can thus maintain the forecast either as a percentage or with an absolute amount. The fields calculate each other.

Project account

You can enter the forecast on a project account of a project task in the project task map on the info tab "Project plan line aggregated by project account".

The fields "Actual progress %" and the field "Forecast (MW)" are available for the entry. You can thus maintain the forecast either as a percentage or with an absolute amount. The fields calculate each other.

Release

After maintaining your forecast for a project, you can have the deviations resulting from the forecast written to the project, depending on their settings, via the call Associated\Archive\Version Release in the project card.

Please note that the Forecast field is cumulative:

	Cost amount (MW)	Forecast (MW)	Variance item Cost amount (MW)
Initial commissioning	5000,00 €		
Forecasting 1	5000,00 €	7000,00 €	
After archiving	5000,00 €	7000,00 €	First position 2000,00 €
Forecasting 2	5000,00 €	10000,00 €	2000,00 €
After archiving	5000,00 €	10000,00 €	Other position 3000,00 €

In this section, the possibilities of project controlling are presented. It will be discussed how project results with multi-level contribution margin accounting can be presented in the Projects module with the help of the project chart of accounts. In addition, the project information that can be called up immediately is presented.

Project controlling is basically based on budgeted and actual values. The realization should correspond to the planned values. In order to be able to manage the project properly and promptly, a comprehensive evaluation of the planned values and the actual values incurred, related to the stored time periods, is immensely important. Microsoft Dynamics Business Central™ offers this evaluation.

The project items show the actual values that are charged to the project from daily work. These are usually goods or time postings. The plan values are defined via the project tasks and its project plan lines. This enables a target/actual comparison of certain cost types. On the basis of this project chart of accounts, evaluation schemas can be formed, with which, combined with correspondingly generated column layouts, specific information can be formed from the values. The procedure corresponds to the account evaluation in the financial accounting area.

Data basis and structure

The creation of the project account framework is fundamental for project controlling via Microsoft Dynamics Business Central™. This contains the most important areas (cost types and revenue types) that are important for the company for the evaluation of projects. The level of detail of the accounts can be freely selected. Thus, a very compact or also a very elaborate project chart of accounts can be the basis.

Based on this, the project items or plan values are formed. These items are combined using a project account scheme.

Project chart of accounts and project account setup

All project entries can be posted to project accounts via the project account setup, similar to the G/L items in financial accounting. This enables evaluation possibilities to an undreamt-of extent.

The project account and the project chart of accounts have already been explained in the section "Project setup", so only the project account setup will be discussed in detail here.

Project account determination is based on the combination of product posting group, project type and activity type. Each combination is assigned a consumption and sales account from the project chart of accounts.

The information is used to determine the respective project account as follows:

Field	Description
Product posting group	From the consumed or invoiced item, resource, G/L account. The product posting group is the only mandatory field in the matrix.
Project type	From the project
Service type	From the addressed project task to which the consumption or revenue was posted or planned.

With the above information can be e.g.

- the resource expenditure for project management on research projects with internal resources
- the cost of small materials for assembly on site
- the travel times of external employees on major projects
  can be determined.

Depending on what is to be evaluated later, the project chart of accounts and especially the matrix must be set up accordingly.

Project items = actual values

With each posting where a project is addressed, the system creates a project item. Project items form the basis for project settlements (expense items) and reflect the revenues of these settlements (revenue items). Project valuation is also built on the project item.

For project controlling, the project item provides all ACTUAL information from consumption and from sales.

As soon as a project booking is made, a project account is assigned to the resulting project items via the matrix mentioned above. In this way, actual consumption and actual sales can be used directly for project controlling.

Down payment plan / payment schedule

Both options behave the same. The only difference is the data source. While the payment plan is a general payment plan for projects, the down payment plan is a part of the down payment accounting module.

Project account schemeta

As soon as project plan lines and bookings are formed, projects can be evaluated. How and according to which criteria these projects are evaluated on the basis of this data is mapped in the project account schemes. The thinking and procedure of these project account schemes corresponds completely to the procedure in financial accounting with the account schemes on the basis of the G/L accounts and G/L items there.

To set up the project account schemes, call up the "Project account schemes" via the user search.

Several structures can be defined via the project account schemes, which can be used to throw different views on the project results. E.g. internal projects should be evaluated differently than customer projects. The project account scheme defines the structure of the rows. In the following the setup fields are explained in more detail:

Field	Description
Code	Specifies a meaningful abbreviation of the project account scheme.
Description	Specifies a description of the project account scheme.
Standard column layout	In the field "Standard column layout" you can define the criteria for the evaluation in the column view. The column layout stored there is always used as a basis when calling up a project account scheme. However, it is possible to assign a different column layout at any time.

Project account schemes lines

A report structure is set up in the project account scheme itself, in which the corresponding project accounts are assigned to the individual lines. Totals lines or formulas can also be entered.

The important fields are:

Field	Description
Heading no.	A logical line numbering is to be stored in the field "Rubric no.".
Description	In the "Description" you have to enter which area you want to display in this line.
Counting type	In the "Totals type" field, specify whether an account total, a grand total or a formula should be stored. When specifying the account total, the values of one or more accounts are displayed. If the Totals selection is activated, totals lines from the project chart of accounts can be taken into account. If the Formula type is selected, a formula can be defined within the project accounts scheme.
Counting up	In the "Totals" field, according to the previously defined type, project accounts, totals rows or calculation formulas can be specified.
Line type	This field can be used to define whether the line is a main line or an auxiliary line.
Hide row	This field can be used to control whether the line should be shown/hidden.
Line color	By means of the selection it can be indicated whether the line is to be printed "black" or "blue".
Boldface	The check mark can be used to specify whether the line should be printed in bold.

Project account schemes column layout

When you call the "Set up column layouts" function, the Column layout project page is opened. Among other things, the column layout TARGET - ACTUAL is stored in the database.

Field	Description
Column no.	In the "Column no. " an identification of the line is to be indicated.
Column heading	In the field "Column header" you have to enter the name of the column as it should appear in the printout.
Column type	**In the "Column type" it is possible to specify what will be done in the column:** **Formula:** Calculations are performed between the columns. **Motion:** Pure transaction data is displayed.
Item type	In the field "Item type" the respective item type (depending on the field "Column type=Movement) must be specified.
Archive source	Depending on the "Item type" field, the archive source must be specified if necessary.
Document type	The type of document is defined in the Document type field. This field depends on the item type. E.g. Item type=Purchase line can be defined as document type "Offer".
Amount type	The "Amount type" field specifies what type it is, e.g. "Cost amount".
Assignment type filter	In this field, a filter can further narrow down this line.
Comparison date formula	In the "Comparison date formula" field, you can define which comparison period is to be displayed. The entry is made in relation to the time period specified in the date filter in the report requests. Entries can be made with the known time specifications (T, TW, W, M, Q, J).
Formula	In the "Formula" field, the formula can be entered if the column type is the Formula selection.
Rounding factor	In the "Rounding factor" field, you can specify whether and if so how to round. This allows large values to be displayed clearly.
View	The "Display" field can be used to define whether the column • always, • never, • if positive • If negative is displayed.

Field	Description
Red color	The display is in red color.
Green color	The display is in green color.

Project account schemes matrix

You can call it up via the menu item "Matrix". It shows you the values resulting from the defined rows of the account scheme and the columns of the column layout.

Archive project versioning and project status

The project planning in Microsoft Dynamics Business Central™ is always supplemented and corrected, so that a comparison of different plan statuses is not possible. In the plant engineering solution, you can carry out a versioning of the project planning in order to have access to older planning statuses and to compare two planning statuses with each other.

Project version

To create a project version, execute the function "Release version" in the respective project via the menu ribbon. The current version of the complete project status has thus been archived and can be viewed via the number of the "Archived versions" field on the "General" info tab or via the menu ribbon under the "Project archive" menu item.

The archived project states contain a complete copy of the project map with the following additional information on the "Version" info tab:

field	description
Version number	Indicates the version number of the archived project state.
Archived by	Indicates who created the version.
Archived on	Gives the date when the version was created.
Archived at	Indicates the time when the version was created.
Archiving comment	If an archiving comment has been stored during archiving, it is displayed at this point.
Last current no. project item	Indicates the number of the last project item at the time the version was created.
Last Item Sequence No. No. Specifies the number of the last item at the time of version creation.	
Last value item no. Specifies the number of the last value item at the time the version was created.	
Last no. of resource items Specifies the number of the last resource item at the time the version was created.	
Last no. of capacity item - Specifies the number of the last capacity item at the time the version was created.	

Project structure version

The project structure version can be viewed via the "Project structure" menu item in the project version ribbon. This corresponds to the project structure at the time of archiving with the additional identifier of the version number.

> Note

When archiving from the project structure, the project map is also always archived.

Project version comparison

By means of the project version comparison you can compare different project statuses with each other.

Setup

To be able to use the project version comparison to the full extent, global settings must first be defined on the "Version comparison" info tab in the "Project setup". You can find more information [here](#).

Version comparison field setup

You can set up the version comparison field setup on the one hand via the "Projects setup" and on the other hand via the project version comparison mask. The difference between these two calls is that the call from the project setup is user-independent (field UserIDFilter = "empty") and the call from the project version comparison is made in relation to the user (field UserIDFilter = "UserID").

In the header of the version comparison field setup, general information is displayed first:

Field	Description
UserIDFilter	With the field "UserIDFilter" you have on the one hand the possibility to make a global setup for all users or to define specifically per user (by specifying the corresponding UserID) an individual comparison setup.
Number of Assigned Fields	This field shows you the number of fields that have currently been activated in the "Visible" field.

In the lines you can make the actual setup. The individual fields and their meaning are explained in more detail below:

Field	Description
Position	Use the position numbering to determine the positioning in the version comparison in the version detail overview.
Field No.	Indicates the number of the corresponding field.
Field Name	Gives the field name of the field.
Field label	Gives the field label of the field.
Visible	Check the box if you want the field changes to be displayed in detail in the version detail overview.
Consider in field comparison	By activating this checkbox, you control whether a comparison of the corresponding field of two versions should be considered in the version structure. If the checkbox is not activated, the line will not be visually displayed accordingly in the version structure when a change or similar is made.

Compare project versions

You can compare different project versions via the respective project card using the call of the same name located in the menu ribbon.

Note

Please note that two released project versions must exist in the system in advance for the version comparison.

The header of the project version comparison card contains the following fields:

Field	Description
Project number	Indicates the number for which a version comparison is to be made.
Calculate	The switch serves as an identifier for the calculation. By calling the version comparison, the system automatically creates a new calculation based on the two currently released versions. As soon as you change a version, the switch deactivates. By the function "Recalculate" this is activated again. (Switch is not editable for the user)
Version left	Specifies the version to be compared with another opposite version. **Note:** Please note that when the project version comparison mask is called up, the two current released versions are always preset first.

To compare the versions specified in the header, the "Recalculate" function is executed in the ribbon.

A comparison structure with colored highlighting of the lines is inserted in the main window. The color scheme is similar to the one defined in the [project setup](#) .

Leading for the comparison structure is always version left. Means, all lines of the version left are inserted into the version structure under consideration (appropriate coloring) with version right. If there are additional lines in version right, these are also inserted in corresponding representation and position.

If version left has no opposite version for comparison, only version left is inserted.

For a better orientation of the coloring, the legend located in the footer offers you.

In the version details, either the fields of the line or the comparison of the fields, if the line is included in both versions, are displayed to you. Which fields are displayed how in the version details is defined in the version comparison field setup.

System logging

The activity log items from the purchase and sales document printouts are marked with the project numbers from the header and can be seen from the project via activity log items.

When manufacturing complex articles, the situation can often arise during shipping that the manufactured article has to be disassembled and packed in a manner suitable for shipping. The plant engineering solution offers you the possibility to handle this via the "shipping units". Here, the shipping units are supported in manufacturing and logistics.

Currently 3 different scenarios can be covered by the shipping units, which are described below:

Relocation of components

An FA is set up whose components are to be transferred to a production warehouse for assembly. The components are grouped into shipping units that are easy to transport. From a released E+D order, these components can be inserted into a stock transfer order.

To do this, select the desired component lines and execute the "Transfer selected shipping units" function.

The system checks that the components to be transferred have already been consumed.

If the appropriately marked components have been consumed, then a transfer order is created that transfers the shipping units from the component storage location to the FA storage location. The "In-Transit Code" is preassigned by the "Preferred Transit Code" field in the project setup when using the plant engineering solution. Otherwise, the first storage location is pre-populated with the "Use as transit storage" identifier.

If the storage locations are subject to goods issue or goods receipt, they can be created and posted according to the standard.

During the posting process, no new item items are created in the background because the components have already been consumed. Through the postings, shipping unit items are formed. These can be used to check the status of the shipping units (opens by the lookup on a shipping unit).

After posting the receipt, the order is completed. The shipping unit can now no longer be shipped because it has already delivered the complete quantity. In addition, it can no longer be assigned to further components.

Shipping units in goods issue

If a production item is sold, the shipping units stored in the FA can also be inserted in a goods issue. For this purpose, the function "Insert shipping units" can be used in the goods issue.

If the sales line was reserved on a corresponding item line, then the shipping units from this FA will be automatically inserted. If there is no reservation, a selection of items will be opened and the user can decide which item to sell.

After selection, the shipping units belonging to the item are inserted into the goods issue.

If the FA associated with the item is not yet finished, the user must confirm that they wish to continue.

The original line remains, but the quantities are removed, since this item is automatically posted in the background after posting the shipping units. The posting of the goods issue with shipping units is now done as in the standard. After complete posting, the original item is also delivered and can be invoiced.

Shipping preparation

In the production of complex articles, the situation can often arise in shipping that the manufactured article must be disassembled and packed in a manner suitable for shipping. In connection with the plant engineering solution, it is also possible to use shipping units across FAs within a project. For this purpose, it is necessary that the production orders have a project reference, e.g. that they are generated by MRP in the project.

Project-specific shipping units can now be assigned to these production orders by setting the "Project-specific shipping unit" checkbox in the component lines. This is set for all component lines of the production order.

Now shipping units can be assigned. They are no longer FA-specific, but can be assigned in all FAs that have the corresponding project number.

The assignment can also be assigned from the "Material structure" in the project. Here, all FAs linked to the project plan lines are directly visible. If the corresponding lines are transferred to a sales order, the shipping units can be used in the goods issue. For this purpose, the function "Insert project-specific shipping units" is used in the goods issue. To do this, all lines that belong to FAs that use project-specific shipping units are selected.

The goods issue can then be posted normally. After the shipping units have been fully posted, the original lines are automatically posted in the background and the sales delivery is completed. When inserting the project-specific shipping unit, the system checks whether each FA that uses one of the shipping units is also linked to this goods issue. If this is not the case, the system terminates with an error and points out the FA.

Basic information about shipping units can be found [here](#)

Complaint and credit note

Complaint

Should the case arise that a customer complains about the delivered goods, the complaint process can be started from within the project.

To do this, select the corresponding project plan line and execute "Create sales complaint" via the menu item.

A window will open where you can make the following decisions:

Field	Description
Create new document	Specify whether you want to create a new document or attach the items to an existing claim.
Archive existing document	If the document is to be attached to an existing document, it is recommended to activate the "Archive existing document" button. The existing document is archived again beforehand when activated.
Document date	Specify which document date the complaint should receive.
Attach to document	If you want to add to an existing complaint (Create new document = No), you can specify the document to be updated here. Determine to which document you want to assign the selected lines. A list of possible documents is displayed for this purpose.
Lines outline	Specify here whether a row outline should be created when a new document is created. When adding documents, you will not be offered the choice and the outline type of the existing document will be kept.

Confirm your selection with "Ok".

Credit

Detached from a complaint process, you also have the option to create a value credit note via a project plan line.

To do this, select the corresponding project plan line and call up the menu item "Create sales credit memo".

A window will open where you can make the following decisions:

Field	Description
Create new credit note	Specify whether you want to create a new document or attach the items to an existing credit note.
Posting date	Specify which posting date should receive the credit note.
Attach to credit memo no.	If you want to add to an existing credit note (Create new credit note = No), you can specify the document to be updated here. Determine to which document you want to assign the selected lines. A list of possible documents is displayed for this purpose.

Work in Progress Rating

Work in Progress (WIP) evaluation in plant construction

general

The following sections describe the Work in Progress (WIP) Valuation module. The determination of the valuation as well as the execution and the posting process will be explained in short form. Finally, archiving and evaluation in project valuation are addressed.

WIP Valuation can determine project values based on planned project budget items and posted project items. Project accounts are used to assign these items to specific line items and are stored as information on the line items. The project accounts are determined via a setup based on project type, activity type and product posting group separately for sales and consumption and assigned to the items.

Via so-called project account schemes with variable column layouts, the values on these project accounts can be evaluated for each project. The flexible structure of the schema makes it possible to display actual and planned values for the different project accounts. Using formulas and if-then conditions, the values can additionally be linked or compared so that the relevant amounts for the WIP evaluation can be displayed. Specially marked rows and columns determine which values are subsequently transferred as a posting to financial accounting.

setup

This section gives an overview of the necessary setups. It explains which master data must be set up for project evaluation in general so that projects can be evaluated automatically. The following master data must be set up in order to use project evaluation:

- WIP Valuation Setup
- Fibu integration codes
- Project chart of accounts
- Project account scheme for WIP valuation
- Column layout project account scheme for WIP valuation

In order to perform the valuation runs, some basic specifications and setups must be made in advance. This section describes which setups need to be made.

wip evaluation setup

In the WIP Valuation Setup, general parameters for the project valuation are defined. The posting of the valuation figures is done from the valuation proposal using a recurring Fibu Buch. sheet.

field	description
Fibu Book	Here the book. sheet template and name for the posting of the project valuation can be stored. The ledger sheet must be a recurring ledger sheet.
Book Sheet Name	Here you can define the accounting sheet template and name for posting the project evaluation. The ledger sheet must be a recurring ledger sheet.
Prefix Document no.	When posting the valuation proposal to the accounting system, the document number is composed of this prefix and *MM/YYYY* of the valuation date.
Posting description	Enter here a posting description for the posting to the financial accounting. The description will be completed with *MonthName/YYYY* of the valuation date when posting the valuation proposal to the Fibu.
Prefix Reversal	When posting a new valuation proposal to the general ledger, the existing posting will first be reversed. The document number for the reversal is composed of this prefix and *MM/YYYY* of the valuation date.
Project evaluation approved as of	Here you can specify the permitted posting period for project valuation postings.
Project valuation allowed until	The allowed booking period for project valuation bookings can be specified here.
Repetition rate	Since a recurring ledger sheet is used for posting the valuation proposal to the financial accounting, you must specify here which recurrence applies. e.g. +1T+1M-1T

wip fibu integration code

WIP Fibu integration codes are assigned in the project account schemes for the lines whose amount is to be posted to the financial accounting. In the WIP Fibu integration codes the debit and credit accounts for the capitalization are defined.

For the different valuation items *(e.g. expenses, down payments)* and methods *(e.g. Local GAAP, IFRS)* separate WIP Fibu integration codes must be set up for each posting record. The codes must be assigned to the respective lines in the [project chart of accounts](#).

Field	Description
Code	Unique identifier of the Fibu integration code
Description	Description of the accounting integration code
Debit account activation	The debit amount of the relevant project account scheme line is posted to this account when the activation is posted
Credit account Activation	The credit amount of the relevant project account scheme line is posted to this account when the activation is posted.

project chart of accounts

A project chart of accounts must be set up so that the corresponding project values can be evaluated using a project chart of accounts. For more information on the project account scheme, see [here](#).

project chart of accounts

This section explains the specifics of the project account schema as it relates to WIP assessment. Basic information on setting up project account schemas and the associated column layouts can be found [here](#).

A project account scheme must be set up for each of the valuations to be determined, e.g., one scheme each for IFRS and Local GAAP. The fields in the project account scheme that are additionally relevant for the WIP valuation must be filled as follows:

Field	Description
Count	A new option If can be selected here. This option can be used to compare row values using arguments and conditions.
Argument 1 Condition Argument 2 Argument 3 Argument 4	These fields must be filled if the summation type, If is used. The fields must be filled according to the following logic: If Argument 1 Condition Argument 2, then Argument 3 other Argument 4 **Note** In the arguments, only rubric no. and arithmetic operators or numbers may be contained in the arguments. Options for condition: - Empty - < - > - = - <= - >= For all other types of summation, the fields remain empty.
Fibu Integration Code	A WIP Fibu Integration Code must be specified here if a posting to Financial Accounting is to be generated for this row. For this entry, the accounts stored in the WIP Fibu integration code will be used. **Note** Only amounts from lines with the "Line value types" Valuation, Valuation correction and Received down payments can be entered into the Fibu
Line Value Type	This field specifies the line value heading in the WIP valuation proposal. Options are: - Expenses - Down Payment Invoices - Revenues - Valuation - Down Payments Received - Valuation Correction Lines with the "Valuation Correction" option usually do not show a calculation, the line can be used later in the valuation proposal for manual correction.
Calculation in column	As values are displayed in different columns in the column layout, it can be defined here which value is relevant in which row and column. For example, planned revenues are to be displayed in one row and actual revenues in another, whereby it can only be defined in the columns whether the values are planned or actual values.

project account scheme column layout

In the column layout assigned to the project account scheme, exactly one column must be marked as the relevant column for determining and displaying the valuation amounts.

field	description
	Set a check mark here in the column that is relevant for the project valuation.
Column WIP	**Note** Since planned and actual values - as well as revenues and costs - can only be displayed in different columns, a totals column with the column type "Formula" is usually used to combine these values and is also used as the column for the WIP.

example of a wip valuation scheme

The following example is intended to show the structure of a WIP valuation scheme and to illustrate the options for calculating and displaying the valuation.

example of a project account scheme

Rubric No.	Description	Counting up value	Counting up	Calculation in column	Line value type	Argum 1
R0010	Plan values	Project accounts				
R0020	Revenue	Project accounts	No. of relevant project accounts	SP040		
R0030	Expenses	Project accounts	No. of relevant project accounts	SP030		
R0040	Planned expenditure in %	Formula	R0030/R0020	SP050		
		Project accounts				
R0050	Actual values	Project accounts				
R0060	Down payment invoices	Project accounts	No. of relevant project accounts		Down payment invoice	
R0070	Revenues	Project accounts	No. of relevant project accounts	SP020	Revenues	
R0080	Sum of services	Formula	R0060..R0070	SP050		
		Project accounts				
R0090	Construction	Project accounts	No. of relevant project accounts	SP010		
R0100	Production	Project accounts	No. of relevant project accounts			

Rubric No.	Description	Counting up value	Counting up	Calculation in column	Line value type	Argum 1
R0110	External services project accounts	No. of relevant project accounts	SP010			
R0120	Travel expenses	Project accounts	No. of relevant project accounts	SP010		
R0130	Other Expenses	Project Accounts	No. of Relevant Project Accounts			
R0140	Total Expenses	Formula	R0090..R0130	SP050	Expenses	
R0150	Effort adjusted	Formula	R0140+ (R0040*R0070)	SP050		
R0170	HZ: Valuation correction	Project accounts		Valuation correction		
R0180	HZ: down payments received	Project accounts	No. of relevant project accounts		DOWN PAYMENT RECEIVED	

example of the corresponding column layout

column no.	column header	column type	item type	amount type	amount type	formula	colu... WIP
SP010	Actual: Expense	Movement	Project item	1	Asset amount (MW)		No
SP020	Actual: Revenue	Movement	Project item	2	Amount sold (MW)		No
SP030	Plan: Expense	Movement	Project plan line	1	Cost amount (MW)		No
SP040	Plan: Revenue	Movement	Project plan line	2	Sales amount (MW)	No	
SP050	Sum column	Formula			SP010..SP040	Yes	

posting procedure project valuation

In this section, the posting flow of project valuation is explained in more detail.

The following points are addressed:

- What is the WIP valuation proposal.
- How the valuation lines are calculated
- Posting the WIP valuation proposal us effects on financial accounting.

fill valuation proposal

The actual valuation is done in the WIP valuation proposal. The function "*Calculate valuation lines* " is used to fill the valuation proposal.

Folgende Optionen müssen hier gesetzt werden:

Feld	Beschreibung
Bewertungsperiode	Hier muss das Startdatum der relevanten Buchhaltungsperiode ausgewählt werden. Für die Buchung selbst wird anschließend der Monatsletzte der Periode verwendet.
Bewertungsschema	Wählen Sie hier den Namen des Projektkontenschemas aus, mit dem Sie die Bewertung durchführen möchten. Vor der Berechnung der Werte wird geprüft, ob alle notwendigen Einstellungen im Projektkontenschema vorhanden sind. Dies sind: • Für jede „Zeilenwert Art" muss eine Zeile im Schema vorhanden sein. • Im Spaltenlayout muss eine Spalte als „Spalte WIP" definiert sein.

Zusätzlich können die zu berücksichtigenden Projekte ausgewählt werden. So haben Sie die Möglichkeit bestimmte Projekte / Projektgruppen mit einem anderen Projektkontenschema zu bewerten. Sollten Sie Projekte parallel nach unterschiedlichen Bewertungsgrundsätzen bewerten (z.B. IFRS / Local GAAP), so muss die Berechnung je Projektkontenschema erneut aufgerufen werden.

Es werden nur Projekte berücksichtigt deren Enddatum noch nicht gefüllt ist bzw. deren Enddatum nach dem Bewertungsdatum liegt.

Bei jedem Aufruf der Funktion wird pro Projekt eine Zeile im WIP Bewertungsvorschlag erzeugt.

wip valuation proposal

The fields in the "WIP valuation proposal" are filled as follows when calculating:

field	description
OriginNo.	This field indicates the project to which this evaluation line applies.
Description	This field displays the project description.
Valuation Date	This is the date (last day of the month of the valuation period) that the entry will be made in the financial accounting system.
Total Expenses	Amount determined by the calculation of the project chart of accounts for this project in the rows marked as "Expenses".
Total of down payment invoices	Amount determined by the calculation of the project chart of accounts for this project in the rows marked as "Down payment invoice".
Total of partial and final invoices	Amount determined by the calculation of the project chart of accounts for this project in the rows marked as "Revenues".
Valuation	Amount determined by the calculation of the project chart of accounts for this project in the rows marked as "Valuation".
Valuation correction	A manual value for the valuation correction can be entered in this field. The value must be positive and must not exceed the valuation amount.
Valuation Adjustment Integration Code	The value from the Valuation Adjustment field will be posted to the accounts of this Valuation Integration Code.
Adjusted valuation	This field is calculated as follows: - Valuation - Valuation correction
Prepayments Received	Amount determined by calculating the project chart of accounts for this project in the rows marked as "Prepayments Received".
passive accrual received down payments	This field is calculated as follows: - if "received down payments" is higher than "adjusted valuation": "received down payments" - "adjusted valuation" - _otherwise this value is 0
Fibu integration code passive accrual received down payments	On the accounts of this Fibu integration code the value from the field "passive accrual received down payments" is posted to the Fibu.

posting a valuation proposal

The following steps are performed when posting the valuation proposal:

- First, the system checks whether a posted valuation already exists for the project with this valuation date and project chart of accounts used to calculate the line. Already posted valuations are archived in the "WIP Valuation Archive" with a sequential number.
- If a valuation has already been posted under these premises, it is first reversed.
- Subsequently, the valuation proposal is posted and stored in the archive with the next consecutive number.
- Optionally, a printout of the valuation can be made.

The posting of the valuation proposal takes place via a recurring book. sheet with the repetition type "Reverse variable". This means that the valuation is booked in on the valuation date and booked out again on the following day. Thus, with each new valuation in the following month, the accumulated value is always posted. With the previous month's values already booked out on the first of the month, the development of the amounts can thus be tracked.

A possible reversal cancels both the postings on the valuation date and the write-off postings on the following day.

Posted are the values from the following columns with the accounts of the respective WIP Fibu integration code of the assigned project chart of accounts row:

- Valuation Adjustment
- Adjusted valuation
- Liabilities accrual received down payments

The document no. and the description for the posting will be set according to these specifications:

- Document no.: The respective prefix.
- Description: The posting description from the "WIP Valuation Setup" is completed with month name/ YYYY of the valuation date.

A new ledger is created with the corresponding G/L items and a new entry is created in the "WIP Valuation Archive". In the archive all information from the "WIP Valuation Proposal" is available, in addition a sequential number is assigned per combination of project no./valuation date/project account scheme. The valuation with the highest sequential number indicates which are the currently posted values in the financial accounting.

print valuation proposal

The WIP Valuation module includes a report for printing and proving the valuation proposal.

Lines generated in the "WIP Valuation Proposal" can be printed in a report before or with posting. The values generated in the valuation proposal are listed in tabular form. In addition, a total is calculated for all valuation lines.

Design And Development

General

Design and Development extends the production processing of Microsoft Dynamics Business Central™ in numerous places. The centerpiece is the new "article version" dataset with which the product life cycle of an article can be mapped. In addition, variant-specific production BOMs or routings can also be defined by overriding the production BOM or routing.

The following sections describe how to use and manage the "Design and Development" module of KUMAVISION factory365.

Establishment

Design & development facility

The "Design & Development Setup" is the central place for the setup of the "Design & Development" module. Call up the "Design & development setup" via the user search and make the necessary settings with the help of the tables below.

Inforegister General

Field	Comment
Variant required	This defines whether in the design & development with article variants must be posted. (If the required article master has variants).
Usable status article version	With this selection you can control which status article versions may be used in the design & development processes. The following selections are available: **All:** The article version can be used independent of the status. **Certified only:** Only certified item versions can be used. Display FA in reservation structure Depending on the selection in this field, the E+D mask or the standard mask is called in the reservation structure in the FA. The following selections are available: **Standard FA:** As soon as the "Display document" function is used in the reservation structure, the production order is called up in the standard mask. **E+D Order:** As soon as the "Display document" function is used in the reservation structure, the production order is called up in the E+D order mask.
Barcode separator	The separator for the barcode in report 5500 - "FA component and routing" is hereby defined. **Example:** **Barcode separator = $** **Barcode in the "FA Component and Routing" report would be for released FA 101031, item 1000, operation 010:** **101031\(1000\)010**
Stepwise E+D Position no.	This facility is required for the determination of a unique E+D position. With this field you can define the step-by-step positioning in the E+D order lines of the "E+D position" field.
Position item separator	This setup is required for the determination of a unique E+D position. With this field you can define the separator for the items in the E+D order lines of the "E+D position" field.
Position phantom separator	This setup is required for the determination of a unique E+D position. With this field you can define the separator for the phantom BOMs in the E+D order lines of the "E+D position" field.

Field	Comment
Position operation separator	This setup is required for the determination of a unique E+D position. With this field you can define the separator for the operations in the E+D order lines of the "E+D position" field.
Position common part summary	This facility is required for the determination of a unique E+D position. This field specifies the character for the common parts grouping. If an article is used in several assemblies of a production order, the system combines them and generates a "collective FA line" for this. Such production order lines are marked in the E+D position with the defined character as suffix. **Important:** The system only groups together non-variable parts if no item no. is maintained in the component.
Position Additional costs	Separator This facility is required for the determination of a unique E+D position. This field specifies the separator for the additional costs (only with the "Valuation & calculation" module) in the E+D order lines of the "E+D item" field.

Information register PDM

The PDM setup fields are not explained here. These will be explained to you in more detail in the "Computer-Aided Design (CAD) Transfer" sections.

Field	Comment
Automatically transfer attributes to versions	Define here how the system should behave when assigning new attributes to an article: **Not:** Entering new attributes at the article has no effect on the article version. **New only:** Newly entered article attributes are transferred to article versions with the status "New". **to Certified:** Newly entered article attributes are transferred to article versions with the status "New" as well as "Certified". **to Certified and reset to New:** Newly entered article attributes are transferred to article versions with the status "New" and "Certified". If the status of the article version is Certified, it is reset to "New". **All:** Newly entered article attributes are always transferred to the article versions.
Item attribute functional structure resolution	If the same attribute is stored at the FA component, for the functional structure explosion the E+D order lines are categorized according to the article attribute values based on the specified article attribute.
Item attribute functional structure resolution Name	Specifies the name of the assigned value in the Item Attribute Functional Structure Resolution field.
Article attribute logistic structure resolution	If the same attribute is stored at the FA component, the E+D order lines are categorized according to the article attribute values for the logistical structure explosion based on the specified article attribute.
Item attribute logistic structure resolution Name	Specifies the name of the assigned value in the "Item attribute logistic structure resolution" field.

Inforegister execution

Field	Comment
Precision duration	Presets the field of the same name in the E+D order with the option: "millisecond", "second", "minute", "hour" or "day".
Calculate times incl. secondary operations	With the activation of the switch, the secondary operations are taken into account for the calculation of times and completed quantities ("Planned time (ms)", "Consumed time (ms)", "Remaining time (ms)", "Planned time", "Consumed time", "Remaining time", "Consumed time %", "Completed quantity" and "Completed quantity (base)") in the E+D order lines.
Calculate routing in change message through comparison	For the "Reschedule" function in the production order, the planning direction is preset with Forward or Backward.
Shipping units for logistic structure resolution	Specify here whether you want to have the logistic view or the shipping units displayed via an attribute assignment. For more information on this topic, see "Shipping units" and "Item attributes". **Note:** If you activate the switch, the value in the "Item attribute logistic structure resolution" field will be cleared.
Observance of the production type in the D+D order	Use this field to define how the system should behave when calculating production orders with maintained E+D project no. in relation to multi-level production: **Standard** The system checks whether the production order line is set to production type "make-to-order" and procurement method "production order". **Always contract manufacturing** In principle, make-to-order production is implemented regardless of the parameterization to articles or inventory data. **Contract manufacturing according to master data** The system checks whether the component is set to production type "make-to-order" and procurement method "production order". This setting is the default value. In the production order, the production type can again be adapted to the specific order using the function "E+D Change production type".

Field	Comment
Procurement type for quantity increase	At this point, define how the system is to behave in the event of quantity changes in the FA: **Enterprise Resource Planning** The system behaves as in the standard **Project management and enterprise resource planning** If component quantities in a production order are increased after they were originally procured, this setting does not include the requirement in the planning worksheet, but it is handled as follows during the FA update: The quantity deviation is implemented by duplicating the FA component with the deviating quantity in the system. In the background, a reserved purchase order is created directly in the purchasing case and a new FA line is created for the duplicated component in the production case.
Autom. update after E+D planning	If the switch is active, the E+D order lines are automatically updated when the E+D order planning has been carried out.
Check status (finished parts list/ work plan)	Define here whether the status of the routing and production BOM: **Always** Always be checked **If E+D project no. empty** Only if the field "E+D project no. " is empty should be checked.
Find production data if empty in article version	**Article:** If the article version does not have a finished parts list and routing and the "Article" option is set in this field, the production data (finished parts list, routing) of the article will be used. **Article version:** If no production data exists at the article version and the option "Article version" is stored in this field, the production data of the article will be ignored. Calculate available for stock transfer in E+D planning Define here whether the quantity should be calculated to other storage locations for information during (E+D) order planning. If the switch is active here, the information is not displayed. The field is especially useful for a large number of storage locations, as it can optimize the runtime. Planning - accept event message The "Accept event message" identifier is preset to "Yes" in the E+D planning if the Automatic option is selected. Otherwise, the "No" identifier is preset for Manual.

Information register monitoring

Field	Comment
Max. Finished parts list level	Specifies the maximum finished parts list levels for the plausibility check for design monitoring. If the system determines a higher vertical range of manufacture, the system terminates when the level is exceeded and shows this as a structural error in the result.

E+D Cockpit

From the overview of released E+D orders the fields exist:

Field	Comment
Material consumption traffic light	Visual representation of material consumption.
% Material consumption	Percentage representation of material consumption.
Capacity consumption traffic light	Visual representation of capacity consumption.
% Capacity consumption	Percentage representation of capacity consumption.
Feedback traffic light	Visual representation of the feedback.
% Feedback	Percentage representation of the feedback.
Foreign. Fert. Orders traffic light	Visual representation of external work orders that already exist.
% Third party fert. Orders	Percentage representation of external work orders that already exist.
Foreign. Feedback traffic light	Visual representation of the feedback from the external work.
% Foreign. Feedback	Percentage representation of feedback from outside work.

The traffic light symbols are to be set up via Company data > Info tab "Documents" in the fields "Red traffic light", "Yellow traffic light" and "Green traffic light".

With the function "Update cockpit" in the "Released E+D order overview" the above mentioned fields are updated.

Article version types

The article version types are used for the later classification of the article versions. To define them first, call up the "Article version types" via the user search.

Via "New" in the ribbon you can define a new article version type specifying the "Code" and the "Description".

Article versions

By means of the "Article version" you have the possibility to map the product life cycle of an article. The different versions can also be used to store different production bills of materials and routings. By assigning an "article version type", the article versions can be classified so that they can be easily distinguished from each other.

To define a new article version, call up the "Article versions" via the user search. Via "New" in the menu ribbon you can define a new article version with the help of the table below:

Field	Comment
Item no.	In this field, specify the item no. for which you want to create a version.
Variant code	If the selected article is variant-managed, you can define the variant of the article for which you want to create a new version at this point.
Version code	Specify an "abbreviation" for the article version you want to create.
Description	Specify a description for the article version you want to create.
Article version type	By assigning an article version type, you have the possibility to classify the article version.
Material	At this point you can assign a material to the article version.
Status	Indicates the status of the article version. Three statuses are assigned at this point: **New:** The article version is currently under construction. **Certified:** The article version has a released status. No changes can be made in this status. **Expired:** The article version is no longer valid. You can change the status via the menu ribbon by calling "New", "Certified" and "Expired".
Version Start date	Specifies the start date of a version.
Drawing no.	Specify a drawing number (if available) for the version.
Drawing format	Specify a drawing format (if any) for the version.
Subscription index	Specify a drawing index (if any) for the version.
Manufacturer code	Specify a manufacturer code (if any) for the version.
Manufacturer Part No.	Specify a manufacturer part number (if available) for the version.
Delivery standard	Specify a delivery standard (if any) for the version.
Norm	Specify a standard (if any) for the version.
Finished parts list no.	Specify the finished parts list number.
Finished bill of material version code	Specify the fert. bill of material version code.

Field	Comment
Work plan no.	Specify the task list number.
Routing version code	Specify the routing version code.

In the procurement process, the article incl. article version can be specified. Via MRP (order planning, planning worksheet), the system proposes a production order taking the article version into account. The production data of the article version are hereby transferred to the production order.

The temporal determination of the article version takes place at

Components, production lines:
Due date
Order lines:
Expected goods receipt date
Planning suggestion:
When revising the start date, this otherwise the end date of the line.

If both are not maintained the order date

- Proposed change: due date of the order

Note

Please note that during the consumption posting, the system checks that the article version type of the consuming article matches the actual article version type to be reported.

The article version does not distinguish the stock on the article. If it is necessary to distinguish the stock on the article on the level of the article versions, the article variant can be managed in addition to the article version. In this way, the stock level is taken into account for the article variants and, consequently, also for the corresponding article version.

Functions in the ribbon New, Certified, Expired

These function buttons set the article version to the status of the same name.

Usage

This functionality is used to determine in which assembly/production article the component is located.

Structure

Microsoft Dynamics Business Central™ uses this to display the production structure/tree structure of the production item based on the specified production BOM and routing.

Structure BOM

The structure BOM is output as a report.

Costs of the bill of materials

Based on the production bill of materials and the routing, the costs of the production item are calculated and output as a report.

Cost shares

The costs are mapped in a tree structure as in the standard Microsoft Dynamics Business Central™.

Detailed calculation

Costs are presented in the same way as in the standard Microsoft Dynamics Business Central™ Detailed Cost Estimate.

Bill of materials - cost share distribution

The cost shares (material, capacity, external labor, capacity & prod. overhead) are shown graphically in a report.

Construction + development order (E+D order)

The design + development order is essentially a production order that is converted from a repetitive manufacturing order to a machine and plant engineering order - i.e.: design + development order - by means of a project number. The data from a production order is displayed in an E+D order as a structured BOM, which is supplemented by the following information fields:

- E+D Positions (Position Index),
- Quantities, deadline, status and change traffic light,
- Information about the demand cover and requester

Functions for the specific processing of the FA position round off the whole.

The E+D order masks exist as for a production order for the status (Simulated, Firmly planned, Released, Finished). There are separate menu items for the different statuses in the "Design & Development".

In summary, the E+D order is intended to provide a central information hub for reporting the status, processing the respective item and interacting with the upstream and downstream processes of design, work preparation, scheduling, purchasing and warehouse/logistics.

Attachment

There are two ways to create an E+D order:

1. You create a production order as usual, manually or via the planning worksheets. In the course of this, an E+D order is generated automatically by the system.

2. You create an E+D order manually. In the course of this, a production order is generated automatically by the system.

The status is always identical for the production order and the corresponding E+D order.

E+D Order card

The structure of the E+D job card is identical regardless of its status "Simulated", "Firmly planned", "Released", "Finished". Depending on the status, some functions cannot be executed.

Inforegister screen

Field	Comment
	The structure resolution controls the view of the E+D lines with the following options:
	constructive: Depending on the due date, the valid master finished parts lists, routings and versions are displayed. In addition, phantom levels of the construction are displayed.
	dispositive: Displays the current procurement-manufacturing structure of the FA. The constructive phantom levels are exploded, the FA lines, FA operations and FA components can be edited manually.
	functional: Assembles the rows according to the functional characteristic (if available- from Design & Development - Setup).
Structure resolution	**logistically:** Assembles the lines according to the logistic characteristic (if available- from Design & Development - Setup).
	dispositive total: this view shows the entire FA order network (also the outsourced sub-Fas) dispositive. **Calculate work plan No:** Only the structure BOM is displayed.
	Hide Sec.AG: The primary operations and the structural BOMs are displayed.
	Show Sec.AG: In addition to the primary operations and the structured BOM, the secondary operations for other capacities such as "Tool" and "Personnel" are also displayed.
Precision duration	Formats the duration of the E+D order line rounded up to millisecond, second, minute, hour, day. The value is suggested from the Design & Development setup when you open the page. You can override the default setting.

Inforegister General

Field	Comment
No.	Document number - number range freely definable.
E+D Project no.	The project number can be entered manually from the project list. When executing the planning function "Project order" in the sales order, the project can be preset. Several FAs can thus be combined into one group.
Description	Description of the production order (e.g.: name of the commission or the customer).
Description 2	Additional description of the production order.
Type of origin	The origin type gives the user an indication of what the production order was created for. **The following selection options are available:** - Article, - Manufacturing family, - Sell order, - Project
Origin no.	Number of the article / production family / sales order or "blank" to be produced. This field is logically related to the origin type.
Search Keyword	Is formed automatically from the first 30 digits of the description and can be changed manually.
Quantity	Number of items to be produced with this production order.
Due date	Date by which the production order should be completed.
Assigned user	Entry of the responsible clerk.
Production order type	For classification of construction contracts. Dimensions can be changed or added depending on the order type. **Additional functions for the calculation:** The costing order type marks the FA as relevant to costing. The type: Basic order marks the costing FA as a copy template for the creation of another costing order.
Locked	If this identifier is active, postings (consumption and actual report) with the FA are not possible.
Corrected on	The date on which the FA was last modified.

Inforegister lines E+D Position

The E+D position is formed for the unique identification of individual lines. Each position in a production order is uniquely defined by the E+D position and is thus very helpful for reconciliation or for the coordination of the different departments.

> Note

The E+D position has a maximum length of 30 characters, if this is exceeded, the last 3 characters of the 30 characters are displayed with "...".

> Note

To determine a unique E+D item, you must maintain the fields "Stepwise E+D item no. ", "Item item separator", "Item phantom separator", "Item operation separator", "Item common parts summary" and "Item additional costs separator" in the Design & Development setup.

Determination of the E+D position no.

The E+D item number is determined by the system when calculating the production order or the planning worksheets as well as when maintaining the item number.

The system proceeds with the determination as follows:

Production order line (producing article)

The system fills the E+D position depending on the creation of the production order:

- Manually or via the planning worksheets, the E+D item no. is preset with the value from the Design & Development setup of the "Stepwise E+D item no. " field.
- In order planning, the E+D item no. corresponds to the item no., the sales item to be covered.
- In project planning, the E+D item no. corresponds to the project task no. of the project plan line to be covered.

Component

The E+D item number corresponds to the E+D item number of the FA line + the item item separator defined in the Design + Development setup and the own item number.

Production order line (assembly)

The E+D position no. of the assembly corresponds to the E+D position no. of the component to be covered.

Operation

The E+D item no. corresponds to the E+D item no. of the FA line + the item operation separator defined in the Design + Development setup and the own operation number.

Additional costs

The E+D position no. corresponds to the E+D position no. of the FA line + the position additional costs separator defined in the design + development setup and the own position no.

Equal parts summary

In the standard system, the same parts are grouped together depending on whether the following fields match:

- Variant code
- Connection code
- Position
- Position 2
- Position 3
- Length
- Wide
- Weight
- Depth
- Unit code

If an article is used in several assemblies of a production order, the system combines them and generates a collective FA component for this article.

The E+D item no. corresponds to the E+D item no. of the FA line + the item same-part summary separator defined in the Design + Development setup and its own item number.

Fields

Field	Comment
E+D Position	The E+D position should describe the exact installation position across all drawing levels. In the case of existing CAD integration, the position should match the designations on the CAD drawing and thus forms search information, e.g. for assembly drawings. **E+D Position Initial value:** In the "Order quantity" replenishment procedure, the E+D item is filled based on the item number of the sales line or based on the project task of the project plan line. If no entry is found here, the step size from the Design & Development setup is assigned. **E+D Calculate position:** The calculation of the E+D position is already done in the planning worksheets and can be shown there in the field "E+D position". In addition, the field is also available in the standard FA documents. **E+D Position manual change:** A manual correction of the initial value is possible in the E+D order via Navigate\lines. All other manual changes are called from the E+D order component/FA component. **E+D Position Forms of presentation:** In the FA components, as well as the E+D order components, the "E+D Position" is combined with the standard field "Position". Here, the field values "E+D Position" and "Position" are separated using the "Position item separator" from the "Design & Development Setup".

Field	Comment
E+D Position	**Phantom levels:** Can be identified in the dispositive view with the "Position phantom separator" from the "Design & development uni". In the constructive view, the phantom layer is unfolded with its component. **E+D Contract Work Plan:** In the E+D order routing, the E+D position is formed from the operation number. A change is made in the master data and can be updated via the E+D change synchronization. The "Position operation separator" can be defined via the "Design & development setup". **Tools and personnel:** Can be managed in the secondary operations. For this purpose, the E+D position receives an additional suffix. The separator for tool and personnel is defined via the "Production setup" of the fields "Separator operation no. personnel" and "Separator operation no. tool". The numbering for personnel and tool is defined via the "Personnel basic operation no." and "Tool basic operation no." fields. **Additional costs:** In the E+D order, imputed additional costs can be stored for the FA line. **E+D Position Representation of the outsourced substructure:** By means of the "E+D Planning" function, assemblies can be outsourced to another production order. The outsourced structure is marked in color and is dispositive or dispositive total depending on the structure explosion. **E+D Position Lookup:** From the E+D position, you can branch directly to the edit mask via an AssistEdit call. Type = Windows Article = Show components Workplace /Workplace group = Show work plan Additional costs = Show additional costs

Field	Comment
	Displays the scheduling situation of an item, starting from its due date as a requirement creator (level x+1) to its requirement date and due date of its requirement originator (level x). The icons are stored in the "KUMAVISION Bitmaps" facility.
Appointment traffic light	**Green/OK:** Due date (level x+1) = Requirement date (level x) **Red (right arrow)/Too Early:** Due date (level x+1) is before requirement date (level x) **Red (left arrow)/Too Late:** Due date (level x+1) is after the requirement date (level x)

Field	Comment
	Displays the stock situation of an item starting from its requirement cover (level x+1) to its requirement originator (level x).
	For type=article: The icons are stored in the "KUMAVISION Bitmaps" facility. **Green/OK:** Sufficient and in stock
	Yellow/disposed: Reserved but not in stock
	Red (down arrow)/below: **Shortage in order production:** The reserved demand covers do not cover the demand.
	Shortage in make-to-stock production: the available stock is not sufficient. The item availability is < 0.
Quantity traffic light icon	**Red (arrow up)/above:** **Excess coverage in order production:** The reservable requirement cover exceeds the requirement (e.g. FA quantity > reserved quantity in the requirement cover).
	Surplus cover for make-to-stock production: The available stock is sufficient. The availability is >= 0.
	For type=workstation(-group): Displays the capacity situation of the work center, work center group on the requirement date.
	Green/OK: Sufficient remaining capacity
	Red (down arrow)/below: Shortage, the remaining capacity is not sufficient. There is a capacity utilization of > 100 %.
Type	**Type of E+D line:** Article, phantom bill of material, workstation group, workstation, functional level, logistic level
E+D Production type	Specifies the production type of the item taking into account the master data and also stock card (**options:** make-to-order, make-to-stock).
No.	Specifies the number depending on the type.

Field	Comment
Description	Specifies the description of the line depending on the "Type" and "Number" fields.
E+D Proposed change available icon	Indicates whether an E+D change proposal exists. The icon is assigned from the "KUMAVISION Bitmaps" setup from the "Default line Existing" field.
Finished parts lists Status	Displays the status of the finished parts list. The options are "New", "Certified", "In Development" and "Expired". The icons are obtained from the "KUMAVISION Bitmaps" facility.
Routing status	Displays the status of the task list status. The options are "New", "Certified", "In Development" and "Expired". The icons are obtained from the "KUMAVISION Bitmaps" facility.
Component quantity	Required quantity to produce one unit of the parent component.
Requirement date	Indicates when the item of the parent level (x-1) is needed. E.g. from goods issue date of VK line, due date FA component.
Quantity required	Indicates the quantity required.
Reserved quantity	Indicates reserved quantity (if in stock or on order) for this line.
Residual requirement quantity	Indicates the demand of the quantities not yet withdrawn or produced.
Storage bin code	Specifies the bin code of the FA component.
Availability balance	For items, the available quantity in stock and demand date is displayed. For work center/work center group the available capacity of the FA work operation from start date/time to end date/time is displayed. Via drilldown, the calculated items can be called up and analyzed.
Reserved stock (base)	Indicates the reserved quantity (if in stock) for this row.

Field	Comment
Due date	Indicates the due date of the FA line when the assembly will be ready according to the FA work plan and calendar model. If an assembly is outsourced and scheduled, the due date of the FA line (level x+1) differs from the requirement date of the FA component (level x). **Note** The due date of the FA components can be over-scheduled by entering the lead time shift.
Quantity	Specifies the number of items to be produced.
Finished quantity	Here you can see the already finished quantities.
Quantity in proposal line	Indicates the quantity in the planning/purchase order worksheets. If the procurement documents are triggered from this, then (provided that with the reservation is worked) autm. the field "Reserved quantity" is adapted accordingly.
Duration	The duration is calculated from "End date/time" minus "Start date/time" of the FA operation and the FA line. For FA components with procurement type = purchasing, the procurement time of the item is displayed from the inventory data.
Total duration	The total duration is the cumulative result of the operations sorted in chronological order for one FA line.
Supplied by	Indicates reserved demand deckers. If there is no reserved demand deck, the field is "empty". In case of uniqueness the card is displayed directly and via lookup you can branch directly to the document. If there are (several) demand coverers, you can branch to the reservation items via lookup. Alternatively, you can branch directly to the documents via the line function Requirement originator (component).
Remaining time	Indicates the remaining time. The output "hours", "minutes" or similar depends on the definition in the Design & Development Setup in the "Precision Duration" field.

Functions Menu selection function E+D Change production type

The production type of the selected item line is changed between make-to-stock production/order-related production. Substructures are set or deleted.

Outsourced manufacturingorder

For an FA line with the E+D MRP type Production part, the option is offered to create a separate production order if the FA line is to be produced for the higher level on an order-related basis.

Create link to the production part

For a stock part a link to a FA line can be created. The FA line is thus the requirement cover of the component and the E+D MRP type is changed from stock part to production part.

E+D Order planning

Order planning is called up specifically for the selected E+D lines. In the course of this, the demand cover is reserved directly for the originator of the demand.

Reserve (line)

Calling the reservation functionality for the E+D line existing as FA line.

Reserve (components)

Calling the reservation functionality for the E+D row existing as FA component.

Demand originator (line)

Calling the demand originator functionality for the E+D line existing as FA line.

Requirement originator (component)

Calling the demand originator functionality for the E+D row that exists as an FA component.

Transfer marked shipping units

This function allows you to transfer the selected shipping units.

Show shipping units

With this call you can display the shipping units for the respective line.

Menu selection line Article availability

Displays item availability by event, period, variant, storage location or BOM level. For further information, please refer to the [Microsoft Dynamics Business Central™ Helpsite (F1)](#).

Reservation structure

This function allows you to display the reservation structure of a selected document line.

Reservation item

Displays the items for each reservation made manually or automatically. For more information, see the [Microsoft Dynamics Business Central™ Helpsite (F1)](#).

Dimensions

Display or edit dimensions. Further information can be found in the [Microsoft Dynamics Business Central™ Helpsite (F1)](#).

Map

Depending on the line type: article, workstation, workstation group, the master data card is called directly.

Work plan

Displays the E+D order operations for the selected E+D line. It is also possible to call it up from the E+D position via the Assist button.

Field	Comment
Working aisle no.	See standard
E+D position	The E+D position should describe the exact installation position across all drawing levels. In the case of existing CAD integration, the position should match the designations on the CAD drawing and thus forms search information, e.g. for assembly drawings. **E+D Position Forms of presentation:** In the FA routings, as well as in the E+D order routing, the "E+D position" is combined with the standard field "Operation no. ". The field values "E+D Position" and "Position" are separated using the "Position operation separator" from the "Design & Development Setup".
Type	See standard
No.	See standard
Workstation group no.	Here you can see the workstation group of the assigned no. (workstation, workstation group).
Description	See standard
Unit code (FA line)	Here you can see the unit code of the production item.
Quantity (FA line)	Here you can see the quantity of the production item.
Finished quantity	Here you can see the already finished quantity of the operation.
Rejects	Here you can see the quantity of the operation already reported as scrap.
Progress quantity	Displays in a progress bar the percentage of completion based on the quantity. **Please note** that in case of overproduction the system will continue to display 100%.
Standard catalog code	See standard
Revised	See standard
Capacity	Here you can see the planned capacity for the work center (group) of the operation in the processing period.
Allocated capacity	Here you can see the allocated capacity for the work center (group) of the operation.
Utilization	Here you can see the utilization of the workstation(s) (group) in the period of the operation.

Field	Comment
Expected time requirement	Here you can see the planned time requirement in the unit from the production setup.
Unit production facility	In this field you can see the unit stored in the production setup.
Booking method	See standard
Start date/time	See standard
Start time	See standard
Start date	See standard
End date/time	See standard
End Time	See standard
End date	See standard
Setup time	See standard
Setup time unit code	Here you can see the assigned unit for the setup time.
Processing time	See standard
Processing time unit code	Here you can see the assigned unit for the setup time.
Waiting time	See standard
Transport time	See standard
Lot size	See standard
Fixed scrap quantity	See standard
Scrap factor %	See standard
Transfer quantity	See standard
To load at the same time	See standard
Cost price per unit	See standard
Target labor costs	See standard
Target capacity overhead	See standard
Routing status	See standard

Field	Comment
Location code	See standard
Off. Fert. ber. stock plan code	See standard
Finished ready storage bin code	See standard
Finished output bin code	See standard
Articles manufactured by others	Specify here whether this is an externally produced item.
Quantity in stock transfer order (base)	Here you can see, in case of external work, the quantity in a stock transfer order created for this purpose.
Quantity in transit (base)	Here you can see the transit quantity (goods on wheels) in the case of external work in a stock transfer order created for this purpose.
Input Quantity at third-party manufacturer (base)	Here you can see the transferred quantity in case of external work.
Recorded times	Here you can see the already booked times in the unit in the production facility.
Remaining time	Here you can see the time still to be completed in the unit in the production facility.
Time progress	Displays in a progress bar the percentage of completion based on time. **Please note** that if the planned time is exceeded, the system will continue to display 100%.
Indentation	Here you can see the production level of the production order.
FA no.	See standard
Work plan ref. no.	Here you can generally see the line no. of the production order item.
Work plan no.	Here you can see the no. of the applied work plan.
Manual planning	See standard
Previous operation no.	See standard
Next operation no.	See standard
Connection code	See standard

Components

Displays the E+D order components for the selected E+D line. The call via the Assist button from the E+D position is also possible.

Additional costs

Additional imputed costs can be entered for preliminary costing. This item is relevant for the "Valuation & Costing" module.

Item tracking line

Displays the item tracking assigned to the document row. For more information, see the [Microsoft Dynamics Business Central™ Helpsite (F1)](#).

Third-party work tracking

Document navigation to the external work documents "Purchase order" and "Stock transfer".

Missing parts list

Call the missing parts list for the selected E+D line.

E+D Proposed change

Call the pending proposed changes to the marked E+D line.

E+D markup calculation

Call the markup calculation for the E+D line with level 0.

Production book. sheet

Post consumption and expenses. Further information can be found in the [Microsoft Dynamics Business Central™ Helpsite (F1)](#).

Inforegister scheme

Field	Comment
Start date	Specifies the start date of the E+D order.
Start time	Specifies the start time of the E+D job.
End date	Specifies the end date of the E+D order.
End Time	Specifies the end time of the E+D job.
Planned time (Current order)	Specifies the scheduled time for the current job.
Planned time (Overall structure)	Specifies the planned time for the overall structure.
Time consumed (Current order)	Indicates the time spent on the current job.
Time consumed (total structure)	Indicates the time spent on the overall structure.
Remaining time (Current order)	Specifies the remaining time for the current job.
Remaining time (Overall structure)	Specifies the remaining time for the overall structure.
Time consumed % (Current order)	Indicates the time used for the current job in %.
Time consumed % (Overall structure)	Indicates the time spent on the overall structure in %.

Information register Buchen

Field	Comment
Stock posting group	Indicates the stock posting group of the production item. This value is preset with the value from the article card.
Product posting group	Specifies the product posting group of the production item. This value is preset with the value from the article card.
Business posting group	Specifies the business posting group of the production item. This value is preset with the value from the article card.
Cost unit code	Specifies the cost carrier code of the production item. This value is preset with the value from the article card.
Location code	Specifies the storage location code.
Storage bin code	Specifies the storage location.

Functions in the ribbon

"Operation" menu selection Update structure

The structure of the E+D order lines is updated. This function is executed manually if required, for example, if the status tables of the E+D order lines are to be recalculated at the current time.

E+D Order planning

The E+D order planning is called for the complete production order. In this overview a procurement is made order-related. The requirement originator receives a direct reservation with a requirement cover. Here the

requirement coverers order, planned/released production order, transfer order, assembly order and external work order are possible.

Field	Comment
E+D Position no.	This field maps the E+D position from the E+D order.
E+D Planning line type	The following types are available: structure heading, stock section and external operation.
Type	The article and workstation group types are possible.
No.	Depending on the type, this field indicates the no. of the item or workstation group.
Description	Depending on the type, this field indicates the description of the item or operation.
Requirement date	Indicates the due date of the item/external operation.
Unit code	Informatively specifies the units from the FA component.
Planning quantity	The target quantity is shown here.
Planning completed	If this identifier is set by the system, this means for the user that the article or the external operation already has a reserved requirements cover.
Procurement quantity	This quantity defines the procurement quantity that is to be transferred to the requirements planner later in the process via the "Create orders" functionality.
Procurement method	Indicates the procurement method of the item. Situationally, the procurement method can be manually changed to purchase, production order, stock transfer or assembly.
Deliver from	Specifies the vendor from which the item/external work is to be obtained.
Reserve	The "Reserve" identifier defines whether the demand cover to be created is to be reserved for the demand originator.
Accept event message	Only E+D order planning lines that have this identifier set will be considered in the "Create orders" function.

Update E+D order...

Has the same functionality as "Update production order..." in FA.

Reschedule...

Reschedules the connected production order lines of the current FA. Other production orders connected to the FA lines are not updated.

If the lead time shift is changed in the FA components, a new due date of the reserved FA line follows.

Perform change comparison...

With the "Perform change comparison" function, the production data comparison takes place taking into account the change flexibility parameter on the E+D order line. If the change flexibility of the E+D order line is set to "none", this line is ignored in the change comparison.

Perform re-comparison...

The new comparison ignores the change flexibility parameter in the change comparison and thus takes all E+D order lines into account.

Change status

This function allows you to change the status ("Firmly planned", "Released", "Finished" for this document.

Copy E+D document

This function is similar to the conventional "Copy voucher" function. With this function you can copy the data from an already existing voucher into a new voucher to be created.

E+D Statistics

Displays statistical data related to the E+D job.

Missing parts list

Call the missing parts list as a table or also report.

Reservation item (component)

Calling the reservation functionality for the E+D lines existing as FA component.

Report menu selection

The following reports can be printed in this menu selection:

- Work ticket
- Material requirements list
- Missing parts list
- E+D Order

Menu selection Email

With this menu selection, the following reports can be sent directly by e-mail (this requires the appropriate setup).

- FA work ticket
- FA material requirements list
- FA faulty parts list
- Production order

Menu selection Actions > Function

At this point, only the function calls that have not been described before will be discussed:

Cross country skiing articles overview

With this function the long run article overview for the referenced production order can be called. In the case of the E+D order, it is the production order that is listed in the header of the E+D order.

For more information, see "Long-run items: Call for a production order / E+D order".

Update cost prices

This function allows you to update the cost prices across all levels or one level.

Actions > Stock menu selection Create putaway / picking / stock transfer

With this function you can create picking and putaway / transfer.

Create bearing deposit request

This function allows you to request an internal putaway request.

Create picking

With this function you can create the picking.

Menu selection Belonging > Order Item

Via the selection "Items" you can view the following items:

- Article item
- Capacity item
- Value items
- Stockyard items

Comments

Via the "Remarks" you can store remarks for the order.

Dimensions

Displays the dimensions.

Third-party work tracking

The external work tracking is called up for the E+D order planning line. This shows all associated orders and stock transfers (provisioning).

Calculation proposal (E+D)

Opens the E+D calculation proposal.

Lines

Opens the E+D order line card for editing.

Shipping unit

Opens the shipping units map.

E+D Proposed change

KUMAVISION factory365 offers the functionality E+D Change Proposal to compare the manufacturing data (FA routings and FA components) of the E+D order with the master data (routings and finished parts lists). If the data of the E+D order differs from the master data, the E+D change proposal suggests a change in the E+D

order. The mask can be called up both via the user search and directly via the E+D order using the functions "Execute change proposal" and "Execute new comparison".

Field	Comment
E+D Position	Position number of the line in the structure of the assemblies.
Type	Definition of the line, the options are: • Article, • Phantom Bill of Materials, • Workstation Group, • Workplace
No.	The number is dependent on the type.
Working aisle no.	Number of the operation, if the type is "work center group" or "work center".
Event message	Indicates the corresponding event message.
Accept event message	The "Accept event message" identifier is preset to "Yes" in the E+D planning if the Automatic option is selected. Otherwise, the "No" identifier is preset for Manual.
Detail. Change notification	Shows the description of the change.
Description	Description depending on the type. (e.g.: article description, operation description)
Age value	Displays the value from the production order.
New value	Displays the value from the finished parts list or routing.
Area	Displays the area where the change is to be made.
FA status	Displays the status of the production order in which the change is to be made.
FA no.	Displays the production order number in which a change is made.
FA line no.	Displays the line no. of the production order in which a change is made.
Change flexibility	Identifier, which allows a line to be excluded from the proposed change. The available options are "Unlimited" and "None". This parameter is set manually by the production management per FA line and FA component.
Comparison date	Displays the date of the comparison.
Variant code (to be manufactured)	Specifies the variant to be manufactured.

Field	Comment
Version code (to be fert.)	Specifies the version to be manufactured.
Proposal version code (to be fert.)	Version that would have to be made if the proposed change is executed.
Change notification	Marks the line as a change and the type of change -. • New, • Change, • Remove, • Empty
Accept change message	Here it can be decided line by line which change is accepted by the user. The program will suggest you changes.
Item no. (component)	If the change concerns a component, its article number is displayed here.
Variant code (component)	If the change concerns a component and this has a variant, the valid variant of the article number is displayed here.
Work plan ref. no.	Line number of the production order to which the routing is assigned.
Work plan no.	Displays the job number of the FA line.
Routing version code	Displays the version of the routing assigned in the production order.
Proposal work plan ref. no.	Displays the line number of the production order in which the routing is to be assigned.
Proposal Work plan no.	Displays the task list number that is entered after the change adjustment.
Proposal routing version code	Displays the new valid version of the task list number entered after change matching.
Proposal work plan status	Displays the status that the routing assumes in the FA when the change proposal is executed.
Finished parts list no.	Indicates the production BOM found.
Finished parts list version no.	Indicates the found valid version of the production BOM.
FA- Component line no.	Specifies the component line number in the found production BOM.
Proposal Finished parts list no.	Displays the found and valid production BOM.

Field	Comment
Proposal Fert. version code	Displays the valid BOM version that is transferred to the FA during a change comparison.
Proposal Finished BOM status	Displays the status found with the current production BOM. The change proposal lines only have an influence on the E+D order as soon as the Execute change message function is carried out for the selected proposal lines (Accept change message = YES).

Execution supervision

Execution monitoring is used to get a quick overview of the execution status of the design and development process.

For this purpose, there is the design monitoring for the master data view and the disposition monitoring for the design + development order view (E+D orders). In both monitoring functions, the scope of monitoring can be defined specifically according to articles, sales orders and E+D orders and projects in the case of MRP monitoring.

The MRP monitoring also lists the finished parts lists and operation lines, but compares these with the components and operations of the E+D order or production order. Additionally, information regarding date and quantity as well as procurement is displayed.

Design monitoring

Design monitoring allows you to monitor the status of your production master data. Design monitoring lists the finished parts lists and operation lines and displays their processing status.

Note

Please note that the system takes into account the inventory data, if available, when determining the data.

You can call up the "Design monitoring" via the user search.

General

In the "General" area, you can first define what should be checked and how.

Field	Comment
Sales order filter	If you want to check the production data for an entire sales order, maintain the order number here. The system determines all articles entered in the order.
Article filter	Enter here the article no. of the article to be checked.
Calculate work plan	Use this field to specify how the system should take the routings into account: **No:** Routings are not taken into account in the calculation and are therefore not included in the result. **Hide sec AG:** Routings are included in the calculation, but secondary operations are not shown. **Sec. AG Ads:** Routings are fully considered in the calculation, primary as well as secondary operations are shown.
Structural test only	Activate the switch if you want to see only articles with hints in the result.

Lines

The main fields of the display lines are explained in more detail below:

Field	Comment
E+D position	This field displays the E+D position. The top level is filled with the "Order position no. " in case of an order reference. Otherwise, the value is initialized according to the Design & Development setup in the "Step size E+D item no. " field. The other levels are calculated according to their definition in Design & Development.
Level	Represents the BOM level.
Sales order no.	In this field the possibly passed order no. is displayed.

Field	Comment
Type	**This field shows the type of line:** **(blank):** It is a comment line **Article:** It is an item, the sources are production order line and components. **Note:** Please note that the variant code is maintained when displayed in blue. **Phantom Bill of Materials:** The component is defined as a phantom. **Workstation Group:** This is an operation of the "workstation group" type. **Workplace:** This is a "workstation" type operation. **Additional costs:** This is an additional cost item from the calculation. **Functional Level:** It is an attribute value according to your attribute definition in the Design & Development setup in the "Item attribute functional structure resolution name" field. **Logistical level:** It is an attribute value according to your attribute definition in the Design & Development setup in the field "Item attribute logistic structure resolution name". **Notice:** Please note that the types Additional costs, Functional as well as Logistical level are not used in construction monitoring.
No.	In this field, depending on the "Type", the "No. " field of the respective master data record is displayed.
Description	Depending on the "Type" and "No. ", the description of the source data set is displayed here.
Finished parts lists Status	For the types "Article" and "Phantom BOM", the status of the stored production BOM is displayed here.

Field	Comment
Finished parts list no.	For the types "Article" and "Phantom BOM" the production BOM no. of the stored production BOM is displayed here.
Routing status	For the types "Article", "Workstation" and "Workstation group", the status of the stored production parts list is displayed here.
Work plan no.	For the type "Article", the routing no. of the stored routing is displayed here.
Procurement method (master data)	Here you are shown the procurement method from the article master for type=article. For type=workstation group, depending on whether it is external work, at **Outside work:** Purchasing **Internal:** Production order set. In the case of type=phantom bill of materials, "Stock transfer" is displayed.
Production type (master data)	Here with kind=article with the procurement type "production order" the production type from the stockkeeping data is represented to you. **For items with the procurement type "Purchase", a reference to the re-procurement procedure, whereby:** • (empty) is displayed with " ". • Order quantity with order production • the others are shown with make-to-stock production. For type=phantom BOM, " " (empty) is always displayed here. Comment Here the system shows you irregularities of your master data.

Functions Calculate

With this action you perform the calculation according to your calculation settings.

Work plan

Use this action to open the displayed routing(s).

Finished parts list

With this action you open the displayed production BOM (version).

Article

With this action you open the article card for articles.

Disposition monitoring

The MRP monitoring offers a resolved tree structure of the production order. The required quantity and the availability balance of the components and capacities can be viewed here.

A visual representation is created via the deadline & quantity traffic light.

If there are reserved requirements coverers available for the requirements originators, these can be called up using the info box.

General

In the "General" area, you can first define what should be checked and how.

Field	Comment
Sales order filter	A sales order filter can be specified. If there are sales lines for the sales order that are reserved with a production order, the reserved production orders are listed and resolved in the MRP monitoring.
Project filter	The project filter acts here analogously to the sales filter. If production orders are reserved for project task lines, the production orders are listed in the MRP monitoring.
Article filter	If an article filter is specified, the MRP monitoring searches over all production orders for the specified article filter and lists the production orders found in the MRP monitoring.
Production application filter	Enter here a production order no. of the item to be checked.
Calculate work plan	Use this field to specify how the system should take the routings into account: **No:** Routings are not taken into account in the calculation and are therefore not included in the result. **Hide sec AG:** Routings are included in the calculation, but secondary operations are not shown. **Sec. AG Ads:** Routings are fully considered in the calculation, primary as well as secondary operations are shown.
Overall structure	Activate the switch if you want to display the overall structure in the result.

Lines

Field	Comment
	This field displays the E+D position.
E+D position	The top level is filled with the "Order position no. " in case of an order reference. Otherwise, the value is initialized according to the Design & Development setup in the "Step size E+D item no. " field. The other levels are calculated according to their definition in Design & Development.
Level	Represents the BOM level.
FA Status	Indicates the status of the stored production order.
FA no.	Indicates the number of the stored production order.
Sales order no.	In this field the possibly passed order no. is displayed.
Project no.	In this case, the corresponding project number is displayed.
Procurement method (master data)	Here you are shown the procurement method from the article master for type=article. For type=workstation group, depending on whether it is external work, at **Outside work:** Purchasing **Internal:** Production order set. In the case of type=phantom bill of materials, "Stock transfer" is displayed.
Production type (master data)	Here with kind=article with the procurement type "production order" the production type from the stockkeeping data is represented to you. For items with the procurement type "Purchase", a reference to the re-procurement procedure, whereby: • (empty) is displayed with " ". • Order quantity with order production • the others are shown with make-to-stock production. For type=phantom BOM, " " (empty) is always displayed here.
Appointment traffic light	Displays the scheduling situation of an item, starting from its due date as a requirement creator (level x+1) to its requirement date and due date of its requirement originator (level x).
Quantity traffic light icon	Displays the stock situation of an item starting from its requirement cover (level x+1) to its requirement originator (level x).

Field	Comment
Type	**This field shows the type of line:** **(blank):** This is a comment line. **Article:** It is an item, the sources are production order line and components. **Notice:** Please note that the variant code is maintained when displayed in blue. **Phantom Bill of Materials:** The component is defined as a phantom. **Workstation Group:** This is an operation of the type work center group. **Workplace:** This is a "workstation" type operation. **Additional costs:** This is an additional cost item from the calculation. **Functional Level:** It is an attribute value according to your attribute definition in the Design & Development setup in the "Item attribute functional structure resolution name" field. **Logistical level:** It is an attribute value according to your attribute definition in the Design & Development setup in the field "Item attribute logistic structure resolution name". **Note:** Please note that the types Additional costs, Functional as well as Logistical level are not used in construction monitoring.
No.	In this field, depending on the "Type", the "No. " field of the respective master data record is displayed.
Description	Depending on "Type" and "No. " the description of the source dataset is displayed here.
E+D Proposed change available icon	Indicates whether an E+D change proposal exists.

Field	Comment
Finished parts lists Status	For the types "Article" and "Phantom BOM", the status of the stored production BOM is displayed here.
Routing status	For the types "Article", "Workstation" and "Workstation group", the status of the stored production parts list is displayed here.
Requirement date	Indicates when the item is needed.
Quantity required	Indicates the quantity required.
Reserved quantity	Indicates the reserved quantity if in stock or on order for this line.
Residual requirement quantity	Indicates the demand of the quantities not yet withdrawn or produced.
Requested from	Specifies the demand originator for this line.
Availability balance	For items, the available quantity in stock and demand date is displayed. For work center/work center group the available capacity of the FA work operation from start date/time to end date/time is displayed.
Reserved stock (base)	Indicates the reserved quantity if in stock for this line.
Due date	Date by which the production order should be completed.
Quantity	Specifies the quantity of this line.
Finished quantity	Here you can see the already finished quantities.
Duration	The duration is calculated from "End date/time" minus "Start date/time" of the FA operation and the FA line.
Supplied by	Specifies the demand cover for this line.
Comment	Here the system shows you irregularities of your master data.

Functions Calculate

With this action you perform the calculation according to your calculation settings.

Production order

With this action you open the associated production order.

Work plan

Use this action to open the displayed routing(s).

Component

Use this action to open the FA component row overview.

E+D Order

With this action you open the corresponding E+D order

E+D Contract Work Plan

With this action you open the E+D order routing.

E+D order components

Use this view to open the E+D order component overview.

Article

With this action you open the article card for articles.

E+D Proposed change

Opens the E+D change proposal.

Calculation

General

With the help of the calculation you can make the following business evaluations and calculations directly in KUMAVISION factory365:

- Regular item costing with highlighting of variances.
- Quotation costing
- Development calculation
- Co-calculation
- Calculation up to the target price
- Access protection of the calculation data
- Separate reporting of costs
- Calculation with planned values
- Extension to include cost elements in the single-level as well as multi-level area (e.g. "material overhead")

Production costing

The production costing is primarily used to determine the production costs / cost of goods sold as well as the sales price for an article. These values can then be transferred to the corresponding price fields on the article card.

The result of this calculation can also be used for the valuation method "Standard" for the bearing valuation.

Furthermore, simulations can also be carried out in the cost of goods manufactured in the event of changes in purchase prices, labor time prices or overhead rates.

Development calculation

When creating new products, not all parts list items or work plan items are always known or their prices have not yet been determined. However, it is necessary to know the approximate manufacturing costs at an early stage and also to determine a sales price.

To make this possible, a "Simulated production order (cost estimate)" can be created manually for such an article. The known information from the routing and bill of materials is used. These values can then be changed as desired.

In addition, there is the possibility to manually. "Additional costs" with quantities, times and prices and, if required, the "Overhead rates" can be adjusted or supplemented.

Quotation costing

For individual manufacturers, the challenge is to carry out calculations for individual customer orders as efficiently and accurately as possible. Therefore, KUMAVISION factory365 provides the cost estimates for similar projects or articles as a basis. Based on this, employees can calculate different variants without having to start from scratch. This means a significant time saving compared to before. This also comes into play with old, already expired quotations. A new calculation is created with just a few entries, as only the new prices need to be transferred. Transparency is another important factor for contract manufacturers. With the old

calculations stored, sales staff can explain to customers, item by item, why there is a price difference compared to previous quotations. This is also important for projects that run over a longer period of time: If deviations from the original quotation occur during the course of the project, the customer can be given a detailed explanation of the causes at the touch of a button. This is because the concurrent costing does not use the theoretical planned values, but the current actual values.

Bearing evaluation

The material overhead costs can be entered separately with the use of the costing solution. This means that costing can now also activate the material overheads based on consumption. This makes the inventory values transparent and traceable and also ensures clarity in the balance sheet. Thus, these additions to the Microsoft Dynamics Business Central™ standard not only make the calculation of sales prices more comprehensible.

Cost types

In Microsoft Dynamics Business Central™, there are a wide variety of cost types. These fields are visible in several masks. The explanation of these will now take place at this point. Basically, Microsoft Dynamics Business Central™ distinguishes between single-level costs and multi-level costs.

Single level costs

Single-level costs are costs that are incurred only for this item. This means that for the calculation only the respective cost price of articles from the bill of materials or the prices and overhead costs are taken directly from the routing. No structures are exploded in the process.

Example:
An assembly in the bill of materials, is shown with the cost price in the material costs.

Multilevel costs

Multi-level costs, are costs that are broken down to the lowest level and then presented in the respective cost pools.

Example:
An assembly in the bill of materials is not shown with the cost price in the material costs, but is broken down further to the purchase item. Only the purchase item is shown as material cost, the rest is capacity/external labor or production cost.

Consumption-capitalized material overheads

The material costs can be included directly in the cost price of the raw material at the time of stock receipt, but also as consumption-capitalized material costs that are not included in the product until production.

The overhead and consumption capitalized costs can be mixed on the item card and in the costing condition lines.

Hierarchy of Consumption Capitalized Overhead:
a) Calculation conditions consumption activated
b) Calculation condition line
c) Article

Hierarchy Overhead:

a) Calculation conditions not consumption activated

b) Calculation condition line

c) Article

Note

Overhead costs and consumption activated overhead costs can be used in parallel. The only difference is that you can only define either a costing condition or a consumption activated costing condition. Both do not work.

Cost types

Below you will find an overview of the cost types that exist in Microsoft Dynamics Business Central™ in connection with KUMAVISION factory365:

Field	Description
Single-level material costs	All costs (cost price - overhead) that come from the bill of material.
Single-Level Material Overhead	All overhead costs resulting from purchased items in the bill of material.
Single-level capacity costs	All costs (cost price - overhead) that come from the routing.(No external labor operations)
Single-level capacity overhead	All overhead costs that come from the item's routing. (No outside labor operations)
Single-Level Production Overhead	Production overhead stored with the item being costed.
Single-level external labor costs	All external labor costs (cost price - overhead) of external labor operations, from the corresponding routing.
Single-level external labor overhead	All overhead costs of external labor operations, from the corresponding routing.
Multi-level material costs	All material costs (cost price - overhead) of purchasing items totaled over all levels.
Multi-level material overhead	All material overhead costs of purchase items summed over all levels.
Multi-level capacity costs	All capacity costs (cost price - overhead) from all routings summed over all levels.
Multi-level capacity overhead	All capacity overhead costs of all operations summed over all levels.
Multi-level production overhead	All production overhead costs of all items summed over all levels.
Multi-level external labor costs	All external labor costs (cost price - overhead) of all external labor operations summed over all levels.
Multi-level external labor overhead	All external labor overhead costs from all external labor operations totaled across all levels.

Note

The totals of the single-level and multi-level prices only match as long as no bookings or price changes are made. As soon as bookings have taken place, these values diverge. They can then be made equal again by means of a new cost price calculation across all levels. (Depending on the settings)

Establishment

Evaluation & calculation facility

In the "Valuation & Costing Facility", the basic facilities for controlling the operation of the costing facility are defined first.

Inforegister General

Field	Description
Basic Std.price calculation (make-to-stock)	The selection you make here is only used for items with the production type "make-to-stock". The following selections are available: **Cost price:** The value of the "Cost price" field from the item's master data is used. **Cost price (latest):** The value of the "Cost price (latest)" field from the item's master data is used.
Basic Std.price calculation (order production)	The selection you make here will only be used for items with the production type "order production". The following selections are available: **Cost price:** The value of the field "Cost price" from the master data of the item will be used. **Cost price (latest):** The value of the "Cost price (latest)" field from the item's master data is used. **Purchase price (purchase prices):** If the article has the procurement method "Purchase", first the purchase price valid for the vendor no. of the article is determined from the table Purchase price and the valid line discount % from the table Purchase line discount (both best price determination according to calculation date and quantity to be calculated). The combination of both fields results in the cost price to be used. If the item has the procurement method "Production order", the determination of the cost price to be used is based on the option value of the field "Basis Std. cost price calculation (make-to-stock)" of the Valuation and Costing Setup.

Field	Description
Default Transfer of cost price (fixed)/ target price Adopt proposal	At this point, you can decide whether the results of these calculations are written back for the respective articles. The following selection options are available: **One level:** The cost price (fixed) is only written back at the article for which the calculation was performed. **All levels:** The cost prices (fixed) are written back at all assemblies / components that were determined by the calculation.
Unit price decimal places	This is where you specify the minimum and maximum number of decimal places to be specified for unit prices in the calculation. **Example:** 2:5 means: minimum 2 decimal places and maximum 5 decimal places. For further information, use the [Microsoft Dynamics Business Central™ Helpsite (F1)](#) on the topic "Unit price decimal places field". .
Quantity Decimal Places	At this point you define how many decimal places should be specified in the calculation minimum and maximum for the quantities. **Example:** 2:5 means: Minimum 2 decimal places and maximum 5 decimal places. For further information use the [Microsoft Dynamics Business Central™ Helpsite (F1)](#) on the topic "Unit price decimal places field".
Fixed costing sheet name for costing proposal (E+D)	This setting applies to the costing sheets matrix that can be called up from the costing proposal (E+D) - i.e. via the production orders. With this field you have the option of specifying a standard costing sheet. If you enter a schema at this point, the user can only work with this schema and no longer select another (lock function). If the user should have the option to select other calculation schemas, then do not put anything in this field.

Field	Description
	This field refers to the calculation from a sales quotation or a sales order.
	The following options are available:
Calculate E+D Order (Sales)	**Calculate only:** The system creates the calculation, but does not perform any further action afterwards. If you want to display the newly created Simulated E+D Order, you must call it up manually. **Calculate+Display:** After the system creates the calculation, the created Simulated E+D Order is displayed directly in a window. **Calculate+Apply:** If the calculation proposal could be created without errors, the value of the "New target price" field of the executed calculation proposal will be applied to the "Sales price" field of the sales line.

Assuming that **consumption-based items (make-to-stock)** are procured on a regular basis, the cost price or delivered price (latest) provides a good basis for costing because the prices usually represent realistic values.

The *cost price* is - except for the stock issue method standard - an average value over all cost prices of the quantities currently in stock.

The *Current price (latest)*, on the other hand, is not an average price. It refers to the last value at which the item was added. For a more detailed definition of the cost price fields on the item card, please use the [Microsoft Dynamics Business Central™ Helpsite (F1)](#).

Items that are procured **on an order basis (make-to-order production)**, on the other hand, can either also be costed on the basis of the cost prices, or - and this makes sense especially for articles that are procured infrequently - on the basis of the currently valid purchase prices. If there is no current purchase price for the article, a planned value can also be entered in the preliminary costing.

!!! note "Note The cost prices are always "adjusted" prices, i.e. freight costs or precious metal surcharges entered per article surcharge/discount are added, purchase discounts or similar are deducted. The purchase price, on the other hand, is the pure purchase price without taking into account any surcharges, discounts or rebates. The final costing always calculates only with the cost prices.

!!! note "Note
A production type must be stored for each article - even for pure purchase articles, for which the production type is irrelevant by default.

Inforegister numbering

Field	Description
Calculation Default Numbers	Enter the code of the number series to be used to assign records to the Calculation Default Numbers table.
Calculation Condition Numbers	Enter here the code of the number series to be used to assign records to the Calculation Condition Numbers table.

!!! note "Note If you want to use more than one number series for this table, you can set up a connection between the corresponding series in the "Connections" call in the number series. This way you can use one code for two or more number series.

Inforegister Assembly

Field	Description
Costing item direct costs (resource assembly)	Select here a costing item from the costing item plan to which the direct costs incurred when a resource is used in an assembly order are allocated.
Description Costing element Direct costs (resource assembly)	Specifies the description of the selection in the "Costing item direct costs (resource assembly)" field.
Costing element overhead costs (resource assembly)	Select a costing item from the costing item plan here, to which the overhead costs incurred when a resource is used in an assembly order are assigned.
Description of costing element overhead costs (resource assembly)	Specifies the description of the selection in the Costing Item Overhead (Assembly Resource) field.

Costing components plan

The costing components plan is the foundation of the costing and is comparable with a chart of accounts. It takes over the task of standardizing and grouping the components of a cost estimate and thus ultimately making them comparable with each other. This applies to both article costing and quotation costing.

In principle, the costing sheet is structured in the same way as the chart of accounts in the Financial Accounting application area.

KUMAVISION factory365 already provides you with a set up costing element plan. You can either use this directly in the form or further adapt it to the requirements of your company. Of course, you also have the possibility to create your own component plan.

!!! note "Note If you want to use more than one number series for this table, you can set up a connection between the corresponding series in the "Connections" call in the number series. This way you can use one code for two or more number series.

Field	Description
No.	The "No. " field is used to identify the costing element. You can enter up to 20 characters, both numbers and letters. Each number may be assigned only once. You can set up as many costing items as you like. **Note:** Choose sufficient intervals between the numbers of the individual costing components. This will allow you to insert additional costing items later if required. For example, you could assign only the end digits 00 to all account groups and only the end digits 0 to all accounts.
Description	Here you can enter any text to describe the content of the costing element.
Cost range	Articles and capacities are later assigned to the costing items table via the costing conditions. The Cost area field indicates the application area of the respective costing item. The following selection options are available: **Cost of materials and material overheads:** The costing items with these options are used in costing conditions of the type "Material" (procurement method of the item = purchase). Material costs describe the direct costs (from the field EK price (latest)). Material overhead describes the indirect costs (from the fields Cost %, Overhead rate, Cost % (consumption capitalization), Overhead rate (consumption capitalization)). **Capacity costs and capacity overhead:** The costing items with these options are used in costing items of the type "Capacity".Capacity costs describe the direct costs (field EK price of the used work center or work center group). Capacity overhead describes the indirect costs (cost %, overhead rate) of the work center or work center group used. **Outside labor costs and outside labor overhead:** The costing items with these options are used in costing items of the type "Capacity" if it is an external labor work center group (or assigned external work center) (Vendor number field is not equal to). External labor costs describe the direct costs (field EK price of the used external work center group or the assigned external work center). External labor overhead describes the indirect costs (cost %, overhead rate) of the external work center group used or the assigned external work center.

Field	Description
Cost range	**Production Overhead:** The costing items with these options are used in costing conditions of type "Production" (procurement method of the item = production order). Costing items of the cost area production overhead describe the indirect costs (fields cost %, overhead rate) of the used article (production article or assembly). **Sales overhead, administrative overhead, risk/profit, commission, discount, rebate:** The costing items with these options are used in costing conditions of the type "markup". Costing items of these four cost areas describe the non-capitalizable costs of an article, i.e. the difference between the sales price and the cost price of the article.
Type	With this field you specify the type of record. You can choose from the following: **Costing component:** This option is used for the actual calculation components. The later assignment is only done via these data records. **Headline:** A heading for a group of costing components. **Sum:** The Sum option is used if you want the application to sum up individual costing items. Please then enter a filter text in the Sum field to specify the costing components to be included. **From-total / To-total:** The From-total option marks the beginning of a continuous series of costing items to be totalized. The end of this series is a costing item of the type To-Sum. In this case, please also enter a filter text in the Totalization field to specify the costing items to be included.
Counting up	Here you can now specify the interval or other filter specification of numbers of the costing elements. The results of the specified costing elements are added to a total balance. For the type "Calculation component", "From-total" or "Heading" this field must remain empty. For the "To total" type, the field is automatically filled when the chart of accounts is indented (function in the ribbon). Only the costing items that lie between a From total and a To total are added together. For the "Sum" type, you must manually specify the costing items to be added together.

Note

You must assign a cost range to each record in the Costing item table with the type Costing item. For all other costing items (headings, totals, from-totals or to-totals), the Cost range field remains empty.

Supplied Costing Components Plan:

No.	Description	Cost area	Type	Counting
1	Energy overhead	Material overhead	Costing item	
10000	manufacturing costs		from-total	
10001	Material costs		From-total	
10010	Direct material costs	Material costs	Costing element	
10011	Direct material costs 2	Material costs	Costing item	
10020	Special direct costs material	Material overhead	Costing item	
10030	Material overhead	Material overhead	Costing item	
10040	Material surcharges	Material overhead	Costing element	
10045	Freight costs	Material overhead	Costing item	
10046	handling costs	material overheads	costing element	
10049	Total material costs		To-total	10001 .. 10049
10100	Capacity costs		From-total	
10110	individual costs elm	capacity costs	costing element	
10120	Single cost worker	Capacity cost	Calculation item	
10130	individual costs machine	capacity costs	costing element	
10150	Overhead costs elm	Capacity overhead	Costing element	
10160	overhead labor	capacity overhead	costing element	
10170	machine overhead	capacity overhead	costing item	
10180	electricity/buildings	capacity overhead	costing element	

No.	Description	Cost area	Type	Counting
10210	Individual costs external labor	External labor costs	Costing item	
10250	Overhead costs external labor	External labor overhead	Costing element	
10299	Total capacity costs		To-total	10100 .. 10299
10300	Individual costs assembly res.	Capacity costs	Calculation component	
10305	Overhead assembly res.	Capacity overhead	Costing element	
10310	Tools	Production Overhead	Costing Item	
10320	Certifications	Production Overhead	Costing Item	
10400	Total cost of goods sold		To-total	10000 .. 10400
10410	Shipping	Sales overhead	Costing item	
10420	Quality Control	Sales Overhead	Costing Item	
10430	Sales	Sales overhead	Costing item	
10510	Administration	Administrative overhead	Costing item	
10520	Special direct costs of technology	Administrative overhead	Costing item	
10600	Selbstkosten		Summe	10000..10599
10610	Risk/profit surcharge	Risk/profit	Calculation component	
10620	Special direct costs other	Risk/profit	Costing item	
10700	Mindestrichtpreis		Summe	10000..10699
10710	Commission	Commission/ Discount	Calculation Item	

No.	Description	Cost area	Type	Counting
10720	Discounts	Commission/ Discount/Discount	Calculation Item	
10730	Discounts	Commission/ Discount	Calculation Item	
10800	Richtpreis		Summe	10000..10799
10810	Rounding income/costs	Commission/ discount/discount	Calculation component	
10900	Guide price (rounded)		Sum	10000 .. 10899

Actions via the ribbon Indentation of the component plan

By executing the "Component plan indentation" function, the filter text in the "Totalization" field is automatically determined by the system for the costing components of the "To total" type.

Comments

Date-dependent information can be stored for the respective costing element via the remarks.

Calculation conditions

The costing conditions establish the link between the master data tables such as article, work center group, etc. and the costing components, thus enabling the results of a costing to be assigned to an account.

In the header of a costing condition the assignment to the costing element costs and the costing element overhead costs is made. The lines of the costing condition allow you to define the costing costs more precisely over any number of lines. This applies to both direct costs (field EK price) and indirect costs (fields Cost %, Overhead rate) of the respective master data table.   A distinction is made in the following calculation condition types:

Costing condition (material)

The calculation condition is used in records of the table Article calculation condition with the calculation type Material. That is, you define here costing conditions that you subsequently assign to some of your articles. The condition is taken into account in the calculation when it comes to the calculation of raw materials (purchase items).

Inforegister General

Field	Description
No.	Number of the calculation condition
Description	Description of the calculation condition
Costing element costs	Select the appropriate costing item in the "Costing items costs" field. For the costing condition "Material", this is usually the material direct costs.
Description costing element costs	Specifies the description of the selected costing item from the Costing Item Cost field.
Costing element overhead costs	Select the appropriate costing element in the "Costing element overhead" field. This is usually the material overhead for the costing condition "Material".
Description costing element overhead costs	Specifies the description of the selected costing item from the Costing Item Overhead field.

Inforegister lines

Field	Description
Description	Here you enter a description of the content of your calculation condition line.
Costing item	A costing item is assigned to each costing condition line. In principle, a costing item with any cost range can be assigned to a costing condition line. However, you should make sure that you use a costing item whose cost range corresponds to the intended application area of the respective costing condition.
Calculation Component Description	This field is automatically filled by the selection of the costing component.
Heading no.	The Rubric No. field is used to relate calculation condition rows to each other in order to define a calculation base for percentage surcharges.
Calculation	The field is a choice field and controls with its option value the meaning of the field Value: **Amount:** If you select Amount, then the specification in the field Value is understood as absolute number input. So you have here the possibility to store fixed values, which will be taken into account in the calculation. In addition, you can provide this line with a rubric number to refer to this line in another line with the setting Percent - so, for example, to take into account an additional overhead. **Percent:** If you select Amount, then the specification in the Value field is understood as a percentage number entry. If the line has been assigned a rubric no., then the basis of the percentage is the sum of all calculation condition lines of the same calculation condition with the same rubric no. and calculation amount. **Note:** If the line is not provided with a rubric no., the application uses either the purchase price of the origin line of the corresponding calculation value or (if available) the sum of all calculation condition lines of the same calculation condition with the calculation value as basis for the percentage. The rubric no. of these lines will then be ignored.

Field	Description
	The meaning of the field depends on the value you have selected in the Calculation field.
	Amount: In this case, the field contains an absolute amount. Depending on the selected costing element, this amount is part of the EK cost or part of the overhead rate.
Value	**Percent:** In this case, the Value field contains a percentage value. The basis of the percentage value is the sum of all calculation values with the same rubric no. If the row was not assigned a rubric no., the application uses as a basis either the purchase price of the origin row of the corresponding calculation value or (if available) the sum of all calculation condition rows with calculation value and specification of any rubric no. (but only if these calculation condition rows were interpreted as part of a purchase price).

KUMAVISION factory365 provides you with predefined costing conditions (material) for use or further individual additions:

Material (single) and material (single2):

Field	Material (simple)	Material (simple2)
No.	KK0000	KK0010
Description	Material (simple)	Material (simple2)
Calculation item costs	10010	10011
Description of costing element costs	Direct material costs	Direct material costs 2
Costing item overhead	10030	10030
Description Costing Item Overhead	Material Overhead	Material Overhead

Material (complex) and material (complex2):

Field	Material (complex)	Material (complex2)
No.	KK0011	KK0001
Description	Material (complex)	Material (complex2)
Calculation item costs	10010	10010
Description of costing element costs	Direct material costs	Direct material costs
Costing item overhead	10030	10030
Description Costing Item Overhead	Material Overhead	Material Overhead

| Field ||Material (complex)|||| | --- | --- | --- |--- | --- | --- | |Description|Handling|Freight|Overhead costs|Special direct costs|Material surcharges| |Kalkulationsbestandteil|10046|10046|10046|10046|10046| |Costing Item Description|Handling Costs|Freight Costs|Material Overhead|Special Direct Costs Material|Material Surcharges| |Heading no.|| R1+R2| |R1|R2| |calculation/value|7 .00 MW| 6.00 %|4.00 %|5.00 MW|2.00 MW|

Field	Material (complex2)		
Description	Handling	Freight	Overhead costs
Kalkulationsbestandteil	10046	10045	10030
Costing Item Description	Handling Costs	Freight Costs	Material Overhead
heading no.			
Calculation / Value	1 .00 MW	6. 00 %	4.00 %

Calculation condition (production)

The calculation condition is used in records of the table Article calculation condition with the calculation type Production. This means that you define calculation conditions here which you then also assign to some of your articles. The condition is taken into account in the calculation if it is about the calculation of products (production items).

Inforegister General

Field	Description
No.	Number of the calculation condition
Description	Description of the calculation condition
Costing element costs	Select the appropriate costing item in the field "Costing item costs". In the case of the costing condition "Production", these are usually the direct material costs or the special direct costs of production.
Calculation Item Cost Description	Indicates the description of the selected costing item from the "Costing Item Cost" field.
Costing element overhead costs	Select the appropriate costing item in the "Costing item overhead" field. In the case of the costing condition "Production", this is usually the cost of tools, special direct costs, etc.
Description costing element overhead costs	ISpecifies the description of the selected costing item from the Costing Item Overhead field.

Inforegister lines

Field	Description
Description	Description of the calculation condition
Costing item	A costing item is assigned to each costing condition line. In principle, a costing item with any cost range can be assigned to a costing condition line. However, you should make sure that you use a costing item whose cost range corresponds to the intended application area of the respective costing condition.
Calculation Component Description	This field is automatically filled by the selection of the costing component.
Heading no.	The field "Rubric no. " is used to relate calculation condition rows to each other in order to define a calculation basis for percentage surcharges.
Calculation	The field is a choice field and controls with its option value the meaning of the field Value: **Amount:** If you select the option "Amount", then the specification in the field Value is understood as absolute number input. So here you have the option to enter fixed values that will be taken into account in the calculation. In addition, you can provide this line with a rubric number to refer to this line in another line with the setting Percent - so, for example, to take into account an additional overhead. **Percent:** If you select Amount, then the specification in the field "Value" is understood as a percentage number entry. If the line has been assigned a rubric no., then the basis of the percentage is the sum of all calculation condition lines of the same calculation condition with the same rubric no. and calculation amount. **Note:** If the row was not provided with a rubric no., the application uses as the basis for the percentage either the EK price of the origin row of the corresponding calculation value or (if available) the sum of all calculation condition rows of the same calculation condition before the current row with the calculation value. The rubric no. of these lines will then be ignored.

Field	Description
	The meaning of the field depends on the value you have selected in the Calculation field.
	Amount: In this case, the field contains an absolute amount. Depending on the selected costing element, this amount is part of the EK cost or part of the overhead rate.
Value	**Percent:** In this case, the Value field contains a percentage value. The basis of the percentage value is the sum of all calculation values with the same rubric no. If the line has not been assigned a rubric no., the application will use as a basis either the EK price of the origin line of the corresponding calculation value or (if available) the sum of all calculation condition lines before the current line with calculation value and specification of any rubric no. (but only if these calculation condition lines have been interpreted as part of an EK price).

KUMAVISION factory365 provides you with predefined calculation conditions (production) for use or further individual additions:

Field	Production (simple)	Production (complex)
No.	KK1000	KK1001
Description	Production (simple)	Production (complex)
Calculation item costs	10011	
Description of costing element costs	Direct material costs 2	
Costing item overhead	10310	10320
Description costing component overhead	Tools	Certifications

No further information is defined in the calculation condition lines of the condition "Production (simple)".

Field	Production (complex)
Description	Tool	Certification
calculation component	10310	10320
CalculationComponentDescription	Tool Certifications
heading no.	
Calculation / Value	2 .00 %	5 .00 MW

Costing condition (capacity)

The costing condition is used in data records of the Work center costing condition table. This means that you define costing conditions here which you then assign to your capacities (work center groups and work centers). The condition is taken into account in the calculation as soon as a capacity is addressed (e.g. because a routing is stored for a production article).

Inforegister General

Field	Description
No.	Number of the calculation condition
Description	Description of the calculation condition
Costing element costs	Select the appropriate costing item in the field "Costing item costs". For the costing condition "Capacity", this is usually the direct production costs.
Calculation Item Cost Description	Gives the description of the selected costing item from the "Costing Item Cost" field.
Costing element overhead costs	Select the appropriate costing element in the "Costing element overhead" field. This is usually the production overhead for the costing condition "Capacity".
Description costing element overhead costs	Indicates the description of the selected costing item from the "Costing Item Overhead" field.

Inforegister lines

Field	Description
Description	Here you enter a description of the content of your calculation condition line.
Costing item	A costing item is assigned to each costing condition line. In principle, a costing item with any cost range can be assigned to a costing condition line. However, you should make sure that you use a costing item whose cost range corresponds to the intended application area of the respective costing condition.
Calculation Component Description	This field is automatically filled by the selection of the costing component.
Heading no.	The Rubric No. field is used to relate calculation condition rows to each other in order to define a calculation base for percentage surcharges.
Setup time	This field is only included in costing conditions of the type capacity or external labor. It can be used to define costing elements that only refer to the setup time in their calculation.
Share %	The content of the field is used as a percentage share in the formula for calculating the Costing price field of the costing value.
Calculation	The field is a choice field and controls with its option value the meaning of the field Value: **Amount:** If you select Amount, then the specification in the field Value is understood as absolute number input. So you have here the possibility to store fixed values, which will be taken into account in the calculation. In addition, you can provide this line with a rubric number to refer to this line in another line with the setting Percent - so, for example, to consider an additional overhead. **Percent:** If you select Amount, then the specification in the Value field is understood as a percentage number entry. If the line has been assigned a rubric no., then the basis of the percentage is the sum of all calculation condition lines of the same calculation condition with the same rubric no. and calculation amount. **Note:** If the row was not provided with a rubric no., the application uses as the basis for the percentage either the EK price of the origin row of the corresponding calculation value or (if available) the sum of all calculation condition rows of the same calculation condition before the current row with the calculation value. The rubric no. of these lines will then be ignored.

Field	Description
	The meaning of the field depends on the value you have selected in the Calculation field.
Value	**Amount:** In this case, the field contains an absolute amount. Depending on the selected costing item, this amount is part of the EK cost or part of the overhead rate. **Percent:** In this case, the Value field contains a percentage value. The basis of the percentage value is the sum of all calculation values with the same rubric no. If the line has not been assigned a rubric no., the application will use as a basis either the EK price of the origin line of the corresponding calculation value or (if available) the sum of all calculation condition lines before the current line with calculation value and specification of any rubric no. (but only if these calculation condition lines have been interpreted as part of an EK price).

KUMAVISION factory365 provides you with predefined calculation conditions (capacity) for use or further individual additions:

Field	Capacity (Energy)	Capacity (Simple)	Capacity (Complex)
No.	01	KK2000	KK2001
Description	Capacity (energy)	Capacity (simple)	Capacity (complex)
costing item cost		10130	10130
Description of costing item cost		Individual costs machine	Individual costs machine
Costing item overhead	1	10170	10170
Description of costing element overhead costs	overhead costs energy	overhead costs machine	overhead costs machine

No further information is defined in the calculation condition lines of the conditions "Capacity (energy)" and "Capacity (simple)".

Field		Capacity (complex)			
description	machine	worker	scrubber	apprentice	GK machine	GK worker
Kalkulationsbestandteil	10130	10120	10110	10120	10170	10160
Costing component description	Individual costs machine	Individual costs worker	Individual costs elm	Individual costs worker	Individual costs machine	Individual costs worker
Rubric No.	M1	A	A	M1	A	
armament		Yes			

|share %| 100.00|100. 00|100. 00|100.00|100. 00|100.00|100. 00| |calculation/value|2 .20 MW|1. 20 MW|1. 50 MW|0 .90 MW|20. 00 % |10.00 %|

Field	External labor (simple)	External labor (complex)
No.	KK2050	KK2051
Description	Foreign work (simple)	Foreign work (complex)
Costing item costs	10210	10210
Description of costing item costs	individual costs external labor	individual costs external labor
Costing item overhead	10250	10250
Description of costing element overhead costs	Overhead costs external work	Overhead costs external work

No further information is defined in the calculation condition lines of the condition "External labor (simple)".

Field	External labor (simple)	External labor (simple)
Description	Freight	Overhead costs
calculation component	10250	10250
Calculation Item Description	Overhead Costs External Labor	Overhead Costs External Labor
heading no.		
armament		
Share %	100 .00 %	100. 00 %
Calculation / Value	5 .00 %	15. 00 %

Calculation condition (markup)

The calculation condition is used in records of the table Article calculation condition (cannot be activated) with the calculation type markup. This means that you define calculation conditions here which you then assign to some of your articles. The condition will be taken into account in the calculation if it is the calculation of "end products". Here you no longer define the cost price of the article, but the markup up to the target price.

Inforegister General

Field	Description
No.	Number of the calculation condition
Description	Description of the calculation condition
Takeover guide price	In an article calculation you can transfer the determined target price from a calculation proposal into the master data of the calculated article. You specify here, in which field of the master data the determined target price should be transferred: **None:** There is no transfer. **Target price:** The value is transferred to the field target price of the article (table article). **Sales price:** The value is taken over into the field Sales price (table article). **Sales price:** The value is taken over into the sales price table of the article. The entry is made taking into account the sales type and sales code. **Price + Sales Price:** The value is transferred to both the Price field (Article table) and the Sales Price table record.
Sales Type	This field is taken into account when entering the target price in the sales price table. The following selection options are available: • Debitor , • Debitor price group, • All debtors • Campaign It can only be edited if the option "Sales price" or "Target price+sales price" has been selected in the Transfer target price field.
Sale code	This field is also taken into account when entering the target price in the sales price table. What you can select here depends on what you have specified in the "Sales type" field. For example, if you have selected customer price group there, all your customer price groups will be displayed for selection in the "Sales code" field. This makes it possible to define individual markup calculations for special customer groups, campaigns or even for individual customers.

Inforegister lines

Field	Description
Heading no.	The field "Rubric no. " is used to relate calculation condition rows to each other in order to define a calculation basis for percentage surcharges.
Description	Here you enter a description of the content of your calculation condition line.
Calculation	The field is a choice field and controls with its option value the meaning of the field "Formula/Code": **Empty:** If the field is left empty the line has no influence on the execution of the calculation. For example, it can be used for a heading or explanation line. **Value:** If you select "Value", the "Formula/Code" field will contain an absolute number entry. In addition, you can assign a heading number to this line to refer to it in another line with the Percent setting. **Formula:** If you select Formula, the Formula/Code field contains an arithmetic formula. The parts of the formula refer to the heading no. of other costing condition lines. **Costing Item:** If you select Costing Item, the Formula/Code field contains a costing item. Thus, this setting allows you to determine a markup line based on the costing values of a specific costing component. This costing item can also be a to-total. **Project Planned Line:** If you select Project Planned Line, the Formula/Code field contains a project task number.

Field	Description
	The meaning of the field depends on the value you have selected in the "Calculation" field.
Formula/ Code	**Empty:** In this case, the "Formula/Code" field is also empty. The calculation condition line has no influence on the execution of the calculation. For example, it can be used for a heading or explanation line.
	Value: In this case, the field contains a constant (decimal number). You can use this constant also, in which you provide the line with a rubric no. and in another calculation condition line with the calculation formula reference to this line.
	Formula: In this case the field contains an arithmetic formula. A rubric no. can also be used here to determine the calculation basis. In the arithmetic formula, the basic arithmetic operations *+, -, , /, multilevel brackets () and the two special characters %* *and § can be used.*
	% stands for "percent of one hundred". *Example:* *5% A means "5 percent of the sum of all markup lines with rubric no. A". Suppose the total is 100, then the markup is 5 (100/100*5)
	§ stands for "percent of one hundred". **Example:** 5 § B means "5 percent from the total of all markup lines with rubric no. B". Let's say the total is 100, then the markup is 4.76 (100/105*5).*
	Calculation Item:* In this case, a calculation item is selected. If this line is used in a calculation, the application will calculate the calculated field "Multi-level amount per 1 unit". For example, the Costing Ingredient option value allows you to calculate a markup line based on the costing values of a specific costing ingredient. This costing item can also be a to-total.
Rounding Method Code	The field specifies whether the costing price of the costing value that will be created when applying the costing condition in a costing proposal is to be rounded.The type and manner of the desired rounding is thereby controlled with the help of a rounding method defined in the master data. This table is a standard table. You have the option to always round up or down amounts or to round them up or down commercially (in this case, amounts are only rounded up if the digit to be rounded is >=5. For further explanations on how to set up the rounding methods, please use the [Microsoft Dynamics Business Central™ Helpsite (F1)]().

Field	Description
Costing item	A costing item is assigned to each costing condition line. In principle, a costing item with any cost range can be assigned to a costing condition line. However, you should make sure that you use a costing item whose cost range corresponds to the intended application area of the respective costing condition.
Guide price	Tick this field only in the line that should determine your guide price.
Bold	The Bold field controls the visual highlighting of the row in the E+D Order markup calculation window.
Error text	If you specify an incorrect formula, the corresponding error message appears in this field.

KUMAVISION factory365 provides you with predefined calculation conditions (markup) for use or further individual additions:

Field	Impact	Impact Calculation
No.	AUFSCHLAG	KK3000
Description	Surcharge	Surcharge Calculation
Takeover target price	Target price	Target price
Sale	Debitor	Debitor
sale code		

No further details are defined in the calculation condition lines of the condition "Surcharge".

Calculation	Formula/Code	Rounding Code	Calcul. Component	Calcul. Component Description	Price		---	---	---	---	---	---	---	---		HK	Manufacturing costs	Calculation b .	10400				
	Shipping	Formula	HK * 0,5/100		10410	Shipping	
	Quality control		Formula	00 .70% HK		10420	Quality control	
	Sales overhead	Formula	03 .00 % HK	10430	Sales	
	Administration		Formula	02 .50 % HK		10510	Administration				SEK d. Technik	Calculation b .	10520	
SK	Self cost	Calculation b .	10600	
	risk	formula	02 .00 % SK		10610	Risk/profit surcharge	
	Profit	Formula	30 .00 % SK		10610	Risk / Profit	
MRP	Minimum Indicative Price	Calculationb .	10700				
	commission 1	formula	03 ,00 § MRP	10710	Provision	
	commission 2	formula	01 ,00 § MRP	10710	Provision	
	Saccount	Formula	03 ,00 § MRP	10720	Account
	Discount	Formula	10 ,00 § MRP	10730	Discount		RP	Guide Price	Calculationb .	10800				
RPG	Directive price rounded	Calculationb .	10800	PRICE			
	Rounding	Formula	RPG-RP		10810	Rounding income / costs	
	Guide price (incl. rounding)	Calculationb .	10900				Yes

Calculation scheme

The "Costing" application area allows you to evaluate the results of item costing and job costing in so-called costing sheets. Costing schemes have the form of a matrix with a freely definable row layout and a freely definable column layout and are comparable to the account schemes (Microsoft Dynamics Business Central™ Standard).

A costing sheet can basically follow the structure of the costing sheet, but it is usually presented in somewhat less detail by grouping certain items together. For example, you can display the total material costs in the chart of accounts; without subdividing them into direct material costs and material overhead costs. This is possible because when you create a costing proposal, the application automatically assigns each costing value to a costing item.

Any number of calculation schemes can be created. Two calculation schemas are already included in the basic setup of the calculation - namely the standard calculation schema and the overview schema. Of course, these schemes can be further customized according to your requirements.

You can call up the overview using the search term "Kalkulationsschemanamen".

Via "New" in the ribbon you can define a new scheme using the table below.

Field	Description
Name	In this field, assign a name for the calculation schema.
Description	In this field, specify a description for the calculation schema.
Standard column layout	The field "Standard column layout" is used to define the criteria for the calculation in the column view. The column layout stored there will always be used as the basis for the calculation.

Via "Calc. Edit scheme" in the ribbon you have the possibility to define the scheme in detail.

Field	Description
Heading no.	Enter a rubric number for a unique description of the row or to be able to use this row later for a calculation.
Description	Here you specify a description for the line.
Totalization type and totalization	The Totalization type field is a choice field. It determines which records will be included: **Ingredient Sum:** The sum is formed from the amounts taking into account the costing elements of the costing element type. To do this, specify an expression in the Total field to filter the costing components to be used. **Example:** The Total field contains the expression 10100..10299. Specifying this causes the costing sheet row to display amounts resulting from the costing components in the range 10100 to 10299. Only costing items of the type costing item are taken into account. **Total:** The total is formed from the amounts taking into account the costing items of the type total or to-total. To do this, specify an expression in the Total field to filter the costing items to be used. **Example:** The Total field contains the expression 10100..10299. Specifying this causes the costing sheet row to display amounts that result from the costing items in the range 10100 to 10299. Only costing items of the type Total or To total are taken into account. **Formula:** The total is formed from the calculated amounts in other lines of the same costing sheet. To do this, specify an arithmetic formula in the Total field. When doing this, use the Heading No. field to refer to the other rows in the schema in the formula. **Example:** The Add Up field contains the expression A+B. The amounts from all other spreadsheet rows in the same schema that have the value A or B in the Heading No. field are added together.

Field	Description
Display	This field is relevant for the Costing Sheet report. You have the following choices: **Yes:** The row will be printed in the report. **No:** The row will not appear in the report. For example, you can use this option to define a calculation scheme row that contains subtotals of a longer calculation scheme. **If a column is not 0:** The row will only be printed in the report if it is not 0. Thus, rows without an amount will not be printed at all.
New page	If you mark the calculation schema line with a check mark, the report will make a page change at this point.
Bold	If you mark the calculation scheme row with a check mark, the row will be displayed in bold in the report.
Cursive	If you mark the calculation scheme line with a check mark, the line will be displayed in italics in the report.
Underlined	If you mark the calculation scheme row with a check mark, the row will be underlined in the report.
Reverse sign on	If the field of the calculation scheme row is checked, all calculated amounts of the row will be displayed in the Calculation scheme matrix window with reversed sign.

Delete

You can delete the calculation schema via the "Delete" menu item.

Print

Via the menu item "Print" you have the possibility to print the calculation schema considering a defined column layout and the specification of at least one calculation proposal line.

Set up account

The "Insert accounts" function transfers the records of the Costing item table to the present book sheet, creating exactly one costing item row for each costing item. The no. of the costing item is then placed in the Totals field of the costing sheet row.

You can select the costing elements to be transferred individually after starting the function. All costing elements are displayed in an overview. Select the data records you want in the window and then click OK to start the transfer.

Set up column layouts

Via the menu item "Set up column layouts" you have the possibility to define a column layout for the defined calculation schema.

KUMAVISION factory365 already provides you with two predefined calculation schemes for use or further individual additions:

Calculation scheme standard:

Heading no.	Description	Counting type	Counting	Advertisements
10010	Direct material costs	Inventory total	10010	Yes
10011	Direct material costs 2	Inventory total	10011	Yes
10020	Special direct costs material	Inventory total	10020	Yes
10030	Material overhead	Inventory total	10030	Yes
10040	Material surcharges	Component sum	10040	Yes
10045	Freight costs	Inventory sum	10045	Yes
10046	Handling costs	Inventory sum	10046	Yes
10049	Sum of material costs	Sum total	10049	Yes
		Component sum		Yes
10110	Individual costs elm	Component sum	10110	Yes
10120	Single cost worker	Summary	10120	Yes
10130	Individual costs machine	Inventory total	10130	Yes
10150	Overhead costs elm	Component sum	10150	Yes
10160	Overhead labor	Component total	10160	Yes
10170	Overhead machine	Components	10170	Yes
10180	Electricity/ Building	Component sum	10180	Yes
10210	Individual costs external labor	Individual costs	10210	Yes
10250	Overhead costs external labor	Inventory total	10250	Yes

Heading no.	Description	Counting type	Counting	Advertisements
10299	Sum capacity costs	Sum total	10299	Yes
		Component sum		Yes
10300	Individual costs assembly res.	Component sum	10300	Yes
10305	Overhead assembly res.	Component sum	10305	Yes
		Component sum		Yes
10310	Tools	Components	10310	Yes
10320	Certifications	Inventory	10320	Yes
		Component sum		Yes
10400	Total cost of goods sold	Sum total	10400	Yes
		Component sum		Yes
10410	Shipping	Inventory	10410	Yes
10420	Quality control	Component sum	10420	Yes
10430	Sales	Inventory	10430	Yes
10510	Administration	Component total	10510	Yes
10520	Special individual costs engineering	Inventory total	10520	Yes
	(Sales overhead)	Inventory total	10400 ..10499	Yes
	(Administrative overhead)	Component total	10500 ..10599	Yes
10600	Self cost	Sum total	10600	Yes
10610	Risk/profit surcharge	Component sum	10610	Yes
10700	Minimum reference price	Sum total	10700	Yes
10710	Provision	Component sum	10710	Yes

Heading no.	Description	Counting type	Counting	Advertisements
10720	Discounts	Inventory	10720	Yes
10730	Discounts	Inventory	10730	Yes
	(Commission/ Discount/ Discount)	Cumulative total	10710 .. 10799;10810	Yes
10800	Guide price	Sum total	10800	Yes
10900	Guide price (rounded)	Sum total	10900	Yes
		Component sum		Yes
		Component sum		Yes
	Summe Aufschläge	Bestandteilsumme	10401..10499 10501..10599 10601..10699 10701.. 10799 10810	Ja

Calculation scheme overview:

Heading no.	Description	Counting type	Counting	Advertisements
MAT	Sum of material costs	Sum of components	10010 .. 10048	Yes
KAP	Sum of capacity costs	Sum of components	10110 .. 10199	Yes
FREMD	Total external labor costs	Component total	10210 .. 10298	Yes
PROD	Total production overhead	Inventory total	10300 .. 10399	Yes
	Sum of material costs	Sum total	10049	Yes
		Component sum		Yes
10410	Shipping	Inventory	10410	Yes
10420	Quality control	Component sum	10420	Yes
10430	Sales	Inventory	10010	Yes
10510	Administration	Inventory	10010	Yes
10520	Special individual costs engineering	Inventory total	10010	Yes
10600	Self cost	Sum total	10600	Yes
10610	Risk/profit surcharge	Component sum	10610	Yes
10700	Minimum reference price	Sum total	10700	Yes
10720	Discounts	Inventory	10720	Yes
10730	Discounts	Inventory	10730	Yes
10900	Guide price (rounded)	Sum total	10900	Yes
		Component sum	10010	Yes

Heading no.	Description	Counting type	Counting	Advertisements
	Summe Aufschläge	Bestandteilsumme	10401..10499 10501..10599 10601..10699 10701.. 10799 10810	Ja

Article card

Article Calculation Conditions

The article calculation conditions can be called up via the article card. With this mask you can define the calculation conditions specifically for a certain article or a species group for the later calculation.

The "General" area of the article calculation conditions mask initially contains filters that you can use to control your view. When you open the mask, the filters are initially always preset to the article from which you have called up the mask.

Field	Description
Sales Type Filter	Using the sales type filter, you can limit your view to lines of a specific costing type or none. The following selections are available: • Material • Production • None
Species filter	Using the species filter, you can limit your view to rows of a specific type. The following selections are available: • Article • Article category • Product booking group • Stock booking group • All articles • None
Code filter	You can use the code filter to further restrict your view in addition to the species filter on a specific article or similar.
Start date filter	Use the start date filter to narrow your view to specific validity lines.

Using the rows you can directly define the calculation conditions with the help of the table below.

Field	Description
Calculation type	In this field you define for which calculation type you want to define the line.You can choose from: **Material:** The condition is taken into account in the calculation, if it is the calculation of raw materials (purchase items). **Production:** The condition is taken into account in the calculation, if it is the calculation of products (production items).
Type	Using the "Type" field, you have the option of defining the condition line for an article or for faster entry of a type group. The following options are available: • Article • Article category • Product booking group • Stock booking group • All articles
Code	You can limit each selection in the "Type" field to a specific article number or species group number in this field.
Indirect Cost Rate	Enter the indirect cost of the item as an absolute amount at this point. **Note:** If you are working with costing, it is recommended that you do not maintain the default field on the item card.
Indirect costs %	Indirect costs of the item as a percentage value. **Note:** This field is identical to the field on the item card. However, if you are working with costing, it is recommended that you do not maintain the standard field on the item card, but only this one instead.
Overhead Cost Rate (Consumption Capitalization)	Enter the consumption capitalized overhead as an absolute amount at this point. **Note:** Overhead and consumption capitalized overhead can be used in parallel. The only difference is that only either a Costing Condition or a Costing Condition Consumption Activated can be defined. Both do not work.
Cost % (Consumption Activation)	Indicate the consumption-activated costs as a percentage value at this point.

Field	Description
Calculation Condition No.	Enter the appropriate calculation condition.
Start date	Indicates the date from which the calculation line is valid.
End date	Indicates the date until when the calculation line is valid.

Via "Manage" > "Delete" you can delete a selected calculation row.

Article calculation conditions (cannot be activated)

The article calculation conditions (not activatable) can be called up via the article card. This screen allows you to define the non-activatable costs (costs that are not included in the cost price) specifically for a particular article or species group for later costing.

In the "General" area of the article calculation conditions (cannot be activated) mask, there are initially filters that you can use to control your view. When you open the mask, the filters are initially always preset to the article from which you have called up the mask.

Field	Description
Sales Type Filter	Using the sales type filter, you can limit your view to lines of a specific costing type or none.The following selections are available: • Markup • Special Direct Cost • None
Type filter	Using the type filter, you can limit your view to rows of a specific type. The following selections are available: • Article • Article category • Product posting group • Stock posting group • All articles • None
Code filter	You can use the code filter to further restrict your view in addition to the species filter on a specific article or similar.
Start date filter	Use the start date filter to narrow your view to specific validity lines.

Using the rows you can directly define the calculation conditions with the help of the table below.

Field	Description
Costing type	In this field you define for which costing type you want to define the line. You can choose from: **Surcharge:** The condition is taken into account in the calculation, if it is the calculation of "end products". You define here no longer the cost price of the item, but the markup up to the target price. **Special direct costs:** The condition is defined the costs that are incurred for a product, but are not quantity-dependent.
Type	Using the "Type" field, you have the option of defining the condition line for an article or for faster entry of a type group. The following options are available: • Article • Article category • Product booking group • Stock booking group • All articles
Code	You can narrow down each selection in the "Type" field to a specific article number or species group number in this field.
Calculation Condition No.	Indicates the corresponding calculation condition.
Calculation Condition Description	Gives the description for the calculation condition selected in the "Calculation Condition No." field.
Calculation condition no. (E+D)	Indicates the corresponding calculation condition (E+D).
Calculation Condition Description (E+D)	Gives the description for the calculation condition selected in the "Calculation Condition No. (E+D)" field.
Start date	Indicates the date from which the calculation line is valid.
End date	Indicates the date until when the calculation line is valid.
Special direct costs	Indicates possible special direct cost values.
Quantity per unit	Indicates the quantity per unit.
Special direct costs per unit	Indicates the special direct costs per unit.
Costing item no.	SEK Specifies the costing item for the special direct costs.

Field	Description
SEK Costing Component Description	Indicates the description for the costing component selected in the "SEK Costing Component No." field.
Project no.	Indicates a possible project number.

Via "Manage" > "Delete" you can delete a selected calculation row.

Calculation specifications

You can use the "Costing specifications" to specify different lot sizes in advance for the cost of goods manufactured simulations, which are then taken into account in the subsequent costing.

Field	Description
No.	This is assigned automatically on the basis of a stored number series.
Item no.	This is automatically assigned with the article number from which you started the call.
Description	Corresponds to the item description.
Start date	From when should this costing specification apply.
End date	To when is this costing specification valid.
Lot size	Indicates the lot size number.
Standard	This field is queried when calculating the cost price. If this is set and the checkbox "Only standard costing specifications" is also set in the function "Costing price (fixed)/Calculate target price for item", then only lot sizes that have the checkmark set in the costing specifications are used.

Job costing conditions

You call up the Costing conditions mask work center via the work center group card. Via this mask you can define the costing conditions you want to assign to your capacities (work center groups and work centers). The condition is taken into account during costing as soon as a capacity is addressed (e.g. because a routing is stored with a production article).

In the "General" area of the Calculation conditions mask workstation, there are initially filters that you can use to control your view. When you open the mask, the filters are always preset to the workstation group from which you called the mask.

Field	Description
Type filter	Using the type filter, you can restrict your view to lines of a specific type or none.The following selections are available: • Department • Workstation group • Workstation • Workstation line • None
Code filter	You can use the code filter to further restrict your view in addition to the type filter on a specific workstation group or similar.
Start date filter	Use the start date filter to narrow your view to specific validity lines.

Using the rows you can directly define the calculation conditions with the help of the table below.

Field	Description
Type	Using the "Type" field, you have the option of defining the condition line for a workstation group or similar. The following options are available: • Department • Workstation group • Workstation • Work plan lines
Code	You can limit each selection in the "Type" field to a specific workstation group or similar in this field.
Version code	Specify the appropriate version code.
Operation No.	Indicate a corresponding operation.
Indirect cost rate	Enter the indirect costs as an absolute amount at this point.
Indirect costs %	Enter the indirect costs as a percentage value at this point.
Calculation Condition No.	Enter the appropriate calculation condition.
Calculation Condition Description	Indicates the description for the calculation condition selected in the "Calculation Condition No." field.
Start date	Indicates the date from which the calculation line is valid.
End date	Indicates the date until when the calculation line is valid.

Via "Manage" > "Delete" you can delete a selected calculation row.

Article calculation

The costing proposal is used for the cost of goods manufactured calculation. You can call this up directly from the respective article card via the menu ribbon.

Calculation proposal

In the costing proposal lines, historically already preceding costings are displayed (if available).

Field	Description
Warning	**Blank:** The proposal line does not contain any errors and can be accepted if necessary. **Errors:** The proposal line contains errors that can be viewed and corrected via the error log. After correction, the proposal must be run through again.
Calculation Run Seq. No.	Indicates a sequential number per proposal line. For proposal lines that contain different article costing specifications (lot sizes), these are displayed with the same sequential number.
Calculation Run Description	Indicates the description that has been specified for the respective calculation run.
Item no.	Indicates the article number for which the suggestion line was calculated.
Description	Indicates the description of the item.
Procurement method	Indicates the stored procurement method of the item.
Status	Indicates the status of the proposal line. A distinction is made here between: • Empty • Preferred • Rejected • Transferred For more information, see the section "Change status".
Lot size	Indicates the lot size on which the proposal line was costed. **Note:** Please note that the lot sizes on the item card as well as in the costing specifications can be used for costing.
Calculation date	Indicates the date when the proposal line was calculated.
Cost Price (Fixed)	Indicates the deposited "Cost Price (Fixed)" on the item card.
New cost price (fixed)	Specifies the new cost price (fixed) of the proposal line.
Cost % (Consumption Activation)	Displays , (if available) the "Cost % (Consumption Activation)" determined from the costing definitions.
Overhead rate (consumption capitalization)	Displays, (if available) the "Overhead rate (consumption capitalization) determined from the costing definitions.

Field	Description
Guide price	Indicates the previous guide price.
New target price	Indicates the recalculated target price.

Calculate set price (fixed)/direct price for article

When this function is executed, the cost price for the corresponding item(s) is calculated.

Field	Description
Calculation date	Specifies the calculation date. This is used to take into account the start and end dates of purchase prices, costing conditions or even bills of materials and routings for costing.
Calculation Run Description	This input is a mandatory input and defines what kind of calculation it is.
Standard costing specifications only	Here it can be defined whether the lot size of the article to be calculated is to be drawn from the article card or the calculation specification. If the switch is not activated, the stored lot size of the costing specification (if available) is treated with priority than that of the article card. If the switch is set, only the stored lot size with the identifier=standard (if available) is treated with priority than that of the article card. **Note:** This applies only to the first level, that is, the article to be costed.
Costing Proposal Name (Plan)	Specification of the costing proposal (plan) if simulations are performed. **Note:** In order to determine the correct cost price based on the structure, which is then also written back to the item card, this field must not be filled in.

Change status...

This function allows you to set the status of the costing proposal line according to the selection (Preferred or Rejected) in the "Status" field.

The status is relevant for the function execution "Accept costing proposal (preferred)". Only costing proposal lines with the status "Preferred" are adopted.

When the price is accepted, the "Status" field is set to "Accepted".

Adopt costing proposal (preferred)

Using this function, the values from the costing proposal lines with the status=Preferred are taken and transferred to the article card.

When executing the function, it is also possible to perform a revaluation at the recalculated price for the items that are still open.

Field	Description
Posting date	Required for the revaluation ledger sheet. Corresponds to the valuation date
Fill revaluation book.sheet	Will be selected if you want to revaluate the currently still open article items. Depending on the selection of the field "Transferred from" either the whole structure can be revaluated or only the article from the calculation proposal. The revaluation book sheet can still be controlled afterwards. It must always be posted manually.
Voucher no.	Indicates which voucher number is to be written to the revaluation ledger sheet.
Article Book. sheet template	Indication of the revaluation bookb sheet
Article Book. sheet name	Revaluation book sheet name
Transfer from	**One level:** Only the prices from the item from the costing proposal line will be updated. The items in lower levels will not be updated. **All levels:** All prices and price fields of all items that occur in the structure will be updated.

Article costing specifications

The "Article costing specifications" can be used to carry out manufacturing cost simulations with different batch sizes. As a rule, these defaults are already defined in advance in the "Costing defaults" on the respective article card and displayed accordingly at this point. If required, changes and/or entries can be made here.

!!! note "Note This always only affects the article that is currently being costed. If costing specifications are also defined for assemblies in subset levels, these are not taken into account. Here, the lot size is always taken from the article card.

Field	Description
No	This is assigned automatically on the basis of a stored number series.
Article No.	This is automatically assigned with the article number from the data record of the calculation proposal line.
Description	Corresponds to the item description.
Start date	From when this calculation specification should apply. Reference date is the "Calculation date" when executing the function "Calculate set price (fixed)/Directive price for article".
End date	To when is this calculation specification valid. Reference date is the "Calculation date" when executing the function "Calculate set price (fixed)/Directive price for article"
Standard	This field is queried when calculating the cost price. If this is set and also at the function "Calculate cost price (fixed)/Directive price for article" the hook "Only standard costing specifications" is set, then only lot sizes are used, which have the hook set in the costing specifications. **Note:** Lot size from the article is not used, if valid costing specifications were found.
Remark	Indicates whether a remark exists for this calculation specification. Remarks can also be stored here.
Corrected on	Set by the system when the record is created or corrected.

Note

If there are several valid entries, the system automatically creates a separate calculation for each valid entry.

Costing proposal (planned values)

With the costing proposal (planned values) you can simulatively calculate proposals with modified planned values and also transfer them via batch processing. Since the basis for the cost of goods manufactured calculation is always the master data, the exchange of the articles is not possible at this point. Only amount values and cost values can be changed (no times and no component quantities).

Via the calculation proposal (plan values) mask you can first select an already created proposal for editing via the "Name" field or define a new one via "New" by entering "Name" and "Description".   You can use the function calls "Propose article costing condition", "Propose capacity unit price (costing)", "Propose article unit price (fixed) (costing)" and "Propose costs according to structured BOM" to redefine the respective stored planned values in batch processing.

The function call opens a mask on which you can define new plan values in the option areas and limit your change project to certain criteria by means of the filter area.

Fixed factor:
These radio buttons allow you to define fixed values for your changes, which will be taken into account over the run and written into the "New value fields" provided for this purpose.

Correction factor:
You can use these option fields to specify factor values that are to be multiplied by the original values. Via the run, these results are also written into the "New value fields" provided for this purpose.

Via the menu item "Accept costing proposal (plan values)" you can finally accept the new plan values.

Note

Please note that only valid condition values are considered for replanning. For example, if an end date of an item calculation condition is in the past, no change value will be written into the "New value field" for this record.

Costing proposal (planned conditions)

With the costing proposal (planned conditions) you can change the costing conditions defined in the system via batch processing. The logic here corresponds to that of the costing proposal (planned values).

Retrieve error log

The error log lists all errors that occurred during the calculation. By clicking on the integrated lookups or the call "Display" in the menu ribbon, the errors can be edited directly from the mask.

Note

Please note that you will need to recalculate the costing after you fix the error.

Calculation values (matrix)

In this view the rows of the account scheme are superimposed with the columns of the column layout. According to the filters entered, the values are displayed. By selecting a predefined column layout for comparison, a comparison of two calculation proposals is possible at this point.

Costing values (structure)

In this view you see all considered costing values in a structure detailed on cost type level. Thereby you have the possibility to view the origin documents on row level via the call of the same name.

Structure list

Using the structure list, you can view a costing proposal aggregated over all costed levels and their costs.

Field	Description
Calculation proposal 1 Filter	Select a calculation proposal that you want to have displayed.
Including overhead costs	Activate the check box if you want to consider the overhead costs included in the respective costs.
Material only	Activate the check box if you only want to view the material costs.
Cost selection	You can use the cost selection to specify the BOM depth over which you want to display the costs. **Single-level:** Displays the costs of the top level of the BOMs. **Multi-level:** Displays the costs multi-level, broken down to the last assembly/ component. **Multi-level:** Displays the costs multi-level, broken down to the last assembly/ component.

Structure list comparison

With the help of the structure list comparison you can directly compare two costing proposals. This structure list comparison allows you to see at a glance, through visualized representation in the "Symbol Deviation" fields, at which level a change to the previous proposal has taken place.

Field	Description
Calculation Proposal 1 Filter	Select a calculation proposal that you want to compare with another proposal.
Calculation Proposal 2 Filter	Select another calculation proposal that you want to compare with the one already selected from the "Calculation Proposal 1 Filter"
Including overhead	Activate the check box if you want to consider the overhead included in the respective costs in the comparisons.
Material only	Activate the switch if you only want to compare the material costs.
Cost selection	You can use the cost selection to specify the BOM depth over which you want to display the costs. **Single-level:** Displays the costs of the top level of the BOMs. **Multi-level:** Represents the costs multi-level, broken down to the last assembly/component.

After your selection, you then execute the "Compare" function in the ribbon to compare the values in the row display.

Quotation costing

In a quotation, you can transfer the corresponding article lines for customer-specific inquiries into a calculation in order to modify them according to customer-specific requirements and to calculate them separately. The calculated cost price and sales price can then be transferred to the offer.

Calculate manufacturing costs

With the "Calculate production costing" function, you first initiate the costing for the selected article line. When the function is executed, a "Simulated production order" is automatically created. Depending on the setting in the "Valuation and calculation setup", the production order will then also open automatically or not.

For item rows for which a calculation has already been created, the row in the "Calculation tracking rows available" field has the "Yes" identifier. By clicking on the identifier, the costing lines can be viewed.

Calculation tracking lines

This call opens the costing trace lines. The links between the production order and the quotation/order are displayed in the calculation tracking lines. Several production order lines can be linked to one quotation line.

Field	Description
Status	Indicates whether the quote line is linked to a calculation. When selected, the calculation tracking lines will be opened.
FA No.	Displays the FA number. This can be an FA in "Simulated", "Firmly Scheduled", "Released" or "Finished" status.
FA line number	Indicates to which FA line number the offer / order line number is linked.
Project no.	Indicates which project it is
Project task no.	Indicates which project task no. is involved.
Project plan line no.	The project plan line number is shown here.
E+D project no.	Indicates which E+D project number was entered in the production order.
Production order type	Displays the production order type from the production order.
Article No.	Displays the article number from the production order.
Variants Code	Displays the variant from the production order.
Description	Display the description from the production order.
Number of costing proposals (E+D)	Number of costing proposals (E+D) Indicates how many different costings have been carried out for this production order. There is no differentiation between target and actual costing.

Delete

By executing the "Delete" function in the ribbon, you can delete a calculation line. If there are no more calculation lines after executing the function, the sales line will be marked with "No" in the "Calculation tracking lines available" field.

Display E+D order

With this call you can display the corresponding E+D order. At this point, the structure of the E+D order is omitted and only the fields/calls relevant for the calculation are explained in more detail. Further information about the E+D order can be found here.

Additional costs

Additional costs" allows you to take into account customer-specific quotation requests for the calculation. In addition to general additional costs, you can also include additional resources, articles or similar. Via the call "Costing condition" you establish the connection between the additional cost line and the costing elements and thus enable an account assignment of the results of a costing.

Components

Via the "Components" you have the possibility to change prices and quantities, exchange items and add overhead costs if necessary.

Work plan

Through the "Routings" you have the possibility to change prices, swap operations and add overhead costs if necessary.

Add calculation tracking manually

With this function you can manually add already calculated E+D order lines and take them into account for the current sales line if required.

E+D markup calculation

If the customer asks for certain discounts, the function "E+D markup calculation" is especially helpful, this allows you to run through possible markup calculations for an offer.

Costing proposals (E+D)

The costing proposals (E+D) are structured in the same way as the conventional costing proposals. You can use the "Change status" and "Adopt costing proposal (preferred)" functions to adopt the calculated values for the sales line. Further information can be found here.

Metal Tax Surcharge

General

The app "KUMAVISION Metal Tax Surcharge" for KUMAVISION factory365 enables a simple administration and automatic booking of all stock values in purchasing and sales. Based on the precious metal weight share of an item, with a corresponding base price and possible additional purchase costs, a surcharge/discount value is automatically calculated in the offer and order and also automatically posted in the further process.

In addition, any number of surcharges can be managed per article, since a separate surcharge line is generated for each precious metal component. Furthermore, the precious metal weight of assemblies or products can be easily determined via the parts list using a special function.

> Note

Please note that the use of the app requires a possible additional licensing.

Establishment

KUMAVISION Module Setup

The metal control surcharge is an activation module, the use of which is only possible with additional licensing and activation. To activate the module, call up the "KUMAVISION module setup" via the user search and activate the "Activate metal surcharge" button. Provided that you have licensed the module, the functionalities are available to you in the full extent.

Article Surcharges/Discounts

Using the surcharges/discounts, you can map additional costs of an item in Microsoft Dynamics Business Central™ and thus ensure correct warehouse valuation.

The precious metal costs also belong to the surcharges shown and must be entered in the system in advance. To do this, first call up the "Article surcharges/deductions" via the user search.

Further information can be found in the [Microsoft Dynamics Business Central™ Helpsite (F1)](#).

Warehouse facility

An additional info tab "Metal surcharge" has been integrated in the warehouse setup. On this info tab, you can use the "Metal surcharge" field to store the previously defined article surcharge/discount. By the assignment you define the calculation basis of the metal surcharge in the sales and purchase documents.

Article metal list

In the article metal list, all article metals are initially listed with their base prices and percentage delivery costs.

Field	Description
Code	Specifies an abbreviation for the metal.
Description	Specifies a description of the metal.
Base price	Indicates the base price for the metal on which the quotation is calculated.
Delivery costs	Indicates possible delivery costs as a percentage.

Metal quotation

In the metal quotations you manage the current exchange-dependent price quotations for the metals.

Filter area

Field	Description
Current metal code	Selection on the metal code on which the filtering is to be set.

Lines

Field	Description
Metal code	Specifies the corresponding metal code of the record.
Offer date	Specifies the offer date of the record.
Offer price	Specifies the offer price of the record. **Note**
The offer price always refers to 100 kg.	

Article metal content list

You can call the article metal part list on the one hand via the user search or on the other hand via the article card via a lookup in the field "Metal list".

Via the article metal parts list you define which metals an article consists of or which surcharges are to be taken into account for an article for sale/purchase.

Field	Description
Item no.	Indicates the part number to which the metal allocation applies.
Metal code	Specifies the assignment of the corresponding metal code for the item.
Net weight	Indicates the net weight of the respective item, which is indicated on the item card in the "Net weight" field.
Metal weight	In this field you can maintain the metal weight in kilograms.
Start date	Here you can specify a date from which the surcharge is to be taken into account.
Berech. Sales surcharge	Check the box if you want the surcharge to be included in the sales documents.
Berech. Purchase. Metal surcharge	Check the box if you want the surcharge to be included in the purchasing documents.

Surcharges in the sales process

In the sales documents, the overhead rates are calculated using the following formula:

$$Surcharge\ Price\ [\text{€/km}] = Metal\ Weight\ [\text{kg/km}] \times \frac{(DE}{}$$

As soon as you enter an article line with a quantity specification in a sales document, the system automatically determines the corresponding surcharge rates for you and automatically inserts them in the sales document in the form of surcharge/discount line(s).

In case of a quantity change of the article line, a quantity change of the surcharge/discount line(s) takes place automatically as well.

If you convert a sales quotation into a sales order, use the "Copy document" function or create a subsequent credit note, the addition/sales lines will also be taken into account.

Surcharges in the purchasing process

In the purchasing documents, the overhead rates are calculated using the following formula:

$$\textit{Surcharge Price } [\text{€/km}] = \text{Metal Weight } [\text{kg/km}] \times \frac{(DE}{}$$

As soon as you enter an article line with a quantity specification in a purchasing document, the system automatically determines the corresponding surcharge rates and automatically inserts them in the purchasing document in the form of surcharge/discount line(s).

In case of a quantity change of the article line, a quantity change of the surcharge/discount line(s) takes place automatically as well.

If you convert a purchase request to a purchase order, use the "Copy document" function or create a subsequent credit note, the surcharge/discount lines will also be taken into account.

Metal weight across multiple BOM levels

With the action "Calculate metal weight" in the menu ribbon of the part card, the metal weights of the production BOM components in the assemblies can be written into the fields "Metal weight" and "Single-level metal weight" and "Multi-level metal weight" via the production structure BOM.

Scheduling Agreement Management

General

For series production, delivery schedules with preview quantities and production-related JIT delivery schedules are sent to the suppliers, mostly electronically. On the other hand, the suppliers send delivery note data to the manufacturers, which in turn are already available to the customer at the time of physical goods receipt. Payment can then be settled either via invoices or via the credit memo procedure.

Delivery schedules serve as the central core for processing. They form a symbiosis between sales orders and sales planning. Together with master scheduling agreements, they also form an extension of order control. They offer similar functions to orders, but when order quantities and deadlines change dynamically, special functions come into play. The dynamics results from the so-called delivery schedules or JIT delivery schedules, which are usually received periodically.

The quantities and dates mapped in the scheduling agreements are taken into account in inventory planning and logistics for shipping. The quantities and dates are entered in the scheduling agreements via the "Incoming documents". All group-wide scheduling agreements with price information can be displayed in the outline scheduling agreements.

Establishment

Roll Center

A corresponding role center was designed for managing the scheduling agreements. This gives users a direct overview of their worklist and allows them to conveniently navigate to the corresponding overviews.

The role "Delivery schedule editor" can be assigned via "My settings". The role center is available after confirming with "Ok".

Scheduling Template

Using the scheduling template, it is possible to define which type of call-off quantities are to be taken into account in logistics or production.

Note

The combination of JIT delivery schedule with preview or delivery schedule is not possible. JIT delivery schedules dominate over delivery schedules and preview quantities. JIT call quantities within the same date range replace preview quantities.

Field	Description
Type	The following selections are available: **Planning code** With the selection "Planning code" you define a scheduling template for production. You use the selection in the "Production Code" field in the scheduling agreement to control which quantities in the scheduling agreement are relevant for production. **Logistics code:** With the selection "Logistics code" you define a scheduling template for logistics. You use the selection in the "Logistics code" field in the scheduling agreement to control which quantity in the scheduling agreement is relevant for logistics.
Code	At this point, assign a meaningful abbreviation for the scheduling template.
Description	Provide a brief description for the scheduling template.Planned Check the box if you want the planned quantities ("Quantity preview" field) to be included in the delivery schedule.
Retrieval	Place a check mark if the released quantities ("Delivery schedule quantity" field) are to be taken into account in the scheduling agreement.
Daily call-off	Place a check mark if the quantities finely called off (field "Quantity finely called off") are to be taken into account.
Disposition method	You use the MRP method to specify how "Floating Goods" (goods that are on their way to the customer) are determined when a new forecast delivery schedule is copied into a scheduling agreement. The following options are available: **Empty** This option only applies to the production code. For logistics code, one of the other three options must always be selected. **Date basis without residual quantity allocation:** The quantities of the new delivery schedule replace the previous values. Quantities already delivered on a date are not taken into account and are omitted. **Date offset with residual quantity offsetting:** The quantities of the new delivery schedule first the previous values. But delivered quantity to a date remain and are added to the new delivery schedule quantities corresponding. **Cumulative Quantity:** The quantities of the new forecast delivery schedule replace the previous values. The difference between own cumulative quantity and customer cumulative quantity is considered as "floating goods" and is deducted from the first forecast delivery schedule quantity accordingly.

Article reference

The customer article numbers are mapped via the article references. Under Reference type referring numbers for vendor as well as customer can be entered. The reference type barcode can be used to define barcodes, e.g. for the EAN number.

To set the article references, call up the desired article card. You can access the article references via the ribbon by selecting "Related" > "Articles". For more information on article references, see the [Microsoft Dynamics Business Central™ Helpsite (F1)](#).

Delivery schedule facility

In the "Delivery schedule setup" the basic setup of the delivery schedule management is made, which will be explained to you in more detail below:

Inforegister General

Field	Description
Min. diff. Cumulative quantity for zero setting	Specifies the minimum difference that must be reached for zeroing the cumulative quantities.
Progress ct. Proposal Name for zero position	In this field you define a default sheet, which will be preset for zeroing in the cumulative quantities proposal.
Default In Transit Code	In this field, a transit storage location must be specified as the default for consignment processing.
Hierarchy type code Group assignment	Defines a hierarchy type code for the group assignment.
Mandatory field check	The use of the mandatory field check for scheduling agreements can be activated separately at this point. Further information on setting up mandatory field checks can be found [here](#).

Numbering

The number series for the delivery schedule management are defined on the "Numbering" info tab.

Group hierarchy

The master scheduling agreement is primarily used for a corporate group and the conventional scheduling agreements for plants. Therefore, it is essential for the system to know which customer (as a plant) belongs to which customer (as a group).

For this purpose, a group hierarchy is used via the hierarchies in the system. Which hierarchy type is used for the group assignment. Specify in the Hierarchy Type Code Group Assignment field in the scheduling agreement setup. A hierarchy type can be used with the customer as the origin and destination.

The group assignment itself is made via the customer and the [here archie relationship](#)..

Scheduling Agreements

Contrary to a sales order, a scheduling agreement always refers to a customer and an article or an article variant. Therefore, the article number is not in the lines, but in the header.

To create a new scheduling agreement, call up the "Scheduling agreements" via the user search. The following table explains the fields of the scheduling agreement in more detail.

Inforegister filter representation

Using the filter area, you can change the display of the delivery schedule for clarity:

Field	Description
Display details	The quantities preview, forecast delivery schedule, JIT delivery schedule, PUS are displayed summarized in the lines as daily, weekly, monthly, quarterly or annual quantities, depending on the selection.
Preview / Retrieval	You can filter the display to a specific version of the type=preview. **Note** Only the versions of the type=preview are available in the selection.
Daily call-off	You can filter the display to a specific version of the type=fine call. **Note** In the selection, only the versions of the type=fine call-off are available.
PUS	You can filter the display to a specific version of the type=PUS. **Note** Only the versions of the type=PUS are available in the selection.
Rounding factor	This allows you to display the quantities (preview, forecast delivery schedule, JIT delivery schedule and PUS) rounded. The following selection options are available: **None:** The quantities are displayed without rounding **1** The quantities are displayed rounded to whole numbers **1000** The quantities are displayed to you /1000.
Optimized display	Activate the switch if you only want to display lines with actual quantity values. Otherwise, depending on the display details filter, you will also be shown days, weeks, months, quarters or years for which no requirement quantities are available.

Inforegister General

Field	Description
No.	This field is used to identify the scheduling agreement. The number must be unique and can be up to 20 characters. The number field can be set to the default value by using the number series option in the delivery schedule setup. However, it can also be created manually.
Sales to customer no.	This field contains the customer number that you have assigned for it in your system.
Delivery to code	Indicates the address to which the products will be delivered. With this field you can enter a different delivery address.
Item no.	This field contains the article number of the customer article that you have assigned for it in your system.
Variant code	This field contains the code of a variant of the item, if any.
Article description	Indicates the description of the selected item.
Item description 2	Specifies an additional description for the selected item.
Customer item no.	This field contains the customer item number. For this purpose, it must be created as an article reference beforehand in order to be selected here (see Setting an [Article reference](#)).
Supplementary part number	Indicates a supplementary part number. This field serves only as an information field.
Customer item no. export option	Indicates the customer item no.
Accept incoming document	Use this field to specify how Incoming Receipts can be accepted. You can choose from the following options: **Manual** The incoming receipts must be accepted manually. Typically, when an electronic processing is newly set up, and each receipt must be tested again beforehand to be on the safe side. **Automatic** Incoming documents are processed automatically when they are processed electronically. Typically, when the electronic processing is running securely and user intervention is no longer required. **Locked** An incoming document cannot be accepted and leads to an error message there. Typically, when there are problems in the delivery schedule and further reading of incoming documents must be prevented.

Field	Description
	This field controls the possible use of the scheduling agreement in stock planning (also called MRPII run) or logistics. This can prevent further processing in the event of incorrect data within the scheduling agreement. The following options are available:
	Empty
	This option is the default value. Here the scheduling agreement is visible and usable in the inventory planning as well as in the logistics.
Locked	**Inventory planning**
	The scheduling agreement is not visible in inventory planning (both purchasing and production) and no longer triggers any requirements there. However, stocks can still be delivered via logistics.
	Logistics
	This option is the strongest lock. The scheduling agreement does not trigger requirements in stock planning, nor can stock be delivered via logistics.

Field	Description
Status	A scheduling agreement can assume the following statuses: **New** Is the initial status for new scheduling agreements. It indicates that not all fields are correctly defined yet. Therefore, it is neither demand-triggering nor can a logistics document be created for it. Likewise, no incoming documents can be accepted yet. **Open** After a scheduling agreement has been completely set up, this status is necessary for each change of modifiable fields. As with a sales order, this only affects the creation or posting of logistics documents. For this, the status must be set to Released. **Share** In this status, the delivery schedule is read-only. **Ends** Once a scheduling agreement has been completed, it can be archived via this status. It then also no longer triggers any requirements, no logistics document can be created for it, and no incoming documents can be accepted. If the status of a scheduling agreement is changed from "New", a check is carried out to see whether an incomplete scheduling agreement already exists for the uniqueness criteria. This is important so that only one scheduling agreement can be found via the incoming documents. The criteria are thereby: - Sales to customer no. - Delivered to code - Item no. - Variant code - Usage key - Status [Open to Released]
Outline delivery schedule no.	If the scheduling agreement was created from an outline scheduling agreement, this field contains the outline scheduling agreement number.
Logistics code	This field is used to define a scheduling template for logistics. It controls which quantities are relevant for logistics.
Production code	This field is used to define a scheduling template for production. It controls which quantity is relevant for production.
Cost center code	Specifies the code for the cost center (dimension 1) that you have set up in the "Financial accounting setup".

Field	Description
Cost unit code	Specifies the code for the cost object (dimension 2) that you have set up in the "Financial accounting setup".
Plant	Indicates a possible plant at the customer. This field is an information field.
Unloading point	Indicates a possible unloading point. This field is an information field.
Point of consumption	Indicates a possible consumption point. This field is an information field.
Storage location at customer	Indicates the storage location at the customer. This field is an information field.
Usage key	This field is used to define which use the item has. It is used to distinguish uniqueness when the same item is sent to the same customer to the same delivery address, e.g. once as serial parts and once as spare parts. The following options are supported: - blank - Series - Replacement general - Series and use - Try - Pilot - Additional requirements - Initial sample - Pattern - Other This field is an information field.
Contract/Order No.	This field corresponds to the document or order number. It is entered in the "External document number" field in the created sales order when a delivery is made.

Inforegister lines

The lines of a scheduling agreement do not really exist. Rather, the different quantity types from the items are displayed to the user at runtime similar to the sales lines. However, there is not only one quantity column, but four and the actual quantity field, which represents the relevant quantity depending on the logisitkcode.

Field	Description
Delivery date	Specifies the date on which the goods are to be delivered.
Planned goods issue date	Specifies the date when the goods are to be shipped from the warehouse.
Goods issue date	As in the sales order, this date corresponds to the due date in the warehouse as a requirement and is therefore relevant when creating the logistics documents.
Outgoing Stock cycle time	Specifies the time needed to prepare the goods from the storage location for goods issue.
Transport time	Specifies the time required for delivery of the goods to the customer.
Quantity preview	These quantities are used as preview e.g. in monthly rhythm.
Quantity delivery schedule	These quantities correspond to a finer subdivision of preview quantity. Therefore, they replace preview quantity within the same date period. E.g.: this quantity is made on days.
Quantity JIT call-off	These quantities are usually sent on a daily basis. They do not replace any preview or delivery quantities, but exist in parallel.
Quantity PUS	This quantity is filled in the special call-off PickUp Sheet. For this purpose, sales order lines already exist before delivery in exactly the same quantities. PUS quantities do not replace each other in new call-offs, but are always additive.
Target cumulative quantities	Starting from the cumulative quantity received from the customer, the target cumulative quantity is determined here using the relevant forecast delivery schedule quantity.
Quantity	This quantity depends on the logistics code and shows the actual relevant quantities.
Quantity supplied	This field indicates the quantity delivered from the set.
Remaining order quantity	This field displays the remaining delivery schedule quantity as the difference between the quantity and the quantity delivered.

Note

If an overdelivery takes place, this is offset in the remaining delivery schedule quantity and the next quantity is already reduced.

Inforegister delivery

Field	Description
Delivered to code	Specifies the address to which the products will be delivered. With this field you can enter a different delivery address.
Delivered to Name	Specifies the name of the recipient of the delivery.
Delivered to name 2	Specifies additional name information of the recipient of the delivery.
Delivered to name 3	Specifies additional name information of the recipient of the delivery.
Delivered to address	Specifies the delivery address.
Delivered to address 2	Specifies additional address information.
Delivered to zip code / city	Specifies the postal code of the associated city of the delivery address.
Delivered on site	Specifies the location of the associated delivery address.
Location code	Specifies the storage location from which stock items are to be delivered to the named customer by default.
Storage bin code	Specifies the bin location from which stock items are to be delivered to the named customer by default.
Delivery code	Specifies the code for the delivery agent transport type used for this customer.
Carrier transport type code	Specifies the code that represents the default carrier shipment type code that you use for this delivery schedule.
Transport time	Indicates the time between the delivery of goods from the warehouse to the delivery.
Outgoing Stock cycle time	Specifies a date formula for the time required to make items from this storage location ready for delivery.
Ames-T	This switch serves as information. With the help of AMES-T (Advanced Mobility Engineering and Services for Transportation), the procurement process within the Volkswagen Group is improved. You receive this information from your customer via the incoming documents.
Consignment processing	Specifies that the scheduling agreement is consignment processing.

Framework delivery schedule

Outline scheduling agreements are a combination of several scheduling agreements. Therefore, it is well suited for later evaluations, since all existing scheduling agreements with the respective plant are mapped for one article. For this reason, an outline delivery schedule is primarily created for corporate groups.

The master scheduling agreement takes on another important meaning when the agreed prices and planned quantities are determined. Therefore, one and the same scheduling agreement can occur several times in a master scheduling agreement with different prices and planned quantities. The fields "From date" and "To date" are used to determine which line is then valid.

To create an outline delivery schedule, call it up via the user search. Via "New" in the menu ribbon you can define a new framework scheduling agreement with the help of the table below.

Inforegister General

Field	Description
No.	This field is used to identify the framework delivery schedule. The number must be unique and can be up to 20 characters. The number field can be set to the default value by using the number series option in the scheduling agreement setup. However, it can also be created manually.
Customer no. (Group)	This field contains the customer number that you have assigned for it in your system.
Delivered to Name	Specifies the name of the recipient of the delivery.
Item no.	This field contains the article number of the customer article that you have assigned for it in your system.
Variant code	This field contains the code of a variant of the item, if any.
Article description	Indicates a description of the item.
Item description 2	Indicates a further description of the item.
Customer item no.	This field contains the customer item number.For this purpose, it must be created as an article reference beforehand in order to be selected here (see Setting an [Article reference](#)).
Status	A master scheduling agreement can assume the following statuses: **New** Is the initial status for new framework scheduling agreements. It indicates that not all fields are correctly defined yet. **Open** After a master scheduling agreement has been completely set up, this status is required each time modifiable fields are changed. **Share** In this status, the delivery schedule is read-only. **Ends** Once an outline delivery schedule is complete, it can be archived using this status.
Logistics code	This field is used to define a scheduling template for logistics. It controls which quantities are relevant for logistics.
Production code	This field is used to define a scheduling template for production. It controls which quantity is relevant for production.

Field	Description
Cost center code	Specifies the code for the cost center (dimension 1) that you have set up in the "Financial accounting setup".
Cost unit code	Specifies the code for the cost object (dimension 2) that you have set up in the "Financial accounting setup".

Inforegister lines

Field	Description
Delivery schedule no.	Specifies a scheduling agreement number associated with the master scheduling agreement.
Customer no. (plant)	Specifies the customer number (plant) defined in the associated scheduling agreement.
Delivered to code	Specifies a possible alternate address for the associated scheduling agreement.
From date	Specifies the date from which the plan line is valid.
Until date	Specifies the date until when the plan line is valid.
Planned quantity	Specifies the agreed quantity for the framework scheduling agreement line.
Price origin	Which price is actually used for the scheduling agreement is determined by the Field Price origin fixed: **Invoice to debtor** The standard pricing for the invoice debitor from the Delivery schedule. **Sales to debtor** The standard pricing for the sales debitor from the scheduling agreement applies. **Framework delivery schedule** The price from the Price (MW) field is valid, for the from date and Until date valid frame delivery schedule line.
UK price (MW)	Indicates the determined sales price.

Inforegister delivery

Field	Description
Delivered to Name	Specifies the name of the recipient of the delivery.
Delivered to name 2	Specifies an additional name of the recipient of the delivery.
Delivered to name 3	Specifies an additional name of the recipient of the delivery.
Delivered to address	Specifies the delivery address.
Delivered to address 2	Specifies additional address information.
Postcode code / place	Specifies the postal code of the associated city of the delivery address.
Delivered on site	Specifies the location of the associated delivery address

Creation of scheduling agreements via master scheduling agreements

To create a scheduling agreement from an outline scheduling agreement, call up the "Create scheduling agreement" function in the menu ribbon of the outline scheduling agreement.

Note

The system determines all plants and their delivery addresses via the group hierarchy. In the "Unloading point selection", all combinations of these are displayed for which there is not yet a scheduling agreement.

Assignment of existing scheduling agreements to master scheduling agreement

To assign an existing scheduling agreement to a framework scheduling agreement, first call up the corresponding framework scheduling agreement. Enter the scheduling agreement number in a new line in the "Scheduling agreement no." field. This assigns the scheduling agreement.

Incoming documents (Incoming call-off)

The incoming documents are transferred to the concrete documents, the scheduling agreements, in this area. They can be transferred manually or directly via EDI interface. EDI is the technical Basis for the transfer of incoming documents. Since setting up the EDI interface is not part of this section, the manual transfer of the documents is explained here. In this process, the delivery schedules are transferred to the scheduling agreements and scheduling agreement items. The document for the Pick Up Sheet (PUS) is the sales order. Credit memos and stock reports can be processed without documents. The shipment data represents the entry of consignment material.

Incoming documents are:

- Call-offs
- Daily call-offs
- "PICK UP SHEET" (PUS)
- Credit note display
- Transport data.

After receipt of a forecast delivery schedule, it must be entered in the system. For this purpose, you have on the one hand the possibility to enter the entry directly via the scheduling agreement using the function "Item direct entry" or usually to generate a corresponding incoming document (forecast delivery schedule / JIT delivery schedule etc.).

Incoming call off

In the incoming call-offs, you are informed of the customer's requirement quantities over a longer period of time, so that you can plan these requirements accordingly in your procurement / production.

Via the user search, you can call this up by entering "Incoming call-off" and manually enter a new one or, if you are working with an interface, open a call-off transmitted by the interface.

Note

A forecast delivery schedule always refers to a scheduling agreement. The delivery schedule concretizes the delivery plan.

The fields of the call-off card are explained in more detail below:

Inforegister General

Field	Description
No.	This field is used to identify the incoming call-off. The number must be unique and can be up to 20 characters. The number field can be set to the default value by using the number series option in the delivery schedule setup. However, a manual number can also be created.
Delivery schedule no.	Selection of the associated scheduling agreement. In this view, only the scheduling agreements with the status "Open" and "Released" are displayed. However, you can only select scheduling agreements with the status "Released".
Debtor no.	This field contains the customer number that you have assigned for the customer in your system. Usually this data is filled automatically from the related scheduling agreement.
Delivered to code	Specifies the address to which the products will be delivered. You can use this field to enter a different delivery address. As a rule, this data is automatically filled from the associated delivery schedule.
Delivered to Name	Specifies the name to which the products are to be delivered.
Item no.	This field contains the article number of the customer article that you have assigned for it in your system. As a rule, this data is filled automatically from the associated scheduling agreement.
Variant code	If necessary, this field contains the code of a variant of the item. As a rule, this data is automatically filled from the associated scheduling agreement.
Article description	Specifies the description of the selected item. As a rule, this data is automatically filled from the associated scheduling agreement.
Item description 2	Specifies an additional description for the selected item. Usually this information is filled automatically from the related delivery schedule.
Customer item no.	This field contains the customer item number. For this purpose, this must be created beforehand as an article reference. As a rule, this information is automatically filled from the associated scheduling agreement.
Error description	If you execute the "Change status" or "Complete and check" function and the document contains incomplete or incorrect data, these errors will be displayed in the text field.
My supplier no.	Indicates the supplier number that your customer has assigned for you. This information is communicated to you via the incoming documents. This field serves only as an information field.
Call-off no. New	Specification of the current forecast delivery schedule. This field must be filled for the transfer of the delivery schedule into the scheduling agreement.

Field	Description
Call date new	Specification of the current call-off date. This field must be filled for the transfer of the delivery schedule into the scheduling agreement.
Plant	Indicates a possible plant at the customer. This field is an information field.
Unloading point	Indicates a possible unloading point. This field is an information field.
Point of consumption	Indicates a possible consumption point. This field is an information field.
Warehouse customer	Indicates a possible customer warehouse. This field is an information field.
Usage key	This field is used to define which use the item has. It is used to distinguish uniqueness when the same item is sent to the same customer to the same delivery address, e.g. once as serial parts and once as spare parts. The following options are supported: - blank - Series - Replacement general - Series and use - Try - Pilot - Additional requirements - Initial sample - Pattern - Other This field is an information field.
Contract/Order No.	This field corresponds to the document or purchase order number. It is entered in the "External document number" field when a delivery is made in the created sales order.
Status	An incoming call can take the following statuses: **Open** The incoming call-off can be edited / recorded. **Accepted** The incoming call-off is confirmed. With the status change, the requirements are taken into account in the associated scheduling agreement. **Rejected** The incoming call-off is not confirmed and is deleted with the status change.

Field	Description
Incorrectly documented	If you execute the "Change status" or "Complete and check" function and the document contains incomplete or incorrect data, the switch is activated and you can get detailed error information from the "Error description" field.

Inforegister lines

Field	Description
Type	Specifies the type "item" of the demand. The selection "empty" is not accepted.
Quantity	Indicates the number of demand.
Requirement type	**blank** The quantity is regarded as a call-off quantity and is transferred to the Delivery call-off quantity column in the scheduling agreement. **No need** This is an informational quantity only and will no longer be included in the delivery schedule. **Backlog** If no requirement date is entered, the current date is used as the requirement date. **Instant demand** If no requirement date is entered, the current date is used as the requirement date. **Preview** The quantity is viewed as a preview quantity and transferred to the Preview quantity column in the scheduling agreement.
Requirement date	Specifies the date when the customer needs the goods. KW call-off Specifies a call-off period from which calendar week the goods are required.
Call off until KW	Specifies a call-off period by which calendar week the goods are required.
Demand month	Indicates the month when the goods are needed.
Demand year	Indicates the year in which the goods are required.
Requirement status	The status "B" indicates that FAB data must be taken over from previous transfers as constant from you as supplier until this date. This field is an information field.

Inforegister delivery

Field	Description
Delivered to code	Specifies the address to which the products will be delivered. You can use this field to enter a different delivery address. As a rule, this data is automatically filled from the associated delivery schedule.
Delivered to Name	Specifies the name of the recipient of the delivery.
Delivered to name 2	Specifies an additional name of the recipient of the delivery.
Delivered to name 3	Specifies an additional name of the recipient of the delivery.
Delivered to address	Specifies the delivery address.
Delivered to address 2	Specifies additional address information.
Zip code / Place	Specifies the postal code of the associated city of the delivery address.
Delivered on site	Specifies the location of the associated delivery address.
Delivered to country/region codes	Specifies the country code of the associated delivery address.
Delivery interval	Specifies a possible interval for the delivery. This field is an information field and has no effect in the system. The following options are available: -blank - According to expiration date - Daily - Weekly - Monthly
Appointment key	Specifies a possible appointment key. This field is an information field and has no effect in the system. The following options are available: - blank - Arrival date customer - Shipping date supplier - Arrival date PAB - Planning preview - Daily scheduling - Short term information
Kanban no.	Indicates a possible Kanban number. This field is an information field.

Field	Description
Production release	Specifies a date for the production release. This field is an information field and has no effect in the system.
Production release end date	Specifies an end date for the production release. This field is an information field and has no effect in the system.
Material release	Specifies a date for the material release. This field is an information field and has no effect in the system.
Material release end date	Specifies an end date for the material release. This field is an information field and has no effect in the system.

Information register cumulative quantity

Field	Description
Progress number customer	Indicates the cumulative quantity that the customer has listed for this transaction.
Last delivery quantity customer	Indicates the last delivered quantity that the customer has listed with him for this operation.
Last delivery note no. Customer	Indicates the last delivery note number that the customer has listed for this transaction.
Date last delivery bill customer	Specifies the date of the last delivery bill that the customer has listed for this transaction.
Arrival date customer	Indicates the arrival date that the customer has listed for this transaction.
Zeroing date cumulative quantity received	Specifies the zeroing date of the cumulative quantity received, which the customer has set for this operation.
Cumulative quantity reached for zeroing	Indicates the number of cumulative steps reached, which the customer has listed for this transaction.

With the accept the lines are taken over into the scheduling agreement and become scheduling agreement items. The function call offers two further functions, on the one hand the call can be checked for completeness and on the other hand there is the possibility to have a suitable scheduling agreement identified. After acceptance, the delivery schedule with quantities and dates is available to logistics and production for further processing.

Incoming daily call-off

The entry of a daily call-off is analogous to the incoming call-off. JIT delivery schedules dominate call-offs and previews. The JIT delivery schedule must be set in the logistics code and/or production code. The codes are stored in the scheduling agreement.

Via the user search, you can call this up by entering "Incoming daily call-off" and manually enter a new one or, if you are working with an interface, open a daily call-off transmitted by the interface.

The fields are analogous to those of the "Incoming call-off".

Note

Depending on the base calendar, the individual JIT delivery schedule quantities are combined in the date. This always ensures timely demand triggering and delivery.

Incoming Pick Up Sheet (PUS)

The "Pick Up Sheet" (PUS) is also recorded in the same way as a call-off or JIT delivery schedule. In contrast to the call-offs, each PUS is a separate binding order, i.e. a PUS does not replace a previous PUS, but supplements the whole. Pick up sheets may not be combined. Only the notified quantities in the corresponding packaging are picked up at the time of collection or delivery.

Therefore, when accepting incoming PUS, not only the delivery schedule is updated, but also a corresponding sales order is created.

To create a Pick Up Sheet, call up the "Incoming PUSes" via the user search. Via "New" in the menu ribbon you can create a new PUS.

Inforegister General

Field	Description
No.	This field is used to identify the incoming PUS. The number must be unique and can be up to 20 characters. The number field can be set to the default value by using the number series option in the delivery schedule setup. However, a manual number can also be created.
Delivery schedule no.	Selection of the associated scheduling agreement. In this view, only the scheduling agreements with the status "Open" and "Released" are displayed. However, you can only select scheduling agreements with the status "Released".
Debtor no.	This field contains the customer number that you have assigned for the customer in your system. Usually this data is filled automatically from the related scheduling agreement.
Delivered to code	Specifies the address to which the products will be delivered. You can use this field to enter a different delivery address. As a rule, this data is automatically filled from the associated delivery schedule.
Delivered to Name	Specifies the name of the recipient of the delivery.
Item no.	This field contains the article number of the customer article that you have assigned for it in your system. As a rule, this data is filled automatically from the associated scheduling agreement.
Variant code	If necessary, this field contains the code of a variant of the item. As a rule, this data is automatically filled from the associated scheduling agreement.
Article description	Specifies the description of the selected item. As a rule, this data is automatically filled from the associated scheduling agreement.
Item description 2	Specifies an additional description for the selected item. Usually this information is filled automatically from the related delivery schedule.
Item code	Specifies the unit code used when selling the item.
Customer item no.	This field contains the customer item number. For this purpose, this must be created beforehand as an article reference. As a rule, this information is automatically filled from the associated scheduling agreement.
Error description	If you execute the "Change status" or "Complete and check" function and the document still has incomplete or incorrect information, the error descriptions will be displayed in this field.
My supplier no.	Indicates the supplier number that your customer has assigned for you. This information is communicated to you via the incoming documents. This field serves only as an information field.

Field	Description
Call-off no.	New Specification of the current PUS. This field must be filled for the document to be accepted.
Call date new	Specification of the current call-off date. This field must be filled for accepting the document retrieval.
Plant	Indicates a possible plant at the customer. This field is an information field.
Unloading point	Indicates a possible unloading point. This field is an information field.
Warehouse customer	Indicates a possible customer warehouse. This field is an information field.
Point of consumption	Indicates a possible consumption point. This field is an information field.
Usage key	This field is used to define which use the item has. It is used to distinguish uniqueness when the same item is sent to the same customer to the same delivery address, e.g. once as serial parts and once as spare parts. The following options are supported: - blank - Series - Replacement general - Series and use - Try - Pilot - Additional requirements - Initial sample - Pattern - Other This field is an information field.
Contract/ Order No.	This field corresponds to the document or order number. It is entered in the "External document number" field when a delivery is made in the created sales order.

Field	Description
Status	A PUS can assume the following statuses: **Open:** Is the initial status for new PUS. It indicates that not all fields are correctly defined yet. Therefore, it is neither demand-triggering nor can a logistics document be created for it. **Accepted:** By changing the status to "Accepted", the incoming requirements are accepted. The status change creates the corresponding sales order. **Rejected:** Changing the status to "Rejected" deletes the incoming document.
Document incorrect	If you execute the "Change status" or "Complete and check" function and the document still has incomplete or incorrect information, the switch is activated. Further information is displayed in the "Error description" field.

Inforegister lines

Field	Description
Type	Indicates the type of demand.
Quantity	Indicates the number of demand.
Requirement type	**blank:** The quantity is considered as a release quantity and is transferred to the quantity PUS column in the scheduling agreement. **No need:** This is an informational quantity only and will no longer be included in the delivery schedule. **Backlog:** If no requirement date is entered, the current date is used as the requirement date. **Immediate Need:** If no requirement date is entered, the current date is used as the requirement date. **Preview:** The quantity is viewed as a preview quantity and transferred to the Preview quantity column in the scheduling agreement.
Requirement date	Specifies the date when the customer needs the goods.
KW call-off	Specifies a call-off period from which calendar week the goods are required.
Call off until KW	Specifies a call-off period by which calendar week the goods are required.
Demand month	Indicates the month when the goods are needed.
Demand year	Indicates the year in which the goods are required.
Requirement status	The status "B" indicates that FAB data up to this date must be taken over from previous transfers as constant from you as supplier. This field is an information field.

Proposal Incoming call-off documents

The proposal incoming call-off documents shows you all call-off documents of the type "Incoming call-off", "JIT call-off" as well as PUS in an overview. By means of the filters you can filter this overview individually.

Field	Description
Status filter	This filter allows you to filter on a specific status of the documents. You can choose from the following: **blank** All document statuses are displayed **Open** All documents of the "Open" status are displayed to you **Accepted** All documents of the status "Accepted" are displayed to you **Rejected** All documents of the "Rejected" status are displayed to you
Document filter	This filter allows you to filter on a specific document type. You can choose from the following: **blank** All document types are displayed **Retrieval** All documents of the "Incoming calls" are displayed. **Daily call-off** All documents of the "Incoming JIT delivery schedules" are displayed to you **PUS** All documents of the "Incoming PUS" are displayed to you
Debtor filter	With this filter you can filter on documents of a specific customer.

Document actions

With the "Voucher actions" function, you can quickly process incoming vouchers by accepting or rejecting them via the action. To do this, first check the "Selected document" box in the lines for which the function is to be executed. Then execute the desired action.

Open

With the action "Open" the respective document is opened

Incoming credit advice

The credit advice note is a possible settlement type to settle delivered quantities from scheduling agreements. Here, no invoice is sent to the customer (manufacturer), but the manufacturer creates a so-called credit advice based on all delivery bills. This is entered in the system in the same way as the other documents against the corresponding delivery bills, scheduling agreements and completed by setting the status to Accepted.

> Note

Please note that the self-billing document in the system is a kind of "information document" and does not replace the billing document of the traditional sales process. Nevertheless, the posted sales amount should match the credit advice amount.

Incoming transport data

This area is used to enter the documents for consignment material. The following document types are available:

- Incoming message
- Damage/Loss
- Return
- Stock
- Departure notification
- Delivery notification

A corresponding scheduling agreement number is recorded as a reference. If a document Incoming transit data is accepted, the system creates a new sales invoice for delivery of the quantity from the consignment warehouse and later billing.

Delivery schedules and logistics

Deliveries cannot be made directly from a scheduling agreement as in a sales order. Logistics documents are always necessary for this. Normally, however, these are not posted directly either, but are transferred to a shipping order. There, the packaging regulations come into play and, depending on the delivery quantity, the number of load carriers and packaging materials is shown as a regulation.

Shipping & Load Carrier

The Shipping & Load Carrier Management module in KUMAVISION factory365 provides the possibility to process packaging. The packaging can be recorded unspecifically or specifically in the shipping processing order. In addition to the logistics documents warehouse picking, goods issue and / or picking, posted documents such as posted sales delivery bills, posted stock transfer outgoing goods and posted return delivery bills can also be transferred to the shipping processing order. When posting a shipping order, the logistics documents are posted and the interfaces are addressed, e.g. a sales order is automatically generated by the posting. The load carriers themselves can be disposable or reusable packaging and can therefore be managed with or without inventory management. In addition, the load carriers can be stored as packaging instructions for the articles. The packaging instructions are transferred to the shipping orders.

Note

Please note that the Shipping & Load Carrier Management module is an activation module that requires additional licensing.

Establishment

For the scope of functions, some settings must first be made in advance, which will be discussed in more detail below.

Shipping & Load Carrier Setup

The number series must be stored in the shipping & load carrier setup. To do this, call up the "Shipping & load carrier setup" via the user search.

Field	Description
Shipping order number	In this field, a series is entered from the number series for the numbers of the dispatch processing orders.
Output existing shipping	Activate this switch if you want to receive a message when selecting a logistics document in a shipping order if it already exists in a shipping order. Otherwise nothing will happen.

Shipping processing parameters

The dispatch processing parameters are used to decide which interface is used with which deliverer or their transport type. In addition, other important control parameters can be set here.

Field	Description
Interface	This field defines which interface is addressed during shipping. For scheduling agreements only the option "EDI" is to be used.
Delivery code	This field defines the deliverer to which the parameters and interface apply. **Note** The delivery agent and the delivery agent transport type are used to define the shipping processing parameters and thus the interface together with all other sterilization parameters.
Carrier transport type code	If different transport types are used, these can be specified here.
Sticker only	After booking, the shipping label is generated. (Only possible in conjunction with a shipping cut).
Do not create file	No file should be created when posting the delivery.
Invoice	After posting the delivery, invoicing is also carried out immediately.
Print deliveries	When sending, not only the sales order or stock transfer order is created, but also the document is printed after posting the delivery.
Print invoices	After invoicing, the receipt is also printed.
DHL Product ID	Parameterization DHL as a deliverer.
DHL Services	Parameterization DHL as a deliverer.
DPD Services	Parameterization DPD as a deliverer.
DPD export parcel type	Parameterization DPD as a deliverer.
DPD Collection type	Parameterization DPD as a deliverer.

Note

From version 14.0 on, all interfaces are delivered without additional licensing, but are not further supported or updated. This is due to the fact that the interfaces were changed spontaneously in the past and KUMAVISION was often not informed about this change on the part of the deliverer. In order to be put into operation, each feeder is now tested individually and project-specifically. This may require some effort in terms of customization. A project-specific connection to Beo or MHP (Vlog) is possible.

Thanks to these control parameters, employees in the shipping department no longer need to worry about how the posting is to take place. They simply select the carrier and, if necessary, the mode of transport and press "send".

Load carrier

Load carriers are all packages in which articles can be shipped. Via the user search you can call up the "load carriers" and define them.

General

Field	Description
Code	Enter a code for a load carrier here. A number series is not available.
Description	Enter the description of the load carrier here.
Load carrier type	Specify a type of load carrier. You can choose from: - Single - Master - Addition single - Addition master
Reusable load carrier	Activate the switch as soon as a returnable load carrier (e.g. Euro pallet) is involved.
Label ID	This field is the same as the report selection in sales or purchasing. It controls which report will be printed for the load carrier.
Stock	Indicates, if the load carrier is inventory managed, the current stock level of the item.
Item no.	Indicates the article number, if the load carrier is inventory-managed.
Item Template Code	Specifies, if the load carrier is inventory managed, the appropriate configuration template for the associated item.
Unit	Specifies the unit of the charge carrier.

Dimensions

Field	Description
Length	Specifies the length dimensions of the load carrier
Wide	Indicates the width dimensions of the load carrier
Height	Indicates the height dimensions of the load carrier
Weight	Indicates the weight of the load carrier

Inventory managed load carriers

Load carriers that are inventory managed must be created as articles. To create a load carrier as an article, select the appropriate article category code and unit and then execute the "Create article" function in the ribbon.

Packing instruction group

Similar to the suppliers of an item, several different packing instruction groups can also be defined for the instruction types:

- Internal
- Debtor
- Vendor

To define the packing instruction group, call it up via the user search. Via "New" in the menu ribbon you can create a new packing instruction group with the help of the table below.

Field	Description
Packaging specification group	This field defines the code for the group.
Packing instruction type	There are the options: **Internal** This group is used internally. There is currently no use for it. **Debtor** This group is used for debtors. **Vendor** This group is used for creditors
Packaging instruction code	Depending on the packing instruction type, this field defines a concrete customer or vendor.
Item no.	This field defines the article for the regulation group.
Start date	This date can be used to define from when this group is valid.
End date	This date can be used to define until when this group is valid.
Standard	One group per packing instruction type can be defined as the default. This is then automatically used when transferring logistics documents to a shipping processing order.
Description	Here the group can be described.

Packing instruction

The actual regulations, i.e. which load carriers are to be used in what quantity, are defined in the packaging regulations.

To define the packing instructions, call them up via the user search.

The "General" area initially contains, among other things, filter options which you can use to filter for specific packaging regulations.

Field	Description
Item no. Filter	This filter allows you to filter on a specific item number.
Packing prescription type filter	This filter allows you to filter on a specific packaging prescription type. You can choose from the following options: - Internal - Debtor - Vendor - None
Packing instruction code filter	This filter allows you to filter on a specific packing instruction code.
Packing instruction group	This filter allows you to filter on a specific packing instruction group

According to the filtering in the "General" section, the corresponding records will be displayed in the rows.

Field	Description
Packing instruction type	Specifies the packing instruction type. The following are available for selection: **Internal** This group is used internally. There is currently no use for it. **Debtor** This group is used for debtors. **Vendor** This group is used for creditors
Load carrier type	Specifies the type of load carrier. The following option types are available: **Single** Corresponds to a charge carrier and is used either individually in a group or several times in combination with a master. **Master** Corresponds to a load carrier that represents the lowest unit, such as a pallet. Is defined only once for a group. **Addition single** Corresponds to additional packaging for a single such as a lid on a KLT (small load carrier). **Addition master** Corresponds to additional packaging for a master such as a false bottom or wrapping the entire pallet.
Quantity	This field contains the quantity of the charge carrier for the group.
Rounding factor quantity	This field can be used to round the load carriers. **Example:** The quantity is 4, because 4 singles are placed on one pallet. However, up to three levels can be placed on one pallet. To ensure that each level is always filled with 4 load carriers (and possibly also empty load carriers) for stacking, the rounding factor Quantity is also set to 4. This means that there are either 4.8 or 13 single load carriers on a pallet.
Item quantity per load carrier	This field defines the quantity of items that a load carrier contains.
Label ID	This field can be used to define the report for the label for exactly this regulation, in contrast to the "Label ID" field of the load carrier.

Consignment processing

If the "Consignment processing" field is set on a scheduling agreement, a transfer order is created instead of a sales order when a delivery is made via Logistics. The following facilities are required in advance for this:

Delivery schedule facility

For this purpose, a transit storage location must be specified as a default in the "Default in Transit Code" field in the scheduling agreement setup. Call this up via the user search.

Origin storage locations

Origin storage locations define different storage locations such as consignment stores. They are defined for debtors, creditors and possibly for work center groups for external work and articles for the different business transactions.

Create logistics documents

Logistics documents are always required for an outbound delivery on scheduling agreements. Depending on the settings of the storage location, these are:

- Warehouse picking
- Outgoing goods
- Outgoing goods and picking

The only difference from the standard is that the scheduling agreement is another source document for selecting origin documents.

Shipping processing order

The shipping order does not replace the logistics documents goods issue and warehouse picking, it supplements them. It primarily serves to enable a clean recording and presentation of the load carriers for a goods issue. Different load carriers can be recorded and displayed for each item listed.

A new shipping order is entered by calling up "Shipping order" via the user search. After creating a new order, the logistics documents can be transferred either via the function "Get goods issue" or "Get warehouse picking".

Then the delivery condition code is entered. The "Delivery code" and "Delivery transport code" selections are used to define the shipping processing parameters. The "Pickup date" and the "Pickup time" can be entered under the "Additional information" info tab.

Note

The field "Pickup date" is used on the EDI labels for the goods tag. If this field is empty, it will also be empty on the labels.

If the quantity of the articles is corrected here again, the packing instructions must be recalculated and taken over via the function "Determine packing instructions".

The actual dispatch then takes place via "Send order". The system first checks whether all requirements have been met. With the EDI interface, the necessary numbers of package tracking numbers are now drawn from the number series for each load carrier. If a label has a label report stored in the "Label ID" field, the label is printed out.

The logistics documents are then posted. If the source origin is still a scheduling agreement, either a sales order or, in the case of consignment processing, a stock transfer order is created and posted as a delivery.

Finally, the shipment processing order itself is archived and, if necessary, the reports for the goods receipt/issue slip and bill of lading/shipping order are printed.

Cumulative Quantity Management

Cumulative Quantities Management is used to manage cumulative quantities and thus extends the scope of delivery schedules. The cumulative quantity management enables a transparent display of the current processing status of scheduling agreements. Logistics can thus be controlled on the basis of the difference between the company's own cumulative quantity and the customer's cumulative quantity. A reset or correction can be made at any time or periodically.

Progress figures Proposal

The cumulative quantities proposal shows the current statuses of scheduling agreements. The displayed scheduling agreements can then be corrected or zeroed out. You can limit the display accordingly by using appropriate filter criteria. You can call up the cumulative quantities proposal using the search term of the same name via the user search.

You can assign your own proposal names to indicate what type of proposal it is. The name will appear later in the journal. After selecting the template, the actual proposal window appears.

Using the "Generate proposal" function, you can now filter out the scheduling agreements that need to be corrected. For this purpose, another window is available in which you can set defaults accordingly.

On the "Options" tab, you can set a date filter. This takes into account all customers who have entered a zero date cumulative quantity on the customer card under the "Scheduling agreement" info tab in the period entered.

After corresponding input and acceptance with "OK", the scheduling agreements are displayed.

After editing the scheduling agreements, they must be registered. You can perform the registration via the menu item "Register".

Progress Notes Journals

All registered cumulative quantities are listed in the journals. You can access the individual cumulative quantity items by using the LookUp function in the "From current no." and "To current no." fields.

1.2.3 healthcare365

KUMAVISION healthcare365

If you want to hold your own in the healthcare sector in the long term, you have to manage your company safely and with foresight. In view of the highly competitive market, this is an extremely demanding task. The ERP industry solution from KUMAVISION healthcare365 supports you in successfully asserting yourself against the competition.

- Contact/contact person management
- Duplicate check
- Flexible pricing
- Multi-level inventory management
- Serial number and batch management
- Traceability
- Validation support
- Certification management
- Batch clean production
- Demand source tracking
- Repair and maintenance

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Basics

Short capture with Wizard (short capture card KE)

The contact short entry represents a separate master record from which master data such as contact, customer and vendor can be created. Thus, a contact short entry record is always created first, before the actual contact is created. This has the advantage that the short entry can be interrupted and resumed at a later time. Accordingly, the contact short entry is also used when creating debtors or creditors and a contact is always created with.

With the contact short entry, contacts, as well as further master data linked to the respective contact, such as customers or vendors, can be created more quickly. Here, the contact short entry can be reduced to essential entries by preassigning fields from configuration templates for the creation of contacts, vendors and customers.

Example: When creating a customer from a contact using configuration templates, fields that do not exist in the contact can be created automatically (e.g. booking codes).

> Note

When contacts are created via contact short entry, a duplicate check takes place. The setup and function of the duplicate check are described in the corresponding chapter.

Establishment

KUMAVISION med facility

The general setup of the contact short recording is done in the "KUMAVISION med Setup" on the info tab "Contact Management".

The following fields must be set up accordingly:

Field	Description
Contact short capture numbers	This field is used to define the number series for contact short recording.
Address start date formula	This formula is used to calculate the start date for the contact's address when creating contacts from the contact short entry. This is useful when assigning documents to a new contact whose document dates are in the past. This ensures that the correct address is displayed in the corresponding documents.

Configuration Template Setup

In order to effectively generate master data from the contact short entry, the configuration templates should be used. With the help of the configuration templates, process-relevant fields such as business posting groups can be predefined so that the user no longer has to maintain this data manually.

The configuration templates are run through in a certain hierarchy when creating master data (contact / customer / vendor) from contact short entry. This hierarchy is shown in the following diagram.

Contact summ

Vendor Contact

Customer template → **Debtor**

ONLY table fields
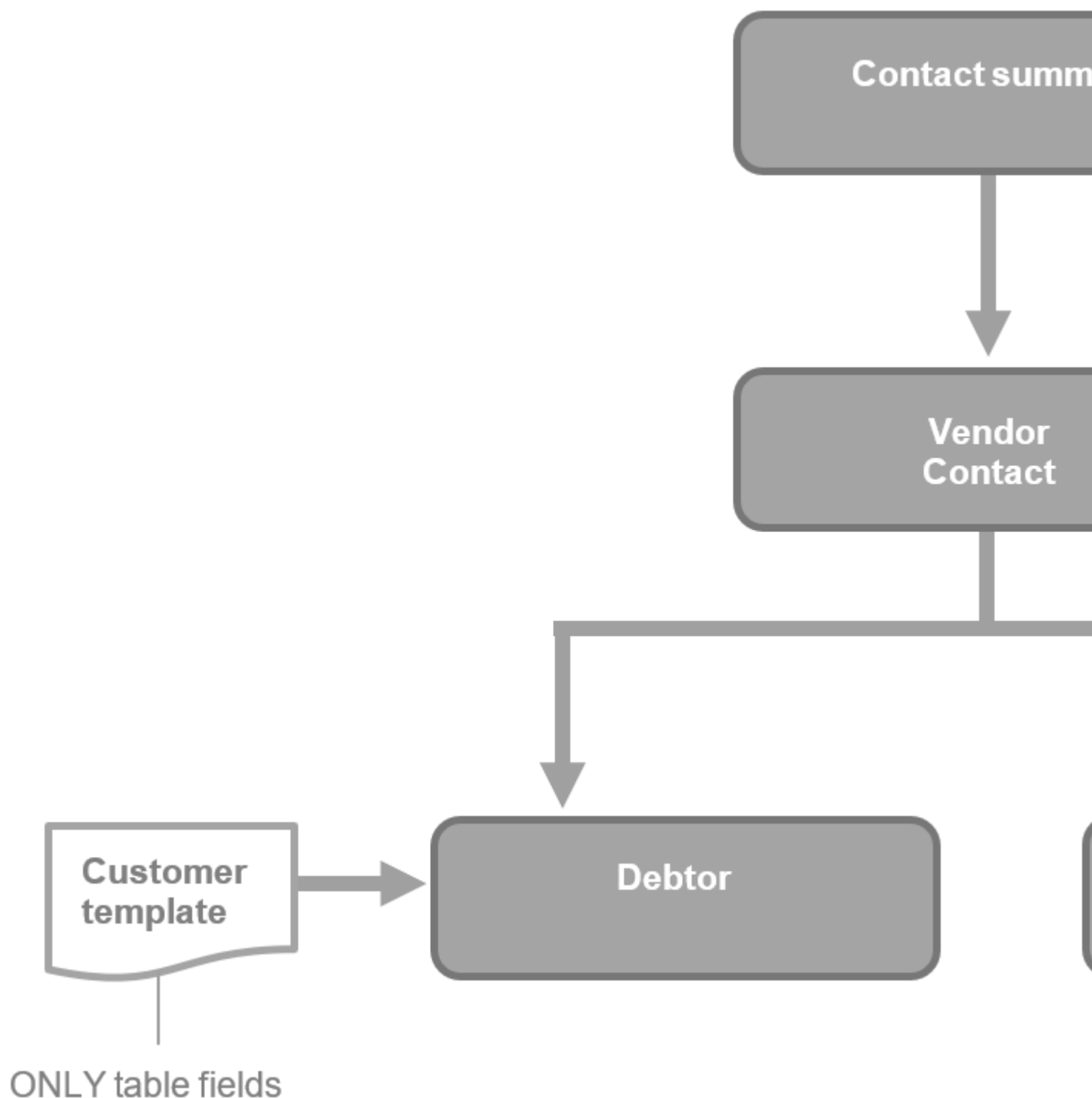
According to the diagram, the following functions result for the individual templates:

Contact Short Capture Template:

Through the master data template for the contact short entry, not only fields can be preset in the short entry, but also roles and additional fields can be preset. The roles and additional fields set here are used when creating the contact and other master data (customer / vendor). Furthermore, the template for contact summaries defines which further data is to be created and which templates are to be used for this purpose. For example, you can use the Create customer template = "Yes" to specify that a customer should also be created

from the contact summary. The Customer template code field can be used to specify which master data template is to be used to create the customer.

Contacts template:

From the master data template for contacts, only the table fields are used in the contact short entry functionality when creating the contact. Additional fields and roles that have been linked to a contact template are not taken into account in this process. Here, the roles and additional fields from the contact short entry are inherited by the contact.

Template for debtors:

From the master data template for customers, only the table fields are used in the creation of the customer as part of the contact short entry functionality. Additional fields and roles that have been linked to a customer template are not taken into account in this process. Here, the roles and additional fields from the created contact are inherited by the customer.

Accounts Payable Template:

From the master data template for vendors, only the table fields are used in the creation of the vendor as part of the contact short entry functionality. Additional fields and roles that have been linked to a vendor template are not taken into account in this process. Here, the roles and additional fields from the created contact are inherited by the vendor.

Note

Additional fields are only inherited if they have been set up for the respective tables. If an additional field is to be inherited from the template to the contact short entry and from there to the contact and from the contact to the customer, this additional field must be set up for the tables Master data template, Contact short entry, Contact and Customer.

The following is an example of how to set up the configuration templates for contact short entry.

First call up the configuration templates via the user search. In this overview, all configuration templates for all tables are displayed.

Inforegister General

Field	Description
Code	Specifies the "abbreviation" of the configuration template.
Description	Specifies a description of the configuration template.
Table ID	The "Table-ID" field is used to link the template to the table that is to be filled from this template. e.g. contact short entry Table-ID "5007265".
Table name	Specifies the name of the table in the Table ID field.
Visible in cash register	If the switch is set, the configuration template for the "Point of Sale" module can be used.
Visible for field service	If the switch is set, the configuration template can be used for the field service.
Enabled Activate the switch	if the configuration template can be used in the processes.

Inforegister lines

After the table is selected, the table fields are defined on the "Rows" info tab, which should be automatically written to the table by the template.

Information register KUMAVISION med

Via the menu call "Own partner functions" the corresponding functions can be assigned to the template, which are to be copied into the contact short entry.

By assigning the role, the additional fields for the assigned role are also displayed in the template and can also already be preassigned with values.

Furthermore, it is possible to set up which assigned partner functions are to be specified in the short entry.

In addition, role-independent additional fields can also be attached to the template. These are then also used in the contact short entry.

Note

Additional fields are only inherited if they have been set up for the respective tables. If an additional field is to be inherited from the template to the contact short entry, from there to the contact and from the contact to the customer, this additional field must be set up for the tables Master data template, Contact short entry, Contact and Customer.

Attachment contact short capture

The contact short entry is always called when a contact, vendor or customer is to be created.

To do this, go to the Marketing Cockpit and select the item "New contact from short entry".

When this function is called, a selection of templates for contact short entry appears. Here you can select the template that will be used to pre-populate the contact short entry with table fields, additional fields and roles.

After selecting the appropriate template, the contact short entry card is opened and a number is assigned. Likewise, the information about which master data should be created with which templates was drawn.

Now the collection of further data such as name, address and communication data can take place.

After all the necessary data has been entered, data maintenance in contact short entry can be ended via the "End short entry maintenance" action. This starts the mandatory field check and then creates master data such as contact, customer or vendor (depending on the setting in the Generate data tab. When you exit short data entry, the created data record is then selected in the list and can be opened directly.

Note

The mandatory field check is run through per created record

Release contact short capture

If the mandatory field check has been activated for contact short entry, master data such as contact, customer or vendor can only be created if contact short entry has been released.

The release of the contact short entry refers to the status of its data maintenance.

The following status options are possible:

No mandatory field check: With this option, the mandatory field check for contact short entry has not been activated. This means that data maintenance does not have to be explicitly completed in contact short entry. Further master data can be created directly.

In progress: This option means that the mandatory field check for contact short entry has been activated and data maintenance has not yet been completed. In this maintenance status, no further master data can be created from the contact short entry.

Care completed:

This option is set when the mandatory field check has been activated for the contact short entry and the maintenance of the data in the contact short entry has been completed. In this status, further master data such as contact, customer or vendor can be created from the contact short entry.

To complete the data maintenance in the contact short entry and release it, the action "End short entry maintenance" is executed.

If not all data has been maintained according to the mandatory field check at this point, the wizard card of the mandatory field check opens. The user can then make the appropriate corrections in the wizard card.

Once all the necessary data has been maintained, the status in the Maintenance field is set to "Maintenance completed". Now further actions for creating the master data can also be performed.

After contact short capture maintenance is complete, the contact short capture map is placed in a non-editable state.

To be able to edit the data, the short entry must be set to the maintenance status "In work" again. This is achieved via the "Edit short entry" action.

After performing this action, the data can be edited again.

After revising the data, the contact short entry must be released again via the action "End short entry maintenance".

Overview of existing contact summaries

The contact short entry represents a wide master data record in KUMAVISION, which can be used to create process-relevant master data such as contact, customer or vendor. The already created records in the contact short entry can be viewed via the "Contact short entry list".

New abstracts can be created from the contact abstracts list or the existing ones can be edited.

Manually create the short capture

A new record in the contact short entry can also be created manually. This is done from the "Contact short entry list".

In order to create a data record manually, the action "New" is executed in the menu ribbon, which opens the contact short entry card. This is empty, since no data from a template has been assigned to the short entry.

In the next step, click into any field, so that KUMAVISION creates a new record for the contact short entry. A number from the number series stored in the KUMAVISION med device will be assigned.

Now all other fields in the contact short entry can be filled manually. It should also be taken into account which master data should be generated from the short entry and on the basis of which templates this should happen.

Alternatively, a configuration template can also be used here to fill certain data in the contact short management. The "Apply template" action in the ribbon is used for this purpose.

When this action is executed, the user is offered the selection of possible templates for contact short entry and the fields defined in the template are filled.

Partner functions

Partner functions are functions that a customer, vendor or contact can assume. This can be, for example, the role of a doctor, an insured person, a health insurance company, an intermediary or a nursing home. Customers, vendors and contacts can assume a partner function themselves (own partner function) and functions can be assigned to them (assigned partner functions).

The partner functions thus represent functional units. For each function, information can be provided in the form of additional fields.

In this way, the "Doctor" role can be given additional information, such as the operating facility number, which is not needed for other roles, and the view remains clear.

Establishment

Allocation

The assignment of the own role can be done via the customer, vendor or contact card. The following applies equally to customers, vendors and contacts.

Via "Own partner functions" in the menu ribbon, all existing partner functions can be accessed and assigned to the customer.

The role can be further specified on the basis of the activity type; a role-activity type combination can only be created once.

If a contact is assigned to the customer/vendor, then this is automatically transferred to the "Contact no." field.

After a role assignment has been made, the role information is available in the master data card and the contents of the additional role information can be defined.

Via the call "Assigned partner functions" the functions of other customers/vendors/contacts can be assigned to the customer. In this way, for example, reference can be made to another customer and his role as a health insurance company.

With the start and end date specifications, a period for the validity of the assigned partner function can additionally be defined. This means that a change to the health insurance fund on a specific date can be maintained in the master data in advance.

The assigned partner functions can then be viewed in the master data card. Changes to the values are only possible in your own partner functions; the values of the assigned partner functions cannot be edited.

Resubmissions

By means of the resubmissions in KUMAVISION healthcare365, reminders for open tasks can be easily and conveniently created and assigned to a user and / or team. The resubmission processing in KUMAVISION healthcare365 can be called from different places.

Establishment

Teams

If you want to work with teams, each employee (user) must be assigned to at least one team. To do this, first create the desired teams in the "Teams" table and then assign the desired employees via the "[...]" > "Associated" > "Team" > "User" ribbon.

The Team User Map will open where you can assign users by entering the corresponding user ID in the lines.

Note

If a user is assigned to multiple teams, the automatic default team assignment will only work if one team is marked as the primary team for the corresponding user.

Resubmission task

In the resubmissions you can work with predefined tasks. For this purpose, the required tasks are created in the "Resubmission tasks".

Field	Description
Code	Assignment of an "abbreviation" of the task.
Beach friction	Specifies the description of the task.

Resubmission groups

In the resubmission group list, several resubmission tasks can be combined into task groups. To do this, first create a resubmission group using the table below.

Field	Description
Code	Assignment of an "abbreviation" of the task group.
Beach friction	Specifies the description of the task group.

The tasks of the group are then added to the resubmission task lines. If a certain team is responsible for the processing, this can already be preassigned here in the resubmission group.

Setup eBox

Team resubmissions are basically edited via eBox. To work with the eBox and the team resubmissions, the following setup is necessary:

Via the function "Initialize eBox types", which can be called up via the eBox Types, all converted types and subtypes can be generated automatically.

The entry for processing resubmissions is thus created automatically.

Usage

Creation of resubmissions

Resubmissions can be created from many documents and master data using the "Create resubmission" function located in the menu ribbon.

The resubmission is created and preset with the own user ID and the primary team.

A simple info text can be stored under "Short information". A longer task text can be entered in the lines under Resubmissions Tasks.

Alternatively, individual tasks can be selected in the rows using the task code or a task group is stored in the resubmission header.

After confirming the selection, the individual tasks of the group will be added to the resubmission.

The text of the next open task is always displayed in the resubmission header.

Assign task to a team

If the task is to be assigned to another team, the Team task button is activated in the resubmission. The user is then automatically deleted and the tasks can be assigned to another team. If the task is to be processed at a later date, the resubmission date must be changed accordingly.

Create resulting task

Resulting resubmissions can be created in general or for a single task of a resubmission.

To do this, the corresponding function is called in the document header or in the line.

When selected in the line, the task is taken over directly and - if already specified - the new team of the task is preset.

In the previous resubmission, the task is automatically set to completed and the number of the resulting resubmission is displayed.

Processing the resubmissions in the eBox

When calling the eBox, the type "Resubmission" can be selected from the list of eBox types.

By calling up the "IM Documents" function, a selection of resubmissions filtered according to own team affiliation appears, the so-called worklist. By selecting a resubmission, it can be edited as usual via the eBox.

Processing of resubmissions from the role center

Own resubmissions can be opened and edited in the role center via the "Own resubmissions" stack.

With "Edit" the marked resubmission is opened and can then be set to the status "In process".

med+ search

This quick search for master data allows you to search for data records in KUMAVISION healthcare365 via all additional fields and all freely defined master data fields by entering them in a search field. In doing so, defined linked data, such as the article units and variants, are taken into account when searching for an article.

Establishment

In order to use the med+ search, the action "Update SQL Search & Objects" must be executed in advance in the KUMAVISION med setup. With this action, all necessary settings are made automatically via an SQL script.

!!!note "Note" Please note that this functionality is only available in non-multitenant or singletenant environments. A full text search in a multitenant environment is currently not possible in KUMAVISION healthcare365.

Usage

The med+ search is available for the following master data, which can be accessed via the respective master data lists and cards:

- Debtors
- Creditors
- Contacts
- Article
- Resources
- G/L account
- Serial no. / batch no. - info card

After you have called the search, you can enter keywords as you are used to from a search engine on the Internet. The system will search for the corresponding matches.

Address management / control

Date dependent addresses

Date-dependent addresses can be created for master data such as debtors, creditors and contacts, which can be entered into the processes generally or only for individual transactions. The addresses are checked for validity during each booking process and updated if necessary, so that you only need to update the master data when you move. The documents in the business process are automatically updated when they are created and posted.

You can enter and change the master data via the Marketing Cockpit. If you want to change a master data address, select the desired contact (or the respective linked customer or vendor). Then select the item "Edit contact" in the menu ribbon and dive into the addresses by clicking on the Assist button [...] next to the names.

The master data address management card opens. Now you can edit the master data and confirm your entry with "OK".

In the master data address management card, time-controlled addresses can be stored using the "From/To date" fields. This could be useful for deliveries, for example, during a period (e.g. vacation) Click on "New" and enter a temporary address. It is important here that you determine the period (From / To date). The same applies to a new creation of an address, for example, in the case of a move. The current master data address has no "To date" specification.

Delivery or billing addresses

In order to store recurring different delivery or invoice addresses, select "Actions" > "Address" > "Delivery/ Invoice to address" in the menu ribbon of the desired contact (or the respective linked customer or vendor). Then select the "New" item and enter a code.

Now the master data address management card opens and you can enter the deviating delivery address as usual and confirm the entry with "OK". The same applies to the different billing address.

If the switch "Voucher master address" is active, this address will be used for a permanent deviating delivery/ invoice address. If this switch is not active, this address can be used for temporary "every now and then" deviating address.

Article tracking

KUMAVISION healthcare365 provides a number of industry standard article tracking codes upon delivery of the system, which can be assigned accordingly when creating a new article.

Note

Please note, the given article tracings are given by KUMAVISION and must not be changed.

Color representation

The "Quantity" field is displayed in a different color in the open sales/purchase document lines, goods issue lines, goods receipt lines and in the article book sheet, UML book sheet, INV book sheet, production, assembly if it is a line with an article for which article tracking has been set up. In addition, the article tracking can be called directly via the lookup of the field.

The following color distinctions are made:

- Red, if batch or serial numbers are present, but no assignment has been made
- Blue, if batch or serial numbers are present but have not been fully assigned
- Green, if batch or serial numbers are present and completely assigned

Date of manufacture Warranty date, ext. batch

If an item has a manufacturing date, you can define it with the item tracking code. You can define the warranty date on the "KUMAVISION med" tab on the "Customer warranty period" / "Supplier warranty period" fields. In addition, various settings for the technical service can be made on this tab.

Info card obligation

In order for a serial number/batch number info card to be created automatically when posting, the info card requirement must be activated for the article on the article card using the "Info card requirement" switch.

Serial No. Information Card

The serial number information card has been extended with the following fields in KUMAVISION healthcare365:

Inforegister General

Field	Description
Description 2	Pre-populated with the description 2 of the article or article variant.
Register number	Maintenance of the registration number assigned by the health insurance company for the aid.
Status mandatory field check	This field displays whether the mandatory field check was not performed (no check), completely checked, or incompletely checked.
Locked from	This field indicates whether the record is locked by the mandatory field check or by the user.

Vendor info register

This info register is of necessity for the technical service. If a device is purchased or recorded as part of the reuse from a market companion via a purchase order, the creditor is recorded here.

Information register customer

This information register is necessary for the technical service. The user who gave the instruction on the device is recorded in this info register.

Information register KUMA platform

Field	Description
Previous owner / previous owner search term	Contact who previously owned the device. / Contact Search term of the previous owner
Date of last stock entry	Calculated field, updated each time the device moves goods.
Storage location/ storage bin	last storage entry Calculated field, updated each time the device moves. This shows where the device is currently located.
Variant code	last stock posting Calculated field, is updated with each movement of goods, shows the current variant code of the device.
Status	freely parameterizable field to display the status of the device
Warranty period customer	Specifies the date formula as well as the duration, is calculated when the device is delivered based on the booking date.
Warranty customer until	Calculated automatically based on the delivery date and warranty period.
Device class	Field for classification option of SN cards. Can be freely defined by the user with own codes.
CE Responsibility	Deposit of the CE mark
Commissioning date	Charged when a unit is delivered for the first time.
Contract no./contract Version no./contract Line no.	Specifies the contract with which the device was delivered. These fields must be filled so that the automatic contract determination in the call can take effect.
Transaction no.	Indicates the operation with which the device was delivered.
Warranty period supplier	Maintenance of the supplier's warranty data. Based on the date formula, the warranty is calculated when the device is booked in.
Warranty supplier until	Calculated on the basis of the goods receipt date and the warranty period at the time of receipt posting.
Warranty period repair	Value is calculated when the repair is carried out.
Rep. KV necessary	Comes from the customer who bought the device and specifies whether the customer wants a CT or not. The field is filled automatically on sale and is used only in trade.
Rep. KV Value limit	If the customer requires a repair cost estimate above a certain value, this field contains the value limit above which the CT must be created. The field is also filled in during the sale and is also only relevant in the trade.

Field	Description
Operating hours obligation	Is preset by the item tracking code of the item

Field	Description
Scrapped	If the check mark is set, the device is considered scrapped. The check mark may only be set after the write-off via the item book sheet. When the check mark is set, the "Locked" check mark is also set. In addition, the fields Scrapped by and Scrapped on/about also log who and when the check mark was set or removed.
Maintenance interval according to MPG Appendix 1	Is preset from the article card
Additional information	The additional fields of the item and the serial number card are maintained in this info register.

Inforegister ownership/tenure

The ownership of the device is shown here.

Field	Description
Last booking code	Indicates the ownership of the device and is recalculated for each goods movement. If the field is empty, the device has been sold without keeping track of where it is.
Owner	Indicates the owner of the device. If the field is empty, the device belongs to ourselves.
Owner	Indicates the customer who currently owns and uses the device.
Device usage type	is not used

As long as it is necessary to keep track of where the device is located, the booking code and the fields for the storage location and storage bin of the last warehouse booking are filled. If a device is only sold to one customer, the fields are empty and only the owner and holder are entered. The booking code is correctly entered in the respective process.

"Operation" ribbon

Field	Description
Contract assignment	Assignment of health insurance contracts to the SN card. Has no use in the processes described here.
Set up resubmission	Sending a resubmission based on the serial number card
Edit serial no. info card/ End serial no. info maintenance	Activation of the mandatory field check of the SN card as well as the editing mode of the SN card and the respective termination.
Serial number search	Med+ search based on the serial number cards
Item/device allocation items	If the additional module "Serial no. in serial no." is used in production, the components assigned to the device are displayed here. In addition, all expenses and spare parts incurred in the course of service are shown here.
Navigate	Display of all items, purchase and sales documents for serial number
Reset owner info	Using this feature, contract and owner information on the serial number card and item items are taken out so that a device can be transferred directly from one owner to another.
Feature classes	Display of device parameters for the device
Article item	Display of the goods movements of the device

Print ribbon

Field	Description
Device life cycle	Printout of the information and movement of goods to the device

"Customer service" ribbon

Field	Description
New call	Creation of a new call for the device
Calls	Display of all open calls to the device
Terminated calls	Display of all completed calls to a device

Device service" menu ribbon

Field	Description
Create maintenance plan	If no maintenance plan exists for a serial number, a maintenance plan can be generated for the individual card based on the maintenance plan of the item.
Maintenance plan	Display of the maintenance plan for the device, here concrete due dates for maintenance are displayed and calculated. The Planning no. field indicates the maintenance cockpit number via which this maintenance is currently being performed. If the entry is 0, this line is not in any maintenance or in planning of an upcoming maintenance.
Equipment item	In the equipment items, the articles and resources consumed within the scope of a technical order are displayed and recorded. In addition, a simple cost accounting based on the cost prices of the articles and resources takes place here.

Actions ribbon

Field	Description
Edit serial no. info card/ End serial no. info maintenance	Activation of the mandatory field check of the SN map as well as the editing mode of the SN map and the respective termination
Contract assignment	Assignment of health insurance contracts to the SN card. Has no use in the processes described here.
Create article contract lines B2B	Function of subsequent assignment of a device to a repair or maintenance contract in the trade.
Feature search	Search for device parameters via serial numbers
Navigate	Display of all items, purchase and sales documents for serial number
Barcode flag	Deposit of a barcode, documents to which this barcode has been assigned are stored here in the document management system (DMS for short).
Back to the eBox	Documents that have been filed in the DMS can be sent back to the eBox via this function if the document has been filed incorrectly and needs to be reassigned.
Device life cycle	Printout of the information and movement of goods to the device

Belonging" ribbon

Field	Description
Item tracking item	Documentation of the goods movement of the device
Comment	Possibility to enter remarks for the concrete serial number
Article tracking	Is only required in production and serves to document the history of the serial number or the components where these have all been included
Stock overview	View of the stock for the serial number
Document characteristics	Maintenance of document characteristics on the serial number card
Feature classes	Display of the device parameters for the device, see chapter "Device parameters on the serial number card".
Item/device allocation items	If the additional module "Serial no. in serial no." is used in production, the components assigned to the device are displayed here. In addition, all expenses and spare parts incurred in the course of service are shown here.
Article item	Display of the goods movements of the device
New call	Creation of a new call for the device
Calls	Display of all open calls to the device
Terminated calls	Display of all completed calls to a device
Create maintenance plan	If no maintenance plan exists for a serial number, a maintenance plan can be generated for the individual card based on the maintenance plan of the item.
Maintenance plan	Display of the maintenance schedule for the device, here concrete due dates for maintenance are displayed and calculated.
Operating hours list	Viewing the operating hours already read, as well as calculating the hours of use.

Operating hours obligation

If a device is subject to operating hours, this is also controlled via the article tracking code. An article tracking code (SN_BSTD) has been created specifically for this purpose, which has the operating hours obligation in the device, so that the operating hours can be maintained and viewed on the serial number card.

Warnings

You can store warnings for a contact or customer that are displayed in the Marketing Cockpit when you open the contact. These can be, for example, warnings about infectious diseases or similar. Depending on the setup, these messages are displayed in the header area in scrolling text and, if necessary, also as a separate warning.

Via the Warnings button "Associated" > Contact MC Cockpit" > "Warnings" of the menu ribbon, a warning from a list can be assigned to a contact and it can be set whether a stand-alone warning (via the Hazard warning field) or only the ticker should be displayed.

Purchasing

Vendor

Create, Delete, Modify, Rename

Vendors are always created via contact short entry. If you select the corresponding short entry template, a vendor is created at the same time as the contact. For more information, see section Contact short entry.

For vendors (as well as for all other master data records), the mandatory field check supports the creation of a data record. Likewise, additional fields can be entered in a simple way.

Fibre-relevant fields

In the following, the fields on the vendor card that are relevant to the fibers and supplemented by KUMAVISION healthcare365 will be explained to you in more detail:

Field	Description
Country code	Maintain accordingly (for domestic, the country code "DE" is entered).
Locked / Locked user	Deliver/Invoice/All: This vendor is blocked for these transactions.

Certificates and declarations

Deposit of certificates and declarations

You have the possibility to deposit and monitor certificates and declarations of a creditor.

In the "Certificates and declarations" facility, you can store the required certificates and declarations needed in the process.

Under Code and Description you can enter the certificate no. and description.

On the creditor card, the existing certificates and declarations are displayed in the "KUMAVISION med" info tab.

You can add new certificates via "New" in the ribbon.

Field	Description
Code	Selection of the deposited certificates
Start date	Validity start date of the certificates
End date	End of validity of the certificates
Query validity certificates and declarations	Notification of the certificates when to check with the creditors
Plant linkage	Link to a file in the file system

Query the valid certificates Since the certificates are only valid for a limited time, the validity must be checked regularly.

For this purpose, there is the report "Vendor QM Data Notification", which can be filtered with "Date for Notification", for example.

Article

Fibre-relevant fields

In the following, the fields on the article card that are relevant to fibers and that have been supplemented by KUMAVISION healthcare365 are explained in more detail:

Field	Description
Without bearing valuation	As soon as the switch is set active, the items will not be managed with stock value. Note: The stock must be 0 when the option is set.
Info card obligation	If this switch is activated, an info card is created for each article. This serial number information card is a prerequisite for plant activation of the serial number devices

Article variants

The article variants have been extended so that individual fields can be created for them, which can then either only serve as information in the master data or can also be carried and changed by the processes in purchasing and sales. Further information can be found under "Additional fields".

Variant master

Possible article variants can be fixed with this functionality. This can prevent the creation of arbitrary variant codes (without systematics).

Establishment KUMAVISION med facility

In the KUMAVISION med setup on the info tab "Stock" it is controlled by means of the field "Variant master obligation" whether a free variant creation for articles is allowed or not.

If the "Variant master obligation" field is set, it is only possible to create variants for articles that also exist in the variant master.

Article categories

With the variants categories it is possible to group variant masters.

If the variant master obligation should not apply generally to all articles, instead of the field in the KUMAVISION med setup the field with the same name in the selected article categories can be set.

Variant master

With this table, the possible characteristics of the article variants can be predefined and thus restricted. This prevents, for example, different spellings.

Since the variant codes can also be used in pricing, an orderly system in the system is helpful.

Article card

The "Variant category filter" field on the article card on the "KUMAVISION med" info tab can be used to reduce the possible entries from the variant master when creating an article variant.

Functionality

When an article variant is created, the entries in the variant master are displayed for selection via the lookup. The "Variant category filter" field on the article card acts as a filter on the "Category code" field in the variant master.

Without variant master obligation, any variant code can be generated. With variant master obligation it is no longer possible to create variant codes outside the master:

Extension article supplier catalog

When an article is assigned to a supplier (entry of the vendor number in the article card), an entry of this article supplier is created in the article supplier catalog. This record is marked as "master supplier". If a "regular supplier" already exists for this article, the "regular supplier" indicator is removed from this existing data record.

To do this, select the desired vendor number on the "Purchasing" info tab in the "Vendor no." field on the item card.

The system generates the article supplier record in the background. The article supplier list can be accessed via the "Related" > "Purchasing" > "Suppliers" ribbon.

Since the article is locked for use in the system as a result of editing, the created data record in the article supplier catalog is also set to "Locked". As soon as the article is released again with "End article maintenance", the article supplier catalog is also updated.

The procedure described above also applies with the locked indicator "Sales", "Purchasing", etc.

If the vendor number is now changed in the article card, another data record is created in the article supplier catalog. This will then receive the "Master supplier" indicator.

Commission article

The "order quantity" replenishment procedure is usually based on a commission type logic.

It is useful to create configuration templates for local and central comm. articles. For this purpose, the field in the template is preset accordingly.

The necessary facilities and procedures within the processes are explained in more detail below.

Establishment Article

On the respective item card on the "Stock" info tab, the "Logistics type" field can be used to define the behavior of the item as a commission item:

Field name	Description
Logistics type	Option values: "<empty>", comm. article central, comm. article local The field defines the behavior of the item as a commission item.

Depending on whether locally or centrally, inventory data is also automatically generated when a template is applied.

KUMAVISION med facility

Field name	Description
Comm. -Article main warehouse location code	Used when applying an article template. Indicates the storage location in case of central procurement of comm. articles.
Comm. -Article Other service providers	Used when applying an article template. Indicates the storage locations for central and local procurement of comm. items for which stock data is created. If the field is empty, stock data is created for all storage locations.

Storage bins

On the respective storage location, a corresponding storage bin must be set up for the commission items. The setup is done analog to the conventional setup of storage bins additionally the field "Comm.-article logistics type" has to be maintained.

Field name	Description
Comm. -Article Logistics type	Option values: <empty>, Default, Allowed The field allows you to specify a separate storage bin for comm. items.

Use in the processes Article facility

If a new article is created via a template or the template is applied to an existing article, the inventory data is created as follows. Generally, the field "Replenishment method" is set to "Order quantity" for all inventory data.

Comm. articles with local procurement For all storage locations in the filter "Comm. items Other storage locations filter" from the KUMAVISION MED institution storage data with "Procurement method" = "Purchasing" are generated.

Comm. articles with central procurement For all storage locations in the filter "Comm.-Article Other Storage Locations Filter" from the KUMAVISION MED institution, storage data with "Procurement Method" = "Stock Transfer" will be generated. For the storage location from the field "Comm. item main storage location code" from the KUMAVISION MED setup, inventory data with "Procurement method" = "Purchasing" will be generated.

Procurement

If a Comm. article is entered in a sales order, a purchase order or a stock transfer including purchase order is suggested directly in the order proposal, depending on the storage location and the storage data. There by the chain purchase order to sales order is always held together by a reservation.

If a comm. article is entered, there is normally no stock for it. In this case, a corresponding message appears.

However, if there is unreserved stock, a message will appear indicating that it may need to be reserved manually.

Order confirmation

A confirmation number and date can be entered in the purchase order using the "Create order confirmation" function. The confirmation no. is visible in the purchase order lines in the field "Current order confirmation no.". For Comm. items, the field has also been added to the sales order lines under the same name. Clicking on the field opens the window with the order confirmation.

The functionality of the order confirmation has been extended as follows:

- In the window itself, the order can be displayed directly via the "Display document" action.
- The fields "Voucher type" and "Voucher no." were displayed to see the order no.
- The table Order confirmation line has been extended by the fields "Sales order no." and "Sales order line no.". The fields are automatically filled when creating an order confirmation line if a reservation exists for a sales line. (This can also exist indirectly via a stock transfer line).
- The "Origin" field has been added to the Order confirmation line table. The field is filled with the default value "Manual" when an order confirmation is entered manually. In addition, an automatic entry is now created in the Order confirmation line table with the origin "Goods receipt" upon delivery. This creates a link between the purchase line and the sales line triggering the requirement if a reservation exists, and this link remains even after delivery if the reservation no longer exists.

Quantity changes

In the case of purchase orders and orders with reservation, no quantity change is possible in the standard system. For comm. items this is possible as long as no delivery has been made. I.e. the quantity can be adjusted in the order as well as in the order at any time. In doing so, both the reservation and the document lines within the reservation chain are adjusted in quantity.

It is not possible

- change the quantity in the middle of the chain, i.e. in the rearrangement.
- to make a quantity change after a partial delivery.
- Change the quantity in the order if the order is linked to a scheduling agreement

Default storage bin in goods receipt

In the respective storage locations, the storage bin "KOMM" is defined as a preliminary storage bin. When the goods receipt is created, this means that the storage bin "KOMM" is automatically suggested if it has not already been specified by the user or by the two-stage goods receipt with GR storage bin.

Change of the article no. or the variance code in goods receipt

In the goods receipt window there is the action "Change Comm. article" on row level. The window "Select article and variant" appears in which the article no. and/or if necessary the variant code can be changed.

Residue Resolution

In order to generate the corresponding goods issues after posting the goods receipt, the existing function "MED Backorder Clearance" can be used.

For this it is necessary that in the user setup the user has activated this in the field "Berecht. Residue resolution" field. In addition, the default purchase order type must be configured for backorder resolution.

Item label with reservation info

It is possible to print a label for an article at goods receipt. To do this, the action Label information must be called up in the article card under Article data and an entry must be created.

When the goods receipt is posted, this causes a label to be printed. If an article from a sales order is reserved, the customer no., the customer name and the sales order no. are now additionally printed on the label.

Creation of a purchase return

If a Comm. item is entered manually in the Sales Returns window, a corresponding note appears.

Using the action "Create return related documents..." it is possible to create a purchase return in the sales return.

This now creates a reservation from the purchase order line to the sales order line for comm. items.

Marking sale items in purchase

Sales articles are articles that are being discontinued from the product range. They can either be articles that are no longer reordered by the company or articles that are no longer supplied by the supplier. So that the purchasing department is informed in the ordering process that the supplier may no longer be able to fulfill this order because the article is being removed from the range.

A sale item can be either an item itself or variants of the item.

To mark an article or an article variant as a sale article, first call up the desired article card.

On the "Item" info tab, you can mark the item accordingly by activating the "For sale" button.

Alternatively, you can mark each variant by checking the "For sale" checkbox for the corresponding variant. Article variants can thus be marked individually "For sale".

Note

If an article that has article variants is itself marked as "On sale", this automatically applies to all its variants in effect, regardless of whether they themselves have been marked as "On sale" in the Article variants table.

When entering an item marked for sale in a purchase request/order, the user receives a notice that this is just such an item.

The order or request can be processed by default, as this is only a message. The planned receipt is also displayed in the availability overview of the article.

Pricing Purchasing

KUMAVISION healthcare365 offers an extended pricing function, which can be used to map different prices and conditions (e.g. discounts for certain vendors or article groups, quantity scales, etc.) within a hierarchy.

In the purchasing area, all price types are on the same hierarchy level. This means that no matter which price has been stored, the "Best price" is always determined. The "Best price" variant is designed to always determine the most advantageous price for the purchase.

The following hierarchy is used to determine the price:

		Calculation group
Article	Article family	Vendor (promotional price)
		Vendor (special condition)
Vendor (promotional price)	Vendor (promotional price)	Pricing vendor (action price)
Vendor (special condition)	Vendor (special condition)	Pricing vendor (special condition)
Pricing vendor (action price)	Pricing vendor (action price)	
Pricing vendor (special condition)	Pricing vendor (special condition)	
Article	Vendor	
without vendor reference (promotional price)	without article reference (special offer price)	
without vendor reference (special condition)	without article reference (special condition)	
Article family	Pricing vendor	
without vendor reference (promotional price)	without article reference (promotion price)	purchase list price
without vendor reference (special condition)	without article reference (special condition)	

Establishment

The following setups must be made for pricing in KUMAVISION healthcare365:

KUMAVISION med facility

In the KUMAVISION med setup on the "Sales" info tab, the "Dynamic article family pricing" switch must be activated.

Field	Description
Dynamic article family pricing	This field activates the dynamic article family pricing. This means that the article family code will be reduced digit by digit from the end until the family code is found or there are no more digits left.

> Notice:

If this function is not used, it should be disabled for performance reasons.

User setup

In the user setup on the respective user card on the info tab "KUMAVISION" the switch "No pricing" must be deactivated.

Article card

On the article card on the info tab "Procurement" the switch "No price determination purchase" must be deactivated.

Purchase order types

In the purchase order types, the check mark in the "No pricing" column should not be set.

Article family

Identical articles that have not been priced individually can be grouped into article families on the basis of which prices can be maintained.

To be able to use pricing on article families, you must first create article families. To access the article families, call them up via the user search.

Using the "New" function in the ribbon, you can define a new article family with the help of the table below.

Field	Description
Type	Select "Purchasing" for the purchasing article families
Code	Assign a meaningful code (abbreviation)
Vendor no.	Enter the corresponding assignment to a vendor based on the vendor no.
Description	Assign a meaningful description
Description 2	Optionally you can insert another description

Costing groups

A pricing group can be used for pricing articles. The price group can be assigned to an article. In the respective calculation group it is displayed for which vendor or pricing vendor it should be applied.

To create the purchasing calculation groups in KUMAVISION healthcare365, call up the "Purchasing calculation groups" in the user search.

Via "New" in the menu ribbon you can define a new calculation group with the help of the table below.

After successful creation of the purchasing calculation group, you can define the prices for the calculation group via the menu item "EK calculation group price management".

Price types

The price types define how the prices are determined. They are the result of the different combinations of price type, area and condition type. The hierarchy in the purchasing area differs from the one in the sales area because all price types are on the same hierarchy level for best price determination. Each code later represents a unique price type. Not all prices set up have to be used in the later process.

To create a new price type, fill in the fields as follows:

Field	Comment
Range	Specify whether the price type is valid for Accounts Receivable or Accounts Payable.
Code	Assign a unique name or number that is used to identify the price type.
Standard	Specify whether the price type is valid for the Pricing module or the price type should be valid for a specific pricing customization. The field is not displayed by default and filled with a check mark.
Description	Assign a short description for the price type.
Condition type	Indicate if this is a special condition, promotional price, or list price.
Price type	Specify which price type you want to define. Based on the combination of area, condition type and price type, the system determines which function is used for pricing. Possible price types: • Article • Calculation group • Area (customer or vendor) • Pricing header (customer or vendor) • Area price list (only for customer, customer price list) • Range article • Area-Calculation Group • Pricing header article • Pricing header calculation group • Range price list articles
Price type Designation	Here you can define another description for the price type. By default, the system enters here the selection range, condition type and price type.
Code unit ID	Specify the code unit to be used for pricing (if the default is not to be used). The field is not displayed by default and filled with "0".
Code unit name	The system automatically enters the name of the code unit. The field is not displayed by default and is filled with the name of the code unit.

Pricing vendor

The pricing vendor is used for grouping vendors of, for example, purchasing associations. One pricing vendor can be stored per vendor.

To assign a vendor for a pricing vendor, first call up the corresponding vendor card and set the status to "Edit vendor".

To now assign a pricing vendor to the desired vendors, select the menu item "Med" > "Assigned partner functions" in the ribbon.

For the assignment, select in the column "Partner functions" = "Pricing vendor (PF-KR)". Then you can select the desired pricing vendor in the "Partner contact no." column.

Then confirm your entry with "OK" and exit the vendor maintenance.

Article

The purchase price management is done on the article card through the "Purchase prices". On the purchase price management card you can assign the article prices, purchase article families, article calculation group and the purchase conditions. For more information, see the sections below.

Article prices

On the purchase price management card you can store the corresponding article prices. The article price is the simplest way of price maintenance. The article price can serve as a base price for further price calculations.

Example: A purchase list price can be stored for an item.

You can maintain the purchase list price on the article purchase price management card on the "Article prices" info tab. To do this, create a new row and fill in the necessary fields according to the table below:

Field	Description
Price type	Here you can specify which price type it should be. The possible price types are: Sale List Price: Price list used for the price type combination customer area, article condition and list price type. purchase List Price: Price list used with the price type combination area vendor, condition article and price type list price. Sale calculated: Price list for sales calculation Purchasing calculated: Price list for purchase calculation Optional 1: Price list for an extension of the price determination or as a further base price for the calculation Optional 2: special price list for an extension of the price determination or as a further base price for the calculation
Sales order type	Here you can select for which order type this price should be taken into account.
Item number	Specify the number of the item to be assigned
Variant code	If you work with article variants in your company, the variant code can be selected here.
Currency code	Specify the currency code for which the item price should be valid.
Quantity	Specify the quantity from which the item price should be valid. The specified quantity refers to the package unit.
Start date	From which date the item price should be valid.
End date	Until which date the item price should be valid.
Unit code	For which packaging unit the pricing is valid. If no packaging unit is specified, pricing is valid for all packaging units
Price unit code	Specification of the price unit for which pricing is to apply. It is preset on the basis of the article number.
Price / Price unit	In this field you can specify the sales price/price unit for which the pricing should apply. If you enter a price, the system calculates the sales price/price unit based on the information entered.

Field	Description
Price / Packing unit	In this field you can specify the sales price/package unit for which the pricing is to apply. If you enter a price, the system will calculate the sales price/package unit based on the information entered.
UK price incl. VAT	If the check mark is set, the VAT is included in the sales price. **Note** that if the checkmark is set, the VAT transaction group field must also be filled in.
VAT business posting group	Selection of the valid VAT, but only if previously selected VK price incl. VAT.

Article family

Item families are groups of articles that usually have the same or similar characteristics or that are grouped together due to their nature, their same pricing or other criteria. Article families are therefore suitable for evaluations and can be used in a similar way to merchandise categories or statistics groups.

Examples:

a) Article family scissors: All scissors cost 2.00 euros.

b) purchase of 20 pairs of gloves (whatever size, color, model).

When the scale is reached (e.g. quantity 20) the family discount is drawn. As a basis for the family discount can either be deposited a family price, or different prices per model.

You can maintain the article family on the article purchase price management card on the info tab "Purchase article family assignment". To do this, create a new line and fill in the necessary fields according to the table below:

Field	Description
Item number	Specify the item number of the item to be assigned.
Article family	Specify the item family of the item to be assigned.
Vendor no.	The vendor no. is automatically preset from the article family.
Quantity	Specify the quantity from which the item price should be valid. The specified quantity refers to the package unit.
Start date	From which date the purchase article family assignment applies.
End date	Until which date the purchase article family assignment is valid.

Note

An article can be assigned to only one article family at a time.

Costing groups

The calculation groups can be used for grouping articles. They are thus used for simple price maintenance. Several calculation groups can be stored per article.

Example:

Customers get 5% on all titanium items.

Care:

Either store percentages in the calculation group

Or enter percentages in the Surcharge/Discount field in the Vendor costing group.

The maintenance of the calculation group can be done on the article purchase price management card on the info tab "Article Calculation Groups". To do this, create a new line and fill in the necessary fields according to the table below:

Field	Description
Order type	Specify the order type for which the article costing group should apply
Costing group code	Specify the item costing group of the item to be assigned
Currency code	Enter here the currency code for which the item price should be valid
Start date	From which date the article costing group applies.
End date	Until which date the article costing group is valid.
Created by	"Created by" will automatically default to the appropriate UserID.
Created on	"Created on" is automatically preset.
Corrected from	"Corrected by" is automatically preset with the corresponding UserID.
Corrected on	"Corrected on" is automatically preset.

Purchasing conditions

Purchasing conditions that you agree with suppliers for a specific item can be maintained under purchasing conditions. The purchasing conditions are used for individual price maintenance.

You can maintain the purchase conditions on the article purchase price management card on the "Purchase conditions" info tab. To do this, create a new row and fill in the necessary fields according to the table below:

Field	Description
Price type	Select a price type. You can choose between Vendor and Vendor Price List.
Price type code	Select a price type code. Enter a vendor for which the price has its validity.
Variant code	If you work with article variants in your company, the variant code can be selected here.
Order type	Specify the order type for which the purchase condition should apply.
Start date	From which date the purchase condition is valid.
Quantity	Specify the quantity from which the item price should be valid. The specified quantity refers to the package unit.
Unit code	Select the appropriate unit.
End date	Until which date the purchase condition should be valid.
Price unit	Select the appropriate price unit.
EK price (price unit)	Enter the EK price unit.
Discount reason	Specify a discount reason (if desired).
Price basis	Specify the price basis.
Additional discount in	Enter the desired surcharges/deductions in %.

Shopping discounts

Discounts that you have agreed with your supplier can be displayed and taken into account in the purchasing documents. In addition to the traditional invoice discounts, the line discounts and discount reasons are available.

Line discounts are taken into account directly on the respective purchase line. These line discounts can be assigned with the help of the defined discount reasons maximum or fixed.

Discount reasons

To be able to use the line discounts in combination with discount reasons in the later processes, it is first necessary to define them. To do this, call up the "Discount reasons" via the user search.

You can define a new discount reason via "New" in the ribbon.

To make the assignment, open the corresponding purchase document and select a discount reason on the desired line.

The discount reasons can also be used to map "discounts in kind". For this purpose, a corresponding discount reason = 100% is created and assigned to the corresponding line item.

After selecting a discount reason, the corresponding line discount will be filled automatically.

The line discount is only directed to the respective line and automatically calculates the line amount for you minus the desired discount.

Special conditions

The conditions describe the conditions under which a certain price is achieved. If no conditions are given, the article price is used. Special conditions are all prices that are not article prices.

Special condition item

With the special condition article you can define for an article a special surcharge or discount valid for all vendors.

Special condition vendor article

With the special condition vendor you can define a special markup or markdown for a vendor of an article. This markup or markdown can either be based on the purchase price entered in the line or on a different price base. To do this, select one of the options in the Price base field. It is also possible not to define a markup or markdown, this way you can enter another vendor specific price for this item.

Special condition vendor purchase costing group

With the special condition Vendor purchase price calculation group you can define a special markup or markdown for a vendor of a purchase price calculation group. This surcharge or discount refers either to the purchase price entered in the line or to the price basis.

Promotional prices

Action prices are part of the special condition. Action prices differ in that they are marked by the hook "Action" and can be marked with it in the price sheet.

Action price vendor

In the Vendor promotion price, you can define an additional surcharge or discount for a vendor. To define this special condition as a promotion price, set the corresponding check mark in the "Promotion" field.

Action price item

You can define a markup or markdown for an article in the article promotion price. This markup or markdown refers either to the purchase price entered in the line or to the price base. It is also possible not to define a markup or markdown, this way you can simply enter another price for this article.

Action price purchase calculation group

You can define an additional markup or markdown for a purchase price calculation in the purchase price calculation group action price. This surcharge and discount is attached as a final invoice transaction of the calculation with the designation additional calculation.

Action price vendor item

In the Vendor article promotion price, you can define a special markup or markdown for an article vendor. This markup or markdown refers either to the purchase price entered in the line or to the price base. It is also possible not to define a markup or markdown, this way you can simply enter another vendor specific price for this item.

Promotion price vendor purchase costing group

In the Vendor purchase price promotion group, you can define a special markup or markdown for a vendor in a purchase price calculation group. This surcharge or discount refers either to the sales price entered in the line or to the price basis.

Price sheet

The price sheet shows you the underlying pricing.

To do this, call up the corresponding price sheet in a purchasing document via the lines, the function.

The price sheet opens. You can use the "Execute pricing..." function to execute pricing.

After executing the function, the origin of the purchase price is displayed in the "Item price sheet" info tab.

Additional fields in purchasing

For additional fields already stored in the master data, it can be defined that these are carried through the purchasing process to the posted document. In addition, it can be defined whether a manual change in the document should be possible or not.

Additional fields for articles and resources can be included in the lines in business documents, information on vendors is included in business documents at document header level.

Header related information from the inc. of Name:

> • When creating a document, the additional fields are included at header level.

Line-related information:

> • When selecting an item in a business document, the additional fields are taken as a row.

For additional fields in header and line applies: All fields that are transferred to a purchasing document can be overwritten there manually if this is set up accordingly in the additional fields table setup. A "manually changed" marker is then set for each field and it is stored by whom the information was changed and when.

Note

For actions such as "Copy document", Post, etc., all additional fields that have not been changed manually are pulled again from the master data.

Time limitation of blanket orders

The standard limitation of the quantity of blanket orders by KUMAVISION healthcare365 can also be limited in time. A time limit was added so that after the expiration of the validity, the conditions of the blanket order can no longer be used.

In the blanket purchase order card, the validity of the blanket purchase order can be entered in the new "Valid until" field. If the field is not filled, the blanket purchase order is considered to be valid for an unlimited period of time.

Frame order Remaining quantity

In blanket purchase orders, the remaining quantity to be delivered is visible. What is not directly visible to the user is the quantity from the blanket purchase order that has already been called off in a purchase order but has not yet been delivered. For this purpose, the blanket purchase order lines have been extended by the fields "Quantity in purchase order" and "Remaining quantity less purchase order".

Minimum order value and freight limits in purchasing

For wholesalers, it is imperative to optimize ordering costs. In KUMAVISION healthcare365 it is possible to consider minimum order values and freight limits of the suppliers in the ordering process.

To define a minimum order value or freight limit for your supplier, call up the desired vendor card.

Enter the desired amounts on the "Delivery" info tab in the "Minimum order value" or "Freight limit" fields. The specification of the two fields for the vendor always refer to the currency of the vendor.

The values entered here are displayed in the order statistics and in the order worksheets.

Order statistics

In an order, you can view the order statistics in the ribbon > "Order" > "Statistics".

In the "Vendor" info tab, the two fields "Minimum order value" and "Freight allowance" are included. Thus, this information can be viewed directly in the order creation process. The display of the two fields "Minimum order value" and "Freight limit" in the order statistics in the info tab "Vendor" always happens in the currency of the vendor, regardless of which currency the purchasing document currently has.

Order worksheet

In the purchase order worksheet, below the proposal sheet, you will also see the minimum order values and freight limits (if any) of the vendor.

In addition, the amount already planned in this order worksheet and by the respective vendor is displayed in the Vendor Order Value field.

When an entered order is released, the values are checked against the freight allowance and the minimum order value. If the values fall below these limits, a corresponding message is displayed to the user.

When releasing an order, a check of the order value against the minimum order value happens only if the currency of the order is the same as the currency of the creditor.

The user can decide at this point if he still wants to release the order or not.

The minimum order value, which is stored at the vendor, is compared with the net or gross value of the order lines in the check run, depending on the setting of the switch "Purchase prices incl. VAT". If this switch is set, it is compared with the value incl. VAT of the order line and it is determined whether the minimum order value is reached. Therefore, when releasing the order, a check is only made if this switch is the same as the switch of the vendor for the order to be released. In the purchase order worksheet, the purchase prices are recorded accordingly. There is no line amount field in the order worksheet line. Here, the "line amount" is simply added, which would result from the fields quantity, purchase price and line discount%. In case of EK price incl. VAT = Yes, the VAT amount to be expected in an order is added per line.

Note

Any existing invoice discount will not be taken into account during the check.

If the purchase from vendor and the payment to vendor differ, the settings of the purchase from vendor will be taken into account for the check run.

Special notes in order worksheets

In the order worksheet, below the suggestion sheet, the special notes of an item and / or the vendor (if any) are displayed to you.

Optimized order

The optimized order offers the possibility to increase the quantities on the basis of the data of the order worksheet in such a way that e.g. a minimum value or a volume or weight is reached. For this purpose, all products of the supplier are listed with their stocks and receipts and issues in the last months. The user can make an optimization by this functionality and write back into the order worksheet.

Establishment

Articles / Suppliers Catalog

In the article supplier catalog articles must have been deposited for a certain supplier.

KUMAVISION med facility

The period to be considered for the calculation of the stock optimization can be determined in the KUMAVISON med setup on the "Stock" info tab via the "Stock range period" field.

If the setup has not been done, the user will receive a corresponding message.

Article units

To calculate volume and weight in the Optimized Order, the volume and weight must be stored in the item units.

Optimized order in the order proposal

Open the optimized order

The optimized order can be opened from the order proposal. Only articles that are not marked as "blocked" and that have the same vendor in the article / supplier catalog are displayed.

Statistical fields

In order to facilitate the selection of the items to be added, the following statistical fields have been inserted:

- Quantity in order
- Stock in storage location
- Stock
- Procurement time
- Storage range in weeks
- Average access per week
- Average departure per week

Add articles

By entering a quantity, the footer fields of the optimized order are updated (prerequisite: weight and volume in the article unit, as well as the prices). In addition, pricing takes place if there are, for example, scale conditions.

Foot of the optimized order

For better planning or overview, there are summary fields for amount, volume and weight in the footer.

Thus, the buyer has the possibility to add more items or quantity for a vendor to reach the volume for a container or amount for the next invoice discount.

Replacement procedure

MED requisition

In addition to the procedures of Microsoft Dynamics Business Central™, there is a replenishment procedure "Requisition MED", with which a pure quantity consideration is carried out, there is no date consideration. You can enter the replenishment procedure on the same inventory card in which you define the procurement method, under the "Planning" info tab.

Replacement procedure	Description
MED requisition	If the reorder level is not reached, the system fills up to the reorder level, taking the order quantity into account. Only quantities are taken into account without reference to the date.

If this option is selected, the two fields "Reorder point" and " Lot size rounding factor" can be changed on the inventory data card.

The procedure integrates into the standard call from order or planning worksheets.

The values from the input mask also apply to the "MED requisition note" replenishment procedure:

- All filters on the article are taken into account.
- The start date is already preset with the work date.
- For the calculation of the end date there is already the field "Default planning period" in the "KUMAVISION med Setup".

Standard routines are used to identify needs and needs fillers. Thus, Microsoft Dynamics Business Central™ Standard also uses data from blanket order and sales plan, as far as these options have been set by the user in the input mask. The technical plan lines from the MED extension are also used.

In the standard system, all inventory data records for the article are run through. This is done in the order that a demand fulfillment from stock transfer is calculated first.

The replenishment procedure "Requisition MED" calculates the balance of requirements and requirement filler for each inventory record. If the balance falls below the "reorder level", this results in the calculated replenishment quantity.

Based on the "lot size rounding factor", the calculated replenishment quantity is rounded up accordingly based on this value. If a purchasing unit code with a quantity greater than 1 is stored, the calculated replenishment quantity is rounded up accordingly using this value.

The calculated replenishment quantity is finally entered as planning line. The order date is filled with the start date. The Erw. delivery date is calculated on the basis of the procurement time.

Notes

- There are no emergency messages
- No demand source items are generated
- As before, the delivery schedule lines are not taken into account. If necessary, this must be implemented on a project-specific basis.
- Returns should be made through a separate storage location if they are not to be included in the reprocurement.
- Purchase returns should also be made from a separate storage location.
- There is no "Do not consider unrealized stock" switch.
- There is no consideration of the document status (Open/Released).

Lot by Lot (Tolerance Period (Too Late))

This change affects the "lot-by-lot" re-procurement procedure in the planning run, i.e. in the purchase order or planning worksheets.

In Microsoft Dynamics Business Central™ Standard, it is possible in the planning run to ignore time shifts between the demand and the demand filler, insofar as the demand filler moves ahead of the demand in terms of time.

Example:
For a sales order with a delivery date of July 15, a purchase order was created whose goods receipt is also planned for July 15. Now the delivery date has been brought forward to July 10. Without further parameterization, the planning run would want to cancel the purchase order and generate a new purchase order for July 10.

To prevent the requirement filler from being deleted and rescheduled, the "Rescheduling period" field in the inventory data card can be used. With this date formula both directions are considered and if necessary a change planning is suggested.

To prevent a message from appearing in general, the "Standard tolerance period (too late)" can be set in the "Production setup" or the "Tolerance period (too late)" can be set in the respective stock card.

This prevents entries from being created in the planning run if the requirement filler is moved before the due date.

Replacement of fixed assets and third-party property

The inventory data apply to all posting codes. In the future, a distinction will be made between current assets (UV), fixed assets (AV) and external property (FE). Each booking code is assigned to one of these three ownership types.

This facility in the "Booking codes" table must be present before all bookings to AV and FE. The actual replacement is only valid for current assets, since usually only current assets are procured.

The field "Stock" now shows the total stock for the characteristic article, variant and storage location. There are three more fields "UV stock", "AV stock" and "FE stock" to show the stock separately by ownership type.

Fixed assets and third-party property are treated specifically.

In the case of third-party property, direct procurement should normally take place. If there are requirement originators for external property without corresponding requirement fillers, these are set 1:1 in the order lines.

For fixed assets, the internal procurement process can be different. For this purpose, there are the following fields on the inventory data card to parameterize this:

In the field "AV Wiederbeschaffungungsverfahren" the procurement can be changed for branches from purchase to stock transfer. In the field "AV Umlagerung-from Code" the storage location of the procurement is then indicated.

In the case of fixed assets, there is the special feature that these are to be held in certain storage locations in certain sizes. In this case, the quantity to be held in reserve can be entered in the "Reorder point" field. The "AV lot size rounding factor" should only be of importance in exceptional cases, if the internal stock transfer is not to take place per piece, but in deviating packaging units.

> Note

If a minimum stock level is specified for a store, it can either be transferred or purchased. If the stock level falls below the minimum stock level, it is always requested from the specified storage location as a stock level in the case of stock transfer. In the case of purchasing, however, the system first checks whether sufficient "UV stock" is available. Only if there is a shortage of UV stock will an order be triggered.

Stock data

In order to simplify the management of inventory data, a possibility has been created for minimum stock levels to be calculated and proposed on the basis of historical data. The user then has the option of transferring this data directly into the inventory data.

In addition, a convenience function has been created to create the inventory data in the batch.

The inventory data of an item can only be entered or changed if it is in the "Processing" status. The inventory data also contain the dimension "posting code", so that inventory data can also be maintained for different posting codes.

Re-procurement procedure "MED requisition".

In addition to the procedures of Microsoft Dynamics Business Central™, there is a replenishment procedure "Requisition MED", with which a pure quantity consideration is carried out, there is no date consideration. You can enter the replenishment procedure on the same inventory card in which you define the procurement method, under the "Planning" info tab.

Replacement procedure	Description
MED requisition	If the reorder level is not reached, the system fills up to the reorder level, taking the order quantity into account. Only quantities are taken into account without reference to the date.

Dispositive data

Depending on the replenishment procedure, various data must be maintained that have an impact on the purchase order worksheets.

In the best practice process of KUMAVISION healthcare365 "Requisition MED" is selected as replenishment procedure. In this procedure, only the fields "Reorder level" and "Order quantity" are relevant. As soon as the reorder level is fallen short of, the replenishment is done up to the reorder level considering the order quantity.

For information on the reprocurement procedures already implemented in Microsoft Dynamics Business Central™, please use the [Microsoft Dynamics Business Central™ Helpsite (F1)](#).

Unreal stocks

In the "Accounts Payable & Purchasing Settings" it is possible to set whether unavailable stock should be ignored. This means that orders with a goods receipt date in the past will not be considered as available stock.

Create inventory data autom.

Establishment Standard assortment

In order to filter the creation of inventory data to specific items, the "Standard assortment" field has been added to the item master.

Autom. stock data

An indicator "Autom. stockkeeping data" can be set at the storage location so that stockkeeping data can be created for all storage locations with this indicator.

Weighting scheme

To create a weighting scheme or edit an existing one, enter "Weighting scheme overview" in the search function.

The weighting scheme can be used to define for which period and with which weighting the historical data should be considered and thus also calculated. In addition to a date formula, a fixed date can also be entered.

The weighting scheme can be stored in the following places, which also corresponds to the hierarchy:

- KUMAVISION med facility (Inforegister: Purchasing)
- Item categories (column: consumption weighting scheme code)
- Article card (Inforegister: Procurement)
- Inventory data (procurement info register)

If the STANDARD weighting scheme has been entered for the item and WEIGHTED for the stock data, the weighting scheme of the stock data will be used for the calculation.

Process Create inventory data

In the article under Actions or under via Quick Search there is a function "Create stock data" to create several stock data in the batch.

There are some fields that support the creation of inventory data.

Field	Description
Created after	Selection of whether the inventory data should be created by storage location only, by variant or by storage location & variant.
Only for items in stock	Specify whether the stock data will be created only if the item has a stock or also if the item has no stock.
Delete existing warehouse data	If selected, the previously created inventory data will be deleted by the new creation. Procurement method Default, how the value "Procurement method" is to be filled in the inventory data. Either by takeover from the article or as default. Selection options: • From article • Purchasing • Production order • Stock transfer • Mounting
Replacement procedure	Specification of the replenishment procedure for the inventory data. Selection options: • Empty • Fixed order quantity • Replenish to maximum stock • Order quantity • Lot-by-lot • MED requisition
Stock transfer from storage location code	If the option "Stock transfer" has been selected in the procurement method, a storage location (from which stock is to be transferred) can be entered here. Prerequisite is that the transfer route is deposited.
Consumption weighting scheme	Specification of the weighting scheme for the inventory data.
Inforegister articles	**Filter on fields of the item** Filter on the fields of the item master, including the new field "Standard assortment" **Filter on summary fields** Filter on the summary fields, such as booking code, but also on the new field "Autom. stock data" When the function with the filters is executed, the stock data is created.

Article Planning parameters Proposal

You can monitor the inventory data via the "Article planning parameter proposal" page.

Calculation planning parameters

To have the planning parameters calculated, the function "Calculation planning parameters" must be executed in the menu ribbon.

The following parameters can be set:

Field	Description
Storage location filter	Registration of a storage location If no storage location is entered, the calculation is made for all storage locations. One line per storage location.
Article variant filter	Registration of a variant If no variant is entered, the calculation is performed for all variants.
Create 1 line per article variants	This option creates and calculates one line for each variant.
Booking code filter	Preset with booking code UV If no booking code is entered, the calculation is performed for all booking codes.
Weighting scheme filter	Entry of a weighting scheme If no weighting scheme is entered, the calculation is performed for all weighting schemes.
Reference date	Based on this date, the data is calculated.
Show rows without change	When filling the book sheet, it is also possible to transfer only those lines to the book sheet at all, whose values in the proposed New Parameters differ from the values in the Old Parameters. This is done with the help of the "Show lines without changes" switch in the options part of the fill run that the user leaves unchecked in this case.
Period	Based on the option, the static fields should be calculated. Options: Day, Week, Month, Quarter, Year
Article" info tab	According to the set filter the data will be calculated.

In addition to the range calculation for the current stock and weighted consumption, the parameter proposal article also suggests new planning parameters based on these values. These can be edited in order to enter deviating data manually, if necessary. For this purpose, the read-only old planning parameters that have been

transferred from the master data are displayed. The logic of how the new parameters result is, in this case the reprocurement procedure must be taken into account:

- The new minimum stock is the consumption, which would result from the kalk. Consumption per day in the time span procurement time + safety margin procurement time would result.
- The New Maximum Stock is equal to the New Minimum Stock plus the consumption that would result from the Calc. Consumption per day in the time span of the order cycle.

Editing proposal

After the proposal has been calculated, the result can be checked and adjusted if necessary. The following columns, among others, are available for this purpose.

Field	Description
Item number	Item number
Description / Description 2	Item description
Booking code	Posting code of the planning line and basis of calculations
Storage location	Storage location of the calculation line
Consumption weighting scheme	Use consumption weighting scheme
Reference date	Reference date for calculation
Lime. Consumption per day	Calculated consumption per day based on the consumption weighting scheme. Here is the lookup option to view the calculation base.
Stock	Stock of items, storage location combination
Range (date)	Range of coverage as date of stock on hand based on cal. Consumption per day.
Range (days)	Range of coverage as number of days of stock on hand based on cal. Consumption per day.
Procurement method	Procurement method stored in the inventory data.
Replacement procedure	Replenishment procedure stored in the inventory data.
New replacement procedure	Optionally, a new replenishment procedure can be selected here.
Procurement time	Procurement time due to NAV hierarchy 1. Stock data 2. Supplier Article Catalog 3. Article 4. Vendor
Old minimum stock	Minimum stock of the inventory data
New minimum stock	Optionally, a new minimum stock can be stored here.
New minimum stock range (date)	Specifies the range as the date for the new minimum stock

Field	Description
New minimum stock range (days)	Indicates the range in days for the new minimum inventory
Purchasing unit	Purchasing unit
Old order quantity	Order quantity of the stock data
New order quantity	Optionally, a new order quantity can be stored here. It is checked whether the order quantity is a multiple of the purchasing unit, so that whole units are always suggested in the order proposal.
New planning pa	rameters deviating
Calculated on	Date when the calculation was performed
Calculated by	From which the calculation was performed
Corrected on	When the line was changed
Corrected by	By whom the line was changed
Stock data updated on	When the inventory data has been updated

Statistics

With the help of statistics, the calculation can be better understood. In addition, the statistics can support decision making for new data.

Info box "Article dispo. parameter".

The info box "Article Dispo. parameters" shows the stock data of the current line.

Infobox "Article consumption lime.details"

The info box "Item Consumption Calc. Details" displays the data of the individual movements based on the consumption weighting scheme of the current row.

Field	Description
Sale per period	According to "Consumption weighting scheme" the item type "Sales per set period" is calculated
Consumption per period	According to "Consumption weighting scheme" the item type "Consumption per set period" is calculated
Consumption assembly per period	According to "Consumption weighting scheme" the item type "Assembly per set period" is calculated.
UML Output per period	According to "Consumption weighting scheme" the item type "UML output per set period" is calculated.
Order per period	According to "Consumption weighting scheme" the item type "Order per set period" is calculated.
UML Input per period	According to "Consumption weighting scheme" the item type "UML input per set period" is calculated.
Actual message per period	According to "Consumption weighting scheme" the item type "Actual message per set period" is calculated.
Actual message assembly per period	According to "Consumption weighting scheme" the "Item type actual message assembly per set period" is calculated.
Addition per period	According to "Consumption weighting scheme" the "Item type access per set period" is calculated.
Disposal per period	According to "Consumption weighting scheme" the item type "Outgoing per set period" is calculated.

Inventory turnover

To open the item statistics matrix, click on "Item/ inventory turnover" and then on Display matrix. The inventory turnover shows the past movements of the item.

Item availability by event

The item availability by event shows all the recorded documents of the item.

Apply changes

When the check and revision of the parameters are completed, this can be transferred to the stockkeeping data. For this purpose, the lines that are to be transferred must be marked and then the function "Transfer changes to stockkeeping data" must be executed.

The user is asked once again whether the transfer should actually take place. If this query is confirmed with "YES", the data will be transferred to the inventory data.

Sales and Marketing

Marketing Cockpit

The Marketing Cockpit is the central point for any kind of contacts in KUMAVISION healthcare365. All business processes can be viewed or started from here.

Information

The "Information" tab of the Marketing Cockpit displays an overview of various information, e.g. open customer items, serial number information or deliveries to addresses. The blue number next to the respective information shows how many different entries are available for it. By clicking on the number, this information is displayed in the window to the right, and can be dived to from there.

Actions

Using the "Actions" tab in the ribbon, various actions can be called up for a contact, e.g. to directly create an offer, order or withdrawal:

Contact statistics

The "Contact statistics" info box can be used to call up existing offers, orders, returns and registered receipts for a contact.

Warnings

Warnings can be stored for contacts or customers so that, for example, a warning against contagious diseases is displayed in the Marketing Cockpit when the contact is opened. For more information, see the "Warnings" section.

Create, Delete, Modify, Rename

Customers are always created via contact short entry. If you select the corresponding short entry template, a customer is created at the same time as the contact. For more information, see section Contact short entry.

For customers (as well as for all other master data records), the mandatory field check supports the creation of a data record. Likewise, additional fields can be entered in a simple way.

Additional fields in sales

For additional fields that have already been defined in the master data of a customer, it is possible to define that these are available in the sales process and are carried forward to the posted document. Additional customer fields are included in the document header, and additional fields for articles and resources are included at line level. In the additional field setup, it must be defined whether manual changes may be made to these fields in the document. These changes are then logged with user and time information.

Article

Sale items

Sales articles are articles that are being discontinued from the product range. They can either be articles that are no longer reordered by the company or articles that are no longer supplied by the supplier. In order for the sales department to be aware of this when entering orders for these articles, there is a sales message through the system with the availability check. A sales item can be either an item itself or variants of the item.

To mark an article or an article variant as a sale article, first call up the desired article card.

On the "Item" info tab, you can mark the item accordingly by activating the "For sale" button.

Alternatively, you can mark each variant by checking the "For sale" checkbox for the corresponding variant. Article variants can thus be marked individually "For sale".

> Note

If an article that has article variants is itself marked as "On sale", this automatically applies to all its variants in effect, regardless of whether they themselves have been marked as "On sale" in the Article variants table.

When entering an item marked for sale in a sales order, the user receives a notice with the availability message that this is just such an item.

Any existing orders for this item will not be displayed for items marked for sale in the availability check. Planned receipt is always set to 0, as it cannot be guaranteed that this order will still be delivered.

> Note

If an order exists for this item, it will not be included in the availability message if the delivery date of the order is later than the delivery date of the order.

If the desired delivery date of the order is earlier than the planned goods receipt, an "Earliest availability date" is displayed.

Additional fields in sales

For additional fields already stored in the master data, it can be defined that these are carried through the sales process to the posted document. In addition, it can be defined whether a manual change in the document should be possible or not.

Additional fields for articles and resources can be included in the lines in business documents, information on customers is included in business documents at document header level.

Header related information from Sales to Deb / Invoice to Customer:

- When creating a document, the additional fields are included at header level.

Line-related information:

- When an article is retrieved from a contract in the scheduling agreement, the additional fields stored for the selected product are transferred from the article to the scheduling agreement. If the contract version line contains more specific information (additional fields defined by the contract, such as settlement aid numbers, item numbers, etc.), these take precedence.
- When selecting an item in a business document, the additional fields are transferred as a row, with additional field values in the contract taking precedence over values from the master data. Additional fields from the contract are always transferred to the row and override identical information from the master data item, resource, etc.

For additional fields in header and line applies: All fields that are transferred to a VK document can be overwritten manually there, if this is set up accordingly in the setup of the additional fields table. A marker "manually changed" is then set for each field and it is stored by whom the information was changed and when.

Note

For actions such as Copy document, Get delivery, Post, etc., all additional fields are pulled again from the contract or master data that were not changed manually.

Pricing sale

KUMAVISION healthcare365 offers an extended pricing function, which can be used to map different prices and conditions (e.g. discounts for certain customers or article groups, quantity scales etc.) within a hierarchy.

On the sales side, the price hierarchy is designed in such a way that the price that is highest in the price hierarchy is always determined automatically. This means that the hierarchy always determines the prices "from the rough to the fine". The following should be noted:

1. **"General accounts receivable" generally always before "Pricing accounts receivable**
   Customers can be grouped into so-called pricing debitors. Thus, all branches of a health insurance company are grouped under one pricing customer (PF-DE). This means that prices only have to be set up for the one PF-DE and are therefore valid for all those that have stored the pricing debitor. If a price maintenance has already been entered on a customer that has also deposited a PF-DE at the same time, the customer price will have priority over the PF-DE price. (Provided that all other influencing criteria such as quantity and date do not play any further role here). Means that there are exceptions. Yes, for price lists. In the case of price lists, if there is a price determination customer for a customer, this customer has priority in the case of price lists.

2. **"Promotional prices" usually always before "Special conditions".**
   The standard facilities supplied in the tables in the setup client are set up so that "special condition prices" and "promotion prices" within a price type are valid at the same time (see Setting up the hierarchy level). If both price types are set up as "condition", then both are also displayed in the price sheet. The more favorable one is then used in the sales order (see Best price determination approach). They are entered in the same table and differ only by the "Action" tick. This makes it possible to separate special conditions and promotion prices. Means that there are exceptions. If the promotional price is greater than the existing special condition, then the best price principle applies.

3. **"Price types with combinations" before "Price types without combinations".**
   Within the hierarchy, the level of detail is graded according to the above: (definition)
   • Article
   • Article family
   • Calculation group
   • Price list

Depending on whether the article or the article family is combined with a customer, or, in addition, is a promotion price, this determines the priority. The entire pricing process can thus be divided into 3 segments.

The highest priority is given to all combinations with reference to a customer. Followed by the middle priority. These are all combinations without reference to a customer. The last and lowest priority is given to all prices that are created without reference to an article.

The following illustrations show you the individual hierarchy levels in relation to each other:

Diagram pricing process / hierarchy with reference to a customer / pricing customer:
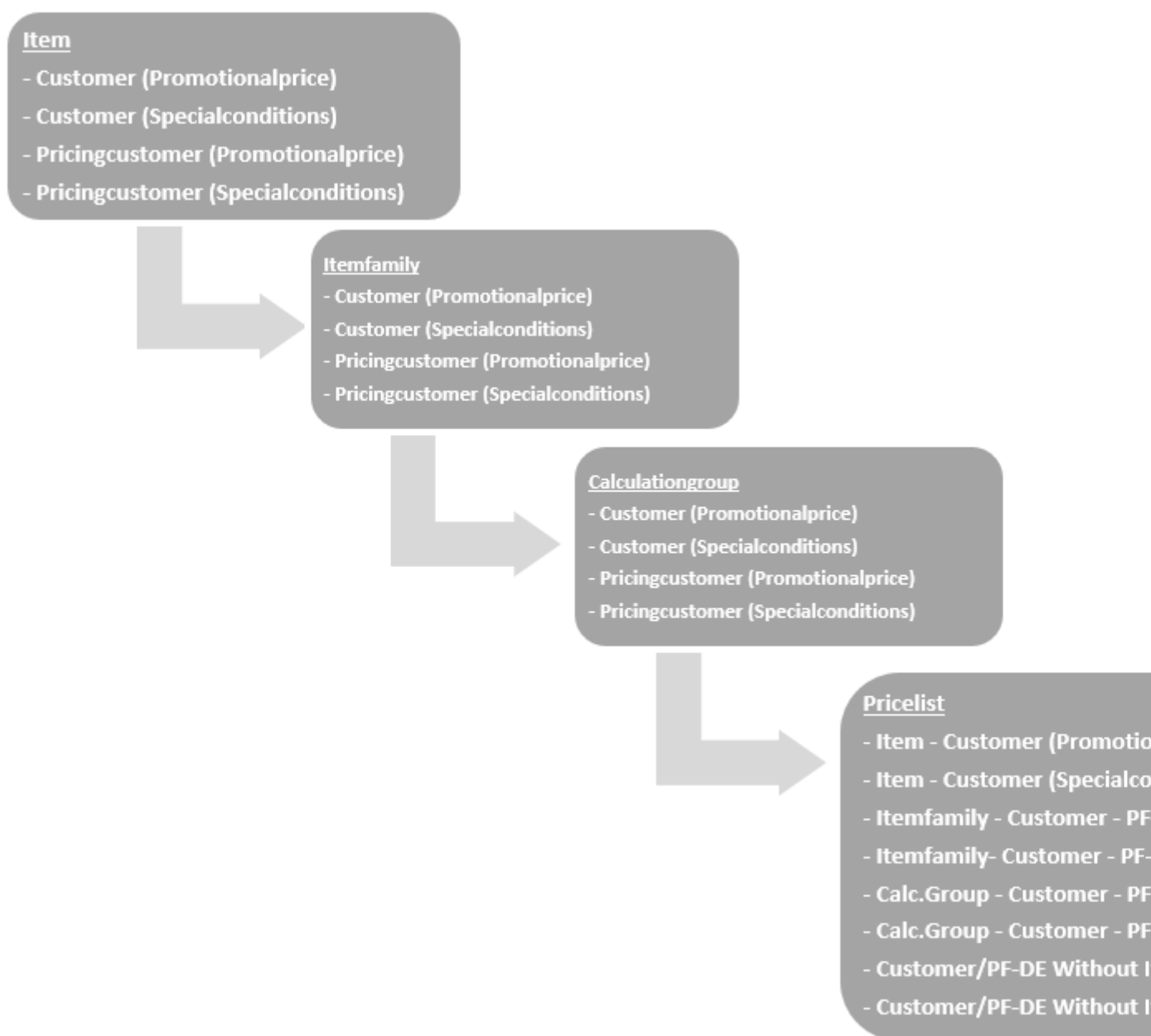
Item
- Customer (Promotionalprice)
- Customer (Specialconditions)
- Pricingcustomer (Promotionalprice)
- Pricingcustomer (Specialconditions)

Itemfamily
- Customer (Promotionalprice)
- Customer (Specialconditions)
- Pricingcustomer (Promotionalprice)
- Pricingcustomer (Specialconditions)

Calculationgroup
- Customer (Promotionalprice)
- Customer (Specialconditions)
- Pricingcustomer (Promotionalprice)
- Pricingcustomer (Specialconditions)

Pricelist
- Item - Customer (Promotio
- Item - Customer (Specialco
- Itemfamily - Customer - PF
- Itemfamily- Customer - PF-
- Calc.Group - Customer - PF
- Calc.Group - Customer - PF
- Customer/PF-DE Without I
- Customer/PF-DE Without I

Diagram pricing process / hierarchy without reference to a customer / pricing customer:

Item

Without Customer Reference(Promotionalprice)

Without Customer Reference (Specialconditions)

Itemfamily

Without Customer Reference(Promotionalprice)

Without Customer Reference(Specialconditions)

Calculation Group

A calculation group is only possible in combination with a customer.

Pricelist

For example, a price list is a list of ite only in interaction with a customer.
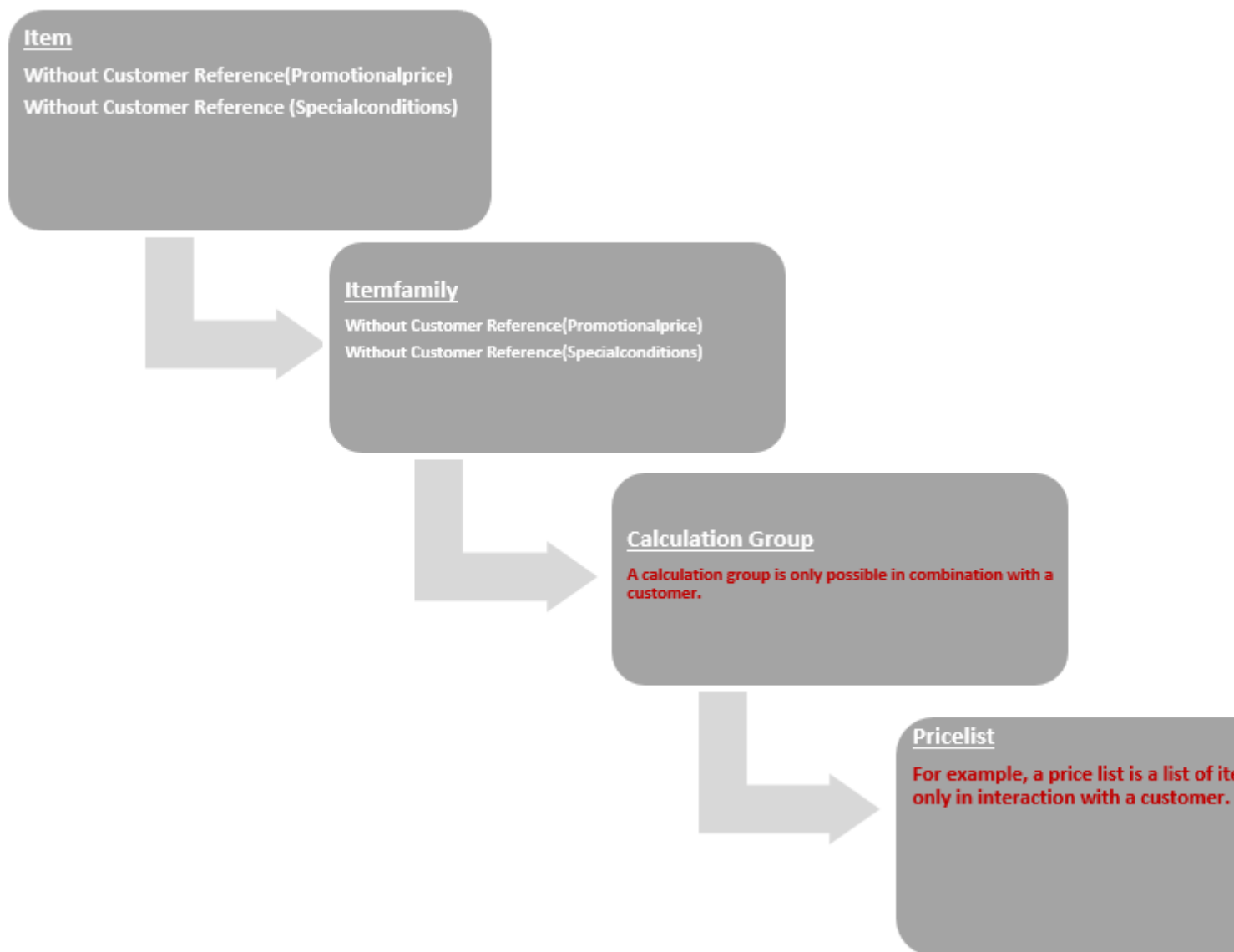
Diagram pricing process / hierarchy without reference to an article:

)
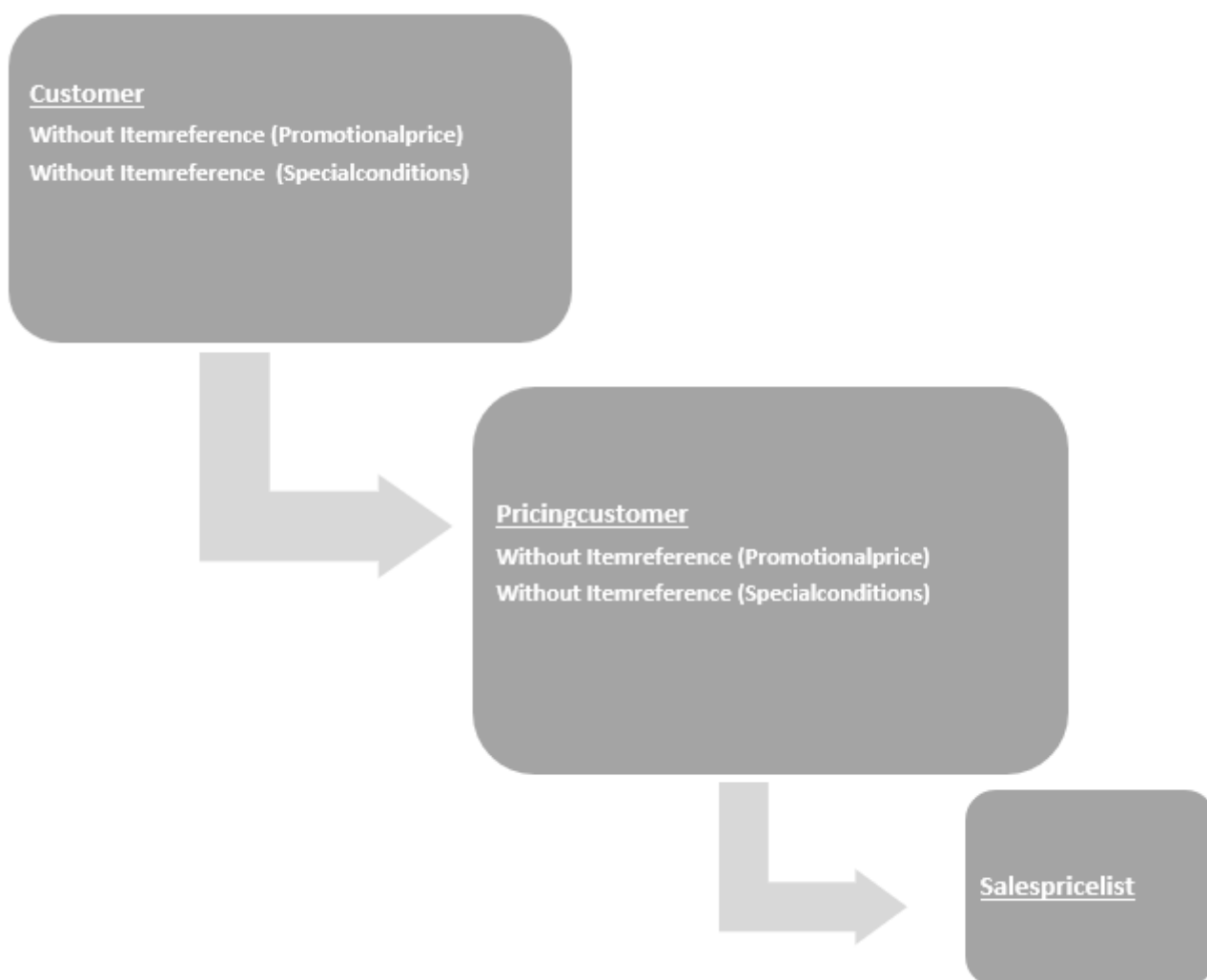
Note

If there are several entries in the same hierarchy level in the pricing process setup, and thus prices with the same priority, which are also valid, as it were, when they are entered, then the "more favorable" price is used

In addition, pricing is influenced by the following factors:

- Quantity (graduated prices)
- Quantity limit (action) in base unit

Establishment

The following setups must be made for pricing in KUMAVISION healthcare365:

KUMAVISION med facility

In the KUMAVISION med setup on the "Sales" info tab, the "Dynamic article family pricing" switch must be activated.

Field	Description
Dynamic article family pricing	This field activates the dynamic article family pricing. This means that the article family code will be reduced digit by digit from the end until the family code is found or there are no more digits left. Notice: If this function is not used, it should be disabled for performance reasons.
Best price determination debtors price list	If this switch is not set, pricing is performed on only one price list.

If the switch is set, the best price is determined only for articles (no article family, no lime-gr.) over all price lists.

User setup

In the user setup on the respective user card on the info tab "KUMAVISION" the switch "No pricing" must be deactivated.

Article card

On the article card on the info tab "Procurement" the switch "No price determination purchase" must be deactivated.

Sales order types (if required)

The check mark in the "No pricing" column must not be set. The check mark in the column "Pricing on release" can be set optionally.

As soon as you set the check mark "Pricing on release", quantity checks are carried out within the sales order when a sales order is released and these are added. Subsequently, the pricing is run through.

Article family

Identical articles that have not been priced individually can be grouped into article families on the basis of which prices can be maintained.

To be able to use pricing on article families, you must first create article families. To access the article families, call them up via the user search.

Using the "New" function in the ribbon, you can define a new article family with the help of the table below.

Field	Description
Type	Select "Purchasing" for the purchasing article families
Code	Assign a meaningful code (abbreviation)
Vendor no.	Enter the corresponding assignment to a vendor based on the vendor no.
Description	Assign a meaningful description
Description 2	Optionally you can insert another description

Costing groups

A pricing group can be used for pricing articles. The price group can be assigned to an article. In the respective calculation group it is displayed for which customer or pricing customer it should be applied.

To create the sales calculation groups in KUMAVISION healthcare365, call up the "Sales calculation groups" in the user search.

You can define a new calculation group via "New" in the ribbon.

After successfully creating the sales calculation group, you can define the prices for the calculation group via the menu item "Sales calculation group price management".

Pricing record types

To access the pricing record types, call them up via the user search. If you use pricing without specific adjustments, the following pricing record types should be created:

Range	Code	Approval	Description
Debtor	ARTICLE	Price reference	Reference: Article table
Debtor	DEBITOR	Price type	Price type: Customer
Debtor	PRICE LIST	Price type	Price type: Price list
Debtor	VK-ART-FAM	Price reference	Reference: Article family table
Debtor	VK-KALK-GR	Price reference	Reference: Calc. group table
Vendor	ARTICLE Price	reference	Reference: Article table
Vendor	EK-ART-FAM	Price reference	Reference: Article family table
Vendor	EK-KALK-GR	Price reference	Reference: Calc. group table
Vendor	CREDITOR	Price type	Price type: Vendor
Vendor	PRICE LIST	Price type	Price type: Price list

Note

Based on the pricing record types, you define which price references and types should exist in pricing.

Price types

The price types are the result of the different combinations of price type, range and condition type. Pricing header here stands for pricing debitors. Subsequently, these are used to define a hierarchy.

To get to the price types, call them up in the search:

The price types overview opens where you can create new price types or delete existing ones.

To edit an already created price type, you can edit it directly on the row level.

To create a new price type, fill in the fields as follows:

Field	Comment
Range	Specify whether the price type is valid for Accounts Receivable or Accounts Payable.
Code	Assign a unique name or number that is used to identify the price type.
Standard	Specify whether the price type is valid for the Pricing module or the price type should be valid for a specific pricing
Description	Assign a short description for the price type.
Condition type	Indicate if this is a special condition, promotional price, or list price.
Price type	Specify which price type you want to define. Based on the combination of area, condition type and price type, the system determines which function is used for pricing. Possible price types: • Article • Calculation group • Area (customer or vendor) • Pricing header (customer or vendor) • Area price list (only for customer, customer price list) • Range article • Area-Calculation Group • Pricing header article • Pricing header calculation group • Range price list articles
Price type Designation	Here you can define another description for the price type. By default, the system enters here the selection range, condition type and price type.
Code unit ID	Specify the code unit to be used for pricing (if the default is not to be used). The field is not displayed by default and filled with "0".
Code unit name	The system automatically enters the name of the code unit. The field is not displayed by default and is filled with the name of the code unit.

Pricing procedure

With the pricing process you define in which order the system should prioritize the different price types. After you have defined and set up the price types, they must be entered in a hierarchy.

To do this, first call up the pricing process overview via the user search.

The pricing process overview opens in which you can enter and define the corresponding hierarchy levels via the "Range" and the "Price type codes".

Fill in the fields according to the following guidelines, or use the tables already installed.

Field	Description
Range	Specify whether the hierarchy level should be valid for Accounts Receivable or Accounts Payable.
Hierarchy level	Specify in which hierarchy level this pricing should be classified. This entry is important for the order of pricing, the smaller the entry the higher the priority of pricing.
Lfd. No.	Specify a sequence number for the line. This entry is used by the system to identify a data record in the case of several entries with the same hierarchy level. The specified sequential no. is not taken into account in pricing, the system compares the result of the same hierarchy level and then takes the best price.
Price type code	Specify which price type is to be drawn.
Standard	This field is used by the system.
Description	Description of the price type. This field is preset with the description from the price type table.

Note

The hierarchy level with the smallest / smaller value compared to another hierarchy level has a higher priority.

Pricing Debitor

The pricing customer is used to group customers, for example for group prices or associations. One pricing customer can be defined per customer.

To assign a customer to a pricing customer, first call up the corresponding customer card and set the status to "Edit customer":

To now assign the corresponding pricing customers to the desired customers, select the menu item "Assigned partner functions" in the menu ribbon.

The Assigned partner functions card opens, where you can assign the pricing debitors.

For the assignment, select "PF-DE" = pricing customer in the "Partner functions" column. Then you can select the desired pricing editor in the "Partner contact no." column.

Then confirm your entry with "OK" and exit the customer maintenance:

Price list

A price list is usually a "collection" of items that can be valid for several customers. The price lists are assigned to the corresponding customers. Depending on the pricing process, this price is taken into account or overridden by a higher hierarchy level.

To access the price list overview, call it up via the user search.

The price list overview opens where you can create new price lists or edit or delete existing price lists.

To create a new price list, fill in the fields as follows:

Field	Comment
Code	Assign a meaningful code (abbreviation).
Description	Assign a meaningful description.
Created by	Automatically filled by the system with the UserID.
Created on	Automatically filled by the system, with the creation date and time.

To maintain the created price list with the corresponding prices, select the menu item "VK price list price management" in the menu ribbon.

After that, the sales price list price management card will open where you can enter the prices as follows:

Field	Comment
Price reference	Specify the reference for which you want to set this price. The following selections are available: • Debtor: Article • Customer: article family • Customer: Calculation group
Price reference code	Select the corresponding article number / article family / calculation group for which the price is to be valid.
Variant code	If you work with article variants in your company, the variant code can be selected here.
Sales order type	Here you can select for which order type this price should be taken into account.
Action	Promotional prices are indicated by the "Promotion" tick.
Start date	From which date the price should be valid.
Quantity	Enter the quantity from which the price should be valid. The specified quantity refers to the package unit.
Unit code	Specification of the price unit for which the pricing is to apply. It is preset on the basis of the article number / article family / calculation group.
End date	Until which date the price should be valid.
Quantity limit (base)	Enter a quantity limit based on the base unit.
Price unit	Enter the appropriate price unit.
UK price (price unit)	Enter the corresponding UK price (price unit).
Discount	reason Specify a discount reason (if desired).
Price basis	Specify the price basis.
Surcharge/ discount in %	Enter the desired surcharges/deductions in %.

There are 2 functions within pricing when using price lists:

1) Use of a price list with price reference to article, article family, calculation group
2) Use of several price lists with price reference exclusively to articles, thereby best price determination over all price lists

The function can be controlled by a switch in the "KUMAVISION med Setup".

Customer price list

In the overview of the customer price list, the customers are entered for which a price list has been stored. With the help of this view you can assign the individual price lists to the respective customers more quickly.

To do this, call up the customer price list via the user search.

The customer price list overview opens. By entering the respective customer no. and the price list code, the desired assignments can be made.

Article

You can manage the sales price on the article card. To do this, call up the menu item "Associated" > "Sales" > "Sales prices" on the respective article card. The article sales price management card opens.

On the sales price management card you can assign the article prices, article calculation group and the sales conditions. You can find more information about this in the following sections.

Article prices

On the sales price management card you can store the corresponding article prices. The article price is the simplest way of price maintenance. The article price can serve as a base price for further price calculations.

Example: A sales list price can be stored for an item.

You can maintain the sales list price on the article sales price management card on the "Article prices" info tab. To do this, create a new row and fill in the necessary fields according to the table below:

Field	Description
Price type	Here you can specify which price type it should be. The possible price types are: **Sale List Price:** Price list used for the price type combination customer area, article condition and list price type. **purchase List Price:** Price list used with the price type combination area vendor, condition article and price type list price. **Sale calculated:** Price list for sales calculation **Purchasing calculated:** Price list for purchase calculation **Optional 1:** Price list for an extension of the price determination or as a further base price for the calculation **Optional 2:** special price list for an extension of the price determination or as a further base price for the calculation
Sales order type	Here you can select for which order type this price should be taken into account.
Item number	Specify the number of the item to be assigned
Variant code	If you work with article variants in your company, the variant code can be selected here.
Currency code	Specify the currency code for which the item price should be valid.
Quantity	Enter the quantity from which the item price should be valid. The specified quantity refers to the package unit.
Start date	From which date the item price should be valid
End date	Until which date the item price should be valid.
Unit code	For which packaging unit the pricing is valid. If no packaging unit is specified, pricing is valid for all packaging units
Price unit code	Specification of the price unit for which pricing is to apply. It is preset on the basis of the article number.
UK price / price unit	In this field you can specify the sales price/price unit for which the pricing should apply. If you specify a price, the system will calculate the sales price/price unit based on the information provided.

Field	Description
UK price incl. VAT	If the check mark is set, the VAT is included in the sales price. Note that if the checkmark is set, the VAT transaction group field must also be filled in.
VAT business posting group	Selection of the valid VAT, but only if previously selected VK price incl. VAT.

The price types that are not called "Sales List Price" are exclusively for the calculation of conditions and prices. Means that e.g. an "Optional 1" price is not found via pricing if there is no "Special condition / promotion price" in connection with a customer who calculates on the OPTIONAL 1 price. In this way the most different prices can be mapped in the companies.

At least one sales list price must be maintained for an item so that the item is used in the sale.

Costing groups

The calculation groups can be used for grouping articles. They are thus used for simple price maintenance. Several calculation groups can be stored per article.

In the calculation group, customers and pricing customers can be defined. If customer and article now come together, the corresponding Optional 1 price applies.

Example:

Customers get 5% on all titanium items

Care:

Either store percentages in the calculation group or enter percentages in the Surcharge/Discount field in the customer costing group.

The maintenance of the calculation group can be done on the article sales price management card on the information tab "Article Calclation Groups". To do this, create a new row and fill in the necessary fields according to the table below:

Field	Description
Order type	Specify the order type for which the item costing group should apply.
Costing group code	Specify the item costing group of the item to be assigned.
Currency code	Specify the currency code for which the item price should be valid.
Start date	From which date the article costing group applies.
End date	Until which date the article costing group is valid.
Created by	Created by will automatically default to the appropriate UserID.
Created on	Created on is automatically preset.
Corrected from	Corrected by is automatically preset with the corresponding UserID.
Corrected on	Corrected on is automatically preset.

Sales conditions

Sales conditions that you agree with your customers for a particular item can be maintained under sales conditions. The sales conditions are used for individual price maintenance.

Example: You can maintain the sales conditions on the article sales price management card on the "Sales conditions" info tab. To do this, create a new row and fill in the necessary fields according to the table below:

Field	Description
Price type	Select a price type. You can choose between Customer and Customer price list.
Price type code	Select a price type code. Enter a customer for which the price has its validity.
Variant code	If you work with article variants in your company, the variant code can be selected here.
Sales order	type Specify the order type for which the sales condition should apply.
Start date	From which date the sales condition is valid.
Quantity	Enter here the quantity from which the condition should be valid. The specified quantity refers to the packaging unit.
Unit code	For which packaging unit the pricing is valid. If no packaging unit is specified, pricing is valid for all packaging units.
End date	Until which date the sales condition is valid.
Price unit	Select the appropriate price unit.
UK price (price unit)	Enter the sales price unit.
Discount reason	Specify a discount reason (if desired).
Price basis	Specify the price basis.
Additional discount in	Specify the desired surcharges in %.

Graduated prices

Graduated prices are based on the quantity purchased. The larger a sales quantity is, the lower the respective unit price will be. The mapping of quantity based prices in KUMAVISION healthcare365 is done on the respective item card on the price management card on the info tab "Sales conditions".

The figure shows you the following quantity scale:

Purchase quantity	Unit price	Total price
1 piece	1000,00 €	1000,00 €
2 piece	900,00 €	1800,00 €
3 piece	850,00 €	2550,00 €

Quantity limit

In addition to the scale prices and thus to the quantity scales, you can define quantity limits. These are used for a quantitative limitation of the respective condition. Quantity limits are also defined on the article card on the price management card on the article prices info tab.

To continue the example of quantity scaling, a quantity limit is entered for a purchase quantity of 3 to 10 pieces at a unit price of 850.00 €. If no quantity limit were entered, the sales price of 850.00 € would always be determined from a sales quantity of 3 pieces. Due to the quantity limit, this is now valid up to a purchase quantity of 10 pieces. After that, the sales price would be determined according to the next hierarchy level.

Resources

You can store the corresponding resource prices on the resource card. You can maintain the prices on the corresponding resource card as follows:

The easiest way to enter the sales price for a resource is to do it on the resource card itself. To do this, enter the corresponding sales price for the resource in the "Sales price" field on the "Invoicing" info tab.

As a further possibility for the price maintenance the VK resource price card is available to you. To do this, first call up the menu item "Associated" > "Prices" > "VK Prices" in the ribbon.

The sales resource price card opens in which you can now maintain the corresponding sales prices. If you do not enter a customer in the Customer no. field, the sales price applies to all customers. If you have entered a customer in the "Customer no." field, the sales price will only apply to the customers entered.

Sales discounts

In the sales documents, discounts that you have agreed with your supplier can be displayed and taken into account. In addition to the traditional invoice discounts, the line discounts and discount reasons are available.

Line discounts are taken into account directly on the respective sales line. These line discounts can be maximum or fixed with the help of the defined discount reasons.

Discount reasons

To be able to use the line discounts in combination with discount reasons in the later processes, it is first necessary to define them. To do this, call up the "Discount reasons" via the user search.

You can define a new discount reason via "New" in the ribbon.

To make the assignment, open the corresponding sales document and select a discount reason on the desired line.

The discount reasons can also be used to map "discounts in kind". For this purpose, a corresponding discount reason = 100% is created and assigned to the corresponding line item.

After selecting a discount reason, the corresponding line discount will be filled automatically.

The line discount is only directed to the respective line and automatically calculates the line amount for you minus the desired discount.

Special conditions

The conditions describe the conditions under which a certain price is achieved. If no conditions are given, the article price is used. Special conditions are all prices that are not article prices.

Special condition sales calculation group

With the special condition sales price calculation group, you can define an additional surcharge or discount for a sales price calculation. This surcharge or discount is attached to the calculation as a final billing cycle with the designation additional calculation.

Special condition customer

With the special condition customer you can define an additional addition or deduction for a customer. This surcharge and discount will be attached as a final invoice transaction of the cost estimate with the designation additional cost estimate.

Special condition customer article

With the special condition customer you can define a special surcharge or discount for a customer of an article. This surcharge or discount can either refer to the sales price entered in the line or to another price basis. To do this, select one of the options in the Price base field. It is also possible to define no markup or markdown, this way you can simply enter another customer specific price for this item.

Special condition customer sales costing group

With the special condition customer sales price calculation group you can define a special markup or markdown for a customer of a sales price calculation group. This surcharge or discount refers either to the sales price entered in the line or to the price basis.

Promotional prices

Action prices are part of the special condition. Action prices differ in that they are marked by the hook "Action" and can be marked with it in the price sheet.

Action price debtor

With the customer promotion price, you can define an additional markup or markdown for a customer. This markup or markdown is attached to the cost estimate as a final invoice transaction with the designation additional cost estimate.

Action price item

In the article promotion price, you can define a surcharge or discount for an article. This surcharge or discount refers either to the sales price entered in the line or to the price base. It is also possible not to define a surcharge or discount, this way you can simply enter another price for this article.

Action price sales calculation group

You can define an additional surcharge or discount for a sales calculation in the sales calculation group promotion price. This surcharge and discount will be attached as a final invoice transaction of the calculation with the name additional calculation.

Action price debtor article

In the customer article promotion price, you can define a special markup or markdown for an article customer. This surcharge or discount refers either to the sales price entered in the line or to the price base. It is also possible to define no surcharge or discount, this way you can simply enter another customer specific price for this article.

Promotion price customer sales calculation group

In the customer sales price promotion group, you can define a special markup or markdown for a customer in a sales price calculation group. This surcharge or discount refers either to the sales price entered in the line or to the price basis.

Price sheet

The price sheet shows you the underlying pricing.

To do this, call up the corresponding price sheet in a sales document via the lines, the function.

The price sheet opens. You can use the "Execute pricing..." function to execute pricing.

After executing the function, the origin of the sales price will be displayed in the "Item price sheet" info tab.

Price adjustment

In order to make price changes quickly and effectively, the "Advanced item price proposal" offers the possibility to adjust prices for several items with the help of filters. Only prices that have a start date are taken into account.

Update item prices

Call up the "Advanced item price proposal". The "Calculate price suggestion" function can be used to retrieve sales list prices, for example.

The following options can be used to further narrow down the prices to be updated:

Field	Meaning
Only prices above	Only items with prices higher than the value specified here will be considered.
Correction factor	Enter the factor by which the prices are to be changed, e.g. price increase by 10% results in a correction factor of 1.1.
Rounding method	If the prices to be updated are to be rounded, the rounding method provided for this purpose can be selected.
Generate new prices	If the switch is not activated, only prices that are valid will be calculated. If the switch is activated, invalid or additional prices (e.g. from a previously non-existing combination of unit code, currency code and validity period) are also suggested.
Price type	If prices are to be updated only for a specific price type, this can be specified here. This way, only prices of the specified price type will be considered in the price proposal.
Sales order type	If prices are to be updated only for a specific order type, this can be specified here.
Unit code	If prices are to be updated only for a specific unit code, it can be specified here.
Currency code	If prices are to be updated for a specific currency code only, it can be specified here.
Start date	Specify a date from when the updated prices should apply.
End date	Specify a date until when the updated prices should apply.

With the help of the various filters in the "Item prices" area, the price calculation can be restricted to certain items or currencies, for example. By clicking on "OK" the price suggestion is calculated based on the selected options and filters. To accept the calculated price proposal, execute the "Accept price proposal..." function. By clicking on "OK", the previously suggested prices will be transferred to the article master. In case of price changes, new lines will be added to the article prices. If the lines from the price suggestion are identical to the lines on the article in question, no new line will be created.

Offer for sale

Sales offers are used to offer items and/or services to the customer prior to the conclusion of a sales order. The customer can then decide whether to accept, renegotiate or reject the offer. The sales offers in KUMAVISION healthcare365 have been extended by the following functionalities:

Different billing address offer

The "Offer address control" field has been added to the offer header. When printing the offer, depending on the option selected in the "Offer address control" field, the sales, delivery or invoice address will be printed in the offer header. If the "Delivery address" or "Sales address" option is selected, the output of the delivery address at the end of the document is also suppressed.

The "Offer address control" field is also passed to the archived offer header and displayed there.

One-time addresses

In sales, it is sometimes necessary to make sales offers to one-time addresses. This can be controlled in the "Number of one-time addresses" field. Via the Assist button, the one-time addresses can be created. If a one-time address is used in a document, it will be transferred to the subsequent documents (e.g. sales order).

Convert selected lines to a job

With this conversion it is possible to convert selected lines into an order.

A new field "Transfer to order" has been added to the quotation lines. The default setting of the field is = YES. The field can be manually overridden by the user with No. With the "Create order" function, only lines that have the "Transfer to order" = YES check mark are transferred to the order. The prices and discounts are already transferred from the offer to the order.

Sell order

One-time address

In sales, it is sometimes necessary to place sales orders to one-time addresses. This can be controlled in the field "Number of one-time addresses". The one-time addresses can be created via the Assist button. If a one-time address is used in a document, it will be transferred to the subsequent documents (e.g. sales invoice).

Framework order

Blanket orders are used to arrange purchase agreements with a customer for specific items and quantities at a fixed price. A blanket order can be given a date until which it is valid. Only valid blanket orders are automatically taken into account in the sales process.

> Note

Blanket orders may only be used for sales orders that are not created via the delivery and billing plan (recipe processing).

Delivery note cancellation

A sales delivery that has already been booked can be canceled. To do this, select and open the corresponding booked sales delivery in the booked documents.

Note

A delivery note cancellation can only be carried out if the delivery has not yet been invoiced and no transfer posting of the goods after delivery has taken place.

If a posted sales invoice already exists, a sales reversal must be generated. To define the quantity to be cancelled in the posted sales delivery, select the corresponding line in the "Lines" info tab and call up "Edit cancellation quantities" via Functions. A window opens in which the quantity to be cancelled is entered.

Note

If the complete delivery is to be cancelled, the function Suggest cancellation quantities (Actions tab of the menu ribbon) can be used as an alternative. This can be used to suggest the complete document for cancellation or to filter for very specific lines of the delivery bill that are to be cancelled.

After the items to be cancelled (including item or batch tracking, if applicable) have been selected, the delivery can be cancelled accordingly using the "Book cancellation" function from the ribbon. Additional information can be entered via the delivery note cancellation query window. In the booked sales delivery, a cancellation status is automatically added after the cancellation or partial cancellation.

Cancellation of a sale redemption

Note

A sales return can only be cancelled if no associated sales credit note has yet been generated.

To cancel the return, open the booked return. Select the row containing the item to be cancelled and choose "Edit cancellation quantities" under Functions in the "Rows" info tab. This opens a selection window in which the items to be canceled can be selected. Then confirm the selection with "OK". Subsequently, the field "Quantity to cancel" in the return line is filled according to the selection. In order to cancel the return, the "Book cancellation" function must now be executed. A further window opens automatically, in which further options for the cancellation booking can be selected, such as a cancellation reason or an automatic printout of the cancellation document. Once the settings have been made, click on "OK". This triggers the reversal posting, finally the system displays which document was used to reverse the sales reset. In the posted return, the Quantity to cancel field is empty again, but Quantity cancelled is filled.

Sales credit

Sales credit memos can be created for existing sales returns whose delivery has already been posted, or they can be created manually. In both cases, a new sales credit memo must be created at the beginning.

Sales credit note without invoice link

It is also possible to create a sales credit note without an invoice link. This permission depends on the user, in order to give a user this right, the "Allow credit note without link to invoice" checkbox must be activated on the "KUMAVISION" info tab in the user setup.

Value posting

If the sales credit does not contain any items and therefore does not cause any goods movement in the warehouse, the "Value posting" switch in the "General" info tab must be activated.

If the switch is not set, a sales return and thus article items are automatically credited in the background when a credit note is posted.

Sales credit heading

It is possible to individually design the heading on the credit memo documents. To do this, call up the "KUMAVISION med Setup" via the user search. On the "Sales" info tab via the "Sales credit heading" field, the heading can be controlled as follows:

Option	Meaning
Empty	If the Sales Credit Heading field remains blank, the sales credit Sales Correction Invoice will be printed on the document.
Credit	If the credit memo option is used, sales credit memo will be issued on the sales credit memo document.
Credit for copayment credit	When using the Credit for Copayment Credit option, Sales Credit is issued on the sales credit document.

> Note

The "Credit note" value is recommended as the default setting.

Manual reservation

Establishment

If you want to work with reservations, you have to enter in the field "View manual reservation" on the info tab "KUMAVISION med" in the warehouse setup, if reservations should be made only from available quantities or if also already reserved stocks should be included.

This setup controls which stocks or receipts can be reserved from documents. The two options are available for this purpose:

- Only available quantities (default) Only stocks/receipt quantities that are available and thus actually available for a reservation are displayed in the document allocation overview. No other reservations exist for this quantity. This option is the default option, i.e. the View manual reservation field is preset with this value.
- All remaining quantities All stocks / receipt quantities with a remaining quantity are displayed, even if this remaining quantity has already been reserved by other documents. The quantity determined in this way provides an overview of the actual stock / receipt and, if necessary, rescheduling / rebooking can be carried out, e.g. to serve a rush order from stock.

Reservation via sales order

To reserve the required quantity, create a sales order as usual and enter the required item(s) in the line. If you want to make reservations, select the line containing the article to be reserved and call up the document allocation overview via "Line" > "Function" > "Reserve...".

Structure of the document assignment overview

The document assignment overview can be divided into the following four areas:

Header data

The header data of the document allocation overview provides information about the document for which the reservation is to be made, the article and the required quantity. The header data can also be divided into three areas:

1) Document information This area displays the document or document line for which the document allocation overview was called up. Furthermore, a short comment can be entered here in the Reservation note field, which is then displayed in the stock allocation overview and in the reservation item overview.

2) Article information This area shows for which article and variant a reservation is to be made.

3) Quantity information In this area, in addition to the delivery date/consumption date on which the requirement is to be available, the quantity information of the requirement line is also displayed. This quantity information consists of the fields:

- Remaining quantity (base) - corresponds to the remaining quantity of the document row in the base unit of the item.
- Allocated quantity (base) -corresponds to the quantity already reserved / allocated for this line item.
- Quantity for assignment (base) - display which quantity has not yet been assigned to the document row and is available for assignment.

Line data

The line data of the document allocation overview provide information on the items available for reservation and are subject to a specific structure. In the first level, the respective available quantity is displayed per requirement coverage type (i.e. warehouse stock and purchase orders) and booking code. If the item being reserved is a trackable item, the first level of inventory can be unfolded to provide item tracking details. Similarly, the first level of purchase orders can be unfolded to provide more information about the receipt documents.

Note

Items already reserved by other orders are always displayed directly below the first level, so that reserved position is quickly visible.

Each line, regardless of the structure level, contains the following quantity information:

Field	Meaning
Residual quantity (base)	Display of the quantity that exists as actual stock or is expected to be received as an order (specified in base unit of the item).
Total Allocated quantity (base)	Display of the quantity already reserved by other sales orders (indicated in basic unit of the item).
Document Allocated quantity (base)	Display of the quantity already allocated for the current sales order (specified in base unit of the item).
Available quantity (base)	Display of the quantity available for allocations (specified in base unit of the item).
Comm. Available quantity (base)	Display of the quantity that is available for allocation and additionally fits to the picking parameters of the item (display in base unit of the item). For example, batch picking or picking by expiration date is taken into account, which may result in the pickable available quantity being smaller than the available quantity.

Foot data

The footer data of the document assignment overview contains information about the storage location and storage bin and the posting code of the sales order line for which a reservation is to be made. Information on the item tracking of the item to be reserved is also displayed, as well as information on the picking parameters (Batch Clean Quantity (Base) and Earliest Expiry Date), which influence the Comm. Available quantity (base).

Functions of the document assignment overview

The ribbon of the document assignment overview contains the following functions: The "Calculate" function can be used to update the document assignment overview. The desired reservation is made using the functions in the "Reservation" area. With "Auto. reserve", the system allocates the quantity to be reserved from the warehouse stock without a manual selection. If the demand cannot be covered from this, the system falls back on the purchase orders. With the help of the function "Reserve from current line" a manual selection can be made. To do this, a corresponding line must first be selected in the line data. The "Cancel reservation of current line" function makes it possible to cancel a reservation that has already been made.

> Note

If a reservation of an item with item tracking is made in the inventory allocation overview, this information is not transferred to the item tracking of the sales order.

However, the reservation is displayed in the stock overview.

The functions in the "Requirements checker" area all refer to the purchase orders displayed in the lines. This can be used to call up the purchase order (Display document function), the lines of a purchase order (Display lines function) or existing reservations (Display reservations function).

Negative list

Negative lists can be created per customer, invoice recipient or country of delivery. Here, freely configurable codes are used to either assign articles (inclusive) or exclude them (exclusive). The negative list created in this way is then evaluated in the sales documents when an article is selected and, if applicable, an error message is displayed.

Create article negative list

To create an article negative list, call up the "Article negative list overview" via the user search. You can define a new article negative list via "New" in the menu ribbon.

An empty article positive/negative list opens. A unique code must be entered in the "List Code" field, which can be further detailed in the "Description" field.

In the info tab "Condition line article list", the corresponding articles are determined by specifying different field origins and field filters.

The button "Create article list" in the menu ribbon is then used to create the article list, the articles determined in this way are then displayed in the Article Negative List Article info tab.

Assign article negative lists

If a customer is not to be supplied with one or more items, a corresponding item negative list can be assigned in the "Delivery" info tab of the relevant customer via the selection based on the list code.

An already assigned negative list can be accessed via the menu item "Associated" > "Sales" > "Negative list item" of the ribbon.

If delivery to a country is to be restricted, the list can be assigned to the country in question in the countries/regions overview.

Use of a negative list article

If an item that is included in a negative list is used in a sales order with a customer to which this negative list has been assigned, or if the delivery is made to a country that is not to be supplied with this item, the system automatically generates an error message indicating that the item is blocked in combination with the customer used.

Export

You can define corresponding footer texts for your documents for export. To set up these footer texts, call up the "Footer texts setup" via the user search.

The Footer texts setup card opens, where you can define appropriate footer texts under combinations of business/product posting groups, VAT business posting groups/VAT product posting groups, and considering

the language code. To create a new footer text, select the "New" function in the ribbon. An empty line is added where you can enter the desired conditions:

Field	Comment
Lfd. No.	A sequential number is automatically assigned by the system.
VAT business posting group	Specify a VAT transaction posting group to which the footer text should apply.
VAT product posting group	Specify a VAT product posting group to which the footer text should apply.
Business posting group	Specify a business posting group to which the footer text should apply.
Product posting group	Specify a product booking group to which the footer text should apply.
Language codes	Specify a language code for which the footer text should apply.
Text module code	Assign a text module code for the footer text.
Footnote	Enter the corresponding footnote here. After the footer text setup, you can enter the appropriate footer text for the created footer text under the Info tab "Footer texts".

Note

The footer texts appear only on VK documents if this contains the set up combination of business/product posting groups, VAT business posting groups/VAT product posting groups and enter language codes.

In a sales invoice, the note "Tax-free intra-Community supply" is then automatically printed on the document.

Tax lot size

By specifying a tax lot size in the item master or item variants, it can be achieved that in sales documents users are forced to enter a multiple of the tax lot size as quantity in the lines.

Setup

Sales order types

In the sales order types, the "Ignore delivery lot size" field is used per code to define whether the delivery lot size is active or inactive.

Article card

On the article card, on the info tab "KUMAVISION med", the corresponding output lot size is stored for the stored sales unit in the field "Output lot size".

Note

If the article consists of several sales units, the delivery lot size in the document will be adjusted accordingly.

Example:
Sales unit piece = delivery lot size 15
Sales unit PCK10 = delivery lot size 1.5

Article variants

Per article variant code an own delivery lot size can be deposited over the field of the same name.

!!!note "Note If a delivery lot size is stored in the article variant, the delivery lot size on the article card is not taken into account.

Procedure

If an article is entered in a sales order that has a delivery lot size stored, the following is checked:

1. quantity is less than the issue lot size. If the quantity is set lower than the issue lot size, a window opens with the option to select the "smaller valid quantity" or the "larger valid quantity". Depending on the selection, the quantity will be updated accordingly.
2. quantity is higher than the output lot size If the quantity is set higher than the output lot size, the window opens again with the option to select the "smaller valid quantity" or the "larger valid quantity". Depending on the selection, the quantity will be updated accordingly.
3. change of the unit code When the unit code is changed, the corresponding delivery lot size is automatically calculated and suggested.
4. article variant with delivery lot size If a variant is stored, the output lot size from the article variant is taken into account.

Warehouse and Logistics

Stock overview

With the "Stock overview" the stock can be displayed and filtered with the corresponding article tracking. The stock overview can be called up via the user search as well as on the article overview and on a corresponding article card. The filter criteria are defined in the header. The following must be entered:

- Storage location
- Article

- Booking code Via the function "Stock" > "Calculate" the stocks are calculated and displayed according to the filter. The display of the infoboxes can be selected via the menu item "Show infobox". There is a possibility to call the following infoboxes:

- Row details (info about a specific row of the listing)

- Total according to calculation parameters (info refers to filtering in the header)
- Total (info per storage location, article, booking code & variant if applicable) In the info box the availabilities and further information are displayed. If quantities of an item are in a storage bin such as "QS", they are not available for picking. These storage bins are specially marked and can be viewed via the storage location, branched to the storage bin overview. The "Total quantity" field reflects the quantity that is in the warehouse regardless of its availability. The "Quantity in stock" indicates which quantities are currently still in the warehouse. It can also be that the quantities are already in picking. The "Quantity in Inventory" minus the "Quantity in Picking" then gives the value from the "Available Quantity" field.

Storage locations, storage places

Counter storage location / automatic counter storage location Customer

By default, the counter storage location is called "AH" ("Out of house"). Based on the storage bins in this storage location, which is automatically named according to the number of the respective customer, it can be quickly traced with which customer the goods are in possession. The storage bin is created automatically as soon as the delivery type is set to "Stock transfer" in a sales order or scheduling agreement. The "counter storage location" and the "automatic counter storage location customer" are set up on the respective storage location card on the info register "KUMAVISION med". This setup makes sense on storage locations from which patients are supplied.

Automatic incoming posting for outgoing stock transfer

If the checkbox "Transfer order output posts automatic input" is activated for a storage location, an input posting for a transfer order is automatically posted as soon as the output of the transfer order has been posted at the original storage location.

This makes sense especially if there is no staff at the destination storage location who can confirm the arrival of the goods by means of a receipt booking.

Storage bin type logistics

The "Storage bin type logistics" is a separate column in the storage bin table at the respective storage location. In logistics there are different storage bin types to identify a storage bin accordingly:

- Stock
- Input
- Output
- Manufacturing
- QS

A storage bin type must be assigned to each storage bin when it is newly created. Picking only accessgoods that are in a storage bin with the storage bin type "stock".

Logistics parameters

General

With the help of the logistics parameters, it is possible to determine for articles which method should be used to pick them, whether batch-pure picking is required at outbound processing, and what the minimum expiration date must be at inbound or outbound processing.

Since depending on the storage or agreement with customers / suppliers these parameters can be different from case to case. KUMAVISION healthcare365 offers the possibility to set up the parameters in different places to represent a hierarchy that ranges from the individual agreement with the customer / supplier to a general default from the warehouse facility.

Establishment

Description logistics parameters

This section describes the individual logistics parameters and where they can be set up.

Parameter	Meaning
Picking method	This field is an option field with the following options: "blank": The picking method was not set up at this point. FIFO: The goods are picked according to the "FIFO" method (First In First Out). LIFO: The goods are picked according to the "LIFO" method (Last In First Out). FEFO: The goods are picked according to the "FEFO" method (First Expire First Out). Notice: If the picking method "FEFO" was selected, but the item does not work with expiration date tracking, the picking method "FEFO" is automatically replaced by FIFO" replaced. Manual: With the picking method "Manual" the warehouse employees decide themselves in the goods issue which articles (if necessary batches / serial numbers) are picked for a goods issue. Notice: Please note that the system does not perform an availability check at goods issue when using the "Manual" picking method. Batch clean production The switch in this field is used to control whether the picking of goods is to be done in batches. Notice: This parameter is used only when picking goods that work with batch tracking.
Output Min. term Expiration date	This parameter is used to specify the minimum expiration date that must be observed when the goods are issued. A date formula is stored as a parameter in this field. Notice: If an item does not work with expiration date tracking, this parameter will be ignored.

Parameter	Meaning
Receipt Minimum term Expiration date	This parameter is used to specify the minimum expiration date that must be observed when the goods are received. A date formula is stored as a parameter in this field. Notice: If an item does not work with expiration date tracking, this parameter will be ignored.

Note

The "Specific logistics parameters" field controls whether the logistics parameters should be taken into account at all when checking a master data. This means that this field can be seen as a switch that determines whether, for example, for a storage location the logistics parameters on the storage location card should be checked or not. The parameters will be checked only in the case when the switch "Specific logistics parameters" is activated.

Setup options Logistics parameters

The logistics parameters can be set up in several places in order to be able to map the chain from individual agreements with customers / suppliers to a general warehouse setup. Below, the possible setup locations are presented according to their priority in determining the logistics parameters.

1. **Article references:** In the article references, the logistics parameters can be defined according to individual agreements with customers or suppliers per article and variant.

2. **Warehousing data:** In the warehousing data the logistics parameters can be defined specifically for a storage location and article / variant / booking code - combination.

3. **Article card:** In the article card the logistic parameters can be defined generally for an article, no matter to which warehouse it enters or from which warehouse it leaves and from which supplier this article comes or for which customer this article is intended.

4. **Item category:** In the item category the logistics parameters for a category of items can be set up. This setup has no relation to the individual item or storage location, nor to customers or suppliers.

5. **Storage location:** The setup of logistics parameters on the storage location card refers to the respective storage location, regardless of which item is received or issued at the storage location and from which supplier or for which customer the goods are moved.

6. **Warehouse setup:** The setup of the logistics parameters in the warehouse setup represents the lowest hierarchy level of the logistics parameters. Here the parameters are generally set, no matter which storage location or article is involved.

Determination

The logistics parameters are checked in the sequence of the master data listed below. This ensures that individual agreements with customers or suppliers, are preferred to the general facilities, e.g. in the warehouse facility.

Logistics parameters are determined in the following order of setup data:

1) Article references

2) Stock data

3) Article card

4) Article category

5) Storage location

6) Storage facility

When checking the logistics parameters in the setup data, it is checked whether the logistics parameters are active at all (switch "Specific logistics parameters" on the respective data card, e.g. storage location card). Further it is checked whether the appropriate parameter is filled. (e.g. field "Outbound minimum runtime expiration date" has a value) If both are true, the parameter is used. If this is not the case, the system checks the logistics parameters in the following setup data according to the check sequence.

The individual logistics parameters are checked independently of one another. For example, it may be that the batch range picking is taken from the article references, but since the minimum runtime expiration date was not specified there, the minimum runtime is determined from the data of the article card.

The logistics parameters can also be set up in master data that have no direct reference to the article or article tracking (e.g. article category, storage location, storage facility). The parameters Picking method = "FEFO", Batch production = "YES", Output min. runtime expiration date and Input min. runtime expiration date can then still be set here.

These parameters are then only applied to articles with corresponding article tracking. I.e. if these parameters are checked for an article for which batch tracking and expiration date tracking have been set up, these parameters will be applied.

If, on the other hand, an item is used that does not have corresponding item tracking, the "FEFO" picking method is automatically regarded as "FIFO". In this case, the logistics parameters "Batch clean production", "Outbound min. runtime expiration date" and "Inbound min. runtime expiration date" do not apply.

Storage location authorization

General

When a client is newly created, no presettings are made, i.e. at this point no user/user has the possibility to use or post storage locations in documents.

For this reason, when setting up a new client, the necessary setup / authorization control must be carried out for the desired purpose.

The following setup must be done for all users for whom no storage locations have been set up under warehouse staff. I.e. if a user is set up as a warehouse employee for one or more storage locations, this user can select and post these storage locations.

Establishment

Authorization storage locations

To set up the storage location and storage bin, call up the "Storage locations authorization" via the user search.

On the authorization storage location overview you can assign authorizations on storage location level for roles or for users via "New".

Note

- Please note that an authorization can be assigned either per role or per user. Simultaneous assignment by role and user is not possible.
- If you define the authorization structure via the "Role ID", it is mandatory that the "Role authorizations" checkbox is set on the respective storage location.

Field	Description
Role ID	Specify the role ID (permission set) for which the permission record should apply.
User ID	Specify the user ID for which the authorization record should apply.
Storage location	Specify the storage location for which you want to restrict the authorization record.
Purchasing; Sale; Access; Departure; Rearrangement; Issue, Consumption;	Choice between: Yes = authorizes the user / role to execute the respective function. No= prohibits the user / role to perform the respective function. **Note:** If you set "All" = "Yes"/"No" in the field, all authorizations (purchase / sale / receipt / retirement / transfer / issue / consumption will be set to the corresponding value.
Only user's own storage space	Restricts the user to the storage bin with the own customer number (determined via salesperson and contact defined for this purpose. For more information, see "Setup "User's own bin only"").
Customer no. Storage bin	Limited to one storage bin with fixed customer number **Note:** Please note that the storage bin must be deposited at the respective storage location with the corresponding customer no.
All storage places	causes the setting for the storage location to apply to all storage bins The column "All storage bins" will be evaluated only if "Only user's own storage bin" and "Customer no. storage bin" are empty.
Existing storage bin authorization	the system displays whether storage bin authorizations have already been maintained for the row.

Setup "User's own storage space only".

In order to allow a user to make bookings only to his own storage bin, the following settings must be made:

Warehouse staff

The user must not be stored as a warehouse employee for the storage location in question. This setup would override the individual setup "User's own storage bin only" in the "Storage locations setup".

User setup

In the respective user setup, the "Authorization for all storage locations" checkbox in the "General" info tab must not be set. This setup would override the individual setup "User's own storage location only" in the "Storage locations setup".

In addition, the "Sales/Purchaser Code" field must be maintained with the seller/buyer. If the user has not yet been created as a seller/buyer, this must be done as a priority.

Seller / Buyer table

In the "Seller/Purchaser" table, the contact created for the corresponding user must be selected in the "Contact no." field. If no contact has been created beforehand, this must be done as a priority.

Contact

The contact assigned to the user in the Seller / Buyer table must have a customer assigned to it.

Storage location

At the respective storage location, a storage bin with the respective customer no. assigned to the contact must be created.

Restriction to existing storage bins" facility

In order to restrict the booking of a user / a role only to an existing storage bin, which is not his own or assigned to a customer, call up the call "Storage bins" via the menu tab "Navigate". Via this call you have the possibility to specify the authorizations on storage bin level.

Note

If something is entered in one of the columns "Only own storage bin", "Customer no. storage bin" or "All storage bins", the "Authorization storage bins" described below is ignored, so nothing has to be maintained for individual storage bins.

Functionality

Lookup on storage location

In most relevant windows, the "Storage location code" or "New storage location code" field displays only storage locations that the user is allowed to use. This affects the following windows:

- Sales documents (header and line)
- Purchasing documents (header and line)
- Repositioning (head)
- All item book sheets
- Order and plan proposal
- Inspection orders
- Production orders

Realization of the test in 3 stages:

a) Posting: For each warehouse posting, the authorization settings are checked exactly and, if necessary, canceled with a corresponding message. This applies to all warehouse postings, regardless of whether they are made via document posting, a book sheet or other warehouse postings.

b) Release: The release of documents serves as the preceding level. Here, too, a check is made. But only the posting of the document line itself. Theoretically, there could be further follow-on stock postings in the document posting that cannot be checked in advance. In the case of a release, a check is only made if at least one line still triggers a stock movement, i.e. a remaining quantity has not been delivered. The release check is carried out for purchasing, sales and production documents.

c) Lookup: Once again upstream in documents and book sheets, the lookups to storage locations are restricted depending on the authorization. The view on the storage locations results from the current setting of the document line / book sheet line (e.g. stock transfer). This is designed as a comfort - function, i.e. when typing in all storage locations are allowed. When maintaining master data and filtering for evaluations, there is no restriction of the view. Ownership is also not taken into account.

Excluded from testing are:

- Value invoices and value credits.
- The 5008626 report for creating fixed assets

Role/User

A user can have higher rights than a role assigned to him. He can also have fewer rights if the right was explicitly set to "No". All roles of the user are checked for permissions one after the other. If there is no storage location authorization for the user or for any of his roles, he has no booking permission.

Posting codes, delivery hierarchy

The booking codes control the ownership and are automatically controlled in the process. With the delivery hierarchy, the system automatically selects fixed assets, current assets, and third-party property for goods issue in a specified order, depending on availability and setup. The booking codes and their delivery hierarchy are already pre-parameterized. This setup can be changed under the "Booking codes" call. This ensures that, as in the above example, used goods (= current assets) are always delivered first. If the system does not find any available stock, it searches for available stock of the next booking codes.

Goods receipt

A new goods receipt is created in the role center "KUMAVISION warehouse employee":

Article tracking

If the item to be stored has an item tracking code (batch or serial number), this can be seen in the "Item details warehouse" infobox in the "Item tracking code" field. With a click on the field "Quantity" on row level the article tracking row card opens on which you have to enter the article tracking. Via the colored quantity marking you can see if an article tracking has already been entered/assigned:

- RED: No item tracking stored
- BLUE: Article tracking partially deposited
- GREEN: Article tracking completely deposited

If an article is marked "Characteristics required", these characteristics are to be indicated on the via "Belonging" > "Line" > "Characteristics class". If it is set up in the item tracking code ("Operating hours obligation"), the operating hours must be entered following the booking. The entry mask appears automatically.

Credit delivery no. & barcode for DMS

In order to be able to easily assign the incoming invoice of the vendor later on, the field "Credit delivery no." in Microsoft Dynamics Business Central™ must be filled in with the delivery note no. of the vendor by default. In KUMAVISION healthcare365, the vendor delivery bill can optionally be prepared for a document management system (DMS) by entering the barcode. For this purpose, a barcode sticker from a roll is affixed to the incoming delivery bill, which also contains a sequential number (in plain text) that can be clearly assigned by the system. The number is scanned into the "Barcode" field, the system then creates a virtual envelope in the DMS. When the incoming delivery bill is scanned in later, the system recognizes which "envelope" the delivery bill belongs in based on the sticker and attaches the document to the associated "posted goods receipt".

Automatic label printing in the goods receiving area

On the article card in the menu ribbon via the call "Article data" there is the "Label information". Here it is possible to set up for any article that a label is printed automatically when posting the goods receipt. For the label it can be determined whether it should be printed in the goods receipt. The size of the outer packaging can also be stored. If, for example, "5" were entered here, three labels would be printed for a delivery of "15". Since this is a simple logistic label, only the article number and the article tracking (e.g. batch/serial number) are printed as barcode. In addition, there is the option to store a text that should always be included on the label.

Backorder clearing in goods receipt

The backorder clearing offers the possibility to clear sales backorders directly when posting the goods receipt. Sales backlogs are overdue deliveries or stock transfer issues. The backorder resolution can be configured via setup parameters in such a way that manual intervention is no longer necessary. In addition, it is possible to display a backorder window so that the user can intervene if, for example, fewer goods are received than are in the backorder.

The user is shown the backlogged and deliverable order/transfer lines in a clear form and can manually distribute the goods receipt to the corresponding documents.

This option is intended to shorten logistics processes (no warehousing if goods can be shipped directly), building on the functionality of the ramp turner (cross-document) already available in the standard.

Automated assignment when posting the goods receipt automatically fulfills the orders (requirements). Depending on the selection (reservation, creation of goods issue, posting of sales delivery bill), the goods are

reserved in the order, a goods issue is created or the sales delivery bill is already posted and printed when the goods receipt is posted. In addition, these options can be controlled via an authorization per user.

Note

The prerequisite for the backorder resolution functionality is the use of goods receipt and goods issue in the storage location.

Establishment User setup

In the user setup, it is first defined for each individual user whether this user is allowed to carry out a backlog clearing with or without a reservation. This setup can be done via the field "Berecht. Rückstandsauflösung" field on the "KUMAVISION" info tab. The following selection options are available: No residue dissolution:

The backorder clearing window is not displayed. The goods receipt is posted without any additional functionality.

Resolving backlog with reservation:

The backorder clearing window is not displayed. Backorder clearing is performed with the quantities already reserved.

Residue resolution with and without reservation: The window for residue resolution is displayed. The user can change the allocation of the quantities. A backorder resolution is performed with the quantities already reserved as well as with the quantities distributed by the user.

Purchase order types

Whether a backorder clearing is possible in the goods receipt is controlled on the one hand by the field "Backorder clearing" in the purchase order types. The following selection options are available here:

Reservation:

The assigned quantities are reserved for the requirement line.

Generate the (outgoing) logistics documents: The quantities to be distributed are first reserved as described above. A goods issue is generated for each of the orders concerned and the reserved quantities are entered. If picking is required for the storage location, the picking document is generated and, if necessary, the reserved quantities and the storage bins are entered. (not for controlled picking).

Note

Only goods issues are created if the shipping instruction is partial delivery, or all remaining quantities can be delivered with the shipping instruction "complete delivery". In addition, it is checked that the credit limit is not exceeded with the reserved quantities.

Posting the (outgoing) deliveries: The procedure is the same as for a) and b). Then, if necessary, the picking is registered and the goods issue is posted. If the storage location uses the option Putaway required, the created putaway will be registered automatically.

None: No residue resolution

Depending on the particular option and the order type in the purchase order, when the goods receipt is posted, a window is displayed where the user can select the type of backorder resolution.

The type of backorder resolution in this window is preset from the type of backorder resolution from the purchase order type of the purchase order and can be changed again individually by the user (if he has the necessary permissions) per goods receipt posting transaction.

Procedure

When a goods receipt is posted, the following is executed:

The system determines whether there are relevant requirement lines for the goods receipt lines. The requirements are determined for the following documents:

- VK order lines
- Stock transfer lines
- FA Components
- Purchasing complaints
- Service lines

In addition, the date formula for the calculation of the date can be stored in the Accounts Payable & Purchasing setup on the info tab "KUMAVISION" in the field "Days backlog clearing". On the basis of this date formula, the determination of the requirement lines will be limited by date, starting from today's system date.

If at least one requirement line is determined, then the window with the query for the type of backorder resolution is opened.

If the delivery is too small, you will be informed that the distribution cannot be done automatically, but only manually.

If not a single requirement line was determined, the window with the query for the type of backorder resolution is not opened and the backorder resolution is not executed.

Note

If the None option is selected in the window with the query about the type of backorder resolution, the backorder resolution will not be executed. In case of all other options, a window will be opened displaying the demand lines (i.e. order lines, FA orders, stock transfer orders, EK complaints, service orders) that have not been completely served yet.

Depending on the goods issue date of the requirement line, the goods receipt quantity not yet reserved is entered as a proposal in "Quantity for allocation" or "Quantity for allocation (base)". The row with the earliest delivery date/due date has the highest priority in the quantity proposal. The user has the possibility to change the entry, distributing it to the individual requirement lines. Finally, he can confirm the entries. The quantity entered in the field Quantity for allocation (base) entered quantities are reserved for the requirement lines.

Exchange of commission items

In the goods receipt window there is an action "Change comm. article" on row level. The window "Select article and variant" appears in which the article no. and/or if applicable the variant code can be changed.

Outgoing goods

Picking process

In the menu ribbon of the goods issue document, as soon as goods issue lines have been fetched into the document, there is the possibility to print a pick list via the call "Print pick list".

Note

If the sales order is linked to the delivery schedule, an article can still be entered that is not included in the contract. In the billing plan line, the pricing origin is generally set to "Manual". In addition, if the article is not included in the contract, an entry is created in the application log.

Delete goods issue process

It may happen that a goods issue has to be deleted because the customer no longer needs the goods or, for example, forgot to remove the picking code before posting the goods issue.

Picking is automatically registered when goods issue is posted. Even if an error occurs when posting the goods issue. Such an abort message can be caused, for example, by the picking code.

When the picking was registered, the goods were posted from the original storage bin to the standard goods issue storage bin "WA".

In the constellation below, picking has been registered, therefore there are no picking rows in the view.

Before the goods issue can be deleted, the status of the goods issue must be reset in the ribbon.

Subsequently, the message appears that the articles have been picked and at the same time it is asked whether the articles should be transferred back to their original storage bins. This message must be answered with "Yes".

The subsequent message indicates that stock transfer book sheet lines have been created in a book sheet and whether it should be opened right away.

The prerequisite for this is that the "Own book. sheet name" field is maintained in the "User setup".

If this query is also answered with "Yes", the above mentioned book sheet opens with the generated book sheet line and again a query.

In the last query there is a note that the articles will remain in the storage bin "WA", i.e. the shipping area, if they are not transferred and whether the goods issue should really be deleted.

If you confirm with "Yes", the goods issue is deleted and only stock transfer is required.

Multi Order Picking

Multi Order Picking is called from the picking proposal and enables way-optimized, time-saving picking. With Multi Order Picking, several picks from different goods issues are combined or, depending on the filtering, separated and combined with other pick lines.

Basically, all picking lines are retrieved whose picking document has not yet been printed. In the overview, after retrieving Multi Order Picking, one or more lines can be explicitly excluded from consideration. This is done by activating the checkbox "Include in MOP".

Note

If one row of a sell order is excluded from Multi Order Picking, the other rows of the sell order are automatically excluded as well.

In order to retrieve Multi Order Picking, multiple goods issues + picking are first created as a base.

Subsequently, the call "Retrieve Multi Order Picking" is started in the menu ribbon. The "Picking selection" window opens, in which a preselection can be made as to the maximum number of goods issue lines that may be contained in a goods issue in order to be taken into account in multi-order picking. In this way, it can be ensured, for example, that goods issues are no longer separated after a certain number of lines.

The picking selection can be called up individually on the basis of goods issues. In addition, it is also possible to include production and/or assembly orders.

After retrieval and depending on the filter criteria, you will get a list view of all goods issue lines where the "Number printed" = 0.

In the list view there is some useful information like the "movement quantity", the "available quantity" or the "number of item lines in the order". If there are rows in the picking proposal overview that should not be considered in Multi Order Picking, they can be excluded via the checkbox in the column "Consider in MOP", in this case the checkbox must be deactivated.

After the preselection has been completed, the function "Create Multi Order Picking..." is called up in the menu ribbon.

A window opens in which, based on numerous options, it is possible to define very flexibly and just as precisely with which parameters the system should create the picking documents:

Option	Function
According to logistics document	Creates picks within the respective goods issue
By deb./credit./storage location	Creates picks only per customer, vendor or storage location
According to article	Creates one picking per item
By zone	Supported only with the "controlled logistics".
By bin no.	Creates one picking per storage bin
By due date	Creates one pick per due date
Max. Number of picking lines	Defines the maximum number of pick lines that can be included in a new pick
Max. Number of comm. origin documents	Defines from how many different goods issues the pick lines for the new pick may be composed of
Assigned user ID	Assigns the specified user ID for the newly created picks. These are then visible and filterable in the list of picking documents
Sorting method for pick lines	Specifies how the newly created pick or pick document should be sorted
Print picking slip	If the checkbox is activated, when new picks are created using Multi Order Picking, the pick lists created in this way are printed out directly

Note

The pick lines for which the "Include in MOP" checkbox has been removed must be further processed manually in the pick proposal.

After the picks have been created and their documents printed, picking, packing and posting the delivery bill can be done as usual.

Inventory

The following preparatory measures must be taken for the inventory:

- The business processes in which goods are moved must be completed. This means that
- Goods that have been physically delivered must also be booked in the accounts.
- Stock transfer orders must not be in the "TRANSIT" storage location, but must be completely closed.
- Goods that have been delivered must also be removed from the storage bins.
- The stock adjustment must have been carried out and posted. This should set all items to "regulated".

Establishment

Inventory Storage Location Setup

Using the "Inventory storage location setup", individual inventory areas can be predefined in advance and set up into which inventory ledger sheets they should be divided. In the setup, it is defined which area is to be divided into which inventory ledger sheet, e.g. in order to divide a storage location according to certain areas (rows, aisles) in advance. This saves lengthy stock calculations, especially when there are a large number of items. The corresponding inventory ledger sheets must have been created in advance. In the "Inventory storage location setup" the storage location and the from or to storage bin codes are set up.

Posting block during inventory

In the KUMAVISION MED setup, "Stock" can be defined in the info tab,

- whether all storage locations should be blocked as soon as an inventory ledger sheet has been filled
- whether to block only those storage locations that are in all existing inventory ledger sheets
- or whether no posting block should be levied at all

Process inventory as of key date

Stock calculation

After the corresponding inventory book sheet has been selected by double-clicking, the book sheet is filled in the next step. For this purpose, various parameters must be entered under "Calculate inventory". The fields "Posting date", "Document no. " and "Calculation per serial no. / batch / expiration date" are particularly important. The posting date and the document number are recorded in the respective items. Thus, it can be easily traced afterwards what was counted in which inventory for the respective item. Just like the date of the inventory.

Note

If the checkbox "Calculation per serial no. / batch / expiration date" is activated, a separate line will be calculated for each batch with stock, for example. This checkbox must be set for a proper inventory.

Another possibility is offered by the filter of the storage location and the storage bin. This filter is used to define the area over which the book sheet should extend. Once all settings for the inventory ledger sheet have been made, the calculation can be executed with "OK".

The field "Quantity (calculated)" contains the stock calculated by the system. Since the option "Calculation per serial no. / batch / expiration date" was activated, one line was calculated per serial number. The "Inventory quantity" is pre-populated with the expected value along with the item tracking.

Count list

The count list is printed out via the "Print..." function in the menu ribbon. In the selection menu it can be controlled whether the calculated quantities and/or the article tracking should be printed. Furthermore, a print and count date can be added to the list.

Inventory recording

After the corresponding employees have completed the physical inventory and filled in the "Inventory Quantity" column on the list, the list is manually transferred to the Inventory Ledger sheet. If a discrepancy is detected for an item without item tracking or an item with a batch number requirement, it can be recorded normally in the "Inventory quantity" field, but the item tracking must be removed before the counted quantity is recorded and reassigned after recording. If an item with serial number requirement is found, a new line must be added manually. In addition, the associated item tracking must be entered manually in the item tracking line for this item.

Recount

The recount can also be documented with an inventory list. If the filter is set accordingly, e.g. "Deviations <15> or "Quantity <> 0".

Perpetual inventory process

Stock calculation

In perpetual inventory, usually only a limited number of storage bins are counted. That is why it is useful to calculate smaller sections of storage bins in an inventory ledger sheet. This filtering is done under the item "Restrict sum calculation to:". It is also important to define via the inventory type which stocks are to be calculated. The following options are available for this purpose:

- All (closing date inventory)
- Without perpetual inventory (takes into account only stocks without the characteristic ("counted on/ counting document no.") for perm. inventory). Inventory)
- Permanent inventory only (only takes into account stocks with the characteristic ("counted on/counting document no.") for perm. inventory). Inventory)

Then the "Perpetual inventory Y/N" switch is activated. The system then automatically activates the "Block storage bin" and "Item not in stock" checkboxes. This ensures, on the one hand, that no bookings are made in the defined storage bins and, on the other hand, that empty storage bins are also inventoried.

Count list

A count list must also be created for perpetual inventory. For further information, please refer to the section "Process perpetual inventory > Count list".

Inventory recording

The inventory is recorded in the same way as described in section "Process annual inventory > Inventory recording". In addition, however, the characteristics for the perpetual inventory must be set immediately

before the inventory lines are posted. The required call "Enter perpetual inventory" can be found in the "Actions" area of the menu ribbon.

A window opens in which you enter the "Count document no." and the "Count date".

The entered data will then be transferred to all inventory lines calculated in this book sheet. Likewise, the characteristics are written to the inventory items and displayed in the storage bin contents:

If now a new article is added to the already counted storage bins and these are recalled with above parameters, then only the newly added items (= quantities) are calculated. All already counted items are delimited by the inventory type "without perpetual inventory".

Recount of the recorded inventory lines

The recounting process for perpetual inventory is identical to the procedure for an annual inventory. For more information, see the section "Process for annual inventory > Recounting".

Special features of the inventory

Owner and owner

In the case of third-party property, the owner and/or proprietor must be recorded for processing. For this purpose, the "Ownership/occupancy relationship" field must be filled in accordingly.

Recognition of fixed assets

Fixed assets should be made either with the accounting code UV-AKT or a separate accounting code.

If a separate booking code is used, it must be agreed between the customer and the specialist consultation whether this is "evaluated" or "unevaluated".

If posting code UV-AKT is used, the item must be activated by the activation run following the acquisition posting.

When fixed assets are retired, the asset number is recorded in the background so that the fixed asset history sheet can be checked afterwards.

> Note

There should never be an acquisition posting by inventory, item ledger sheet, etc. with posting code AV.

Stock transfer ledger sheet "Get storage bin contents"

The stock transfer ledger sheet is used for transfer posting within a storage location from storage bin to storage bin. The function "Get bin contents" (found in the menu ribbon of the stock transfer ledger sheet) takes into account in the stock transfer ledger sheet the different posting codes needed to separate the different ownerships.

> Note

The "Get bin contents" function is only available in the stock transfer ledger sheet.

This makes it possible to fill the stock transfer ledger sheet with the entire contents of one or more storage bins. When calculating the rows, the item tracking is also taken into account and entered in this process.

Appropriate filters must be set in the selection mask. Based on this, the system calculates and fills the stock transfer ledger sheet.

The system behavior is significantly influenced via the "Quantity type" field. The following options are available for selection:

- Total amount
- All picking lines that have not been registered yet as well as allocation items that concern the corresponding storage bin content will be deleted.
- Movable quantity
- Existing allocation items to the corresponding storage bin content are deleted. Quantities that are in picking or blocked are not included in the calculation and remain.
- Available quantity
- Only available quantities are taken into account for the calculation. Assigned, blocked, or quantities that are in a pick are not taken into account and remain. After selecting the quantity type, a meaningful note is displayed directly below the selection field. There, the individual parameters are also described. The "User setup" controls whether the user may use all three options (switch set), or only the "available quantities" may be calculated (switch not set).

Note

In the created stock transfer lines, the fields "New storage location code" and "New storage bin code" were not filled automatically. Here the user must define to which storage location and which storage bin the respective stocks are to be transferred. Only after entering the new storage location can the item tracking be viewed.

After the user has entered the destination storage location and the destination storage bin for the created lines, he can transfer the stock transfer ledger sheet via the actions "Post" or "Post & Print". This will post the goods in the system to the defined destination storage locations and destination storage bins.

Stock transfer order "Outbound automatically posts inbound".

Through KUMAVISION healthcare365, the stock transfer order has been extended by the function "Outbound Bay Automat. Inbound" function. This function is always useful if no receipt confirmation is to be expected from the destination storage location or the destination storage location does not have the possibility to post the goods receipt in the system (setting at the storage location "Goods receipt required = No"). In order to use this function, the checkbox "Output Bay Automat. Input" is activated in the respective stock transfer order on the "General" info tab.

Shopkeeper management

With this function you have the possibility to evaluate the stock, which items will be sold or not before or after reaching the expiration date. On this basis, you can then plan actions to sell the stock before expiration.

Establishment

Sale Recommended minimum term Expiration date

On the "Item Card" and in the "Stock Setup" there is a new field "Sales Rec. Mind.Expiry Date". This field is used in the store management to identify risk items. If the field in the item is not filled, the value from the store setup is used. If both fields are "empty", there is no classification as a risk item.

Consumption calculation

The consumption calculation is performed using the "Consumption weighting scheme" which can be stored in the system in the places listed below. The determination of the consumption calculation is also carried out in the following order:

1. Article card
2. Product group
3. Article category
4. KUMAVISION med facility

Starting from the working date, it is possible to preset the start date of the weighting scheme calculation via a date formula. The date is defined in the KUMAVISION med setup on the info tab "Stock" in the field "Default date loading". If the field is empty, the start date is the working date.

Manage shopkeepers

To identify and manage the slow-moving items, first call up the "Slow-moving items management" via the user search.

The following calls are available in the menu ribbon:

Call	**Description**
Calculate	All entries will be rebuilt.
Action	Calling the action window for the current line

Filter

- All
- Problem articles
- Endangered items
- Problem post
- Resubmission

Quick filter according to designation

Call "Calculate

The "Calculate" action is used to analyze all open article items, i.e. article items with remaining quantity. An entry is created for each open item. If an entry already exists, it will be updated. If the article item is closed in the meantime, the entry is deleted.

The following fields are calculated:

Field	Description
Lfd. No.	Lfd. Item no.
Article no., variant code, storage location code, booking code	Unique identification. These fields are used to calculate stock and consumption.
Description Description 2	Description from article card
Posting date	From item item
Consumption weighting scheme	Weighting scheme according to the device for calculating consumption
Stock	Stock according to unique identification
Residual amount	From item item
Serial no., batch no., warranty date, expiration date, date of manufacture, ext. batch no.	From item item
Sold until	Extrapolation based on stock of the article and "sales per day
Minimum term Expiration date	Determined value according to device
Problem post	If expiration date on the date "Sold until" does not show the minimum term.
Problem articles	Set if there is at least one problem item to the article
Sale per day	Calculated value according to the weighting scheme.
Value	Remaining quantity multiplied by cost price
Comment Remark bearing	Fields for user remarks
Number of buying customers	Shows how many customers have bought the item. Via the lookup these are displayed.
Corrected from/at	User and time of the last change of the record
Resubmission set by/at	The fields are set in the "Shop guard action" window.
Shelf life at sale (months)	The remaining term in months is calculated from the difference between "Sold by" and the "Expiration date".
Recommended minimum runtime	Determined value according to device

Field	Description
Endangered item	If expiration date on the "Sold by" date does not show the recommended minimum term.
Main statistical group, group, subgroup	Values from article card
Stat. DG Main group, subgroup	Values from customer

Coloring: If no problem has occurred the line will be green, for risk items black, for risk items blue and for problem items red.

Call "Action"

The "Shop guard line action" window is called for the current line.

In the Action window, details about the item are displayed in the upper area. Actions can be logged here and the resubmission can be set conveniently. You can decide whether the resubmission should only apply to the item or to all problem items of the item.

Selecting the various actions sets the Resubmission Date field in the Storekeeper Management window. For example, if the resubmission date was set, the record will no longer be displayed in the Problem Items view.

The action "Verf-HB-2M" means: resubmission date, 2 months before the item expires. The action "Set all" means: The action should apply to all items for this article. The action "Set" means: The action should only apply to this item.

You can enter descriptive texts in the Reason/ Action field.

Field Solution is an option field. Select here, for example, "Return" if you want to return the item.

The entries in the Remark and Remark Stock fields are displayed in the Stock Management window. Example for remark warehouse: "Please transfer to blocked stock".

Resubmission on:

This does not refer to the normal resubmission in the system (e.g. resubmission with the documents), but only within the storekeeper management.

Mounting

Use of assembly components of fixed assets

For components that are in stock as fixed assets (AV) and are used in an assembly order, it is possible to transfer the item from fixed assets to current assets (UV). To do this, go to the corresponding item line of the assembly order in question and select the "Function" menu item in the "Lines" info tab, and execute the "Debit AV" function.

Then the stock card will open, where you select your desired item that you want to transfer from fixed assets to current assets. Confirm your selection with "OK".

You will then be asked again whether you want to make the transfer. Confirm this with "Yes".

After successful rebooking you will receive a corresponding notice again.

The serial number of the component is not changed by the rebooking process.

Collective External Production

General

In the external work process, different production orders can be combined on one or more storage carriers. These load carriers are assigned to a collective external production, from which an external work order is created. The invoices for this can then be posted per load carrier or to the individual production order.

Example:
In the sterilization process, different load carriers (pallets) can contain different, but also identical production orders. Via this module, the production orders are provided with the load carrier bracket and transferred cumulatively to the external work order. Invoicing is done on the basis of a load carrier or the costs of an operation.

Establishment

License KUMAVISION med Module Setup

In order to be able to use the module "Collective external production", the corresponding license must be available and activated in KUMAVISION healthcare365. Whether this is the case can be checked via the "KUMAVISION med Module Setup". On the setup card, the switches "Collective external production in license" and "Collective external production active" must be activated.

Production facility

The number series for the collective external production orders and the load carriers must be stored in the production setup. To do this, call up the "Production setup" via the user search.

The production setup opens, where you can define the number series for collective external production, as well as the number series for the load carriers under the "Numbering" info tab.

In addition, you can define the "Load carrier price calculation" on the "General" info tab of the setup card. You can select "Load carrier unit" or "Cost of operation". For more information, see the "Prices in the order" section.

Load carrier price unit

If the price calculation is set according to load carrier in the setup, the load carrier code or the load carrier price unit must be maintained. To do this, call up the "Load carrier price units" via the user search.

The Load unit price card opens. Click the "Edit list" button to edit or add a selected load carrier price unit.

Select the "New" function in the ribbon to add a new load carrier price unit.

Now you can create a new load carrier price unit by entering a meaningful code, the description and the price for the respective load carrier.

Process

In order to be able to carry out the "collective external production" process, released production orders must exist in the system.

Create load carriers

To create a new load carrier, call up the "Load carrier" via the user search.

The load carrier card opens, in which the "Load carrier no." is automatically preassigned. You can then enter the load carrier code, the corresponding released production order in the "FA-No." field and the quantity, then confirm your entry with "OK".

Note

• When adding a production order, the remaining quantity and, if available, the batch are preset. If a quantity greater than the remaining quantity is entered, the user receives a corresponding note. • Only production orders with the status "Released" and a corresponding work center group can be added. A production order, in turn, can be located on several load carriers.

Load carrier label printing

Using the "Print" function in the ribbon, you can create the corresponding document with the label for the load carrier.

The signature fields "Compiled" and "Checked" are used for internal documentation.

Create collective external production

To create a new external collective production order, call it up via the user search. Via "New" in the menu ribbon you can create a new collective external production order.

An empty collective external production order then opens. The "Workstation group no." or the vendor number of the external manufacturer must be entered on the "General" info tab.

By entering the "Workstation group no.", the other necessary information fields are automatically filled with the data from the vendors stored in the workstation group.

Assign and remove load carriers

Load carriers can be added to a collective external production order using the "Select load carrier" function in the menu ribbon.

The load carrier overview opens where you can select a load carrier and then confirm your selection with "OK".

Note

• The system only suggests load carriers that have not yet been assigned to another collective external production order. • An assignment is made individually per load carrier. • Only load carriers that also have an operation corresponding to the work center group of collective production can be assigned.

After the load carrier has been successfully added, it receives a corresponding indicator.

Using the "Remove load carrier" function, you can remove the load carriers individually from collective external production. To do this, select the corresponding load carrier and confirm your selection with "OK".

Note

When selecting load carriers, only assigned load carriers are displayed.

If the "Price calculation per load carrier" function is set up in the production facility, the "General" info tab of the collective external production order contains three additional fields:

- Quantity
- Price / Unit
- Amount

Note

The fields are automatically filled and calculated when assigning the load carriers.

Printing collective external production

Load carrier pressure

To print the load carrier for the third-party manufacturer, select the "Load carrier print" function in the menu ribbon.

Afterwards the routing slip load carrier card opens, in which you can activate the switch "With FA lines" to print the routing slip of the load carrier with or without lines. The advantage of printing without lines is that no unnecessary information is sent to the third-party manufacturer.

Article pressure

Furthermore, it is possible to print the routing slip of the collective external production order sorted by article. To do this, select the "Print article" function in the menu ribbon.

Ordering, release of collective external production

Once you have finished assigning the load carriers, you can execute the "Create purchase order" function in the ribbon to create the external work order related to the collective external production.

After the order has been generated, the collective external production order is automatically released. The information of the load carriers is still available in the lines. In addition, a link to the purchase order belonging to the collective external production order is displayed via the "Purchase order exists" field.

The user can continue processing the order by selecting "Yes" in the dialog box.

Subsequently, the corresponding order is opened and can be edited. The purchasing status is automatically set to "FREMD". The quantity of the purchase order lines is added per production order/article combination.

Print order

To print the order, select the "Print" function in the ribbon.

Alternatively, you have the option of automatically printing the receipt in the course of posting using the "Post and print..." function.

Prices in the order

Cost load carrier unit

With the "Price per load carrier unit" setup, the total price of the order is composed of the individual prices of the assigned load carriers.

Cost of the operation

With the "Price per operation" facility, the costs are calculated from the operation. Thus, in the order, the price is calculated based on the operation and not on the load carriers.

Deliver order

To deliver the order, execute the "Book" function in the ribbon. Alternatively, you can perform the posting with the goods receipt.

Another dialog box opens, in which the "Deliver" checkbox is already activated. Confirm your entry with "OK".

After delivery, in the purchase order, in the column "Already delivered. Quantity" column in the purchase order.

Two additional references have been automatically set in the associated collective external production order, one to the complete delivery of the order and the other to the existing delivery bill.

> Note

The article tracking can be called with the call "FA- Arrticle tracking".

Invoice order

To invoice the order, execute the "Book" function in the ribbon.

Another dialog box opens, activate the "Invoice" checkbox there. Then confirm your entry with "OK".

After complete invoicing, the purchase order will be moved to the posted documents. Additionally, you will receive this note with the option to open the posted purchase invoice.

Otherwise, you can call up the posted purchase invoice again afterwards.

In addition, the associated third-party production order automatically contains a reference to the fully invoiced order.

Archive

A collective external production order is automatically archived when it is released. Nevertheless, before a collective external production order is deleted, it should be archived manually to ensure that the current version of the collective external production order has been archived. To archive a collective external production order manually, execute the "Archive" function in the menu ribbon.

You will then be asked again whether the collective external production header should be archived, confirm this with "Yes".

To call up the archived collective external production order again, call up the "Archived collective external productions" via the user search.

After successfully archiving the collective external production order, the collective external production order must be deleted manually from the collective external production overview. To do this, call up the "Delete" function in the menu ribbon.

The deletion can also be done in the course of "delete completed orders", if the order has not already been deleted.

Background:
If the purchase invoice is not generated from the purchase order with the "Post" function, but via purchase invoices "New", the purchase order is not deleted immediately. The deletion of the order takes place subsequently via "Delete completed orders".

If an order is deleted in the "Delete completed orders" report, the system checks whether the order is linked to a collective external production order before deleting it. If so, this collective external production order is also deleted.

If an order is deleted manually or deleted directly during posting, the deletion of the "linked collective external production order" must still be done manually.

Note

A collective external production order can only be deleted if it has been fully invoiced.

External Production With Provision

General

A work process that is outsourced (also called extended workbench) occurs particularly frequently in contract finishing processes and also in the assembly of subassemblies. Outsourcing is also a possible alternative to in-house processing when capacity bottlenecks occur in the company's own operations. Often, components are provided that are required for the processing of the material. In some cases, an already processed product is also provided.

In the case of external production with provision, the standard functionality of external production has been extended by a provision. The materials to be sent for external production can be defined by the provision. For logistical processing, a stock transfer order can be created from the external production order. The corresponding documents can be printed out for the posted stock transfers.

When the external production order is posted, the corresponding quantity is debited from the external production warehouse.

Establishment

The following sections discuss the setup of external production with provision. As a prerequisite for setting up external production with provision, the facilities for manufacturing/production apply. For further information, please refer to the [Microsoft Dynamics Business Central™ Helpsite (F1)](#).

Production bill of material, version

In the following, only the special features of external production with provision are discussed. As a prerequisite for setting up external production with provision, the facilities for manufacturing/production apply. For further information, please refer to the [Microsoft Dynamics Business Central™ Helpsite (F1)](#).

Inforegister lines

In the production BOM (version), the fields "Connection code" (this field identifies the component as a raw material provision relevant to logistics) and "Provision type" must be set. Parts are always sent to the external processor only if an order exists.

Provision type option	Description	Note
Empty	No provision (Business Central Standard)	
Order-related	the goods are always sent to the external processor only if an order (FA) exists	Connection code must be maintained
Neutral	the external processor receives a certain quantity of goods in advance. When a production order is created, the external processor only receives the order for external processing. The parts to be provided are already with the supplier The issue storage location is set to the external processor (is entered at the work center group under origin storage locations)	Connection code must be maintained
Supplier	here the component is only for information ("info part") in the parts list. The supplier (external processor) takes over the procurement himself. This setting is also used if the customer provides parts. Here no stock or issue posting takes place.	No transfer to the FA

Note

A component defined on a parts list of an item can be linked to an operation by means of connection codes. In this way, it is possible to define which operation requires or consumes an item.

The connection code must first be stored in the operation before the setting for the component can be made in the production BOM. Otherwise, an error message will be displayed when trying to certify the BOM.

Work plan, versions

In the following, only the special features of external production with provision are discussed. As a prerequisite for setting up external production with provision, the facilities for manufacturing/production apply. For further information, please refer to the [Microsoft Dynamics Business Central™ Helpsite (F1)](#).

Information register: lines

Field	Description
Standard catalog code	The standard catalog code is used for external labor pricing
Connection code	Connection code selection

Workstation group

In the following, only the special features of external production with provision are discussed. As a prerequisite for setting up external production with provision, the facilities for manufacturing/production apply. For further information, please refer to the [Microsoft Dynamics Business Central™ Helpsite (F1)](#).

Usually, the following settings are made when creating a workstation group for external work:

Inforegister General

In the "Department code" field, the workstation group is assigned to the External work department.

Information register booking

On the workstation group, the vendor must be stored in the "Vendor no." field that performs the external work.

> Note

The product posting group defines G/L accounts which are posted during sales and purchase postings. For a better distinction it is recommended to define a different product posting group.

If you have agreed with the vendor on a different price for each process for external work, select the Special cost price check box.

Inforegister Planning

The "Unit code" field is usually set to days, since external processing is usually calculated in days.

As a rule, a separate company calendar is created for external processing.

Navigate menu tab

In addition, the external work prices and the origin storage location can be stored via "Belonging" > "Workplace group".

Determination of prices for external work

In Microsoft Dynamics Business Central™ Standard, a price for external labor (i.e. the price that is later used in the purchase order) can only be stored on the work center group card. Different prices per vendor, per scale quantity, per activity (standard catalog code) or time period dependent prices cannot be maintained.

In KUMAVISION healthcare365 you have your own price table for the external work orders. The prices for the external labor can be stored in different places. Thereby the entries of the external labor prices override the prices of the work center group card.

Work center group per time: see Basic data - Production - Work center groups

Workstation group per piece: see Basic data - Production - Workstation groups

Work center group special cost price: see Basic data - Production - Work center groups

Third-party work prices Prices (with the option of graduated prices) can be stored for the following combinations via the external work prices:

- Workstation group (MUST)
- Article (MUST)
- Vendor (MUST)
- Standard catalog (external work activity)
- Start and end date
- Minimum quantities (graduated quantities)
- Price units (conversion factor weight share)

The external work prices can be called from the following masks with appropriate filtering:

- Article card/list
- Workplace group card / list
- Accounts payable card / list

Origin camp location

With the origin storage locations it can be controlled which storage locations should be used for the provided goods. Either a specific article is stored per work center group or the option all articles is selected. The call of the origin storage locations is made from the workstation group map/list.

- Type of origin: workplace group
- Origin code: which specific workstation group
- Type: All items or a specific item
- Code: for specific article: Item number
- Storage location code: which storage location is to be controlled

Relocation routes

With the help of the stock transfer routes you have the possibility to create the link between the vendor warehouse (i.e. the warehouse of the external processor) and your own warehouse.

To set up the stock transfer routes, call them up via the user search.

The stock transfer routes overview opens. In the info tab "Stock transfer route matrix" you can now make the assignment for your own warehouse (stock transfer from code = own warehouse (e.g. BLUE)) and the vendor warehouse (e.g. external).

By clicking on the Assist button you get to the transfer route specification on which you enter in the field "Transit Code = Own-LOG". This field must be filled with an appropriate code, the other fields can remain empty if no fixed deliverer is defined.

You can then close the Stock Transfer Route Specification and Stock Transfer Route Matrix windows.

Process of external production with provision

Initial situation: Production is planned and a released FA has been created. For articles with article tracking, this should be stored with the components and in the production order

Third-party work proposal

Calculate external labor

In the external worksheets it is possible to calculate which released production orders should be sent to the vendor. Here, it is possible to filter on the workstation group, the vendor or the FA number, among other things.

The external work sheet then lists the pending external work calculated according to the filtering.

The vendor is taken from the work center group, the price depending on the stored prices. If there is already an external work for a FA, it will not be charged twice.

Work in the external work proposal

Change of the creditor: The vendor can be changed per line (order), thus the external labor price stored in the new vendor is also used.

Perform event reporting

With the function "Execute event message" and the activated hook "Accept event message" the suggestion line can be transferred into an order. The stock transfer order can be created here with the hook activated. Lines in which the check mark is not activated remain in the external work proposal without an order being generated.

Released production order

Pursuit of the foreign work

The tracking of external labor is done at the line level in the production order. To do this, select the corresponding line and call up the "External work tracking" via Line.

The linked documents can be viewed and called up via the window called up by this function.

Order

The order is placed through the service of external production, as the necessary components for the article to be manufactured are provided to the order by stock transfer. Accordingly, the description of the item line in the purchase order does not contain the name of the item, but of the service.

The columns Third-party items, Quantity of third-party items, FA no., FA line no., Work center group no. and Work center operation no. should be displayed, since they represent the reference to production.

The article tracking of the production order is printed on the order.

The order type FREMD is automatically preset for orders from the external work proposal, but can be changed manually. This can be used to preset certain data, such as payment terms and other fields.

If the purchase order is delivered, the operation is confirmed at the same time.

> Note

If this is the last operation of a production routing, it may end the production order.

Reference of a provision on the document

If an external production with provision is carried out, the stock transfer lines (provision) of the articles from the production order are indicated when the purchase order is printed.

The price of external work is printed here per piece (according to the setting in point Determination of prices for external work). If this is a tiered price of the workgroup, it will be automatically applied here and updated when changes are made.

Post delivery in the order

The purchase order is posted according to the document. As a result, the goods receipt is now posted via the manufactured goods. The stock of the provided components in the foreign storage location must now be debited (consumed). This can be done either manually or automatically (explained in Process of external production with provision and automatic posting). The article tracking of the manufactured articles must be deposited here.

When the order has been delivered, it can be seen in the released FA. With complete delivery, the released production order is now at 100%

Stock transfer

In the stock transfer header, the field Stock transfer order type indicates that this is a stock transfer of external labor.

If you do not receive a separate goods receipt message from your external processor, you should check the box Outbound automatically posts inbound*, otherwise the goods would be in transit and you would have to post the putaway to the vendor again.

If the product (semi-finished product) is also sent, the quantity is not displayed in the "Quantity" field, but in the "Quantity manufactured by third party" field.

Reason: The article has no stock yet and the stock transfer can only be simulated.

The provided items, in turn, must - in the case of the provision type Order-related - be debited from the warehouse and the provided quantity is therefore also found in the Quantity field.

The components to be added can now be sent to the paver via the stock transfer order.

Note

Check the box "Outbound automatically posts inbound" if you do not expect a separate inbound message from your external processor.

Reason: When the stock transfer order is posted, the quantities are first posted to the transit warehouse via the defined stock transfer route. If you do not check the box, the receipt must be posted to the supplier subsequently. For the items to be provided, you can create the logistics documents from the stock transfer order (e.g. goods issue, goods receipt).

Process of external production with provision and automatic posting

In order to be able to use the automatic booking of consumption, the facilities and prerequisites described below are necessary. Alternatively, the consumption can also be booked manually via the consumption book. sheet, see chapter "Manual booking of consumption" below.

Establishment

Posting method in the production BOM and thus also the FA component is set to Backward.

Prerequisite

If the item has item tracking, it must be stored in the FA components.

Process

When the goods are delivered, the consumption is automatically booked.

Manual booking of the consumption

In the production book sheet, all consumption lines are displayed and can be posted manually. The actual message line of the external labor is not displayed here, since this must be posted via the purchase order.

The consumption ledger sheet can be calculated as well as entered manually.

Batch Clean Production

General

Sometimes it is important in production processes that a final product is produced by only one batch of a raw material and that several batches of a raw material are not used in a production order. With the "Batch-pure production" module, you can assign the batches to the components in the production orders in a batch-pure manner, divide up or reduce the production order so that batch-pure production is guaranteed for the production parts. You also save time compared to manual batch-pure assignment per component

Batch clean production - setup

Batch clean production is an enabling module, the use of which is only possible with a license and activation.

Setup module

Only if both switches (Batch clean production in license and Activate batch clean production) are activated in the "KUMAVISION med Module Setup", the functions of batch clean production are available. The module offers the possibility to plan the components in batches in the fixed planned production order (FA) and to split the production order or reduce quantities if required. Quantity changes can be made on demand (stock transfer) or by assigning pure batches, as it is better to consume components in pure batches per production order (FA) due to simplified traceability and possible recalls.

Production

Create fixed planned production order

First of all, a firmly planned production order must be created in production. To do this, the production employee calls up the Fixed planned production orders menu item in his role center and creates a new fixed planned production order by pressing the "New" function key in the menu ribbon.

Edit fixed planned production order

In the new firmly planned production order, the "Origin No. " is first used to determine the article to be produced, then the quantity to be produced is entered and the production order is updated. The system then determines the production components stored in a production BOM (active version) on the article and the routing (active version) with its operations.

Edit manufacturing components

The function key "Line" and "Components" can be used to call up the production order components of the previously created production order line. The red coloring of the expected quantities of the manufacturing components signals that item tracking is required for these items.

Search batches

To determine a batch taking into account the expiration date, the following functions are possible in the FA components of a firmly planned production order:

Function	Meaning
Search batch clean FeFo	Item traces are assigned for all rows whose expiration date is reached first. Availability is checked and taken into account. It is possible that a production order will not be 100% fulfilled as a result and will have to be split (see "Split quantity" in section "Process quantities").
Search batch clean quantity	The article traces for all lines that could not yet be 100% fulfilled are assigned. Already assigned article tracings of other lines remain thereby. Here, too, it is possible that a production order cannot be 100% fulfilled and the quantity to be produced must be reduced.

The "Search batch clean quantity" function can also be executed after an initial proposal by the "Search batch clean FeFo" function without changes being made in the respective other proposal lines for components with batches that can be 100% fulfilled. However, for lines of components with batches and expiration dates, a recalculation is performed and corrections are made if necessary. If a production order is always to be produced in batches if possible, the function "Search batch clean FeFo" must be used instead of the function "Search batch clean quantity". This first searches for a sufficient stock quantity of components of a batch and ignores expiring batches whose stock quantity is smaller than the production quantity. In this way, only batches that meet the quantity to be finished are assigned and not those that expire first.

Process quantities

In order to be able to adjust the quantities to be produced in batches if necessary, the following functions are possible in the FA components of a firmly planned production order:

Function	Meaning
Split quantity	This allows the FA to be split to ensure batch purity per production order. A second, firmly planned production order is created for the difference quantity when this function is executed.
Adjust quantity	This can be used to reduce the FA quantity so that the FA is produced in a batch. If necessary, another production order is then required to produce the remaining quantity with a new batch.

Corrections

The system checks the availability of the components subject to batch management and - if available - their expiration date during the functions described in section "Searching for batches". As a result, individual components may not be available in the quantity resulting from the production order. The "Search batch clean FeFo" function assigns the first expiring batch to each component with corresponding item tracking and calculates which smallest common quantity of components can be produced with the available stock in this production order. If this results in the quantity from the production order not being able to be produced completely in this way, the system issues a corresponding message. After confirming the message with "OK", the system displays for which batch components 100% is not fulfilled. In order to produce in batches, the

system calculates the quantity to be produced using the "Split quantity" function in the menu ribbon. After confirming with "OK", the component quantities, their percentage fulfillment and the quantity on the finished article are corrected. For the difference quantity, the "Split quantity" function always creates a new, firmly planned FA. After executing the "Adjust quantity" function, a new fixed planned FA must be entered manually for any remaining quantities. In the new production orders created in this way, there is again the option of using the functions "Search batch clean FeFo" and "Search batch clean quantity". Here, too, it is possible that the quantity resulting from the production order cannot be produced completely. In this case, the quantity can be reduced to the quantity still available using the "Adjust quantity" function and reordered using the MRP data. The FA components and FA routings, as well as the FA line are recalculated to the adjusted quantity.

Release production order - change status

When changing the status of a firmly planned production order with the function "Change status..." in the menu ribbon (alternatively key combination Ctrl + F9) you can choose whether the picking should be created and printed immediately. If the picking is created here and registered unchanged, the batches proposed for the components are finally firmly assigned to the production order as batches to be consumed. After creation and registration of the picking, the firmly planned production order is now in the system as a released FA and can be processed as usual until it is completed with the status "Finished".

Device Assignment Sn in Sn

General

In case of a production quantity greater than quantity 1 of items with serial numbers in a production order in which the components are also subject to serial numbers, the module offers to assign the consumption of serial numbers to the serial number of the finished article. This ensures unambiguous tracing of which item serial number of a component was consumed to which finished item. The production order cannot be completed until the assignment has taken place. These assignments are carried on the serial number card in the assignment items.

Establishment

The following sections will discuss the device assignment setup and process.

KUMAVISION med Module Setup

The "Device Assignment" module is a module that must first be licensed and activated. You can see whether the module is licensed and activated in your system via the "KUMAVISION med Module Setup". To do this, call up the KUMAVISION med module setup via the user search by entering the terms "KUMAVISION med module setup". To use the module, both the "Device assignment in license" and "Activate device assignment" fields must be activated.

Article card

In the following, only the special features of device assignment in the article master are discussed.

Inforegister article tracking

On the "Article tracking" info tab of the article to be manufactured, the "Info card obligation" field must be activated. In addition, an article tracking code with the type serial number is required.

Information register KUMAVISION med

On the "KUMAVISION med" info tab, the "Device tracking obligation FA" field must be activated.

Note

The field cannot be reset (deactivated) if assignments have already been made in production processes. To do this, all assignments must first be cancelled again.

Device assignment process

Initial situation:

Production has been planned and a released FA has been created.

The production order produces 5 pieces of an electronics package.

The corresponding components are required for this. Consumption postings of the components have already been carried out.

The article tracings of the components can now be assigned to the article tracings of the production quantities on the finished article.

Assign FA consumption items

The call for the assignments is possible in several ways.

One possibility is to call up the page for assignments directly in the line of the released FA via the action "Line" > "Assignments". However, this requires that article tracking has already been defined for the finished article, for example, by means of a number series defined for the finished article.

The allocation page will open immediately. For those who are used to store their item traces manually, or to create user-defined serial numbers, the call in the line of the released FA via the action "Line" > "Item trace lines" (also key combination Ctrl+Shift+I) is another possibility.

The article tracking lines page then opens first. Here, the corresponding article tracking lines must first be created so that the article tracking line of the component can be assigned to the article tracking line of the finished article in the assignment page.

Via "Actions" > "Functions" > "Component Assignment", you then continue to the assignment page.

The last option is to open the item tracking rows page in the row of the released FA using the Lookup button next to the quantity.

Here, too, the article tracking for the finished article must then be created so that the article tracking of the component can be assigned to the article tracking of the finished article in the assignment page. Via "Component assignment", you can then continue to the assignment page.

Assign to production order consumption item

On the "Equipment item tracking lines" info tab of the assignment page, the corresponding item tracking of a finished article to which the FA consumption items are to be assigned is highlighted. Use the [...] drop-down menu at the top right of the page to open the FA consumption items page via the "Assign to production order consumption items" menu item.

Here you can now select the lines of the consumed components that are to be assigned to the article tracking of the finished article. A selection of several lines is also possible.

By confirming with "OK", the selected FA consumption items are transferred to the lines of the FA assignments tab of the assignment page. The FA consumption items are reduced accordingly by the respective articles and quantities.

> Note

If, due to the selection of consumption items, a total quantity of components is once assigned to only one article tracking of the finished article, although it should have been distributed to other finished articles, this can be corrected on the assignment page (see section Correction of assignment quantities).

Correction of allocation quantities

If a total quantity was assigned as the quantity of components actually consumed, although it should have been distributed to more finished products, then the quantity can still be adjusted accordingly on the assignment page.

After the quantity has been changed in the "FA allocations" info tab and the Update action has been performed using the F5 function key, the FA consumption items are then redetermined.

However, a change in quantity always presupposes that the remaining quantity of the consumption items is actually available.

If a quantity greater than the remaining quantity is entered once, the user receives an error message.

Assignment can be done only once

Item tracking of components to a finished article can only be assigned once. Once they have been assigned, they are no longer displayed as FA consumption items and therefore cannot be assigned to any other finished article.

If only a quantity of 1 is to be produced in a FA, the FA consumption items can be assigned with the action "Assign consumption items automatically", since the consumption is unique to the finished article.

Assign to item tracking lines

In the "FA Consumption Items" info tab of the assignment page, the corresponding item traces of the consumed components that are to be assigned to the finished article's item trace are marked. Multiple markings are also possible here.

The "Assign to article tracking line" action on the "FA consumption items" info tab opens the article tracking lines page for the finished article. In it, the article tracking line of the finished article to which the consumed components are to be assigned is selected.

By confirming with "OK", the selected FA consumption items are transferred to the lines of the "FA allocations" info tab of the allocation page. The FA consumption items are reduced accordingly by the respective articles and quantities.

Note

Even before the article tracking lines of the components are allocated to the finished article by selecting the consumption items, the allocation quantity of components can be changed. If, however, a total quantity of components is only allocated to one article tracking line of the finished article when it should have been distributed to other finished articles, this can be corrected on the allocation page.

Correction of allocation quantities

If a total quantity of components has been consumed that is to be divided among several article tracings of the finished article, this can already be done in the "Allocation quantity" field of the "FA consumption item" info tab on the allocation page before the allocation to the finished article.

After the quantity change and the "Assign to article tracking line" action, the article tracking lines page for the finished article opens. In it, the article tracking line of the finished article to which the consumed components are to be assigned is selected.

By confirming with "OK", the previously selected and changed FA consumption items are transferred to the lines of the "FA allocations" info tab of the allocation page. The FA consumption items are reduced accordingly by the respective articles.

In order to recalculate the total quantity of consumed components subject to batch management for further allocations, the Update action must be executed via the F5 function key in each case.

If a quantity greater than the remaining quantity is entered once, the user receives an error message.

Delete assignments

It is possible to completely or partially reset or delete already made assignments for lines or components.

Delete all assignments

On the allocation page, the "Delete all allocations" action is located in the menu ribbon. If this function is used, all assignments previously made for this FA of all device item tracking lines are deleted.

In the overview of FA consumption items, this makes all consumption items available again for reassignment.

Delete selected assignments

If one or more lines of FA assignments are selected and the "Delete selected assignments" action is performed, the application will delete only the assignments selected to this device item tracking line.

In the FA consumption item overview, the deleted components then become available again in the FA consumption items.

The consumption items can now be reassigned.

Assignments according to actual message

Even after all actual messages have been sent, it is still possible to make and change assignments as long as the production order has not yet reached the "Finished" status.

Assignments according to actual message

Actual reports on the production item have been posted and all items with their item tracings have been reported complete.

The assignments already made still exist after the actual message posting(s). Assignments can still be detached, added, or changed at this time.

FA Status Finished without device assignment

If the "Device tracking FA" switch in the article master is active for the production article, the status of the FA may only be set to "Finished" if all allocations have been made. The system issues an error message in the event of missing assignments.

If all assignments have been made beforehand and all postings to the FA have been completed, the system issues a corresponding message when the status changes to "Finished".

FA Status Finished for special make-to-order production (SEF)

Special make-to-order is an unlock module that must first be licensed and activated in the Kumavision med module setup.

In the special make-to-order process, the FA is automatically created in the background, consumption and actual messages are posted, and the FA is finally set to the "Finished" status by the creation of the sales order.

Because a SEF order always has a production quantity of 1, the assignment is made automatically when the status changes to "Finished" and is written to the article/device assignment items.

Item

Device allocation items

After the status of the FA has been changed to "Finished", the item traces of the components assigned to the finished item are documented in the serial no. information list or in the serial no. information card with the action "Device assignment item".

Article tracking

The item trace can be used to view which item trace of the components has flowed into which serial number on the finished item of the FA. This is possible in the Consumption -> Origin view.

In the view Origin -> Consumption, on the other hand, it is possible to see which postings have taken place after actual reporting to the FA.

Priceupdate

General

With the price update, manufacturer lists can be read into healthcare365. Additional data such as purchase and sales prices can also be created or updated. The functionality is based on the so-called catalog items.

The following updates can be made with the price update:

- List price update
- Sales list price

- purchase list price

- Updating pharmacy purchase prices

- Price type Optional 1

- Updating other optional prices

- Price type Optional 2

Establishment

Setup eData Setup

Since the price update is based on the catalog items, generally the catalog items setup must be set up.

To enter the setup, call up the "eData setup" via the user search.

The eData setup card opens, where you can fill in the fields as follows:

Field	Description
Use manufacturer article no.	Activate the switch to take over the manufacturer article number incl. the manufacturer code as your own article number.
Prev. Product posting group	**Optional:** General default for the product booking group of all new articles of the price update.
Prev. VAT Product booking group	**Optional:** General default for the VAT. Product posting group of all new items of the price update.
Prev. Stock posting group	**Optional:** General default for the stock posting group of all new items of the price update.

Setup Manufacturer abbreviation

Warehouse facility

To define the length of the manufacturer code so that the manufacturer code is not printed on future documents, first call up the warehouse setup via the user search.

The Bearing Setup tab opens where you can define the length of the manufacturer code in the "KUMAVISION med" info tab:

Note

The number of characters are then truncated for all items.

Accounts Payable Card

In addition, you must store the corresponding manufacturer code for the vendor on the respective vendor card on the "KUMAVISION med" info tab.

Read article

To be able to import the articles, first call up the "Price update overview" via the user search.

The price update overview opens. To be able to read in the articles, select the menu item "Actions" > "Function" > "Read in price update..." in the menu ribbon.

After that, the import price update card will open, where you can specify the following:

Field	Description
Type of reading	The following data can be read in: • Article master • Scale discount/price sale • Scale discount/price purchase • Text • Parts list Further information on the subject of read-in types can be found in the section "Read-in types".
Vendor no. Manufacturer	Specification of the vendor number of the manufacturer.
Vendor no.	Specification of the vendor number of the regular supplier.
EK prices start date	Indication of the date from which the EK prices are valid.
EK prices end date	Indication of the date until which the EK prices are valid.
UK prices start date	Indication of the date from which the UK prices apply.
UK prices end date	Indication of the date until which the UK prices are valid.
Currency code	Specification of the currency code of the read prices.
UK prices incl. VAT.	If the switch is activated, the sales prices to be read in already include VAT.
VAT Business booking gr. (price)	Indication of the VAT. Transaction posting group for the read prices

Then confirm your entries with "OK". The Import card opens, where you can select the TXT file you want to import.

Then confirm your selection with "Open" to import the file.

After successful import of the file, the data will be listed in the "Price update overview" as well as in the "Catalog items".

> Note

The preparation of the TXT import file can be requested from KUMAVISION.

Reading-in types Article master

The "Perform Price Update" report processes the fields of the "Catalog Items" table in records with type "Item Master" in the way described below:

Field	Description
Article no. Manufacturer	For manufacturer item no. use = YES in table 'Stock setup: **The article number is determined in the following form:** <manufacturer code><article no. manufacturer>. Transfer as article number and creation of an article master record and / or an article variant, if no master record exists for this article number or variant. Creation of an entry in table 'Article supplier' for this article and variant. Saving the Manufacturer item no. and the Vendor item no. as Vendor no. and Vendor credit no. in the item supplier and, if the Manufacturer item no. and Vendor item no. are identical, in the item master. Article no. in article supplier and, if article no. manufacturer and article no. supplier are identical, in article master. If an entry already exists for the determined article number / variant, only the existing entry is to be updated. **For manufacturer article no. use = NO in table 'Wholesale setup:** Using the fields Article no. manufacturer and Vendor no. manufacturer, a search is made in the table 'Article supplier' to see whether an entry already exists for this article. If yes, this article will be processed and possibly another variant will be created (if the variant does not exist yet). If not, the article master record and possibly the variant are created again.
Manufacturer code	**For manufacturer item no. use = YES in table 'Wholesale setup:** Transfer as article number in the following form and create an article master record: <manufacturer code> <article no.manufacturer> For manufacturer article no. use = NO in table 'Wholesale setup: Field has no meaning
Variant code	If a variant code is specified, the procedure is as follows: • If an article master has already been created, but the variant has not yet been created: The variant and the associated data are created. The data of the article master card will not be changed. • If article and variant do not yet exist: Article master and variant are created. The variant data is also stored in the article master (if the fields are available there). • If there are articles and variants: The existing variant will be changed or not depending on the Update existing articles only field of the request form. If no variant code is specified, the article master itself will be changed.

Field	Description
Article no. Regular supplier	If this entry <> item no. manufacturer: Creation of another entry in table 'Article supplier' for this article. Saving the supplier item no. as a credit item no. in the item supplier and, if the manufacturer item no. is not identical, in the item master. Article no. in article supplier and, if article no. manufacturer and article no. supplier are not identical, in article master. see otherwise field item no. manufacturerd
Description	Transfer to the Description field in the article master or variant, if this is specified in Request Form.
Description 2	Transfer to the Description 2 field in the article master or variant, if this is specified in Request Form.
EK price (net)	Depending on the setting in the Extended pricing field in the 'Accounts payable & purchasing setup' table, the price will be saved. If YES is entered in Extended pricing, the price will be saved in table 'Purchase condition' for item, variant code, vendor no. master supplier, purchase prices start date, purchase prices end date, currency code, purchase price unit code, purchase unit code and from quantity. If NO is entered in Extended pricing, this field has no meaning
List EK Price	Depending on the setting in the Extended pricing field in the 'Accounts payable & purchasing setup' table, the price will be saved. If YES is entered in Extended pricing, the price for article, variant code, purchase prices start date, purchase prices end date, purchase price unit code, purchase unit code and currency code will be saved in table 'Article prices' with price type 'Purchase list price'. If the price already exists, a new record with a new start date will be created. If NO is entered in Extended pricing, the price will be saved in table 'Purchase prices'. In each case, a new entry is created with the validity period, purchase unit code, purchase price unit code, currency code specified in table 'Catalog items' (if it does not exist yet. Otherwise, an existing entry will be changed). In addition, when a new item is created, the price is entered into the item master record in the 'EK Price (newest)' field.
Purchase unit code	Conversion using the conversion table and transfer to the article master as purchasing unit code and possibly in table 'Article prices', 'Purchase condition' or 'Article supplier'.

Field	Description
Purchase price unit code	Conversion using the conversion table and transfer to the article master as purchase price unit code and possibly in table 'Article prices', 'Purchase condition' or 'Article supplier'.
UK price (net)	Depending on the setting in the Extended pricing field in the 'Accounts receivable & sales setup' table, the price will be saved. If YES is entered in Extended pricing, the price in table 'Sales condition' is added to article, variant code, Sales prices start date, sales prices end date, currency code, sales price unit code and sales unit code saved (without customer reference). If NO is entered in Extended pricing, this field has no meaning.
List UK Price	Depending on the setting in the Extended pricing field in the 'Accounts receivable & sales setup' table, the price will be saved. If YES is entered in Extended pricig, the price for item, variant code, sales prices start date, sales prices end date, sales price unit code, sales unit code and currency code will be saved in table 'Item prices' with price type 'Sales list price'. If NO is entered in Extended pricing, the price will be saved in the 'Items' table in the Sales price field.
Sale unit code	Conversion using the conversion table and transfer to the article master as sales unit code and possibly in table 'Article prices' and 'Sales condition'. The field content is also transferred to the Unit code field of the item master (for this purpose, an entry must be created in the 'Item unit' table).
Sale price unit code	Conversion using the conversion table and transfer to the article master or the article variant as sales price unit code and possibly in table 'Article prices' and 'Sales condition'.
Error message	The field is filled if an error occurs when transferring the entries to the article masters.
EK prices start date	Transfer to purchase prices
EK prices end date	Transfer to purchase prices
UK prices start date	Transfer to sales prices
UK prices end date	Transfer to sales prices

Field	Description
Input tax code	Based on the input tax code and the VAT code, the VAT product posting group is determined in a conversion table and entered in the article master or article variant. If an item master or the variant already exists, no more changes will be made to the VAT product posting group.
Sales tax code	Based on the input tax code and the VAT code, the VAT product posting group is determined in a conversion table and entered in the article master or article variant. If an item master or the variant already exists, no more changes will be made to the VAT product posting group.
Product posting group	The product posting group is entered in the article master or the article variant if the article or variant does not yet exist. If the article or variant already exists, it will not be changed in this field.
Stock posting group	The stock posting group is entered in the article master or the article variant if the article or variant does not yet exist. If the article or variant already exists, it will not be changed in this field.
Currency code	Transfer to the price tables.
Quantity per package	Transfer to the article master
Gross weight	Transfer to the article master
Net weight	Transfer to the article master
Volume	Transfer to the article master
Item tracking code	Transfer to the article master
From quantity	Transfer to the Quantity field of the Purchase condition table and the Minimum quantity field of the Purchase prices table.
Discount %	Only if Extended pricing in 'Accounts payable & purchasing setup' = YES: Transfer to purchase price calculation group in field 'Additional discount in%' (description in next field)
Price group 1	Only if Extended Pricing in 'Accounts Receivable & Sales Setup' or 'Accounts Payable & Purchasing Setup' = YES and in the Request Form Import Purchase Costing Group = YES: On the basis of price group 1 and price group 2, the purchase and/or sales price calculation group is determined in the Industry Business Solution via the conversion table and stored in table 'Price calculation group article' for the article (and in purchasing additionally for the regular supplier).

Field	Description
Price group 2	see field price group 2
Product group manufacturer	If there is no entry for a product group and manufacturer in table 'Product group vendor', the entry is created. Saving the product group in the 'Item supplier' table. Moreover, if Statistical item groups set in the Request form = YES: Based on the product group and the manufacturer, stat. Product groups are determined in the conversion tables and entered in the articles or their variants.
UK price incl. VAT	Transfer to article master or price specification (where possible)
VAT Business book.-Gr.(Price)	Transfer to article master or price specification (where possible)
Device master obligation	Transfer to article master
Pharmacy Central Number	Transfer to article master Additional field "Pharmacy central number
Auxiliary number	Transfer to article master Additional field "Aid number"
Consultation supplies	Transfer to article master
EAN code	Transfer to article master in the "barcode references
DIMDI	Transfer to article master in the "barcode references
Component from	Entry of an assembly parts list component in the article specified here (generate article no. by manufacturer abbreviation and manufacturer article no. if necessary).
Position component	Entry in the Position field of the assembly BOM component. When inserting the BOM component, the item present here must be placed in the correct position in ascending order after the Position field.

Field	Description
Alternative item no.	Field for specifying the old article no. When working with manufacturer abbreviations: Combined with the manufacturer code of the current entry, the article master must be determined (see below) When working without manufacturer abbreviation: The field already contains the MBS-Navision article no. (for further processing see below).
Alternative (Old) Article no.	If an Old Article No. is entered in the catalog article table, the following procedure takes place: If no movement has been posted for old item no. and there are no open documents, the item will be deleted. If a movement is booked or an open document exists, in the article and in all article variants Locked EK = YES is set and as alternative article no. the new article no. of the price update is entered. To the new article of the price update all created variants of the old article are copied. Sense: Renaming articles is thus no longer necessary so often. Notice: The Old article no. fiel
Optional 1 valid until	Transfer in the article prices
Optional 1 valid from	Transfer in the article prices
Optional 1 Price / PE	Transfer in the article prices
Optional 1 price unit code	Transfer in the article prices
Optional 1 price price unit code	Transfer in the article prices
Optional 2 valid until	Transfer in the article prices
Optional 2 valid from	Transfer in the article prices
Optional 2 Price / PE	Transfer in the article prices

Field	Description
Optional 2 price unit code	Transfer in the article prices
Optional 2 Price price code	Transfer in the article prices

Scale discount / price sale / purchase

The 'Perform price update' report processes the fields of the 'Catalog items' table in entries with type 'Scale discount/price sale' and 'Scale discount/price purchase' in the way described below.

Entries with these types are only processed in sales if extended pricing is activated for sales. Likewise, entries for purchasing are only processed if extended pricing is activated for purchasing.

The entries of the table Catalog items are created in table 'Purchase condition' or 'Sales condition' depending on the entry in field Type. Purchase conditions are created as 'Special condition vendor item' for the master vendor. Sales conditions are created as 'Special condition item'.

Field	Description
Article no. Manufacturer	For manufacturer item no. use = YES in table 'Wholesale setup': The article number is determined in the following form: <manufacturer code><article no. manufacturer>. For manufacturer article no. use = NO in table 'Wholesale setup': The fields Article no. manufacturer and Vendor no. manufacturer are used to search the table 'Article supplier' to see if there is already an entry for this article. If an article master record is found with the details and the article variant specified in table 'Catalog articles', this article no. and variant will be used in further processing. If not, the entry is not processed and an error message is entered in the Error message field.
Manufacturer code	see field item no. manufacturer
Variant code	see field item no. manufacturer
Purchase unit code	Conversion using the conversion table and transfer to purchasing conditions as purchasing unit code.
Purchase price unit code	Conversion using the conversion table and transfer to purchasing conditions as purchasing price unit code.
Sale unit code	Conversion using the conversion table and transfer to the sales conditions as sales unit code.
Sale price unit code	Conversion using the conversion table and transfer to sales conditions as sales price unit code.
Error message	The field is filled if an error occurs when transferring the entries to the conditions. An entry is made for subsequent errors: - Item no. and/or item variant not available If an entry cannot be found in the conversion table.
EK prices start date	Transfer to purchasing condition
EK prices end date	Transfer to purchasing condition
UK prices start date	Transfer to sales condition
UK prices end date	Transfer to sales condition

Field	Description
Currency code	Transfer to the purchase or sales condition
From quantity	Transfer to purchasing condition or sales condition
Discount %	Transfer to purchase condition or sales condition as surcharge / discount **Notice:** In table 'Purchase condition' and 'Sales condition' entries can be created in which both price / price unit and surcharge / discount % are filled. In this case the surcharge / discount will be calculated on the price / price unit.
EK price (net)	Transfer to purchasing condition as price / price unit **Note:** In table 'Purchase condition' and 'Sales condition' entries can be created in which both price / price unit and surcharge / discount % are filled. In this case the surcharge / discount will be calculated on the price / price unit.
UK price (net)	Transfer to sales condition as price / price unit **Note:** In table 'Purchase condition' and 'Sales condition' entries can be created in which both price / price unit and surcharge / discount % are filled. In this case the surcharge / discount will be calculated on the price / price unit.
UK price incl. VAT	Transfer to the sales condition
VAT Business book.-Gr. (price)	Transfer to the sales condition **Note:** Reading the following table fields for the vendor table is not possible: • Price basis • Quantity limit base • Discount reason • Price type • Price type code • Action

Text

The 'Perform price update' report processes the fields of the 'Catalog items' table in entries with type 'Text' in the way described below.

These entries are created as text modules for the articles. To do this, the articles must already be created in the system. During a processing run, a text module header and text module lines are created for each article and language code for which texts exist in the 'Catalog articles' table. All entries in table 'Catalog articles' for an article and language code are saved under this created text module header.

In table 'Text module line' the print control fields are set depending on the entries in table 'Print control sales texts' (Note: See the code that is run through when changing the fields sales offer, sales order etc. of the text module header). The setting of the switches of the table 'Text module header' is to be queried via the request form of the import. For this purpose, the corresponding fields are inserted into the request form of the 'Perform price update' report.

Field	Description
Article no. Manufacturer	For manufacturer item no. use = YES in table 'Wholesale setup: The article number is determined in the following form: <manufacturer code><article no.> manufacturer>. For manufacturer article no. use = NO in table 'Wholesale setup: The fields Article no. manufacturer and Vendor no. manufacturer are used to search the table 'Article supplier' to see if there is already an entry for this article. If an article master record is found with the information, this article no. will be used in further processing. If not, the entry is not processed and an error message is entered in the Error message field. **Note:** Text modules are not dependent on variants. So here the field Variant code is without meaning.
Manufacturer code	see field item no. manufacturer
Description	Transfer to the Text field of the text module line.
Error message	The field is filled if an error occurs when transferring the entries to the text modules. An entry is made for subsequent errors: Item no. not available
UK prices start date	Transfer to start date in the text module header
UK prices end date	Transfer to end date in the text module header
Language code	This code is transferred to the text module.

Parts list

The 'Perform price update' report processes the fields of the 'Catalog items' table in records with type 'Bill of materials' in the way described below: The line no. of the BOM position is determined by "Position component" * 10000.

Field	Description
Article no. Manufacturer	The article number is determined in the following form: For manufacturer item no. use = YES in table 'Wholesale setup: <manufacturer code><article no. manufacturer> For manufacturer article no. use = NO in table 'Wholesale setup: < Item no. Manufacturer> If an article master record is found with the information, this article no. will be used in further processing. If not, the entry is not processed and an error message is entered in the Error message field. **Note:** Text modules are not dependent on variants. So here the field Variant code is without meaning.
Manufacturer code	see field item no. manufacturer
Error message	The field is filled if an error occurs when transferring the entries to the article masters. An entry is made for the following errors: • For manufacturer item no. use = YES in table 'Wholesale setup: <manufacturer code> + <article no. manufacturer> > 20 digits. • If an article master entered in component of does not exist, an error message is entered.
Component from	Entry of an assembly parts list component in the article specified here (generate article no. by manufacturer abbreviation and manufacturer article no. if necessary).
Position component	Entry in the Position field of the assembly BOM component. When inserting the BOM component, the item present here must be placed in the correct position in ascending order after the Position field.
From quantity	Transfer to component quantity field.

Price update care

Edit conversion

When importing the data, the conversion tables are already preassigned so far that all data of the supplier are entered and you only have to maintain the corresponding own values.

Note

This is also required if the supplier's value happens to be the same as the company's own value.

To edit the conversion, select "Related" > "Price update" > "Conversion" on the price update overview card in the ribbon.

Check the individual conversions and enter your corresponding values for them.

Add more data / change data

To add further data or to change data, select the menu item "Actions" > "Function" > "Change data" via the menu ribbon:

The Edit card opens where you can select the column or field you want to change:

Field	Description
Field number	Selection of the field number to be changed from selection menu
Old field value	Input of the field value to be changed
New field value	Entering the new field value
Check field length Auxiliary no., Pharmacy central no.	If the checkbox is activated, the length of the Aid no. and Pharmacy central no. fields will be extended to the prescribed length.
Copy	Activate the checkbox to copy data from one column to another column
Copy from	Select the column to copy from in the "Dive" field.
Copy to	Select the column you want to copy to in the "Dive" field.
Filtering	Additional filtering if the value is to be maintained only in certain records.

Then confirm your entry with "OK".

Perform price update

After you have completely maintained the data, execute the menu item "Actions" > "Function" > "Perform price update" in the menu ribbon.

The Perform Price Update card opens, where you can select the desired options. Additionally, set a filter on the vendor for which you want to create the items.

Field	Description
Change the name of existing articles	Boolean If YES is specified here, the Description and Description 2 fields in existing item master entries or, if a variant code is also specified, in the 'Item variant' table, will be overwritten with the entries in the 'Catalog items' table.
Import purchase price calculation group	Boolean Specify whether the purchase calculation group should be saved in table 'Calculation group-article' with range = 'Vendor' to the article and supplier or not.
Read in sales calculation group	Boolean Specify whether the sales calculation group should be saved in table 'Calculation group article' with range = 'Customer' for the article or not.
Update existing items only	Boolean Specifies whether only existing article master records / article variants are to be updated, or whether new article master records / article variants are also to be created.
Set statistical article groups	With YES, the stat. article groups are re-entered in existing articles or their variants using the conversion tables. Article groups are re-entered using the conversion tables. If NO is selected, the field entries remain unchanged.
Set locked EK	If YES is specified here, Blocked EK = YES is set in all articles or, depending on the specification in the Variant filter field, in their variants for which the vendor no. specified in the request form is entered in the Vendor no. field of the article master and which are no longer included in the price update. If NO is specified here, "Blocked EK" will not be converted (unless a follow-on article no. is specified).
Observe article master records	Here, YES is used to specify whether article master records (i.e. the variant <empty>) should also be changed in addition to the article variants specified via the variant filter. NO indicates that only the locked indicator is converted to variants. The field may only be maintained if "Set locked EK" = YES. Meaning of the parameter: Possibly trade items should be set to Locked EK, but repair variants should not.
Tax, book grp. from short capture	If one of the fields Input tax code, Sales tax code, Stock entry group, Product entry group, "VAT transaction group" of the table Catalog items = '' or if no VAT transaction group can be determined via VST + UST, the stock entry group, product entry group and or "VAT transaction group" are determined from the short entry according to the empty field, if the switch=YES.

Field	Description
Update consultation supplies	If YES is specified here, the content of the Consultation hour requirement field of the Price update table must also be transferred to existing article master records.
Variant filter	Set field to specify a filter for the Locked EK field. When the Blocked EK indicator is set, only articles or article variants that lie within the variant filter are taken into account. The field may only be maintained if "Set locked EK" = YES. Meaning of the parameter: Possibly trade items should be set to Locked EK, but repair variants should not.
Number series	Allow entry only if NO is entered in the Use manufacturer article no. field in the 'Wholesale setup'. With F6-relation to table 'Number series' to select a number series. If a number series was specified here, the next number from this series is to be used as the article number when an article is created.
Information register "Sales text modules	When reading in the text modules, you can specify for which ones the text modules are active.

After confirming with "OK", the articles are first checked. If the articles can be read in, the articles disappear from the list in the Price update overview window. If there are errors (not format defaults), a corresponding note is written in the table, which must be edited so that the article can be read in a next attempt.

Error messages can be viewed in the corresponding info box.

Once you have worked through the errors, you can delete the notes using the "Clear error message" function in the ribbon. Then execute the "Perform price update" function in the menu ribbon again.

Price update for already existing articles

If prices for already created articles have been updated via the price update, you can check the corresponding articles and the updated prices with the help of the menu item "Belonging" > "Price update" > "Show articles":

The corresponding article card opens. The updated prices can be viewed via the menu items "EK prices" and "VK prices".

Repair and Maintenance Contracts

Introduction

With this adaptation it is possible to use contracts detached for maintenance and repair. On the basis of these B2B contracts, transaction periods, scheduling agreement lines and schedule lines are generated for delivered devices, which refer to the delivery. Due to the standard functionality of the MED operations, billing lines and schedule lines are automatically generated, which can be used to bill the contracts. Thus, the extension of operations is also possible analogous to the standard.

In the technology module, these new B2B scheduling agreement lines are recognized and so is the maintenance or repair contract.

Note

At the time of implementation of the task, the engineering module could not yet manage batches Therefore, the "Batch no." field is not displayed in this customization and thus no contracts for batches are possible yet.

Establishment

Technique setup

In order to distinguish B2B contracts from other contracts, the transaction control type and transaction type are stored in the technical setup for the contracts. To do this, first call up the technical setup via the user search.

On the "Contracts B2B" info tab, you can store the transaction control type "HAN" = "Trade" in the "Transaction control type B2B" field and the transaction type "A-HAN" = "Trade" in the "Transaction type B2B" field.

Operation participant institution

All parties involved in the process can be set up as process participants for the process control type. To do this, first call up the operation participant setup via the user search.

The "Participants" overview opens where you can add a new participant by clicking on "New" or edit an existing participant by clicking on "Edit list".

Contract periods

For each plan type used from repair and maintenance, at least one contract period must exist that is declared as the entry point. In addition to this, any subsequent periods can be defined. To create and define the contract periods, first call them up via the user search.

The contract period overview opens where you can enter a new contract period via "New" or edit an existing one via "Edit list".

Field	Description
Code	Assign a meaningful code (abbreviation)
Description	Assign a meaningful description
Planart	Select the "Repair" or "Maintenance" plan type for the contract period
Port of unloading	Activate the checkbox as soon as the contract period is to be the entry point for the respective process.

Contracts B2B

The contracts in KUMAVISION healthcare365 are structured in the following levels:

1. contract The first level contains the contract itself with its general contract determination data. (contract header 5007230)

2. contract version The second level is the contract version (version header 5007231), whose changes are incremented using a sequential number within the contract. The contract version period (5007239) and contract version lines (5007232) are stored in the contract versions.

3. contract- version period

4. contract version lines

In the following, the creation of B2B contracts will be explained to you in detail.

To create a B2B contract, first call up the contracts via the "B2B" user search.

The contract overview opens where you can create a new contract via "New" or edit an existing contract via "Edit list".

Ribbon Contract Map

Function	Description
New	A new contract is created based on the number series
Copy contract	Creates a new contract from the current contract based on the number series
New version	A new version is created from the last contract version by incrementing the contract no.

Inforegister General

Field	Description
Document type	Always "contract
Contract no.	Unique contract no. from number series
Search Keyword	To the internal search
Planart	Maintenance or repair
Status	Open or Released Only open contracts can be processed
Inactive	If "Yes", this contract can no longer be used
Check debtor	Customer or customer group for which this contract is to apply
Valid from/until	Scope of validity for contract determination

Inforegister Contract Version List

To access the contract version card, call up the "Version card" on the "Contract version list" info tab.

Version map

The version map opens.

Inforegister General

Field	Description
Contract no.	Unique contract no. from number series
Version no.	Unique running version no.
Booking description	Free description of the contract
Valid from/until	Scope of validity for contract determination
Status	Open or Released Only open contract versions can be edited
Rech. to deb. no.	With this customer the invoice recipient can be defined
Zlg. condition code	If the invoices for this contract are to be subject to payment terms that differ from the default value of the customer, these can be specified here
Invoice instruction	If a different invoice instruction from the default value of the customer is to apply to the invoices for this contract, it can be specified here

Inforegister Deviating document specifications

Field	Description
Invoicing order type	The order type for billing must specify a value invoice. Therefore, the order type is preset with the "Invoice order type" from the KUMAVISION MED setup
Booking group deflect. Code	The booking groups can be changed via a redirection code
Calculation pressure	Specifies how the price calculation should appear on the invoice

Information register Information

Field	Description
Created on/about	Information about when and by whom the document was created
Modified on/about	Information when and by whom the document was changed

Inforegister Periods

The contract version periods describe the phases of the contract. If a contract consists of only one phase or if all phases are identical in their length and billing modalities, only one period is required here.

Field	Description
Period	A period is defined for each contract phase
Extension lead time	Specifies how long in advance a contract is to be extended
Extension type	Contracts can be renewed automatically
Runtime operation	Indicates the contract length of the current contract phase
Info. Template	All communication documents are defined in the information template
Billing interval	Time interval of the billing (e.g. "1Y" for annual billing).
Settlement date	If nothing else is specified here, billing always takes place on the first day. I.e. normally this is the day of delivery. Via a date formula this time can be shifted into the future.
The following contract no.	If you want to change to a different contract after the contract period has expired, you can specify this here.
The following version no.	If you want to change to a different contract version after the contract period has expired, you can specify this here.
The following period	If you want to change to a different contract period after the contract period has expired, you can specify this here.

Inforegister lines

The contract version lines define both the contract objects, the special services and the billing amounts. In the case of indirect billing, the respective line is linked to a billing line, the so-called "flat rate".

Field	Description
Contract period	Reference to one or more contract periods (e.g. W1)
Type	Depending on the plan type, the contract items (equipment or batches) are indicated as "maintenance" or "repair". Billing flat rates and also additional services are specified as "resources". Other items allowed in the contract are indicated as "items". No. With type = "Article", "Maintenance", "Repair" an article no. can be entered here. It can also be a contract determination article at this point. For type = resource correspondingly a resource no.
Work type code	The use of the work type code is necessary for resources.
Serial no.	If the contract is valid only for a specific serial no., it is indicated here. If the field is empty, the contract applies to all serial numbers, i.e. generally to the item itself.
Description	Free description of the contract line
Settlement type	Indicates whether the line is billed directly, via a different flat rate line or not at all.
Belongs to flat rate	If the billing type = "Flat rate", the flat rate (= resource no.) is specified here for which the billing is carried out.
Quantity	Specifies the planned quantity.
Unit code	Planned sales unit
Price unit code	Reference value for the "Sales price (price unit code)" field
UK price (price unit code)	The price is only specified here if it is fixed in the contract.
Price origin	Indicates whether the price is fixed in the contract or whether pricing is performed.
Discount reason	Defines the frame of the possible "line discount %".
Line discount %	Specifies the line discount in %.

Functionalities

Functionality article contract lines

The basis are the contracts B2B agreed with the customer.

If a contract already exists before delivery, an operation with the following data is automatically created in the technical plan:

- One operation period including operation participants
- a technical plan line, hereinafter referred to as "article contract lines".
- one fixed technical schedule each for the delivery made
- one billing plan line
- Settlement schedule lines resulting from the settlement type

If the article contract data is to be created subsequently for a device, this is possible in two ways. The "Generate B2B article contract lines" action can be called up in the posted sales delivery. This function subsequently generates the article contract data for all devices in the contract.

The same call is also possible for a single device in the serial no. information card. All B2B article contract lines can be viewed via the "B2B article contract lines" call.

Functionality billing

When generating the operation with technical plan data, the billing data in the billing plan is also generated automatically. Here, a retrieval is possible using the standard functionality.

Functionality extension

A contract is extended by creating a subsequent period in the technical plan. This can be done manually by the function "Extend operation period" or also by the batch call "Filter to extend operations". The extension is done in the same way as the standard extension, with the difference that the engineering schedule (which documents the delivery of the device) is generated automatically.

Functionality Customer Service Call

The extensions to the previous functionality are described here. When creating a call with the classification "Maintenance" or "Repair", the system now automatically checks whether there is an active article contract line for the device. If yes, the corresponding contract data is transferred directly to the "Call line". If No, an attempt is made as before to determine the maintenance or repair contract via the original delivery. This second step is only possible if the scheduling agreement was used for the delivery.

Functionality diagnostic order

Contract billing type

There is a new "Contract billing type" column in the diagnostic order. This is filled automatically on the basis of the data entered in the line and the contract data in the "Call line". This means that if a contract exists, a decision can be made immediately for each line as to whether the item is chargeable or not. There are four possible results:

- Blank: No contract available. Normal billing.
- Flat rate: No billing as item already compensated via flat rate
- Direct: Direct billing of the position to the customer
- None: No billing to the customer.
- Direct: Direct billing of the position to the customer
- None: No billing to the customer.

Value limits

This customization allows the repair estimate to be automatically set to approved for individual customers in general or up to a value limit.

Establishment

On the customer card, on the info tab "KUMAVISION med" there are two fields "Rep. KV necessary" and "Rep. KV value limit". The field "Rep. KV value limit" can be changed only if the field "Rep. KV necessary" contains the value "From value limit". In the Info. box "Customer Info" these two fields are displayed in the technology module.

Functionality

The two fields "Rep. KV necessary" and "Rep. KV value limit" are transferred from the customer card to a diagnostic order when it is created.

In the "Planning material / resources" tab, the sales prices have been inserted and pricing is now carried out when the quantity is changed.

Via the new action "Calculate amount" all lines are added up, which are invoiced to the customer according to the "Contract billing type".

The sum of the relevant lines is transferred to the "Rep. order value" field.

The document is archived via the action "Transmit effort". The new fields in the header and lines are also transferred.

If a cost estimate is now created as a follow-on document, it is automatically set to approved depending on the two fields "Rep. KV necessary" and "Rep. KV value limit".

Also in the engineering order the new fields are shown in the header together with the action "Calculate amount".

In the "Planning material / resources" tab, the sales prices have also been shown. Pricing is also carried out here when the quantity is changed.

Note

• If a sales quotation (KV) does not contain a line that can be billed to the customer, it is immediately "Accepted" and archived. • For call lines without contracts, offers / invoices are generally no longer automatically set to completed • For call lines with contracts, quotations are no longer automatically set to completed if no findings were previously created

Functionality sales offer (KV)

When creating the sales document, only items from the diagnostic order are now taken into account that either have no contract stored or are set to "Direct" in the "Contract billing type" field.

If a sales quotation (KV) does not contain any lines that can be invoiced to the customer, it is immediately "Accepted" and archived.

Sales invoice via call

The lines from the sales quotation are transferred to the unposted invoice VRU. If a sales invoice does not contain an amount to be invoiced, it is immediately invoiced and thus archived.

Retrieve sales invoice from settlement schedule

Stack retrieval device

- Invoice retrieval must then take place with DE-SO
- Filter on operation type A-HAN
- Create unposted invoice = "Release

Process flow

1. Contact / Debtor * Own role = DE-SO * Assigned partner function = PF-DE, if applicable

2. Purchasing process * Item is purchased with serial number and is in stock after booking * The article is a SN obligatory article and is in a contract B2B as contract line maintenance or repair contract * Maintenance or repair contract itself has an invoice recipient / debtor entered

3. Sales process via sales order MST1 * If a sales order is created with the customer and the article, both of which are also in the maintenance or repair contract, and the article (or several) is delivered (booked delivery), then so-called article contract lines are created per serial number. * These are visible in the contract as a line or also as a list in the role center. * Moreover, the list can also be accessed via the path Departments > Technology > Contracts B2B > Article Contract Lines B2B.

4. Repair / Call * Via Marketing Cockpit, dive down as usual on the serial number * Create a call from the SN card * Contract B2B is determined * Select process

5. Findings * Findings are created * Recognize items as they are billed * Conclude findings * Follow-up document is a Serv-KV * All positions that can be settled and do not run via settlement schedule are transferred to Serv-KV.

6. Technical order * No planning Close * Booking the consumptions * Complete technology order

7. Shipping the device

8. Invoice from call

9. Call closure

10. Invoice call-off from billing plan

Repair and Maintanance Processes For Dealers And Equipment Manufacturers

Introduction and requirements

The technology module in KUMAVISION healthcare365 simplifies the entire processing of the technical service of medical devices. There is a clear separation between the technical and the commercial processing. Each area has its own documents and yet they can all communicate with each other via the fully automated processing status. Due to the high automation of the processes, delay times are minimized, as the subsequent follow-up documents are automatically generated when the predecessor is completed and many manual tasks are performed automatically.

With the current status of the technical service mapping module, only devices can be repaired. Items without an info card obligation or with an item tracking not equal to the serial number are currently not yet mapped.

General setup technique

This chapter describes the general equipment to be installed in the engineering module.

Technique setup

Basic data is stored and set up in the technology setup. The fields of the individual info registers are described below.

Inforegister General

Inforegister General

Field	Description
Technical order numbers	Deposit of the number series for the technical orders
Findings order number	Storing the number series for diagnostic orders
Service Call Numbers	Deposit of the number series for the calls
Default booking code	Booking code, which is to be drawn when the repair components are entered in the engineering order
Main bearing	Base storage location for the delivery of exchange and loan equipment. The entry is overridden by storage location and storage bin from the unit of responsibility.
Service In-house Warehouse/ Service In-house Storage Yard	Default repair storage location and storage bin, which is drawn when a call is inserted. These entries are also overwritten by the technical storage locations and storage bins from the responsibility unit.
Warranty period repair	Deposit of a date formula, e.g. "1J" for the warranty period, which is given within the scope of a repair.
Maintenance process type/ maintenance document type	Are currently not used
Maintenance Date Formula Check Due Date	Deposit of a date formula. Based on this, all pending maintenance is displayed in an info box in the call and technical order.
Tech. Service discount reason	Deposit of a discount reason, which is drawn in sales documents with the hook "technical service", especially needed in case of sales returns.
Tech. Service access booking code	Default booking code for sales returns, with the "technical service" checkmark set. The booking code is always drawn if the device is unknown or no longer in stock (and therefore no longer has a booking code on the serial number card).
Redemption booking code	Default booking code for sales returns, without "technical service" hook set. The booking code is always drawn if the device is unknown or no longer in stock (and therefore no longer has a booking code on the serial number card).
Reversal discount reason	Deposit of a discount reason, which is drawn for sales documents without a hook "technical service", especially needed for sales returns.

Field	Description
Take back delivery error	Setting an error code, which is used in the delivery schedule when a product is retrieved in advance after a stock transfer, for the purpose of sample usage.
Technical order planning	Method of how engineering orders are generated. If the entry "Call" is selected, the technical orders are generated from the call. If the entry "Maintenance cockpit" is selected, engineering orders can be generated from the engineering cockpit. This procedure for generating technology orders has not been implemented further and is already planned for the future.
Process type Unexpected	Define the process type to be used for unexpected goods receipts.
Process type not available	This process type is written to the call when a device is received via the technical device receipt if a call has been created for a device but no process type has been entered.
Printing service bill on shipment	If a repaired device is returned to the customer, the service bill is automatically printed out with the delivery bill if the switch is activated.
Picking code accessories	This picking code ensures that no goods issue can be posted without providing the collected accessories.

Information register service provider

Field	Description
Default order type	Entering the order type for external repairs when entering the PPA or for pricing the service costs.

Inforegister consumption book sheets

The book sheets for the consumption entries of the resources and articles in the technical order are stored in this info register.

Inforegister Customer Service

Deposit of standard stock transfer book sheets and number series, which are drawn in the context of the stock transfers via stock transfer book sheet in the technology. In addition, an article book sheet is stored, which is addressed via the call in the case of scrapping.

Inforegister processing status

Field	Description
Status Call line Created	Default processing status, which is drawn as soon as a call is created. This is overridden again by the start status from the process type
Status planning completion in tech order	Default processing status, which is drawn when the button "Complete planning" is pressed in the engineering order. This status can also be overridden by the process type field of the same name
Status Unexpected	Processing status, which is drawn in case of an unexpected goods receipt.
Status completion service on site	Comparison processing status, which checks whether or not another call may be created for the same device during on-site maintenance or repairs.

Inforegister Contracts B2B

Maintenance of a standard transaction control type and transaction type for creating repair and maintenance contracts for dealers and manufacturers.

Technique processing status

The processing statuses are the former repair statuses. With the help of the processing statuses, you can see at any time in which part of the workflow of the process you are. Due to the variable setup options, the change of the processing status is almost fully automatic, except for a few special interventions. The processing status is always automatically continued in the process at the start and end of a process step. In this way, so-called processing status items are formed to document the individual steps.

These processing statuses are maintained in the "Technology processing status" table. Only a code and an associated description are assigned. The "Manual" checkbox can be used to control whether the processing status may be overwritten automatically (Manual = No) or whether the next status is set manually (Manual = Yes). Thus, if a processing status with the "Manual" checkmark is entered in the document and an automatism would write another processing status, then the manual processing status would remain in the line until it is set further by hand.

About the nomenclature of the codes: The numbering of the codes at the beginning serves to illustrate the status of the process. For example, 10 at the beginning stands for all startup processes, while 90 at the end stands for the final steps, such as the storage or shipping of devices. The number combination is followed by either an I, A or E. This character indicates whether the process step is internal (I), general (A) or external (E).

Customer Service Process Status Filter

In the role center for technical service, there are several tiles for displaying individual calls according to processing status.

These tiles show the status of the call based on the processing status, which can be stored in the above table depending on the tile.

Field	Description
Type	Selection of the tile to be parameterized.
Processing status filter	Here you can define the processing statuses that are to filter the calls in the page frame. Via the "Or-Pipe" (	) several processing statuses can be stored per page frame.

Test types

All possible device tests that must be carried out during repairs and maintenance are stored in the test types. These are later linked to the article and thus to the device in the maintenance plans.

Technology Maintenance Plan Templates

The individual maintenance tasks are mapped in the technology maintenance plan templates. General maintenance plans can be generated and then assigned to any number of articles. In this way, a maintenance plan must be created once for a model series, for example, and then only assigned to the articles.

Inforegister General

A unique code with associated description of the maintenance plan is stored in the maintenance plan header.

Information register Service levels

The individual device maintenance is then maintained in the lines of the maintenance plan.

Field	Description
Test type	Selection of a previously set up inspection type. Based on the code, the description is then filled.
Description	Is automatically filled with the description of the test type.
Time interval	Specification of the interval when the next test is to take place. For example, "6M" means that the MPG test is due every six months.
Interval highs. with work type	Deposit of a work type of a resource, for which the date of the next check is set high after

Technique parts list

The technical parts lists are used to map repair and maintenance parts lists. These are also maintained centrally and can then be assigned to several articles. Here, too, a unique code is assigned to the bill of materials at the beginning.

Subsequently, the call "Components" opens a mask in which articles and resources are entered into the parts list.

Field	Description
Type	Definition of whether an article or a resource is to be entered in the parts list line.
No.	Based on the type, the resource or article master is displayed here to select articles and resources. The description is taken over with the description of the article or resource.
Variants/work type code	Depending on the type, variants or work types can be maintained in this field.
Default component quantity	Preset the quantity in which the item/resource is usually taken.
Quantity overrun allowed	If the check mark is set, the preset quantity can be overwritten in the repair.
Priority	Based on the prioritization, the bill of materials can be filtered in the engineering order.
Standard	If the "Standard" check mark is set, this line is automatically dragged into the engineering order if it does not already exist.

If a technical parts list is used in a diagnostic or technical order, the "Parts list components" function is executed there. In both cases, the technique parts list belonging to the device opens.

The "Selected" checkmark is set either by the default checkmark in the BOM, alternatively the user can select the line over it to drag it to the planning register of the document. In the "Selected quantity" the desired quantity is entered. In case of standard lines, it corresponds to the default quantity. If no quantity overrun is allowed in the BOM, the default quantity cannot be exceeded when selected. In the following fields the spare parts or expenditures are displayed, including the prioritization. The "Exhausted quantity" and "Quantity overrun" bars provide graphic information on how much of the maximum quantity has already been taken. The functions "Prio All", "Prio High", "Prio Low" are used to filter the parts list according to the specified lines.

Technique diagnostic groups

The diagnosis of the device defect is recorded in the call and in the technical order with the aid of the diagnosis groups or the diagnosis. Since the findings are maintained in the system, the same findings do not have to be entered again and again and can also be evaluated.

Several of these findings can be clustered in the technique finding groups.

After a unique designation of the diagnostic group has been maintained, several diagnostic findings can be stored via the "Diagnostics" call.

Field	Description
Code	Deposit of a unique code of the findings
Description/ Description 2	Description of the findings

Work performed

In the technical orders, the service technicians have the option of recording which work they have performed. For this purpose, the work performed can be maintained under "Work performed" in order to be able to maintain user-defined texts later on this basis. This means that these texts can also be evaluated.

Unit of responsibility

Companies with multiple locations maintain their units of responsibility, according to which the individual employees or customers are assigned to these locations. As a result, these units of responsibility must also be considered in the context of technical service. Once the units of responsibility have been maintained, they are automatically entered into the call. Only three fields are important for the technical service in the call or technical order:

Field	Description
Storage location	In the technical service, specifies the storage location from which exchange or loan devices are to be shipped. This entry overrides the main warehouse from the technical facility.
Technique storage location code / Technique storage location code	Deposit of the workshop storage location and standard storage location of the individual branch. These values also override the entries of the engineering setup.

Offer status

The "Quotation Status" is used to manage the status of sales quotations and repair estimates.

The following fields must be filled in:

Field	Description
Code	Clear short designation of the offer status
Description	More detailed description of the status
New plant	Indicator for the status, which should be set when creating an offer
Create order	Indicator for the status, which should automatically create an order when selected
Customer service processing status	Definition of the processing status, which is to be written into the associated call when the quote status is selected. This field is only relevant for repair estimates.
Customer service quotation status type	Trigger field, for certain statuses, as these should automatically trigger a subsequent step of the workflow in the background, e.g. the next document creation, at least the setting of the processing status.

The last two fields are mandatory for the use of repair estimates.

Definition of the processes

In the technology module of KUMAVISION healthcare365, customer-specific repair and maintenance processes can be mapped without programming. For this purpose, the individual processes are defined and linked to the individual documents.

Customer service document types

The individual documents required to map the process are defined in the customer service document types.
Several document types can be defined per basic document type.

Field	Description
Code/ Description	Unique designation of the document type, including the description.
Base document type	Forms the base (standard) document on which the document type/process step is based. A large number of sales, purchasing or warehouse documents can be used, including the technical and SEF order.
Technical service	Controls whether the receipt is intended for technical service or whether the receipt should use its standard functionalities. In the case of sales returns, for example, this check mark controls whether owner and contract information should remain on the serial number card or not. If the checkmark is not set, the data is deleted, as the device thus remains in-house and is not returned to the customer.
Call classification	Differentiation for the technical order, whether it is a technical order for repair/ maintenance or for recording findings/expenses. Based on this, the field Technician order type is filled.
Technology order type	Technical field to control whether the technical order is a diagnostic order for the purpose of technical effort determination or a technical order to perform the service.
Device reference	Control which device is to be controlled in the respective document. If you select "Device", the (defective) device in the call is inserted; if you select "Loaner device", the loaner device stored in the call or the loaner device defined in the document is inserted. If the device reference is "Exchange device", an exchange device is entered in the document and the subsequent process based on it.
Deviating device reference	The deviating device reference controls whether the document is to be processed beforehand or whether deviating customer/vendor data can be stored here.
Business reference type	If the checkmark of the deviating business reference is set, it is mandatory to maintain a business reference type afterwards. The selection "Unit of responsibility" is only used for warehouse documents, since the storage locations can be controlled from the unit of responsibility. Purchase order and warehouse documents must have the "Different business reference" checkbox and a business reference. Due to these entries, these documents are also color-coded in the call.
Order type	Depending on the base document type, sales order and purchase order types can be entered per document type.
Scrapping	Can only be set for the base document type = article book sheet. If the check mark is set, the article ledger sheet is automatically entered with a retirement. After posting, the SN card is blocked and marked as "scrapped".
Standard text code	Control of the standard text stored here in the sales document

Field	Description
Storage location code/ bin code	Applies to basic document types = stock transfer book sheet and stock transfer order, the storage location and storage bin entered here is controlled in the document, regardless of the storage location of other facilities. In orders, the storage location can come from the order type in addition to the technique facility.

Note

The basic document types defined by KUMAVISION healthcare365 in the delivered setup client are functional. All other selection options have already been entered for a possible extension, but do not yet function in the processes, as there have been no requirements in this regard to date.

Customer service document links

Used only in B2B business to handle multiple devices in one call. The document link code can be used to combine a wide variety of process types in central documents (e.g. cost estimate or invoice). The document link codes can be assigned to the process types or manually assigned in the call.

Field	Description
Code/ Description	Description of the document link code
Base document type	Definition of the document to which this link code applies
Technology order type	In the case of links for the "engineering order" base document type, this field specifies which engineering order type is to be linked. Technique orders may only be linked within the same technique order type. This ensures that, for example, a diagnostic order is not linked to a technical order (type = service).
Service bookings	This field is used to control whether the link code may only be used for documents for service postings. An example here is the service invoices. Where the actual device is not moved at all, but only the consumed components and services are billed. Therefore, service invoices cannot be combined with "normal" sales invoices.
Link status	References the processing status. The processing status entered here must be set in the call line so that this document can be generated.
Creation option	This field is an option field and controls when the creation of a collective document is possible. The following options are available: • Partial creation: The collective document is created even if not all linked call documents have reached the necessary status. It is sufficient if only one linked call document has reached the necessary status for document creation. • Overall creation: With this option, all linked call documents must have reached the necessary status (link status) so that the collective document can be created. The collective document is only created for all linked call documents.

Customer service process types

In the customer service process types, the individual processes are defined that are used in the context of repairs and maintenance. This process type is selected in the call and defines the further process there.

Field	Description
Code	Unique designation of the process type
Description	Description of the process type, usually this is the name of the process.
Service location	Specifies whether the process takes place in-house (i.e. in the company itself) or on site at the customer. If "In house" is selected, the storage location is controlled based on the unit of responsibility or technology setup. If "On site" is selected, this setup does not take place, but the service technician must be stored in the call, who then controls the storage location and storage bin.
Call classification	Specification of what kind of service takes place (repair, maintenance, empty, return). Based on this value, the contract determination of the repair or maintenance contracts takes place in the call. The classifications Complaint and Complaint have no relevance for the technical service processes described here; they are used in the "Complaint and Complaint Management" module.
Document creation	The document creation can be used to define how the subsequent document (subsequent process step) is to be started. If the entry is set to "Automatic", the subsequent document is created automatically after the previous one has been completed. Automatic generation of documents is currently only possible for calls with a device.
Automatically close call	If the check mark is set, the call is automatically ended as soon as the last document in the process chain is completed.

The document types can then be linked to the process types via the "Edit" call. The hierarchization of the processing is controlled via the entry in the respective line. After the individual processes have been defined, the processing statuses must be assigned to the individual process steps, which are to be set automatically when the individual steps are started and completed.

In addition to the status "Status selection process type" in the "General" info tab, the processing status can also be maintained here, which is to be written to the technical order of the loaner device (field "Status direct release after plan. completion"). If a loaner device is also being refurbished, a cost estimate must not be generated at this point and a note must be sent directly to the user that the repair may be started. The other fields are already controlled by the creation of the process type. The fields "Cost center code" and "Cost object code" represent the global dimensions of the system and can be entered for each process type.

The individual process steps are listed in the "Process documents" info tab. The start and end statuses of the individual process steps are maintained in the "Start processing status" and "End processing status" fields. It also makes sense to maintain both statuses during automatic document creation, since automatic processing can be interrupted again and again during the course of the process (e.g., in the case of master data errors). If no status were maintained at this point, the call/technical order would be lost with an empty status or an incorrect status.

At this point, the customer service document links are also linked to the individual process steps of the process type. This means that the document link entered here is checked for multi-line calls and repairs and created according to the setup. In the process, the document link code is selected and entered. The document link status is entered according to the document link, but can be overwritten again here according to the process. The two fields have no relevance in the processes with prescription processing and health insurance companies.

Technology process groups

The individual process types are clustered in the technology process groups. These process groups are later assigned to the repair and maintenance contracts to enable the user to select the process type quickly and correctly for the process or type of device.

In the "Process type filter" field, any number of process types can be combined into one process group via the "Or pipe" (|).

Master data

The following chapter describes fields and possible facilities at the master data for using the technology module.

Article

The following section describes the equipment for the technical module on and for marking an item as a device.

Article tracking

The article tracking code of the article is stored in the info register of the same name. This is used to specify whether the article is subject to serial or batch numbering, has an expiration date or a date of manufacture. Furthermore, the "Info card obligation" switch is used to control whether or not a serial number information card is to be generated on receipt posting.

Only through the combination of the item tracking code serial number and the info card obligation does an item become a device.

Operating hours obligation

If a device is subject to operating hours, this is also controlled via the article tracking code. An article tracking code has been created specifically for this purpose, which has the operating hours obligation in the device, so that the operating hours can be maintained and viewed on the serial number card.

Information register KUMAVISION med

Various settings for the technical service can be made in the "KUMAVISION med" info tab.

Field	Description
Technique maintenance plan code	Storage of the previously set up maintenance plan for the item. When a device is posted, the maintenance plan is written or updated to the associated serial number card.
Technique parts list	Deposit of the engineering BOM code for the selection of the BOM components in the engineering order.
Technology Assessment Group	Presetting of a diagnostic group, which is then transferred and preset in the call and technical order.
Maintenance interval according to MPG Appendix 1	For all medical devices that have an Annex 1, there is a special regulation for calculating the date of the next service as part of the maintenance. For these devices, the date must be calculated consecutively from the previous due date, regardless of when the actual maintenance took place. To map this requirement, the switch must be set on the item card. If the switch is not set, the date of the next inspection is calculated starting from the date the service was performed.
Warranty period repair	Deposit of a date formula for the warranty period within the scope of repair for the specific item.

Resource

The following fields are to be used at the resources for use in the technology module.

General

Working hours, flat rates and service technicians are mapped via resources within the scope of technical service. Resources for technical service are assigned the product booking group "SERV". Furthermore, service storage location and storage bin can be stored here, in particular for service technicians for service away from home, which are transferred in the call and technical order.

Contracting Resources

Similar to the contract determination articles, there are also so-called contract determination resources to combine several resources into one in order to minimize the maintenance effort. Due to this setup option, only the contract determination articles and resources have to be maintained in the contracts and no longer each individual resource.

If the button "Contract determination" on the info tab "KUMAVISION med" is activated on the resource card, the call "Assignment of contract determination resource" appears in the menu ribbon afterwards, via which the individual resources are assigned to the contract determination resource.

All resources with work types that are to be combined in the contract determination resource are then entered in the assignment screen.

Work types

Individual characteristics of a resource can be mapped via work types (similar to the variant on the article). In technical service, these are used to represent the individual work steps and to map the inspection types for assignment in the maintenance plan.

For each work type, a separate unit can be stored that overwrites the unit of the resource, provided that the unit has been created and assigned as a resource unit. Furthermore, the field "Apply description" can be used to control whether the description of the resource should be replaced by the description of the work type. In addition, translations can also be maintained for each resource.

The individual purchase and sales prices of the resources or resource-work type combination are to be maintained via the resource card and the call "VK prices".

Maintenance of G/L accounts and EC prices for external repairs

In order to manage the purchase costs for the external repairs, prices and G/L accounts for the purchase invoices are managed at the resources. These are stored at the resource in the purchase prices.

At this point, as in sales pricing, prices can be maintained per vendor, order type, etc.. However, in order for this resource to be transferred to the purchasing department and converted, a G/L account must be stored here.

Debtor

At the customer on the info tab "KUMAVISION med" two fields can be maintained to manage a repair estimate.

Field	Description
Rep. KV necessary	This field is used to manage the general need for a repair estimate. The field has the following selection options: **Blank:** No default **Yes:** A repair cost estimate must always be provided **No:** A repair cost estimate is never necessary. If the process chain of the process type provides for a CT, this step is automatically skipped. **From value limit:** A CT is only necessary from a minimum value. If this value is not reached, the system skips the creation of the cost estimate. If the value is exceeded, the system creates an offer.
Rep. KV Value limit	The field can only be maintained if a "Rep. CT necessary" has been set to "From value limit". The possible processes for this are described in the section "Handling Necessity Repair Estimate".

Serial number card

All fields and functions on the serial number card are described.

General information

Serial number cards are automatically generated with each receipt posting if the item has an item tracking code serial number and the "Info card requirement" switch is activated. Furthermore, a serial number card can be created manually in the serial number information list via the "New" call.

A serial number card is made unique by part number, serial number and variant. The individual fields and functions on the serial number card are described below:

Inforegister General

General information about the device is maintained in this info register.

Field	Description
Item no.	Device part number
Variant code	If the device has a certain characteristic/variant, it will be displayed here.
Serial number	Capture the serial number of the device.
Description/ Description 2	Pre-populated with the description of the article or article variant.
Locked	If the check mark is set, the serial number is blocked for all further goods movements. When a serial number card is scrapped, this check mark is set automatically.
Register number	Maintenance of the registration number assigned by the health insurance company for the aid.

Vendor info register

When a piece of equipment is purchased or entered via a purchase order as part of the reuse process from a market competitor, the vendor is entered here.

Information register customer

In the "Customer" info tab, the user who gave the instruction to the device is recorded.

Information register Kuma platform

Field	Description
Last consignee	Contact who currently has the device in their possession.
Previous owner	Contact who previously owned the device.
Date of last stock entry	Calculated field, updated each time the device moves goods.
Storage location/ storage	bin last storage entry Calculated field, updated each time the device moves. This shows where the device is currently located.
Variant code last stock posting	Calculated field, is updated with each movement of goods, shows the current variant code of the device.
Status	freely parameterizable field to display the status of the device
Warranty period customer	Specifies the date formula as well as the duration, is calculated when the device is delivered based on the booking date.
Warranty customer until	Calculated automatically based on the delivery date and warranty period.
Device class	Field for classification option of SN cards. Can be freely defined by the user with own codes.
CE Responsibility	Deposit of the CE mark
Commissioning date	Charged when a unit is delivered for the first time.
Contract no./contract Version no./contract Line no.	Specifies the contract with which the device was delivered. These fields must be filled so that the automatic contract determination in the call can take effect.
Transaction no.	Indicates the operation with which the device was delivered.
Warranty period supplier	Maintenance of the supplier's warranty data. Based on the date formula, the warranty is calculated when the device is booked in.
Warranty supplier until	Calculated on the basis of the goods receipt date and the warranty period at the time of receipt posting.
Warranty period repair	Value is calculated when the repair is carried out.
Rep. KV necessary	Comes from the customer who bought the device and specifies whether the customer wants a CT or not. The field is filled automatically on sale and is used only in trade.
Rep. KV Value limit	If the customer requires a repair cost estimate above a certain value, this field contains the value limit above which the CT must be created. The field is also filled in during the sale and is also only relevant in the trade.

Field	Description
Operating hours obligation	Is preset by the item tracking code of the item
Scrapped	If the switch is set, the device is considered scrapped. The switch may only be set after the write-off via the item book sheet. When the switch is set, the "Locked" switch is also set. In addition, who and when the switch was set or removed is logged in the Scrapped by and Scrapped on/about fields.
Maintenance interval according to MPG Appendix 1	Is preset from the article card
Additional information	The additional fields of the item and the serial number card are maintained in this info register.

Inforegister Ownership/Property Relationship

The ownership of the device is shown here.

Field	Description
Last booking code	Indicates the ownership of the device and is recalculated for each goods movement. If the field is empty, the device has been sold without keeping track of where it is.
Owner	Indicates the owner of the device. If the field is empty, the device belongs to us.
Owner	Indicates the customer who currently owns and uses the device.
Device usage type	is not used

As long as it is necessary to keep track of where the device is located, the booking code and the fields for the storage location and storage bin of the last warehouse booking are filled. If a device is only sold to one customer, the fields are empty and only the owner and holder are entered. The booking code is correctly entered in the respective process.

Operation ribbon

Field	Description
Contract assignment	Assignment of health insurance contracts to the SN card. Has no use in the processes described here."
Set up resubmission	Sending a resubmission based on the serial number card
Edit serial no. info card/ End serial no. info maintenance	Activation of the mandatory field check of the SN card as well as the editing mode of the SN card and the respective termination.
Serial number search	Med+ search based on the serial number cards
Item/device allocation items	If the additional module "Serial no. in serial no." is used in production, the components assigned to the device are displayed here. In addition, all expenses and spare parts incurred in the course of service are shown here.
Navigate	Display of all items, purchase and sales documents for serial number
Reset owner info	Using this feature, contract and owner information on the serial number card and item items are taken out so that a device can be transferred directly from one owner to another.
Feature classes	Display of the device parameters for the device, see chapter "Device parameters on the serial number card".
Stock overview	View of the stock for the serial number
Article item	Display of the goods movements of the device

Print ribbon

Field	Description
Device life cycle	Printout of the information and movement of goods to the device

Customer service ribbon

Field	Description
New call	Creation of a new call for the device
Calls	Display of all open calls to the device
Finished call	Display of all completed calls to a device

Device service menu ribbon

Field	Description
Create maintenance plan	If no maintenance plan exists for a serial number, a maintenance plan can be generated for the individual card based on the maintenance plan of the item.
Maintenance plan	Display of the maintenance schedule for the device, here concrete due dates for maintenance are displayed and calculated.
Equipment item	In the equipment items, the articles and resources consumed within the scope of a technical order are displayed and recorded. In addition, a simple cost accounting based on the cost prices of the articles and resources takes place here.

Actions ribbon

Field	Description
Contract assignment	Assignment of health insurance contracts to the SN card. Has no use in the processes described here."
Create article contract lines B2B	Function of subsequent assignment of a device to a repair or maintenance contract in the trade.
Feature search	Search for device parameters by serial numbers.
Edit serial no. info card/ End serial no. info maintenance	Activation of the mandatory field check of the SN card as well as the editing mode of the SN card and the respective termination.
Navigate	Display of all items, purchase and sales documents for the serial number.
Print > Device history	Printout of information and movement of goods to the device.
DMS > Barcode flag	Deposit of a barcode, documents to which this barcode has been assigned are stored here in the document management system (DMS for short).
DMS > Back to the eBox	Documents that have been filed in the DMS can be sent back to the eBox via this function if the document has been filed incorrectly and needs to be reassigned.

Ribbon Belonging

Field	Description
Serial no. > Item tracking item	Documentation of the goods movement of the device.
Serial no. > Remarks	Possibility to enter remarks for the concrete serial number.
Serial no. > Article tracking	Only required in manufacturing and is used to document the history of the serial number or components where they have all been incorporated.
Stock overview	View of the stock for the serial number.
Document characteristics	Maintenance of document characteristics on the serial number card.
Feature classes	Display of the device parameters for the device, see section "Device parameters on the serial number card".
Item/device allocation items	If the additional module "Serial no. in serial no." is used in production, the components assigned to the device are displayed here. In addition, all expenses and spare parts incurred in the course of service are shown here.
Article item	Display of the goods movements of the device
Customer Service > New Call	Creation of a new call for the device
Customer service > Calls	Display of all open calls to the device
Customer Service > Terminated	Calls Display of all completed calls to a device
Create maintenance plan	If no maintenance plan exists for a serial number, a maintenance plan can be generated for the individual card based on the maintenance plan of the item.
Maintenance plan	Display of the maintenance schedule for the device, here concrete due dates for maintenance are displayed and calculated.
Equipment item	In the equipment items, the articles and resources consumed within the scope of a technical order are displayed and recorded. In addition, a simple cost accounting based on the cost prices of the articles and resources takes place here.

Device and customer parameters

Via the device and debtor markers, properties, dimensions and settings of devices or debtors are mapped and recorded in KUMAVISION healtcare365.

Feature classes

The characteristic classes can be used to define parameters and settings for devices in the system (so-called device parameters). Furthermore, patient characteristics or measurements are also stored here (customer parameters).

Here, too, the "Code" and "Description" of the characteristic class are defined at the beginning. The field "Belongs to characteristic class type" controls whether this characteristic class should serve as a device parameter, customer parameter or both. The other fields are system fields and are initialized by KUMAVISION healthcare365.

An image can also be stored for a feature class. The individual parameters/characteristics are assigned to the characteristic class in the Characteristic class additional fields info tab. The characteristics are mapped in KUMAVISION healthcare365 via additional fields.

Customer parameters

In the customer parameters, dimensions and values of a customer are recorded, according to which a tool or device is to be set. These can be stored in the Marketing Cockpit (alternatively also on the customer card) via the call "Characteristic classes".

In the upper part of the mask the characteristic class code is to be deposited. In addition, it is possible to store a characteristic class, depending on the type of operation, so that the respective characteristics are controlled according to the operation/process. In addition, the user who entered and changed the characteristic class is also recorded here.

In the lower area, on the "Feature class values" info tab, the associated additional fields for the parameters are listed. The value of the characteristic is entered in the "Value" field. In addition, it is also possible to maintain an image for the respective feature class here.

Device parameters on the article

The feature classes can also be stored on the item card in order to record the properties and parameters of the devices. Examples would be the administration of software states from the article to the individual serial numbers. For this purpose, the call "Feature classes" is also made here.

There, too, the feature classes are selected in the upper part of the mask. If the same feature class is stored again in another line, the check mark "Historical" is automatically set in the previous line, in order to be able to keep track of the various parameters of a device in this way. Here, too, it is recorded which user created and, if necessary, modified the data record.

In the lower info tab "Characteristic class values", default values can be preset, as with the customer parameters, should there be settings that are the same for all devices.

On the article card it is also possible to control whether an article is subject to device parameters or not. If the switch is set in the article tracking info tab, then it is mandatory to fill or confirm the device parameters for each goods receipt posting.

Device parameters in goods receipt

When devices are delivered, the item tracking is recorded in the goods receipt line. For this purpose, either the "Quantity" field is dived or the "Line" button is used to open the item tracking lines.

In the article tracking lines, after entering the serial number, the feature classes can then be maintained via the call in the menu ribbon.

If the article is marked with "Device characteristics mandatory" and nothing is entered here, but the goods receipt is posted, if the characteristics are missing, a corresponding error message appears.

Subsequently, the characteristics are to be maintained in the article tracking lines. The already known mask opens again.

The goods receipt can then be posted. The parameters are now written to the serial number card.

Device parameters on the serial number card

When the goods receipt has taken place, the device parameters of an article are transmitted to the respective serial number, taking into account possible default values on the article or the characteristics maintained in the goods receipt.

For this purpose, the call "Characteristics classes" is also executed on the serial number card and the characteristics mask opens.

Both in the feature class mask and in the info box the parameters are now visible.

Outgoing goods parameters

If an operation is now created and called up in the order or goods issue, the customer parameters belonging to the operation type are displayed there. Furthermore, the customer parameters are also printed on the picking slip.

If a serial number is entered in the picking lines of the goods issue, then the associated device parameters can be viewed. To do this, the "Device characteristics" are opened via the "Line" menu item.

If a device is or has been set, it is also possible to copy the customer parameters to the device parameters in the goods issue. To do this, execute the "Copy customer characteristics to device" function in the picking lines.

Search for features

The feature search can be used to search for suitable serial numbers or devices in different places using the feature classes. The feature search can be performed at the following locations:

- Scheduling Agreement Line
- Delivery schedule
- Picking lines in goods issue
- Serial number information card

The mask or search function is the same in all places and is shown here using the serial number card as an example. The feature search is opened via the function.

In the upper area of the mask, the characteristic class, customer and transaction type are entered. In addition, it is possible to filter the storage location and the booking code in this tab in order to further restrict the search for devices.

The individual characteristics of the characteristic class are displayed in the Search parameters info tab. The value of the parameter is now entered in the "Value" field. The tolerance in the search result can be controlled via the "Tolerance type" and the "Tolerance".

After entering the values and, if necessary, the tolerance, the feature search is executed via the "Search" call. In the information tab below, the serial numbers that meet the criteria are listed, including the exact storage location and storage bin. In addition, the parameters of the respective device are displayed in the Article attributes info box.

Call

The call represents both an internal and external ticket system. Furthermore, in the context of technical service, it serves as a bracket for all processes and related documents. The call is seen as the document for the (technical) office staff to handle repairs and maintenance.

The call can be generated from the serial number card. Both owner and device information is written directly to the call. Alternatively, a call can also be generated from the Marketing Cockpit or the customer card. In this case, only the header of the call is preassigned, the lines are to be filled manually.

A call does not necessarily have to contain a customer, for example in the case of internal repairs of own devices or machines. As soon as a sales document is to be generated from there, either one must exist in the call or this must be subsequently entered as a deviating customer on the respective document.

In the left area of the call header, document number, customer data and user information about which agent entered the call are displayed.

Field	Description
Call classification	Indication of what type of call it is. The classification can also be changed in the middle of the process.
Responsibility unit code	Which branch is responsible for the call. The call is automatically initiated either by the customer or by the user, just as in the orders and transactions.
Process type	Selection of the process to be mapped via the call. Based on the process type, the fields Service location, Document creation and Automatically complete call are filled. In addition, the required linked documents based on the process type are displayed in the Linked documents info tab. If the contract determination has been performed before selecting the process type, then the process types will be pre-filtered based on the technology process group defined in the contract (see chapter "Contract version line").
Customer reference number	The document number (of the repair order) sent by the customer can be entered in this field. This document number is transferred to all subsequent documents generated from the call.
Service Technician	Entering the service technician responsible for the call/technical order who is to perform the work. Based on this, the technician name is displayed.
Service storage location/service storage bin	Specification of the responsible warehouse or start storage location and bin for the first booking. In the case of an "In house" service location, the storage location and storage bin are entered on the basis of the unit of responsibility or technical equipment. In the case of an "On-site" service location, no preassignment is made. Since these cases are off-site processes, a service technician is entered in these cases, who then controls the storage location. Alternatively, these fields can be edited manually at any time.
Appointment date, appointment type, block accuracy, appointment - time from, appointment - time to, appointment confirmed	With the help of these fields, a simple technician deployment planning can be carried out without having to use the route planning module. If the module is nevertheless used, the data from the planning is transferred to these fields of the call.
Warranty repair until	Display of the warranty period of the device

Inforegister lines

Range Call lines

The device is recorded or automatically entered in the call lines. Many fields are identical to the fields in the call header, which can be changed here again on a line-specific basis if several devices are processed in one call. These are not explained again here:

Field	Description
Type	is automatically entered in the same way as the no. and serial no. or description and booking code of the device if the call is generated via the serial number card. If the call lines are filled manually, this field controls whether it is a call line for a device or an item.
Booking code device	Indicates the ownership of the item/device.
Processing status	Status of the process workflow at the current time. The status continues to be set automatically on the basis of the previously made settings, but can be changed manually here at any time. The processing status synchronizes in real time with the processing status in the engineering order or from the cost estimate.
Call classification	Indication of what type of service is involved. In addition to the contract information on the serial number card, the field forms the basis for automatic repair or maintenance contract determination in the call.
Process type	Is filled by the call header. However, a different process type can be stored for each call line. The process for this is described in the "Multiline repairs" chapter.
Contract no., contract version no., contract line no., contract period	The fields are filled in automatically if there is a repair or maintenance contract for the device and show the valid contract found for the service. These fields can also be filled manually.
Loaner Item no., Loaner serial no., Loaner variant code, Loaner Storage Location, Loan unit storage space:	Display of the loaner device sent when a repair override takes place. If the fields in the call are empty, the device in the call is automatically transferred to the loan order. If a different device is to be delivered, this can already be specified in the call for transfer to the loan order. After delivery of the loaner device, this information is transferred back from the loaner order to the call (including any subsequent changes made in the loaner order). Service storage location/service storage bin At the beginning of the call, the same information is displayed here as in the same fields in the call header. After each booking in the call, the fields in the call line are updated. Maintenance Plan Templates Code When a call is generated from the maintenance cockpit, the maintenance plan of the item card is transmitted in this field.
Test type	This field is also filled automatically when a call is created from the maintenance cockpit and represents the type of inspection due.
Technique process group	Display the found technology process group from the contract.

Field	Description
Service technician/ Technician name	Display and selection of a service technician who will work on this device. Furthermore, there are also line-specific functions and calls via the menu selection "Call lines":
Serial no. Info card	Direct opening of the associated serial number card
Findings	Enter the findings/defect when entering the call. If findings are available, the icon in front of the designation changes. Furthermore, the findings are synchronized directly with the technical order, and vice versa. If there is a diagnostic technique group for the article, it is automatically activated at this point. Findings can be entered in two ways. On the one hand, so-called lay findings, which the customer informs you about on the phone, which are entered as free text without a finding code. The other type of findings would be "expert findings", those that the service technicians subsequently record on the basis of the finding codes in the call or engineering order, for later evaluation. For this purpose, the field Findings code is dipped into and the mask with the findings for the group opens. By setting the "Selection" checkmark, any number of diagnostic codes can be marked and transferred to the diagnostic report at once.
Findings loaner device	After taking back a loaner device, the findings for the loaner device can be entered in both the call and the technical order.
Comments	Further (internal and external) comments on the call can be entered via the comments. These are also displayed in the technical order. By checking the "Print" box, these marked lines are also printed on the pickup and service bills and are therefore no longer just internal comments.
Accessories	View the accessories belonging to the device, for details see chapter "Accessories management".
Item tracking lines	Viewing the item tracking associated with the call line
Processing status items	View the processing status items belonging to the call (for details, see the "Processing status items" section).
Reset owner info serial no. card	Resetting the owner and contract or transaction data on the serial number card, in case the device now remains in-house after all and is not sent back to the debtor.
Document characteristics	Document features are PDFs to be defined by the customer, which can be called from the call, as an example the 8D report can be considered. Since this is an additional module of KUMAVISION for the healthcare market, no detailed description is given here.

Linked documents area

In this part of the call, the process or the documents required for it are displayed, which are controlled on the basis of the processes. The lines are displayed according to the process types and can be manually edited, deleted or additional document types can be added at any time. If the follow-on documents are generated automatically and an error occurs during generation, the checkbox "Cancel Auto. Processing" is set. The generated document is displayed in the "Document no. " field and it is possible to dive to the document by clicking on the number. In the automatic process, the line that is currently being processed is displayed in blue.

Lines that are displayed in red still need to be edited before the document is created. In the case of a purchase order, for example, a vendor must still be entered or, in the case of a putaway, the destination storage location and destination storage bin of the posting must be maintained. To do this, the line is marked and the view switches to edit mode by selecting "Edit" in the "Linked documents" menu.

At this point, in case of putaway, both "Business reference storage location code" and "Business reference storage bin code" would have to be maintained. These fields can either be filled manually or based on the "Business ref. unit of responsibility". In case of sales or purchase documents to be processed, deviating order or sales order types can be entered here in the order type. Furthermore, it is also possible here to maintain deviating processing statuses for this process step in order to override the setup. The fields "Document link code" and "Document link status" are also filled by the process type, but can be changed again manually at this point.

Inforegister Tour

Calls can also be scheduled via the tour and technician scheduling module. For this purpose, "Tour code", "Tour placement" and "Planning indicator" are entered in the call on the basis of the customer. The fields "Tour no." and "Scheduling completed" can either be filled in manually as part of simple tour planning (see the "General information tab" section in the "Calls" chapter) or the tour or technician workstation can be filled in automatically.

Inforegister delivery/invoice info

If the device has to be fetched or sent by another customer as part of the service, or if the invoice is calculated via another customer, this can be entered in the call. The deviating delivery or invoice information is then inherited by the sales documents generated there.

On the invoice side, a different invoice recipient can be selected in the fields "Invoice to debit no." to "Invoice to code contact no.". To code contact no. ", a different invoice recipient can be selected. This recipient does not necessarily have to be assigned to the customer. The same applies to the fields "Delivery to code" to "Delivery to code contact no." in the "Delivery to info" area.

Infoboxes in the call

In the call there are various info boxes with further information about the customer, article or process.

On the one hand, there are two info boxes "Customer Info" and "Article Info", which display the priotexts for the customer or article.

The "Maintenance due dates info" info box displays all due checks from the maintenance plan of the serial number card that fall within the period defined in the "Maintenance date formula check due date" field in the technology setup. The "Remarks Info" box displays all remarks of the respective call line.

The info box "Call line info" displays more detailed information about the respective selected call line. The call document info for the selected document line from the info register of the linked documents.

Further functionalities in the Call

In the call there are the following functions, these are listed repeatedly in the other action areas of the map:

Field	Description
Set up resubmission	Create a resubmission based on the call
Create call vouchers	In case of automatic document generation, this function is to be executed at the start of the process chain or the process chain is restarted via this process, should the document processing run into an error. Furthermore, this functionality is used for the manual document generation. A mask opens with all documents to be generated, which have not yet been processed. If only one document exists, it will be created automatically.
Technique contract determine	Based on the call classification and the contract data on the serial number card, this button is used to find the correct repair or maintenance contract.
Enter cost estimate	This function is used to enter the cost estimate of the external service provider, the process for this is described in the "External repair from in-house repair" chapter

Field	Description
Marketing Cockpit	At this point, the Marketing Cockpit for the customer is opened from the call.
Debtor	Opening the debtor card
Print service certificate	Printing the service certificate for the service
Print pickup slip	Print out the pickup slip for the device or loan device from the call. The printout of the correct receipt is also automatic. For example, if a loaner device is shipped, the pickup slip for the defective device is automatically printed out.
Close call	If the call is no longer needed or the process is finished, the call is closed. However, this is only possible if there is no more open document in the linked documents (the same applies to deleting the call).
Document characteristics	Document features are PDFs to be defined by the customer, which can be called from the call, as an example the 8D report can be considered. Since this is an additional module of KUMAVISION for the healthcare market, no detailed description is given here.

Findings orders

The diagnostic order is a simple and streamlined document for the service technicians only, which is used as an entry document for estimating the effort required to restore the device to working order. No data relevant to

the contract or billing is included in the findings order. The technician should record what he needs for reprocessing or maintenance without having to worry about whether something is billable or not.

As in the call, the processing status is also integrated here and is synchronized with the call in the same way as the findings, comments or general information.

Inforegister General

In this area, the customer data as well as basic data from the call are displayed (responsible service technician, storage location, date for preparation).

In the fields "Rep. KV necessary" the system shows whether a KV is necessary for this or whether only from a certain value limit. This value limit can be seen in the field "Rep. CT value limit". The field "Rep. order value" shows the sum of all sales prices of the planning lines of the engineering order.

Information register Findings order line

The device to be processed via the diagnostic order is entered in the diagnostic order lines. In addition, ownership and processing status or call classification are also displayed here.

Furthermore, the following functionalities can be executed at the engineering order line:

- Parts list components: Opens the engineering parts list associated with the device to select spare parts and resources.
- Serial No. Info: Open the serial number card to the device.
- Findings: Display of findings that have already been maintained in the call. These can be maintained again here.
- Remarks: Display of the remarks from the call as well as the possibility of further maintenance.
- Call: Open the call for the diagnostic order.
- Accessories: view the accessories belonging to the device, details, see chapter "Accessories management".

Inforegister Planning Material/ Resources

In the planning register of the diagnostic order, the service technician enters all the efforts (resources) and spare parts (articles) required for preparation or maintenance. The effort is then transmitted via the function of the same name.

Depending on the result and type of device, the system automatically recognizes whether a quotation needs to be created or whether service can be started directly and controls the processing status accordingly.

Furthermore, the stock level can already be viewed in this tab via the stock overview.

Other functionalities

The following additional functions can be executed in the diagnostic order:

Field	Description
Set up resubmission	Sending an internal message from the engineering job
Calculate amount	Fills the Rep order value field in the general info tab. The function calculates the total order value of the service based on the sales prices of the items in the planning register.
Transmit effort	Transmitting the estimated effort to the office staff for processing of the created estimate.

Technical order

The technical order is a simple and lean document for the service technicians only as a workshop order for subsequent consumption posting. The technical order does not contain any data relevant to the contract or billing. The technician should enter what he needs for preparation or maintenance without having to worry about whether something is billable or not. By separating planning and consumption, it is possible to distinguish between estimated and actually consumed expenses.

Furthermore, it is possible to map maintenance within the scope of a repair, as well as several maintenance tasks at once, by controlling the maintenance via the work category in the maintenance plan. As in the call, the processing status is also integrated here and is synchronized with the call in the same way as the findings, comments or general information.

Inforegister General

In this area the customer data as well as basic data from the call are displayed (responsible service technician, storage location, date for preparation.

In the fields "Rep. KV necessary" the system shows whether a KV is necessary for this or whether only from a certain value limit. This value limit can be seen in the field "Rep. CT value limit". The field "Rep. order value" shows the sum of all sales prices of the planning lines of the engineering order.

Inforegister technique order lines

The device that is to be processed via the technical order is entered in the technical order lines. In addition, ownership and processing status or call classification are also displayed here.

Furthermore, the following functionalities can be executed at the engineering order line:

Field	Description
Serial No. Info	Opening the serial number card to the device.
Findings	Display of findings that have already been maintained in the call. These can be maintained again here.
Comments	Display of the remarks from the call as well as the possibility of further maintenance
Accessories	View the accessories belonging to the device, for details see chapter "Accessories management".
Work performed	Recording of the work performed on the device. If the button is pressed, a mask opens for maintenance. In the upper half of the mask, one of the performed work codes maintained in the facility is selected in order to have the option of maintaining free text on the basis of this line in the second info tab. On this basis it is now possible to evaluate these works and to record a separate manual on individual defects.
Document characteristics	Document features are PDFs to be defined by the customer, which can be called from the call, as an example the 8D-ort can be considered. Since this is an additional module of KUMAVISION healthcare365, no detailed description is given here.
Call	Open the call to the technical order.

Inforegister Planning Material/ Resources

In the planning register of the technical order, the service technician sees all the efforts (resources) and spare parts (items) needed for preparation or maintenance or approved by the offer.

Depending on the result and type of device, the system automatically recognizes whether an operation must be created or whether service can be started directly and controls the processing status accordingly. If an operation has been created and the planning lines subsequently need to be changed, the operation can be interrupted or opened via the "Delete engineering plan lines" function in order to edit the lines and then complete the planning again.

Furthermore, the stock can already be viewed in this tab via the "Stock overview". If no stock is available, the planning line can be marked for the order proposal by setting the check mark in the "To order" field. The article is then procured for the engineering order, with correctly maintained stock data.

Inforegister consumption lines material/ resources

The consumption register is used to record the spare parts and expenses that were actually incurred during the repair or maintenance. The register is simply filled via the function "Transfer planning lines to consumption lines" located in the menu ribbon.

The lines can be edited at any time, for example by changing storage bins or quantities. Components that are subject to article tracking are highlighted in color, as in the orders and purchase orders. If only partial quantities are booked, the remaining quantities remain as a reminder. It is not a must to book the remaining quantities as well.

In addition, a simple calculation of the consumed quantities or residual quantities takes place in the planning register.

Infoboxes in the technology order

In the technical order there are various info boxes with further information about the customer, article or process.

On the one hand, there are two info boxes "Customer Info" and "Article Info", which display the priotexts for the customer or article.

The "Maintenance due dates info" info box displays all due checks from the maintenance plan of the serial number card that lie in the period defined in the "Maintenance date formula check due date" field in the engineering setup. The "Remarks Info" box displays all remarks from the respective engineering order line.

The "Accessories Info" info box displays all accessories belonging to the device.

Other functionalities

The following additional functions can be performed in the engineering order:

Field	Description
Set up resubmission	Sending an internal message from the engineering job
Calculate amount	Fills the Rep. order value field in the general info register. The function calculates the total order value of the service based on the sales prices of the items in the planning register.
Finalize planning	Transmitting the estimated effort to the office staff for the creation of the cost estimate. The function is used only in prescription processing and not in specialized trade.
BOM components	Opens the technology parts list associated with the device to select spare parts and resources
Transfer planning lines to consumption lines	Copying the entries in the planning register to the consumption register
Book consumption	Booking of the consumed spare parts and expenses
Close technique order line	When the technical order is finally processed, it can be closed by pressing the button and the subsequent document will be created.
Resource and Item Ledger Entries	Viewing the consumptions applied so far in the technical order

At the consumption line there is also a function "Assign exchange".

The replacement for a spare part/resource can now be booked for the selected consumption line. The item to be replaced is now selected from the article/device allocation items of the device.

If the consumption is subsequently posted in the technical order, a new article/device allocation item is created for the line on the device. The previously selected quantity is also marked as "cancelled".

Technical equipment input

All goods receipts that take place within the scope of a technical service (goods receipts from returns, goods receipts from stock transfers within the scope of external repairs and service in other branches) are posted via the technical equipment receipt. The technical device receipt is able to post every device, whether known, unknown, recorded in the call or as an unexpected goods receipt.

At the beginning it is checked whether the serial number is known or not. If it is, the item and its owner will be displayed.

If a serial number is unknown to the system, then a message appears and it is possible to capture the device.

In the mask that opens, it is now possible to select the article, variant and customer so that the entry can be made. If the customer is also unknown, it would also be possible to create a new customer here.

The technical equipment receipt also recognizes whether an item is subject to operating hours or equipment characteristics and issues an error message and cancels the booking if this information was forgotten when it was entered. Location-independent posting is possible - if a device arrives at a store other than the one entered in the document, it is posted to the actual store where the goods were actually received. These two fields must also be filled in for every booking. Storage location and bin location are either automatically entered by the call or the return or have to be entered subsequently in case of an unexpected goods receipt. It is also possible to enter accessories; the process is explained in the following section "Accessories management".

If a call and an associated return exist, the storage location and bin from the return are entered at this point.

In addition to the serial number, the technical device inbox also recognizes whether a call with callback is present or not, or whether a call but no callback is present. In the same way, the technical device entry also posts half-finished calls. Depending on the result, the missing documents are created and the device is booked in. These processes are described in the "Other processes" section.

Accessories management

If a customer sends along accessories, it must also be possible to collect these, even if the products do not necessarily have to be known to the ERP system.

Accessories in the technical device input

In the technical device input, the mask for recording the accessories can be opened via the "Accessories" function.

In the mask, the existing article, resource or G/L account master can be accessed. Likewise, a text line can also be entered if the article does not exist. Article numbers do not necessarily have to be present, descriptions can also be overwritten. If available, serial number, batch number and expiration date can also be attributed.

Accessories management in call and engineering order

When a booking is made in the technical equipment inbox, the accessories recorded are written back to the call. The accessories can be viewed in the call via the "Accessories" function. After booking, the recorded accessories can be seen here. The accessories can also be called up in the diagnostic order. The same applies to the engineering order.

Accessories output in shipping

Since the accessories can be system known items as well as entered texts, the accessories are printed as text on the picking slip and not as lines in the goods issue. The pick ticket is printed in the goods issue. The accessories are now printed on the picking slip.

Repair processes for dealers and manufacturers

In the following section, the most common repair processes are exemplified and described. The actual customer-specific processes can vary depending on how the process types are set up. Depicted here are pure repairs with one device per call. Multi-line repairs can also be mapped, this process is described in the section "Multi-line repairs".

Repair without loaner

During repair, the defective device is retrieved, checked, a cost estimate is sent, repaired, returned and billed. The following process type setup is required for this.

The starting point is the Marketing Cockpit of the customer who wants to send his device for repair. In this cockpit, there is a call for serial number information in the "Information" info tab. All devices located at the customer are displayed there.

By diving on the serial number, the serial number card opens, from which the call for repair is created. The call is classified as a repair.

When the call is created, a contract check is automatically performed to determine whether a valid repair contract exists for the device. Then select the process type, which is displayed filtered on the basis of the call classification and, if applicable, the contract.

The documents assigned to and required for the process type are displayed in the linked documents. Subsequently, the mentioned findings of the customer are to be entered.

The findings are recorded at this point as lay findings and free text, since the specific diagnosis by the technician is still pending.

Subsequently, the function "Create call documents" is executed to start the process chain. In the process, the callback is created at the beginning.

If the device is sent, the goods receipt can be posted via the technical device receipt.

After posting the goods receipt, the diagnostic order is created for the service technician to inspect the device and estimate the effort. The processing status changes to "20A T-KV SCHÄTZ". Based on the status, the diagnostic order is displayed in the "Technical order worklist" tile.

The service technician now checks both the findings named by the customer and then the device to be repaired. After the inspection, the actual faults and defects are recorded in the findings of the engineering order.

For this purpose, the "Findings code" field is dived into and the corresponding findings are selected.

Subsequently, the required expenditures and spare parts are entered in the "Material/Resource Planning" info tab, either via the engineering parts list or by manually filling in the lines.

By executing the "Transmit effort" function, the system now checks whether a possible contract is to be taken into account or whether a cost estimate is necessary. Since a CT is necessary, the processing status changes to "21A T-CT DETERMINED" and the call can be viewed in the tile "Call technician CT determined".

The call is opened and via this the offer can be opened by clicking on the document number.

The quotation now contains all the items from the diagnostic order. Pricing takes place when the quotation is generated. The device is also included in the quotation as a heading item.

The offer can be sent by mail or print. If the customer accepts the quotation, this is ended via the "Close quotation as accepted" function. If the customer accepts it on other terms, the lines can be changed in advance. If the customer rejects the CT in its entirety, the "Close offer as rejected" function is executed. The automatism terminates and the call is to be processed and triggered again via the call document creation function. For the following process, the offer is accepted, the processing status jumps to "31A KV GEN", a technical order is created, which can again be viewed from the worklist tile for service technicians.

The planning register of the engineering order now contains the approved consumption. This can be transferred to the info register consumption lines materials/resources via the function "Transfer planning to consumption lines", as the actual consumption is posted via this.

If item tracking is necessary, the number in the "Quantity" field is highlighted. The storage bin for removing the components is preassigned based on the bin contents. After the repair has been carried out, the actual consumptions are recorded and the consumption is booked via the function of the same name.

If the complete target quantity has been entered, the consumption register is empty and the "Remaining quantity" in the planning register is also 0. It is then possible to enter the "Work performed" on the technical order line and briefly document what has been done.

Once the data has been entered, the engineering order is completed via the "Complete order line" function and the processing status continues in the call. The sales order for delivery of the now repaired device is automatically created. If the option is activated in the technical setup, service bill would now be printed automatically. Alternatively, this must be done manually from the call using the "Print service ticket" print function.

The goods issue for the reconditioned device is now generated and posted in the warehouse. The delivery bill is printed and, as a final step, the processing status is again set and the service invoice is generated. This contains all the items of the cost estimate and can be invoiced using the "Book" function. According to the settings, the call closes automatically with the invoice.

Repair with provision of a loaner device

When a device is repaired, a loaner device is sent at the beginning, the defective device is retrieved, assessed, a CT is sent and repaired. The repaired device is then returned to the customer and the loaner device is retrieved, prepared and stored. This is mapped accordingly in the respective process type.

The starting point is the Marketing Cockpit of the customer who wants to send his device for repair. In this cockpit, there is a call to the serial number information in the information tab. All devices located at the customer are displayed there.

By diving on the serial number, the serial number card opens, from which the call for repair is created. The call is classified as a repair.

When the call is created, a contract check is automatically performed to determine whether a valid repair contract exists for the device. Then select the process type, which is displayed filtered on the basis of the call classification and, if applicable, the contract.

The documents assigned to and required for the process type are displayed in the linked documents. Subsequently, the mentioned findings of the customer are to be entered.

The findings are recorded at this point as lay findings and free text, since the specific diagnosis by the technician is still pending. Subsequently, the function "Create call documents" is executed to start the process chain. At the beginning, the loan order is created. This opens a screen for selecting a device.

In the left-hand area, "Device to be replaced", the device that is in the call is displayed. In the right-hand area, "Device to be delivered", a different device can now be selected which is to be made available to the customer as a loan device. If nothing is entered there, the same item will be delivered 1:1. With confirmation with "OK" the order is generated. The defective device is displayed as the heading and the loaner device is displayed underneath. According to the setup of the corresponding order type, a device is transferred from the fixed assets.

The device is now shipped via logistics. Two documents are generated in the process. One is the delivery bill for the loan device. In addition, the pickup slip for the defective device is printed out.

In addition, the sales return was automatically posted. If the device is sent, the goods receipt can be posted via the technical device receipt.

After posting the goods receipt, the diagnostic order is created for the service technician to inspect the device and estimate the effort. The processing status changes to "20A T-KV SCHÄTZ". Based on the status, the diagnostic order is displayed in the "Technical order worklist" tile.

The service technician now checks both the findings named by the customer and then the device to be repaired. After the inspection, the actual faults and defects are recorded in the findings of the engineering order.

For this purpose, the "Findings code" field is dived into and the corresponding findings are selected.

Subsequently, the required expenditures and spare parts are entered in the "Material/Resource Planning" info tab, either via the engineering parts list or by manually filling in the lines.

By executing the "Transmit effort" function, the system now checks whether a possible contract is to be taken into account or whether a cost estimate is necessary. Since a CT is necessary, the processing status changes to "21A T-CT DETERMINED" and the call can be viewed in the tile "Call technician CT determined".

The call is opened and via this, the offer can be opened by clicking on the document number.

The quotation now contains all the items from the diagnostic order. Pricing takes place when the quotation is generated. The device is also included in the quotation as a heading item.

The offer can be sent by mail or print. If the customer accepts the quote, it will be closed via the "Close quote as accepted" function. If the customer accepts it on other terms, the lines can be changed in advance. If the customer rejects the CT in its entirety, the "Close offer as rejected" function is executed. The automatism terminates and the call is to be processed and triggered again via the call document creation function. For the following process, the offer is accepted, the processing status jumps to "31A KV GEN", a technical order is created, which can again be viewed from the worklist tile for service technicians.

The planning register of the engineering order now contains the approved consumption. This can be transferred to the info register "Consumption lines materials/resources" via the function "Transfer planning to consumption lines", as the actual consumption is posted via this.

If item tracking is necessary, the number in the "Quantity" field is highlighted. The storage bin for removing the components is preassigned based on the bin contents. After the repair has been carried out, the actual consumptions are recorded and the consumption is booked via the function of the same name.

Since the complete target quantity has been entered, the consumption register is empty and the "remaining quantity" in the planning register is also 0. Subsequently, it is possible to enter the "work carried out" on the technical order line and briefly document what has been done. When the data has been entered, the technical order is completed via the "Complete order line" function and the processing status continues in the call. The sales order for delivery of the now repaired device is created automatically.

In the warehouse, the goods issue for the reconditioned device is now generated and posted. The delivery bill is printed and, as the last step, the processing status is set again. In addition to the delivery bill, the pickup slip for the loan unit is also printed.

If the option is activated in the technology setup, the service ticket would now be printed automatically. Alternatively, this must be done manually from the call via the print function "Print service bill". In addition to the delivery and the document printout, the follow-up document, the return of the loaner device, has also been created.

This device can also be logged in via the technical device input. A technical order is then generated for checking and possibly preparing the loaner device. This technical order can also be viewed in the tile of the worklist for service technicians.

This technique order can now be used in the same way as the previous one. Findings can be entered via the "Findings" function. It is not possible to transfer the planning to a cost estimate. If all tests have been carried out, the consumptions can be booked, but at least the order line must be completed.

According to the process chain, a storage of the rental equipment is now generated, since storage location and storage bin are preassigned.

Finally, the service invoice is generated. This contains all items of the cost estimate and can be invoiced via the "Post" function. According to the settings, the call closes automatically with the invoice.

Repair out of house

In the case of an off-site repair process, the device is reconditioned directly at the customer's premises. This means that, apart from the technical order and the invoice, no other documents are required.

If KV is used in advance, both the cost estimate and the determination of effort by means of the findings order must be added at this point in the process type. One of the two is not sufficient, as the technician usually has to provide a valid estimate and always does this via the determination of effort in the findings order.

Here, too, the call is generated via the Marketing Cockpit and the serial number card. The process type is selected in the call.

Due to the setup, this call and also the engineering order is marked with the service location "on site". Furthermore, no storage locations and storage bins have been automatically entered for this reason. If the technical order is now created, a corresponding error message appears.

Storage location and storage bin are to be filled now, in which in the context of the technician deployment planning the service technician (in the field of the same name) in the call is filled (see section "Resource"). In addition, it is possible to carry out the planning "on a small scale" via the appointment date, appointment type, block accuracy, appointment - time from, appointment - time to and appointment confirmed; alternatively, a separate module can be used for this purpose.

In addition, the findings of the customer must now also be entered and maintained in the call line. As before, this is entered as a "layman's assessment" without selecting an error code, since the customer's message cannot be regarded as a qualified assessment.

After entering the service technician or storage location and storage location, the technical order can be generated. The office staff now has the possibility to pre-record possible spare parts and resources in the technical order and to "send them on their way" to the technician via the service ticket. For this purpose, the lines in the planning register are filled in the technical order. Then print the service certificate, which will be given to the technician.

After the repair has been carried out and the service ticket has been returned, the data from it, such as spare parts, resources or actual findings, must be added to the engineering order. The consumption must be booked and the technical order completed.

The service invoice is then created and can be invoiced to the customer. The call is also closed upon completion.

External repair from repair in the house

Assuming that a repair is started in-house, the B2B REP DL process type only describes the steps required to supplement the existing call with the documents already created (such as loaner device or return) in such a way that the external repair process can be mapped completely. Thus, two stock transfer orders for goods movements to the vendor and back are included here, as well as the shipping of the repaired device and the loaner device processing. The purchase invoice is processed manually and not via the call.

The customer is called up via the Marketing Cockpit. In the "Information" tab, the serial number information is opened and all devices located at the customer are displayed. The device for which a complaint has been made is selected there and the serial number card is opened.

The call is generated from the serial number card. The call number serves as a reference in case the customer has queries.

The process type must be selected. The process types are already pre-filtered on the basis of the call classification and possibly on the basis of a repair contract.

Next, the findings named by the customer are to be entered in the call line. Free text is entered here, as the actual diagnosis is not yet known.

After entering the findings, the "Create call documents" function must be executed and the process is started. At the beginning, a sales order is created for the delivery of a loan unit.

The warehouse creates a goods issue and posts and prints the delivery. In addition to the delivery bill for the loaner device, the pickup bill for the defective device to be picked up is also printed out directly.

When the rental order is booked, the rental device, including storage location and storage bin, is written to the call or updated in the event of changes to the order. Furthermore, the return for the defective device is automatically generated, which must then be booked in via the technical equipment receipt. The serial number and, if applicable, the operating hours or device characteristics are recorded in the technical device input.

With booking, the processing status is set to "20A T-KV SCHÄTZ" and the diagnostic order is generated. Due to the setup, this can be viewed in the "Technical order worklist" tile.

In the diagnosis order, the service technician records the actual diagnosis of the device, after it has been tested.

It is now determined that the device cannot be repaired itself, but must be sent to a service provider. For this purpose, the process type in the call is now changed to "REP B2B DL". The system now replaces all documents of the previous process type that have not yet been posted/generated with the lines of the new one. The findings order is not yet completed, as the service provider's expenses will be entered here later.

As described above, the goods movement of the defective device to the service provider and back is processed via stock transfer orders. If no destination has been defined, these stock transfer orders are shown in red, as important data for document creation is now missing. This data must now be entered by selecting the corresponding line and clicking "Edit".

Via this call the mask changes and document related data can be maintained or changed, e.g. processing status or addressees of the document. For the stock transfer this means that here in the field "Business ref. storage location code" and "Business ref. storage bin code" a storage location as well as storage bin are deposited. The storage bin must correspond to the vendor number of the service provider to whom the goods are shipped. Based on this information, a delivery bill (so-called service order) will be generated for shipment to the vendor.

If you now click on the "List" menu item, the first stock transfer line is no longer red. The destination storage location/storage bin is now stored in the same way in the second stock transfer line when the device returns (i.e. the repair storage location again).

Since a manual intervention in the process has now taken place, the automated document generation is interrupted. Due to this, the process chain must be triggered again by clicking on "Create call documents". The system now generates the following stock transfer order in which the device is entered, the destination being the vendor as specified.

The goods issue is generated and the device is sent via "Book & Print". The following delivery bill to the supplier is generated. The storage locations are set up so that the system automatically posts the goods receipt directly to the counter warehouse in addition to the goods issue from its own warehouse, so only one posting is necessary here.

By posting the device to the vendor, the device is now also on the SN card at the service provider.

Furthermore, the processing status was also automatically continued. Due to the setup, the call is now in the tile "Call to service ext. service provider".

The service provider now also performs an analysis and sends a cost estimate, which must now be entered in the call. To do this, the "Enter cost estimate" function is executed.

In the mask that opens, the expenses and the vendor of the external repair are now entered. With the current state of implementation, only items with the type = "resource" can be entered and no articles. If purchase prices are maintained at the resource, these are taken over according to pricing, but can also be adjusted at any time. In the field "Vendor no. " the vendor can be entered, to which the goods have been sent. The presetting of a repair vendor does not exist. The order type comes from the technique setup.

In order to now transfer the cost estimate to the cost estimate, the "Complete planning" function is also executed here, as in the findings order via the effort transfer function. In this case, the still open findings order is archived and, if not yet generated, the quotation is created. The cost price from the entry screen of the cost estimate is written as the cost price.

If the CT is approved by the customer, the "Close quote as accepted" function is executed, the vendor is contacted that the repair can be performed. When the estimate is approved, the second stock transfer order was automatically created in the call. This is now opened and the first posting is made from the service provider to the transit warehouse. To do this, the outbound is posted in the stock transfer order via Post. A goods issue is not necessary.

If the device is now returned by the service provider, the goods receipt can be posted again via the technical device receipt.

A technical order is then generated, which the service technicians can use to check the functionality of the device. If everything is OK, the technical order can be posted.

According to the process chain, the shipping order for sending the repaired device to the customer is now generated.

In Logistics, a goods issue is now generated for this order and sent via "Book & Print". A delivery bill for the repaired device and a collection bill for the loan device are now generated. When the order is posted, the sales return has also been created for the return of the loaner device. This device is now also collected via the technical device receipt. A further technical order has then been created for checking the loaner device. Any findings and repair costs are now recorded in this order.

If the "Complete planning" function is executed, no process or KV is generated for billing. The system recognizes that it is a loan unit, so that processing can be started directly. In addition, a corresponding processing status is set.

The planning lines can now be dragged into the consumption lines, and the consumption can be posted and the engineering order completed.

Finally, the loaner device is put away again via a stock transfer journal. To do this, the destination storage location and storage bin are again entered using "Edit", so that the device can finally be placed in storage, provided it has not been preassigned using the customer service document types.

Finally, the sales invoice is generated so that the customer can be invoiced. The call is also closed with the booking.

When the incoming invoice arrives, a new purchase invoice with the order type REP is created for the vendor from the call. Via "Get goods receipt lines" the expense can now be retrieved from the call. The call number is displayed as the document number.

The G/L account maintained behind the resource as well as the price that has been stored in the call are automatically drawn into the invoice lines. The purchase invoice can then go to invoice verification and be invoiced.

Device replacement

A separate process type can be created for the exchange, which can have the following structure. A quotation is created to offer the customer a device, rather the exchange is completed. Alternatively, the document types are written manually in the linked documents of the call

Since the process of creating a repair has already been described above, it is assumed at this point that there is already a call with a device booked in and a diagnostic order. The diagnostic order is closed and, if necessary, a manual processing status is set to inform the user of the necessary replacement. The process type is then changed in the call.

The documents of the selected process type are entered and the function for creating the call documents is to be executed. This opens the offer, in which the device to be offered must be entered manually. If no offer is created, but an exchange order is used directly, the step is not included in the process type. If the offer is accepted, the "Close offer as accepted" function is executed there. The exchange order is created and the mask for selecting the device opens. As with the loaner device, the defective device is displayed on the left. The device for which the defective device is to be exchanged can be entered on the right.

The exchange order is generated so that logistics can ship the device. According to pricing, the line also contains the calculated sales price.

After delivery, the call is automatically closed and the order can still be invoiced.

The process of a warranty exchange has not been explicitly described. This is due to the fact that the process works 1:1 like the previously described exchange process. The only document type required for this is "Warranty exchange". The document type differs from the TAUSCH only in the order type.

The order type has a discount reason, which prevents the creation of an invoice and also discounts the sales price by 100%.

Maintenance processes for dealers and manufacturers

The call-off of due maintenance is called up to the maintenance cockpit on the basis of the maintenance plans in order to schedule the maintenance there.

The processes described here are exemplary and can also be executed differently. For example, the process type can be specified directly in the maintenance cockpit in all processes, just as it can only be selected after the maintenance contract has been determined.

Call off due maintenance

Maintenance plans are maintained behind each article, which are inherited by the serial number card upon initial delivery. In addition, the date of the next inspection due is calculated. The maintenance cockpit is used to call up which maintenance/checks are due next. There, the function "Create maintenance items" is used to call up the device tests that are due. This can be filtered according to various criteria, such as inspection type, device in house or not, article families or due date. The "Create planning up to date" field is used to define the period under consideration; all tests not yet processed are retrieved up to the date entered here. The "Device in house" button is used to control that devices located in the house should also be explicitly checked.

Based on this information, the due maintenance is now retrieved into the cockpit. Some selected fields are described below:

Field	Description
Item no. / Serial no.	Affected device
Customer no. / Name	Customer who has the device
Last booking code	Ownership (cash ownership, fixed assets, ...)
Due date	Date by which the test must be done
Test type/ Technical description	Type of test to be performed
Time interval	Regularity in which the test must be performed
Zip code	Exemplary, generally all address data of the customers for a planning/ grouping
Process type	Preset the process type that is to apply to the device or the call to be generated. Only the maintenance process types are displayed. The field is preset by default with the default process type for maintenance from the technical setup and must be changed if the process type is not correct.
Item status	Indicates the status of the planning of the maintenance - more detailed in the processing status of the calls. **New:** New, additionally added maintenance that must be scheduled **Indoor service:** Call is created and must be scheduled **Technique:** Technique order to the call has been generated - maintenance is now performed **Completed:** Engineering contract is complete, maintenance is done, but call is still open
Customer Service Call No.	Call number for maintenance mapping
Existing calls	Shows whether there are already ongoing calls for this device. By clicking on the number, you can dive into an overview of the calls. The assignment to running calls is described in the course of this chapter.

In addition to the function for calling up due maintenance, the serial number card (Serial no. info card function) can also be opened and calls created using "Create calls". Calls are generated for all maintenance cockpits. Filtering takes place before the function is executed in the maintenance cockpit.

Maintenance that has already been processed in a call can no longer be deleted from the maintenance cockpit.

The "Assign existing call" function is explained in the "Assigning maintenance to existing calls" section.

Maintenance out of house

A device is to be serviced - the due date is 27.09.2021

The process type is specified in the maintenance cockpit by the technology setup and then the call is generated.

The call is created, then the service technician is to be maintained in the "General" tab. Based on this, the storage location and storage location are automatically entered. For maintenance or service calls in general that are to be performed on site, a technician must be entered before the first call document is created.

The call is now marked as a maintenance call, and a corresponding processing status and check type are set.

The technical order is now created via the function "Create call documents" in the call, where the resource for the activity to be performed can already be entered. Alternatively, the test is also included here in the technical order lines. Several checks can also be carried out at once with a technical order, as the respective check is incremented by entering the work category from the maintenance plan setup.

Afterwards, the service ticket for the technician can be printed from the call.

If no service app is used, the technical order must be reworked after the maintenance has been carried out. To do this, "Transfer planning lines to consumption lines" is now listed as well as "Post consumption" and "Complete order line".

Finally, the service invoice generated afterwards is invoiced.

When the call and the technical order are completed, the device is automatically deleted from the maintenance cockpit. In addition, when the consumption is posted in the technical order, the "Date of next inspection" is set high according to the setup on the item (Maintenance interval field according to MPG Annex 1 on the item card).

The safety inspection (STK) was due, as the maintenance was also carried out in this course, the entry was also set high.

Home maintenance

A device is to be serviced, the safety technical inspection (STK) is due on 03.10.2021.

The process type is preset in the maintenance cockpit from the technical setup. Since the preassignment is for maintenance outside the company, but maintenance is now to take place inside the company, the process type is changed before the call is generated.

The call has been created, the entire process type for in-house maintenance is entered so that the device can be retrieved, refurbished and returned.

The call documents are created so that the goods receipt can be posted at the beginning via the technical equipment receipt. In addition, a pickup slip can be printed in advance from the call using the "Print pickup slip" function. When using the technical equipment receipt, operating hours and equipment characteristics may have to be maintained.

The diagnostic order is then generated automatically. In the "Planning" tab Material/Resources", the expenses for maintenance must now be entered. At least one resource with a corresponding work type must be stored according to the setup of the maintenance plans. If later a work type stored in the technical order corresponds to the work type of the maintenance plan, then the date of the next inspection on the device is set high. If there are several defects, findings with details can also be recorded (as in the case of repair).

Finally, the "Transmit effort" function must be executed so that the cost estimate can be transmitted to the customer. The processing status in the call/technical order is converted according to the setup, so that the call is displayed in the corresponding tile "Technician KV determined". The offer is set to accepted, just as for the repair.

If the approval comes, the offer is set to accepted, which changes the processing status in the call and the technical order is generated so that the technician can start with the maintenance. Now the consumption lines have to be filled, the consumption has to be booked and the technician order has to be closed.

When the consumption is posted, the date for the next test on the device is set. Finally, the technical order is completed.

According to the process chain, the shipping order is generated when the technical order is completed, so that the device is returned to the customer. When the delivery is booked, the pickup slip for the loaner device is also printed out, if one was issued. In addition, the service ticket may have to be printed out as proof of service provision.

Finally, the invoice document is generated from the call, which is to be invoiced.

Assignment of maintenance to existing calls

As described above, it can happen that a device is already being repaired or serviced in some other way and is also due for maintenance. To avoid the technician having to return to the customer or the device having to be sent in again, the maintenance cockpit shows whether there are already one or more open calls for the device. The "Existing calls" field is used for this purpose. If there is more than one open call, a number is displayed in red and in italics or bold.

Clicking on the number either opens an overview of all open calls (if there are two or more) or opens the call directly (if there is one) so that you can check how far it has progressed.

To assign the maintenance from the cockpit to the existing call, the function "Assign existing call" is executed in the maintenance cockpit.

An overview of all calls opens, so that the marked call is selected, by confirming the mask the call is assigned.

The call number is now entered in the cockpit line and the item status is continued.

In addition, a remark was entered in both the call and the diagnostic or technical order as to which test is to be performed.

More automatism is not possible at this point, because there can be an infinite number of constellations in which a service call can be (waiting for the device, only created, KV already created, device is sent back, invoice executed...), so that a pure information is displayed or another new call can be created.

Multiline repairs

Since customers often send several devices for repair at the same time, these can also be combined in one call. This combination only applies to repairs in B2B business, not in processes with prescription processing and health insurance companies.

As soon as several lines are in a call, the process flow can no longer be run through automatically. This is because there can be any number of constellations in which the workflow of one line has to wait for that of the other line. These permanent queries can have an impact on the performance of the system.

Assignment of document link codes to process types

As already described in the section "Customer service process types", the individual process steps must be provided with the document link codes and document link statuses. The document link status should always be the "completion processing status" of the previous line. If this is not unique (as in the case of closing a PO), the document link status must be the status that is expected in most cases, regardless of the closing processing status.

The assignment must be made for each process type used.

Merge criteria of multiple call lines into one document

It is not possible to combine arbitrary lines with the same processing status in one document. The following criteria apply to the grouping:

1) Same document link code: Only call documents with the same document link code are combined.

2) Same outgoing storage location (storage location of the call line): For a collective document, only the documents with the same outgoing storage location are considered. This prevents, for example, warehouse issues from the storage location "NORTH" and storage location "SOUTH" from being combined in one document. Instead, each unit of responsibility ("NORTH" or "SOUTH") can process its own documents.

3) Same business reference (business reference type and business reference number): The collective document can only address one business reference, e.g. vendor 7411. Therefore, only call documents with one and the same business reference can be combined in one collective document.

4) Same target storage location (for stock transfer orders and stock transfer ledger sheets): If the collective document is a stock transfer (stock transfer order / stock transfer ledger sheet), the target storage location is also decisive. In this case, only individual call documents that have the same destination storage location are combined into one collective document.

Combining the same documents of different document types

It is also possible that different processes have the same base document type (e.g. sales order) but are different document types (e.g. SHIPPING and EXCHANGE). Nevertheless, it is possible that all call lines can be combined in one document (here the sales order). However, since the document types can have different order types with different settings, the order type no longer plays a primary role. At this point, the order type of the

first document type is simply entered. If the order type contains lines that require different settings, these settings must be made manually in the respective line in the document.

Creation of a call with multiple lines

Multiline calls can be created in two ways. On the one hand, an existing single-line call can be extended. On the other hand, a call without lines can be created and then filled in the devices.

Extension single line call

As in the previous processes, a call is generated via the Marketing Cockpit and the serial number card for a specific call classification.

At this point, another line is added underneath. For this purpose, the type is defined at the beginning (here device). If the serial number is known, it can be dipped directly in the field "Serial no. ".

A screen opens in which all the devices located on the customer's premises are displayed. The corresponding device is selected and thus entered in the call line.

Call creation via Marketing Cockpit or customer

There is a "New Call" function on the customer card as well as in the Marketing Cockpit. This function creates a call of a selected classification.

A call without lines is generated, because the document has been generated generally by the customer or from the Marketing Cockpit.

As before, the type is also determined here and it can also be dived via the serial no. and a device can be selected per call line. The lines are added in the call.

Assignment of the process types

If the same process type applies to all lines, this can be specified in the call header. This is then transferred to all lines and the linked documents are entered accordingly.

If different process types apply to individual call lines, these can be selected at the respective call line. For this purpose, the "Process type" field is also dipped here.

In the mask that opens, the desired process type is selected and entered in the call line.

Example process multiple lines with the same process type

If the same process types are assigned to a call, the same linked documents with the same facilities are available for both call lines. As with single-line calls, the documents are also created here using the "Create call documents" function.

The mask that opens now displays all the collective or individual documents that can be summarized at the current time. The traffic light indicates which document can currently be created. If documents cannot be created (collectively), the document details can be opened via the small arrow on the left. Under the lines in the notes, each line will then indicate why the document cannot be created. Collective vouchers are those vouchers with a voucher link code, lines of linked vouchers without such a code are single vouchers and are listed separately.

In order to create the return to service in this case, the "Create document" checkmark must be set on the general document line (since all lines should be combined in one document).

The system now creates a document for both call lines. The call lines are now written in two separate lines in the sales reset.

Each serial number can now be booked in individually via the technical device input. Posting now sets the respective completion processing status of the process type line. In this step, only the first line is now posted once via the technical device input.

The processing status of one line has now moved on, also the document has been terminated only in the first of the two lines.

For the first line, for example, a diagnostic order could now already be created for the purpose of determining the effort. Because of this, the traffic light is yellow at this point. Document detail lines for which a document may be created are displayed in black, all others in red and italics. If the document is to be created, the same check mark is also set here; the system now includes all lines that have the corresponding processing status in the document to be created.

A diagnostic order is now generated for the one call line only. This is now processed in exactly the same way as in single-line calls and repairs. For this reason, no more detailed explanation is given here.

Since total document creation is now set for a CT, the next document cannot be created until the second device has been collected and diagnosed beforehand.

This is now carried out so that a cost estimate can then be generated for both devices, via the path already shown. The quotation now shows all the items for the repair of each device.

If the offer is accepted in its entirety, the "Close offer as accepted" function is executed. If it is rejected in whole or in part, the "Close offer as rejected" function must be executed and, depending on the case, one or more new offers generated. If the offer is accepted, a technical order can now be generated by creating the call documents. Depending on which engineering order line is now selected, the other items are displayed in the subsequent planning and consumption registers. The functions BOM components, Transfer planning to consumption lines, Post consumption and Complete order line are also executed depending on the selected engineering order line. The same applies to the functions on the engineering order line.

The consumption must now be booked for each technical order line. If the repair or maintenance is completed for multi-line technical orders, the order line is also closed here. In contrast to single-line repairs, the entire technical order is not completed, but only the line, so that the multi-line call for the one device is continued. The respective device is marked as completed in the engineering order.

Once all the technical order lines have been processed, the technical order also closes completely. Next, the shipping order can be created, again using the "Create Call Documents" function. With each completed document, the list of documents to be processed is reduced.

The order can now be delivered, due to the collective receipt setting both devices are included. In addition to the delivery bill, the service bill and, in the case of a loaner device, the pickup bill can also be printed.

The processing status has also set itself to the completion status of the booked shipment here, so that the invoice can now finally be generated.

Since there is no automatism for multi-line repairs and maintenance, the call must also be closed by manually using the "Close call" function.

Example process several lines with different process types

As mentioned previously, a call can also manage and process multiple devices with multiple process types.

If a call document is now created, two documents are considered to be generated, once a loan order for the shipping device of the second line, and once the return for the first line, since both documents may also be created in parts. In addition, two technical orders are included as "single documents", since no document link code has been assigned to them.

Since two documents could be created, the checkbox for document creation can be set for both documents. As a result, the call generates both documents in parallel. The loaner device can now be sent. The first defective device is booked in via the technical device input. If the next Call document is now created, only the sales return for the second device can be generated and no diagnostic order, as both documents are to be combined in one diagnostic order. The second sales return is therefore posted.

A diagnostic order for both devices can now be generated.

All functions, with the exception of the creation of resubmissions or the calculation of amounts and the standard functions of Microsoft Dynamics Business Central™, are line-related in the findings order if several lines are included. In addition, the planning register and the findings must also be filled for each findings order line before the effort can be transmitted in each case. As described above, this can be done via the BOM components or via manual filling of the lines. The effort is then transmitted for each line, and a corresponding indicator is set for the corresponding diagnostic order line.

If the effort has been transmitted for all lines, the diagnostic order is automatically closed in its entirety.

Afterwards, an offer can be created again. This has the same structure as before, per device the offered positions are displayed. Using the already known functions, an offer can be closed as accepted or rejected.

Since the technical orders do not have document link codes, they are not displayed as collective documents, but in the individual documents. Alternatively, a document link code could also be stored for these lines, with partial creation, so that individual technical orders are also then generated for each device. For individual documents, the document line must be selected and not the collective document.

The further processes of service execution, shipping and invoicing as well as the further handling of the loaner equipment process are carried out in the same way as in the previous processes and are not described in detail here.

Further functionalities within the scope of document creation

If a call document is created, it is possible to edit it again before the document is created. The "Edit" function is used for this purpose. This is only possible on the individual document line, not on the superordinate collective document. The function "Select document" marks the corresponding line, like setting the checkmark in the field "Create document".

It is now possible to edit the various fields of the details of the linked documents before creating them. This can make sense especially for the stock transfer documents and sheets.

The "Discard changes" and "Save changes" functions are used to discard or save the entries. Saving is mandatory before creating the document, otherwise the data will not be accepted.

Internal repair of own equipment and machines

Up to now, the previous sections have described all repairs or maintenance for devices that belong to a customer. However, the module can also be used for own devices, machines or test equipment, without the need to assign a customer (owner) to them. The service can still be performed, but no one can be charged for the costs.

These devices have maintenance plans and parts lists stored in the same way as external devices. If a regular inspection is to take place using the same process as the maintenance described above, the maintenance plans would have to be filled manually on the serial number card. Alternatively, a call for maintenance could be created manually based on a calibration of a piece of test equipment. Such a maintenance or repair process would proceed as follows.

If a call is created manually, this is done via the serial number card using the "New call" function, so that the call is subsequently classified.

A process type for internal repair is selected. The process type provides for a transfer to the workshop, a document for reconditioning/testing the device, and a transfer from the workshop back to the destination.

If a storage location is already predefined on the document types, a call document can be created directly. Alternatively, a "Business ref. storage location code" and "Business ref. storage bin code" can be stored on the line of the linked document via "Edit". The same can already be stored when transferring stock from the workshop, so that the automatic process flow is not interrupted.

Once this is done, the "Create Call Documents" function would now be executed and the stock transfer ledger sheet would be filled for transfer to the workshop.

The device has now been booked into the workshop and the technical order for inspection/reconditioning has been generated. This can also be opened via the tile of the technician's worklist. In the "General" tab, there is now no customer because the device has no owner, as it is its own device.

Findings can now be recorded if required, as is also the case for customer repairs or maintenance. At the very least, the expenses must be recorded in the consumption register. The consumption is booked and the technical order is completed when the device/machine has been repaired or the test equipment has been calibrated. This creates the further transfer back to the destination, when this is booked, the call is automatically completed and the equipment is ready for use again.

The cost of the service can now be viewed in the device items of the serial number card.

If this is a call of a calibration, the calibration on the test equipment must now also be processed manually, since the call with technical order was a pure workshop order. Possible connections between the additional module of quality control and the module for technical service would be an extension.

Accessories orders and offers

In addition to classic repairs and maintenance, customer inquiries regarding possible spare parts, including the creation of a quotation and an order, can also be handled here. In these cases, a repair or maintenance does not necessarily have to take place, but a service technician must still define the correct spare parts based on a possible fault. The following process type is required for this.

This process type includes two accessory document types, which must have the corresponding facilities. Thus, they are considered as quite normal sales documents.

For such a request, a call would now be created, e.g. for a concrete device, and the process type would be selected.

The call documents are created and a service technician now receives a diagnostic order in which he can enter lines of possible spare parts. These must be explicitly marked as "sales items". The already known and previously described functionalities can be used to enter the lines.

Via "Transmit effort" the document is closed and the data is transmitted to the subsequent offer for the spare parts/accessories. Only those sales items are transferred.

The offer can now be sent to the customer and also accepted via the "Close offer as accepted" function, so that the sales order can subsequently be created for delivery and billing.

In the sales order, the item could now be assigned to a device using the "Item/device assignment" line function, so that an entry has been assigned to it in the item/device assignment items. This process is explained in the section "Assignment of components to device in sales".

The sales order is now released and can be sent via goods issue and subsequently invoiced.

Other processes

The following section describes further, general processes within the scope of technical service.

Scrapping equipment

Scrapping is always to be seen as a partial process of previous repairs and can be handled very differently. It is important that there is a document type, which must have the following minimum structure. It must be the basic document type = "Article book.sheet", in addition, the checkbox Scrapping must be set so that the serial number card is also blocked.

If scrapping is required as part of a repair or maintenance, either the process type created for this purpose can be selected in the call. If, in addition to the scrapping, an exchange order or a quotation is to be created for it, this would be a further process step of the SCRAP process type.

The new process type is now selected in the call. The documents that have not yet been created are replaced by the new documents of the process type. The document is created and the article book sheet is filled directly with the device with the call line.

With booking, the serial number card is blocked, furthermore marked as scrapped, incl. recording of the person and the date when this was carried out. The fields are also updated when the scrapping flag is removed again.

If there is no separate process type for this, the document type SCRAP can also be entered manually in the linked documents. In this case, all documents that are not required must also be deleted manually.

The further process is identical to the procedure already described.

Change process type

It can always happen that when a call is created, a different type of service is assumed than it actually is. As a result, the wrong process types may be available for selection or the wrong contract may be valid.

The call classification can now be changed, provided that all linked documents have either been posted or not created. If documents have been created but not processed, the call classification cannot be changed, a corresponding error message appears.

The call classification can be changed, the process type is emptied.

Based on the new call classification, the system automatically checks for the existence of contracts. In addition, all process types that correspond to the new classification are now made available for selection.

The process steps of the newly selected process type are now written under the already processed documents.

Unexpected Return

An unexpected return in KUMAVISION healthcare365 is seen every unexpected goods receipt of an (un-) known device. This means that no call exists for the arrived device, with the help of which the goods can be booked in.

When the device arrives, it is also booked in via the technical device entry. After the serial number has been entered, the storage location/storage location must also be entered here, as there is no call or return. In addition, operating hours or device features and accessories may also need to be recorded.

Although neither call nor sales return exist, the device is booked in because a call with the process type for unexpected goods receipt from the technical equipment is created beforehand. The sales return for the goods receipt is created and booked in from this process type.

Based on the process type or the processing status, the call can now be found and processed in the role center, for example in the "Call unclear" tile.

Undefined process

An undefined process is a call that has been created for a device but not processed further. In this case, the process type is missing, so that it is unclear what has to happen to the device. These devices are also to be posted in the goods receipt, but must then be identified again so that it is clear to the office staff that rework is necessary here in order to initiate the correct process.

A call was created for a specific device, but not processed further. The process type is missing to define which process is to be used here.

The device is then delivered and is now to be collected via the technical device receipt. For this purpose, the serial number and the operating hours are recorded and the goods receipt is posted via the "Post" call. Since there is no return, the storage location and storage bin must also be maintained.

The system has now not created a new call, but recognized that one already exists for the device.

Instead, the process type for undefined processes from the technology facility was entered in the existing call and the reset of this process type was recorded.

Now, based on the processing status, the office staff can see that something still needs to be done here, for example directly in the role center in the tile of unclear calls.

Assignment of components to device in sale

If a customer has already purchased a device and subsequently orders accessories for it, there is a possibility to assign them to a device.

For this purpose, the article to be assigned is entered in the sales order.

To assign this product to the device now, the function "Article/device assignment" is executed at the respective sales line.

In the mask that now opens, the device or devices are entered and the respective quantity is assigned.

The serial number card has now been assigned the additionally delivered components in the item/device assignment items.

Assignment of components to device in purchasing

As described above in Sales, it is also possible in the purchase order to assign subsequently procured components to a device in your own system. To do this, use the "Device assignment" function on the relevant order line.

In the mask that now opens, the device or devices are entered and the respective quantity is assigned.

The serial number card has now been assigned the additionally delivered components in the item/device assignment items.

Handling necessity repair estimate

In the "Customer" section, the management of the necessity of cost estimates per customer was described. In this section, the options that no cost estimate and from a fixed value is necessary are now described. The permanent necessity of a CT is assumed in the processes described before.

No Rep. KV necessary

The customer has the setting that no CT is necessary.

Afterwards, as before, a call is created and the device is retrieved.

With Posting, the diagnostic order is generated in which the items for effort calculation are entered. Finally, the "Transmit effort" function is executed.

The software now checks whether a CT is necessary at the customer's or not. Since this is not the case here, the processing status is automatically set further, the offer is skipped with a note and the engineering order is generated as the next document in the process chain.

Own process types with a cost estimate and without CT are therefore not necessary. The device can now be repaired via the engineering order. The consumption is posted and the order is completed.

The device is now shipped and the invoice with the items from the effort calculation are transferred.

Rep. CT from value limit

A value limit is now stored on the customer, from which a CT is necessary. If the value falls below this limit, the quotation is skipped as described above and a technical order is generated directly. If the value is above the value limit, the offer is generated according to the process type.

Function for calculating the order value

In both the technical order and the diagnostic order, there are fields which indicate whether a CT is necessary or whether this is necessary above a value limit. In addition, there is a further field "Rep. order value" which displays the volume of the planning lines.

If all planning lines are filled, there is the function "Calculate amount" in the menu band of both documents, which calculates over all planning lines, according to pricing, how high the order value of this service is.

According to this, the order value has been calculated.

More information

This section lists and explains other tables and functions that are independent of processes or facilities.

Processing status items

In the processing status items, the changes of the processing status from the call or engineering order are documented. Each time the status is changed manually or automatically, an entry is written to this table. As already described in the section "Call - Information tab rows", these processing status items can be displayed and opened for an individual call. Furthermore, it is also possible to display an entire overview of the processing status items.

In the table, it is recorded which user changed a processing status, when and how. This makes it possible to evaluate call by call how long a service took from the creation of the call to the completion of the last status change, in order to identify further potential for optimization. In addition, it is also possible to evaluate per employee which tasks he or she has processed during the day.

Diagnostic information

Diagnostic notes can be maintained per customer in the Marketing Cockpit. These notes are also displayed in the engineering module in several places, according to the setup, to protect the employees. The following example demonstrates the display in the engineering order.

When a technical order is opened, depending on how the notes are set up, firstly an information window appears with the clinical picture.

When the mask is confirmed, a banner with the same information also runs through.

The same also happens in the technical equipment receipt or in the goods receipt, if a return or a device is selected and diagnostic notes are stored, these are displayed in the same form.

Closed documents

In addition to the standard documents for the documentation of deliveries, returns or goods receipts, there is also the possibility to view the completed engineering orders and calls.

In the completed calls, all the completed documents generated out of there can be viewed, as well as the findings, processing status items or remarks.

Information on findings or comments can also be found in the completed engineering order. In addition, the work performed and the expenditures incurred can also be viewed here in the form of the item and resource items.

Changing the lines in the linked documents

It is possible to manually adjust the linked documents in the call at any time. Even if the process type specifies certain steps, these can be removed manually. It is also possible to add further steps at any time. If the automatic is to take effect, the line must be entered in the correct place following the currently created document. No documents can be created automatically retroactively.

Entry of information items in service documents

In the technical and diagnostic order, there is a "Customer service item type" field. By default, this field is set to "Consumption item" and indicates that this is a spare part.

This field also has the option for a line to be recorded as a sales item. This has already been explained in the section "Accessory orders and offers". Furthermore, a line can also be marked as a type of = information, in which case this line will be written through to all subsequent documents as pure text information.

These lines are thus fed through 1:1 into the sales documents, and are also printed on the quotation document as information.

Logic for creating calls

There are cases where it must be possible for there to be multiple calls for service for a device. For example, if a device has already been sent back to a customer, but the invoice has not yet been billed. If in the meantime the device breaks again, it must be possible to create another call. Since there are both in-house and on-site repairs, the following requirements apply for another call to be created, depending on the service location of the call.

Service takes place in the house

1) If no call exists for the device, a new call can be created.

2) If a device is in a call as a loaner device, a separate call can only be created for the loaner device if it is refurbished and stored in-house. This means that all process steps relating to the loaner device must be completed.

3) If a device has been delivered to the customer again via a call (sales document with the device reference = device), then a new call may be created. In addition, no new technical order, stock transfer order or return order may subsequently be created for the device.

4) If a device has been placed in storage via a call (stock transfer ledger sheet with the device reference = device), then a new call may be created. In addition, no further document with the device reference = device may be created afterwards.

Service takes place on site

Even in the case of on-site service at the customer's premises, it must be possible for another call to be created even though the previous one still exists. The special feature here is that it may be that the repair has long since taken place, but the rework has not yet been carried out (because, for example, the service certificate with the services is not yet in the house). Thus, the engineering order would not be completed yet. Subsequently, the device breaks down again, so another call would be necessary, although the previous call is still unprocessed. However, it is also possible that the call/technical order has already been processed, but the call has not yet been completed, so that a call must be created here as well.

That is why there is the field "Status completion on site" in the technology setup.

The processing status entered here now serves as a comparison value as to whether a new call may be created or not. When a new call is created, the system checks whether the processing status of the new field is entered in the call line or not. If yes, then a new call may be created for the service location = on site, otherwise not.
- When the rework has been carried out by the office staff and the technical order is completed, this status can be controlled automatically on the basis of the setup options in the process types.
- If the rework has not yet been carried out, but another call is still required, the processing status can be entered manually in the line before another call is created. The processing status in the call line and the new field then match again and the call can be created.

In addition, a new call may be created if the engineering order/last document in the chain is completed with the device reference = device in the linked documents.

Logic for control of the storage location in the call

In the call, there are the fields for the service storage location and service storage bin in the call header and line.

If a call is created, these fields contain the storage location where the device is currently located. Thus, in the case of stock transfers (whether via return or stock transfer book sheet/order), the system knows the storage location from which it must be posted away. After the first posting is made, the fields in the call line update, for future postings via the follow-on documents. The fields in the call header remain unchanged, since a call can also have multiple lines with different storage locations.

If there is no storage location and storage bin on the serial number card, the device has been completely sold. This means that the service storage location from the technical equipment/unit of responsibility is now entered in the two fields. In these cases, this storage location is the target storage location to which the posting is to be made.

B2B repair contracts add-on module

In addition to the functions described here, there is an add-on module for mapping repair and maintenance contracts in B2B. Below is a brief explanation of the scope of functions, more detailed documentation can be found in the section of the module.

The contract manager for repair and maintenance contracts in retail and manufacturing offers the possibility to map them easily and to manage all possible constellations of contract lengths and billing cycles. If a repair or maintenance is completely settled via the contract, the cost estimate and billing processes of the workflow are automatically skipped. In addition, all items that are covered by the flat rate can be included. Invoicing of the flat rate takes place fully automatically at the relevant time, without the intervention of an employee. Any errors are noted centrally and can be reworked. In addition, it is possible to extend these contracts fully automatically and to automatically create, send and remind any cost estimates/documents.

1.2.4 project365

KUMAVISION project365

Although project-centric businesses come in many shapes and sizes, their goals are always the same: They need to deliver on time, on budget, and within scope, and be able to respond quickly to changes in the market.

Thanks to sophisticated workflows based on industry-specific, tried-and-tested functionality, KUMAVISION project365 can help these companies—which operate in sectors as diverse as service and repair, IT, equipment rental, engineering, consulting, and architecture—make the most of their resources and drive success.

Fully integrated into Microsoft Dynamics 365 Business Central, project365 empowers you to:

- keep track of your projects and resources with ease.
- make decisions based on sound data.
- identify risks early on and respond in time.
- stay on top of things when working across departments and locations.
- improve customer satisfaction thanks to reliable, effective scheduling.
- control costs at every step of a project.
- exchange data with Microsoft Office at a moment's notice.
- reduce administrative overhead.
- record times and travel expenses online—in any internet browser.

Topics

- [HR Cockpit](#)
- [About Resources](#)
- [Job Setup](#)
- [Create a Job](#)
- [WBS and Scheduling](#)
- [Time & Materials](#)
- [Billings](#)
- [Intercompany Work](#)
- [Control Costs](#)
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HR Cockpit

Overview

In Microsoft Dynamics 365 Business Central, staff data typically needs to be stored in the Employee, Resource, and Salesperson/Purchaser tables. Sometimes, however, data also needs to be available elsewhere in the app. For example, you might need to add information to the Vendor table to reimburse employees for travel expenses.

Hiring a new staff member or updating staff data might therefore have a ripple effect throughout the app. The HR Cockpit was designed to offer you an easy way to create and update information across all tables at once.

Information is stored in the cockpit temporarily so that you can add or update data in the tables that include a certain staff member. For example, if you want to change an employee's home address, changing the relevant HR cockpit field updates the field in all tables linked to this employee. Removing data from the cockpit, however, doesn't delete the information elsewhere.

After you added or updated the relevant data, you will be asked if you want to keep or delete the HR cockpit record. We recommend that you keep it, but—as a precaution—run the Get Data action when you are about to perform the next update. This function retransfers all data related to a certain staff member, ensuring that the cockpit also shows changes made to individual tables in the meantime.

Setup

You can set up default values for some staff-related fields. Choose the Search icon, enter HR Cockpit Setup, and then choose the related link.

This opens a page where you can set up a general template or a distinct combination of values for each person working in HR. These default values are then entered in the resource record that is created when you register new staff.

If you want to specify default values for vendor-related information, you need to have the Comsol Travel Expenses app installed.

Default no. series

You can also choose in HR Cockpit Setup what number series you want staff-related tables to use. For example, you can choose if you want a field in the resource record to keep the number that you used to create the employee record.

For each table, two fields are available for setting up a series.

Resource No. Series Setup

Field	Description
Resource No. Series	Fill in this field if you want new data records to use a number from this series.
Resource Nos. Prefix	Fill in this field if you want to add a prefix to the employee number when you set up new data records with that number.

Examples

Employee and resource number are identical.
Employee=1235 and Resource=1235

Resource No. Series	
Resource Nos. Prefix	

The resource uses a number from another series.
Employee=1235 and Resource R58456

Resource No. Series	**ResourceNoSeries**
Resource Nos. Prefix	

Resource and employee number are identical, except for the prefix.
Employee=1235 and Resource=R1235

Resource No. Series	
Resource Nos. Prefix	**R**

HR Field Check

On this page, you can specify what cockpit fields every user needs to fill in. To open the page, choose the Search icon, enter HR Field Check, and then choose the related link.

With the toggle turned on, the first field on the page checks whether an employee is available in sales. Except for the Employee No. field—which cannot be changed—the options are the same in each field.

Option	Description
Ignore	Ignores the content of the related field.
Required	Requires the related field to be filled in. If this field is blank, no data is copied to tables associated with the employee record.
Ask	Asks the user whether to continue with processing information if the related field is empty.

HR Cockpit

The cockpit provides you with a central location to add and update staff data.

Register a new employee

1. Choose the Search icon, enter HR Cockpit, and then choose the related link.

2. On the ribbon, choose the New action. Fill in the fields as described in the following table.

General

Field	Description
Type	Shows the type of data record, for example, New.
Employee No.	Serves as a unique reference to the new data record. Numbers are assigned based on the series stored in HR Cockpit Setup. To create a new cockpit record, go to any other field and choose Yes on the dialog page that appears. A number is then assigned automatically. **Note** If you follow these instructions, an HR cockpit record is created before a new employee record.
User ID	Choose an ID to link the employee to a user. **Note** The user must already exist.
Initials	Specify initials for the employee.
Gender	Specify the employee's gender.
First Name	Enter the employee's first name.
Last Name	Enter the employee's last name.
Name	Combines the First Name and Last Name fields.
Address / Address 2	Enter the employee's (second) home address.
Post Code	Enter the ZIP code of the location where the employee lives.
City	Shows the city or town associated with the ZIP code.If the field is empty, fill in a location manually.
County	Specify a county if necessary. You need to unhide this field before you can enter a value.
Country/Region Code	Shows the country or region associated with the ZIP code. If the field is empty, fill in a code manually.
Birth Date	Enter the employee's date of birth.
Record Created On	Shows the date on which the record was created.
Record Created By	Shows the ID of the user who created the record.

Field	Description
Registered On	Shows the date on which the employee was added.
Registered By	Shows the ID of the user who added the employee.
Last Imported By	Shows the ID of the user who last imported the data record.
Last Imported On	Shows the date on which the data record was last imported.
Last Updated By	Shows the ID of the user who last updated the employee record.
Last Updated On	Shows the date on which the employee record was last updated.

Contact Details

Here you can enter an employee's contact information.

Employee

Field	Description
Status	Select the employee's status. You can choose between three options: Active, Inactive, and Terminated.
Job Title	Specify the employee's role in the company.
Project Manager	Turn on this toggle if you want to create a job journal.
Trainee	Turn on this toggle if this employee is a trainee.
Social Security No.	Enter the employee's social security number.
Employment Date	Specify the starting date of employment.
Inactive Date	Enter a date in this field if the employee is unavailable for a relatively long period of time.
Cause of Inactivity Code	Select a reason for the employee's inactivity, such as parental leave.
Termination Date	Enter a date in this field if the employee's contract came to an end.
Grounds for Term. Code	Select a code that explains why employment ended. For example, the employee might have been let go or might have retired.
Emplymt. Contract Code	Shows the type of employment contract stored with HR.

Master Data

Field	Description
Create Salesperson	Turn on this toggle if you want to create a salesperson record for the new employee.
Salesperson Code	Instead of creating a new data record, you can also enter the code of an existing salesperson here.
Create Resource	Turn on this toggle if you want to create a resource for the new employee.
Resource No.	Instead of creating a new data record, you can also enter the code of an existing resource here.
Create TE Employee	Turn on the toggle to set up a staff member for whom you want to post travel expenses (known as a TravelExpense Employee). This field is only shown if you installed the Comsol Travel Expenses app.
TE Employee No.	Instead of creating a new data record, you can also enter the number of an existing TE employee here. This field is only shown if you installed the Comsol Travel Expenses app.
Create Vendor	Turn on this toggle to link a vendor to the new employee. This field is only shown if you installed the Comsol Travel Expenses app.
Vendor No.	Instead of creating a new data record, you can also enter the number of an existing vendor here.This field is only shown if you installed the Comsol Travel Expenses app.

Resource

Field	Description
Resource Group No.	Fill in this field if you want to assign the employee to a resource group.
Base Calendar Code	The code in this field determines how much capacity the resource has available. If you want capacity to be calculated automatically, turn on the Create Capacity toggle (also found on this card).
Available in Sales	Turn on this toggle if you want to use the data record for sales documents.
Show on Schedule	Turn on this toggle if you want to utilize the resource in planning.
Direct Unit Cost	Specify the resource's unit cost.
Unit Price	Specify the resource's unit price.
Work Hour Template	Choose a template for the resource's weekly working hours.
Product Commission Group	This field helps group and commission products individually.
Blocked	Turn on this toggle if you want to block use of the resource.
Create Capacity	Creates resource capacity entries automatically. To use this feature, you need to choose a Base Calendar Code, a Work Hour Template, a Capacity Starting Date, and a Capacity Ending Date.
Capacity Starting Date	Specifies the starting date of capacity planning.
Capacity Ending Date	Specifies the ending date of capacity planning.

Bank

Here you can specify an employee's bank account information.

Setup

Field	Description
Gen. Prod. Posting Group	Specify a general product posting group.
No. Series Vendor	Specify a number series for vendors.
Vendor Posting Group	Fill in this field if you want to map the resource to a G/L account for posting purposes.
Payment Terms Code	Enter the agreed terms of payment.
Payment Method Code	Select how payment is made, for example, by bank transfer.
Application Method	Specify how you want to apply payments for items.
Gen. Bus. Posting Group	Used to determine the relevant G/L account in VAT Posting Setup.
VAT Bus. Posting Group	Used to determine the G/L account on the VAT Posting Setup page when you post the resource.
Responsibility Center	Shows the responsibility center, such as a purchase office, to which the employee is assigned.

Dimensions

On this tab, you can specify dimensions for the staff member. These are then copied as default dimensions to the Employee and related tables (for example, Resource).

Depending on what you entered in General Ledger Setup, this FastTab includes up to eight fields: Global Dimension 1 and 2 and Shortcut Dimension 3 through 8. You can add more default dimensions by selecting the Dimensions action on the ribbon.

TempVision

Fill in this tab if you use the Tempras app for employee management.

Travel Expenses

Fill in this tab if you use the Comsol app for travel expense management.

Transfer Data

Use this action on the ribbon to create new data records in the Employee, Resource, and Salesperson/ Purchaser tables, as well as the Vendor and TE Employee tables if you installed the Comsol Travel Expenses app.

You can then choose to keep or delete the HR Cockpit data.

Update staff data

When you use the HR Cockpit card to register new staff members, data will be linked throughout the Employee, Resource, and Salesperson/Purchaser tables—and the Vendor and TE Employee tables if you installed the Comsol Travel Expenses app.

When you close the card, you will be asked if you want to keep or delete the data that you created.

Keeping the HR cockpit record

If you choose to keep the information, the card is retained in the system so that you can take another look at the data later. To ensure that the information shown on the card includes all changes users made to related data in the Employee, Resource, and Salesperson/Purchaser tables in the meantime, go to the ribbon and run the Get Data action before your next update.

Changes to employee data can be tracked by using the Type field. If the information related to an employee has been changed, the field is set to Updated. The Updated By and Updated On fields show who last updated the fields and when this happened.

To replace what is stored in the associated tables with new information, reopen the relevant card and rerun the Transfer Data action when you're finished updating. You can then again decide if you want to keep or delete the cockpit record.

Deleting the data record

If you decide to delete the data record, you need to retrieve all relevant information each time you want to look up an employee.

1. On the HR cockpit card, choose the New action.
2. In the Employee No. field, select the number of the data record that you want to update instead of having the system assign a new number to the card.

When you choose an Employee No., the program will copy to the card all information related to the employee, that is, all data stored for the staff member in the Employee, Resource, and Salesperson/Purchaser tables (and, if you installed the Comsol Travel Expenses app, the TE Employee and Vendor tables). At the same time, the Type field will be set to Updated.

To replace what is stored in the related tables with new data that you entered on the card, go to the ribbon, and select the Transfer Data action. Following the update, you can again decide if you want to keep or delete the data record.

About Resources

Overview

Resources are the people and machines performing the activities of a job.

With the help of a budget, you can easily define their deployment and availability on multiple capacity-related pages within the system. You can also record their impact on a company's revenues and expenses, either independently or as part of jobs and sales (which creates a link to Finance).

Resources can be part of resource groups. You can use both resources and resource groups to budget and bill highly sophisticated purchase and sales price structures.

As the resource and job functionalities are closely intertwined, the following sections will also cover some of the basics of project management, with explanations of:

- Resources and resource groups
- Units and types of work
- Unit costs and sales prices
- Resource and job journals
- Capacities
- Flextime summaries

Resources Setup

Before you can register and post to resources, you need to set up the functionality.

1. Choose the Search icon, enter Resources Setup, and then choose the related link.
2. On the KUMAVISION project365 FastTab, fill in the fields as described in the following table.

Field	Description
Resource Calendar Type	You can choose between two options in this field: **Base Calendar** The standard calendar. This calendar is only available if you have a Premium license and use the Services functionality. **project365 Calendar** The calendar for users with an Essentials license, which precludes access to the standard version.
project365 Calendar Code	Fill in this field if you selected the project365 resource calendar. The standard and the project365 calendar both offer the same features. The standard version, however, is only included with a Premium license.
Resource Base Unit of Measure	Specify a base unit of measure for resources. A typical unit is Hour.
Dimension Integration	Enter a dimension that you want to link to new resources. When you later enter a resource in the Person Responsible field on a job card, the dimension is assigned as a job dimension to the resource. This way, you can evaluate the work of project managers across jobs.
Auto Close Res. Costs Auto Close Res. Prices	Turn on these toggles if you want the system to fill in ending dates when you select another unit cost or price with a more recent starting date. This is only useful if you work with Extended Pricing (something that we strongly recommend) and if the relevant tables include both starting and ending dates.
Resource Planner Start Resource Planner End	Specify a period that you want to transfer to visual resource planning **Note** Specifying a period that is too small makes planning impossible. A period that is too large has a negative impact on performance. **Example** -1W to 2M = one week back from the current week to 2 months into the future.
Night Differential Start Night Differential End	Fill in these fields to calculate a night differential. For more information, see [Flextime Summaries](#).

You can now register your first resource.

Register a resource

1. Choose the Search icon, enter Resources, and then choose the related link.
2. On the ribbon, choose New > New to register a resource and fill in the fields as described in the following table.

General

Field	Description
No.	Serves as a unique number to identify the resource. Numbers are assigned from the series stored in Resources Setup. To assign a number to the resource automatically, go to any other field on the FastTab.
Name	Enter a name for the resource.
Type	Specify the type of resource. Person is for a company's own employees, and External is short for external resources. Machine covers everything the first two options don't, including vehicles and equipment.
Base Unit of Measure	Also specified in Resources Setup. The unit you choose must be the same for all resources. We recommend you use Hour, even if you bill services on a per-day basis.
project365 Calendar Code	Each resource can have its own calendar. The calendar is later used to set up capacity. If you leave the field blank, the relevant calendar code is copied from Resources Setup.
Work-Hour Template	Select a code to specify standard hours per workday in capacity planning.
Default Break	Specify the length of the resource's work break that is entered when you post times on CTC cards. If you leave the field blank, the system copies the default break from the work hour template that you selected for this resource.
Employee No.	Shows the employee number associated with the resource.
No. of Extended Texts	Shows the number of extended texts stored for the resource.
Search Name	Enter a term that can be used to search for the resource, for example, an employee's initials.
Resource Group No.	Each resource can be assigned to a resource group. This assignment is how a group receives capacity. You can then use the group, for example, to create a rough job budget before devising a more detailed schedule for individual resources. A resource can only be part of one group at a time. You also cannot post an entire group but only individual resources.

Field	Description
Billing Resource	Turn on this toggle if you want to include the resource on sales invoices. A resource linked to billing cannot be budgeted.
Available in Sales	With the toggle turned on, the resource can be used on sales documents. Typically, this applies only to billing resources.
Use in Resource Planning	Turn on this toggle if you want to include the resource in planning. Turn it off if the resource is used in billing or for other special purposes.
Blocked	Turn on this toggle to block use of the resource.
Privacy Blocked	Turn on this toggle to limit access to resource data in day-to-day operations.
Last Date Modified	Shows the date on which the resource record was last modified.
Use Time Sheet	Turn on this toggle if you want to use a time sheet. Leave it turned off for other methods of time tracking.

Invoicing

Field	Description
Personnel Cost Rate Personnel Cost % Personal Ovhd. Cost	These fields provide information on labor costs and determine the unit cost. All of them might be empty, as the unit cost can also be filled in manually.
Direct Unit Cost	Specifies the direct cost of one unit of the resource. This field has a lower priority than the same field in the Resource Cost table. It is only used if the system cannot find a valid direct unit cost in that table.
Indirect Cost %	Specifies the indirect cost associated with the resource. This amount is added to the direct unit cost to make up the unit cost.
Unit Cost	Specifies the cost of one unit of the resource. This is the cost budgeted and billed to a project when you post expenses.
Price/Profit Calculation	Choose if and how you want to fill in the Unit Price or Profit % fields.
Profit %	Shows the resource's profit margin. You can enter a margin or have the field filled in automatically based on the Price/Profit Calculation field.
Unit Price	Shows the resource's unit price. This field has a lower priority than the same field in the Resource Price table and is only used if the system cannot find a valid price in that table.
Gen. Prod. Posting Group	You must specify a general posting group before you can post to a resource. This also applies to postings in job or resource journals, even if entries, as in the resource journal, include no reference to Finance.
VAT Prod. Posting Group	Select the VAT product posting group that you want to use for transactions.
Default Deferral Template	Select a template that governs how to defer revenues and expenses to the periods when they occurred.
Automatic Ext. Texts	Turn on this toggle to add an extended text to sales and purchase documents that include the resource.
IC Partner Purch. G/L Acc. No.	Select a G/L account in this field if you want to post intercompany invoices to a partner company. For more information, see [Intercompany Work](#)

Intercompany Work.| |Product Comm. Grp. Code |Select a code that you want to use for billing resources if salespersons receive commissions.| |Vendor No. |For an external resource, enter a vendor number in this field.

This number is then copied to budget lines in planning, where the vendor can be used to perform price

calculations and process purchase orders.| |Use Purch. Invoice Entries |If external resources post work hours in the same way internal resources do, you need to ensure that a purchase invoice includes the times spent on a job only once.

A check for duplicate entries can be run with the help of the job ledger entries that are created when you post time summaries.

To have this check performed automatically, turn on the toggle.|

Personal Data

Shows the personal data stored for an employee.

Units, work types, and alternate costs and prices

After you have entered key resource information, you can create units, work types, alternate costs, and alternate prices for the resources you work with.

Set up a unit of measure

1. Choose the Search icon, enter Units of Measure, and then choose the related link.
2. On the ribbon, choose New to create a resource unit such as Hour.
3. Fill in the fields as described in the following table.

Field	Description
Code	Enter a code that uniquely identifies the unit of measure.
Description	Enter a description for the unit.
International Standard Code	Enter the code of the UN/CEFACT-Rec20 unit that you want to use when you submit sales documents in electronic form.
Type	Select a unit of time.
Time in Minutes	Fill in this field so that you can convert between different units of time.
Inv. Qty. Rounding Precision	Specify the decimal precision for invoice quantities.

Work types

Work types describe various ways of rendering and selling services. They allow you to set up structures that, for example, account for the difference in cost between an hour spent working on a job and an hour of travel.

All types are closely linked to alternate resource costs and prices. As part of a job or sales transaction, the work type has a significant influence over both.

When you register a resource or a resource group, you can assign a cost and a price to each type of work.

A work type can also be assigned to more than one unit of measure to differentiate between the use and billing of resources. For example, you can define that employees record times spent on a job in hours but that their work is billed on a per-day basis.

Set up a work type

1. Choose the Search icon, enter Work Types, and then choose the related link.
2. On the ribbon, choose New to create a work type.
3. Fill in the fields as described in the following table.

Field	Description
Code	Enter a code that uniquely identifies the type.
Description	Enter a text to describe the type of work.
Unit of Measure Code	Specify the unit of measure used by the resource.
Invoice Unit of Measure Code	Specify the unit of measure used to invoice work done by the resource.

Examples:

Code	Description	Unit code	Billing unit code
PROGRAM	Software programming	Hour	Hour
INSTALL	Network installed for customer	Hour	Hour
CONSULT_STD_D	Consulting work billed in days	Hour	Day

Extended resource costs

General setup

If you want to work with the extended cost and price tables instead of the standard tables included with Microsoft Dynamics 365 Business Central, you need to turn on the Extended Pricing feature.

1. Choose the Search icon, enter Purchase & Payables Setup, and then choose the related link.
2. On the KUMAVISION tab, in the Extended Pricing field, choose Yes.

Set up alternate costs

You set up alternate costs for resources and their groups on the Extended Resource Cost page. When you invoice items, the values shown on this page take priority over those specified on resource cards.

1. Choose the Search icon, enter Extended Resource Cost, and then choose the related link.
2. On the ribbon, choose New to set up a unit cost for a resource.
3. Fill in the fields as described in the following table.

Field	Description
Type	You can choose between the following resource cost types: **Resource** The unit cost will be used for the resource entered in the Code field. **Group (Resource)** The unit cost will be used for the group of resources entered in the Code field. **All** The unit cost applies to all resources regardless of their resource group.
Code	Based on the Type field, you can select a resource, a group, or nothing here.

Field	Description
	This field plays a crucial role in cost and price calculations. It specifies both the resource's unit of measure, such as hours, and activity, such as travel or software development.

Examples

Line 1
Type = Resource
Code = MICHAEL
Work Type Code = INSTALL
Cost Type = Fixed
Direct Unit Cost (Base) = 80
Unit Cost (Base) = 120

Line 2
Type = Resource
Code = MICHAEL
Work Type Code = PROGRAM
Cost Type = Fixed
Direct Unit Cost (Base) = 100
Unit Cost (Base) = 150

Line 3
Type = Resource Group
Code = TECHNICAL
Work Type Code = INSTALL
Cost Type = Fixed
Direct Unit Cost (Base) = 110
Unit Cost (Base) = 160

Line 4
Type = Resource Group
Code = TECHNICAL
Work Type Code = PROGRAM
Cost Type = Fixed
Direct Unit Cost (Base) = 80
Unit Cost (Base) = 120

Line 5
Type = ALL
Code = " "
Work Type Code = CONS
Cost Type = Fixed
Direct Unit Cost (Base) = 90Unit Cost (Base) = 90 |
| Work Type Code | |

Field	Description
Starting Date Ending Date	Fill in these fields if you want to set up period-specific costs.
Cost Type	Specify how you want the system to calculate the cost. Resource costs aren't linked to a currency code. The local currency is used instead.
	You can select Fixed, % Extra, or LCY Extra.
	Fixed copies the unit cost from the Extended Resource Cost table; the other options add charges to the cost that you enter on resource cards.
Personnel Cost Rate	Specifies the cost rate for work done by the resource.
Personnel Cost %	Specifies the percentage of costs for work done by the resource.
Personnel Ovhd. Cost	Specifies the labor overhead for work done by the resource.
Indirect Cost %	Indicates the percentage of indirect costs for work done by the resource.
Direct Unit Cost (Base)	Specifies the direct cost of a resource unit.
Unit Cost (Base)	Specifies the cost of one unit of work performed by the resource.
Unit of Measure (Work Type)	Shows the unit stored for the assigned work type code.
Direct Unit Cost (Work Type) Unit Cost (Work Type)	Shows the (direct) unit cost associated with the chosen work type.

Find resource costs

Resource costs are retrieved in the following order:

1. From a resource in the Extended Resource Cost table if both the resource and its work type are valid within the specified period.
2. From a resource group if the group and its work type are valid in the specified period.
3. From a resource with the All option if the resource and its work type are valid in the specified period.
4. From the Unit Cost field on a resource card.

Work types and costs

Unlike customer billing, cost calculation doesn't distinguish between activities, as it doesn't matter what resources spent their time on. Whether they travel or hold a workshop at a customer site, their pay is unlikely to change (at least when it comes to your own staff members).

If no unit cost can be found for a work type and period, a universally applicable entry linked to a blank Work Type field will be copied from a unit cost table.

This avoids having to specify the same unit cost in cost tables over and again. The entry will then use a resource's base unit (the typical unit being Hour).

Prices for external resources

It should be noted that external resources can also be brought on for projects, and that they have their own, separate list of costs. For more information, see External Resource Prices.

Extended resource prices

You set up alternate prices for resources and their groups on the Extended Resource Prices page. You can specify multiple prices per work type.

Resource prices are retrieved when you schedule resources, enter a price on a sales line, or post resource consumption (as a time and materials entry might contain not only a unit cost but also a unit price that can be used to measure job progress or bill work done on a project).

General setup

If you want to work with the extended cost and price tables instead of the standard tables included with Microsoft Dynamics 365 Business Central, you need to turn on the Extended Pricing feature.

1. Choose the Search icon, enter Sales & Receivables Setup, and then choose the related link.
2. On the General tab, select Never in the Find Best Price field.
3. On the KUMAVISION tab, in the Extended Pricing field, choose Yes.

Set up alternate prices

Resource prices and costs are set up in similar ways, with prices being assigned to resources and work types on the Extended Resource Prices page.

You can create alternate prices for individual resources, resource groups, or (most conveniently) all resources at once.

To add alternate resource or resource group prices: 1. Open the relevant resource card or the Resource Groups list. On the ribbon, choose Related > Prices > Prices. 2. If you don't want to set filters on resources or groups, choose the Search icon, enter Extended Resource Prices, and then choose the related link. This opens a list of all alternate prices stored for each resource and group. It's also the only way to enter universally applicable prices. To specify validity periods for prices, fill in the Starting and Ending Date fields on the Extended Resource Prices page.

Examples:

|Type |Code| Work types code| UK price (base)|

Type	Code	Work Type Code	Unit Price (Base)
Resource	GUIDO	CONSULT	90
Resource	MARKUS	INSTALL	80
Resource	MICHAEL	CONSULT	80
Resource	MICHAEL	INSTALL	100
Resource Group	TECHNICAL	INSTALL	75

Pricing options

You have more than one option for setting up detailed unit prices for resources.

For one, you can create special project-specific prices by opening a job card and choosing Related > Prices > Resource.

What you see on this page—which looks almost exactly like the Extended Resource Prices page—has been copied from the job card.

You can also turn on the Use WBS Res. Prices toggle on a job card. With the toggle turned on, a resource price isn't retrieved the usual way when you post job usage or create a sales line manually but is copied directly from the related WBS line.

Where to use resource prices

You can enter alternate unit prices for resources during various stages of a job.

Planning
You can run a function to fill in extended unit prices when you schedule resources with the help of a budget. You can then change these prices manually if necessary.

Sales
When you create a sales document such as a quote or an order in project planning, the resource prices on WBS lines are transferred to this document alongside other job information.

Should you create a new sales line, however, the price on that line might be retrieved from elsewhere in the system.

Time tracking
When a resource posts hours spent on a job, the alternate unit price is added to the time and materials entries created during this process.

The price can then be used to measure job progress or see an estimated price total for unbilled services.

Purchasing
For the same reason as in time tracking, a unit price is added to job ledger entries for an external resource when you post consumption from a purchase document.

Find resource prices

Prices are added to a resource or resource group in the following order:

1. If you turned on the Use WBS Res. Prices toggle, unit prices are copied from a WBS. Based on the posting or link level, a price might be copied from a budget line or a work package. It is, however, only retrieved if
   • it is stored with a resource or a group (not an item).
   • its work type and unit codes are identical to the those of the job.
   This type of setup makes sense if there's a certain latitude in how you can budget a job, that is, a unit price can be specified during planning (on the spot) and isn't copied from a list. Turning on the toggle ensures that there are no differences in price between time and materials entries created for job usage, planning and sales.
2. If the toggle mentioned under 1) is turned off, the system will try to find a suitable price among the resource prices specified for a job.
3. If no job-specific price is available for the given period, the system will try to find one in the Extended Resource Price table.
4. If that table contains no valid price either, the price will be copied from the resource card.

For any table, the system runs through the following sequence:

1. Find a price for a resource.
2. Find a price for a resource group.
3. Retrieve a universally valid price.

A price is considered valid if it has the same work type (a blank field is not taken to mean that a price is universally valid), uses the same currency and is valid between the starting and ending dates specified in the table.

Sales transactions

As part of sales transactions, resources are billed according to their work types and relations to jobs. The entry type created in this context is always Sale, as resource postings on sales documents represent project revenues. Posting revenue for a job doesn't create consumption.

For the use of job-specific prices in sales, turn on the Use Job Prices on Sales Doc. toggle in Jobs Setup. With the toggle turned off, prices are retrieved from resource cards only.

   Note

If you want to enter a resource on a sales document, you must turn on the Available in Sales toggle on the relevant resource card.

Resource capacity

Resource capacity represents a resource's work hours available for planning.

To limit these hours, you can use the calendar that you chose in Resources Setup. You can specify in this calendar the public holidays, weekends, and other days on which employees aren't at work.

You can also set up resource-specific versions to account for differences in the number of holidays observed in different states and regions.

Alternate base calendar

The standard calendar functionality is part of the Microsoft Dynamics 365 Business Central Premium license. Customers with an Essentials license can use the calendar that comes with KUMAVISION project365.

> Note

You must turn on the alternate calendar in Resources Setup before you can use it in place of the standard calendar on the setup page and for individual resources.

To turn on the project365 calendar:

1. Choose the Search icon, enter Resources Setup, and then choose the related link.
2. On the KUMAVISION project365 tab, in the Resource Calendar Type field, select project365 Calendar.
3. In the project365 Calendar Code field, choose a calendar.

View and set capacity

To see the capacity of a resource, choose the Search icon, enter Resource Capacity, and then choose the related link.

This opens a page that lists capacities by day, week, and month. Capacities can be specified for several resources at once. Be aware of filters applied to the list.

To specify resource capacity:

1. Open the Resource Capacity page.
2. Go to the Resource Capacity Matrix section. On the ribbon, choose Planning > Set Capacity.

As a rule, capacity is scheduled for long periods in advance. No time sheet template needs to be specified if all filtered resources have one when you run the function. A template is only needed for resources that don't.

You can also set capacity for individual resources:

1. Open the Resource Capacity page.
2. Select a resource.
3. On the ribbon, choose Planning > Set Capacity for Resource.

Group capacity

Resource groups don't have capacities, nor can you specify capacity for them.

Instead, the total number of hours that you can schedule for a group equals the capacities available for all resources within that group.

Time summaries

Time summaries show you the monthly work hour totals of resources for whom you set up capacities.

These entries are mainly used for flextime arrangements but might also be linked to scenarios that involve night differential pay or bonuses for working on holidays.

Set up time summaries (flextime) Resources setup

Fill in the Night Differential Start and Night Differential End fields in Resources Setup if you want to add extra pay for night shifts recorded by a resource.

Holidays

To set up holidays:

1. Choose the Search icon, enter Base Calendars, and then choose the related link. Select a calendar.
2. On the ribbon, choose Actions > Functions > Maintain Base Calendar Changes.
3. Select the Holiday checkbox for each day you want to specify as a holiday.

Causes of absence

For flextime summaries to be calculated correctly, you must ensure that when you fill in the Causes of Absence page, the Ignore for Flextime checkbox is selected for all causes that don't affect time tracking in a negative way. This includes absence due to illness, for example.

Essentially, the checkbox needs to be selected for all causes except for reductions in flextime. A code for reductions isn't strictly necessary—if work hours aren't posted to a job, the overall time available is reduced automatically. However, reductions might need to be recorded for documentation purposes.

Example:
You set up sick leave, vacation, and flextime as causes of absence, with flextime as the only category for which Ignore for Flextime isn't selected. You then post what is shown in the following table.

Day	Daily capacity	Paid time	Absence	Flextime Day
1	8	9.5		1.5
2	8	0	Sick leave	8
3	8	4	Flextime	4
4	8	0	Flextime	8
5	8	6		-2

As said previously, registering flextime absence isn't what causes a reduction. The lack of postings on individual days is.

Additionally, full reductions are given for documentation purposes only, and absence due to vacation or sick leave doesn't affect the numbers.

Starting summaries

To use time summaries:

1. Choose the Search icon, enter Time Summary Journals, and then choose the related link.
2. Record all existing flextime summaries of employees. Each entry must start with the last day of the prior month—such as 11/30/2023—if summaries are implemented on 12/01/2023.
3. When you recorded all summaries, go to the ribbon, and choose Post to copy all entries to the Posted Time Summary Journals.

The last step is crucial, as you cannot create starting summaries if you have already set up individual summary entries for employees. You also cannot reset a summary.

The starting summaries are then posted automatically when you choose the Create Time Summary Entries action on the Time Summary Entries page.

Time summary entries

You can create time summary entries by running the Create Time Summary Entries function on the Time Summary Entries page. To avoid inaccuracies in time tracking, we recommend that you generate these entries at the close of every month.

A time summary entry contains all information required to fill in the Flextime, Night, Saturday, and Sunday and Holiday Summary fields per resource and month.

But whereas a flextime summary is calculated regularly from the times recorded by a resource the prior month, the other fields show mere snapshots of data. This means that they are used for informational purposes only; their contents aren't incorporated into other functions, such as updates of project estimates.

All totals are calculated from a resource's (that is, an employee's) capacity, posted work hours and periods of inactivity, with the system using the calendar and related fields specified in Resources Setup to determine night shift and holiday totals from the hours posted.

Note

Once created, entries cannot be changed.

For later postings (of times recorded or periods of absence), you need to rerun the Create Time Summary Entries function.

Summaries are always created for the month prior to the work date.

Example
Work date = 05/02/2023 = System calculates summary for April 2023.

Corrective postings

To post adjustments to Saturday, holiday, nighttime, or flextime work hours:

1. Choose the Search icon, enter Time Summary Journals, and then choose the related link.
2. Select the resource number of the relevant employee.
3. Fill in the Quantity field. In the Reason Code field, choose a reason.
4. On the ribbon, choose the Post action to post the journal.

For tracking purposes, the relevant journal is then copied to the Posted Time Summary Journals page. This creates an entry combining a resource's latest summary and the data you entered.

Job time journals

Create a time journal template

1. Choose the Search icon, enter Job Time Journal Templates, and then choose the related link.
2. On the ribbon, choose New.

3. Fill in the fields as necessary. For more information, please see the Microsoft Business Dynamics 365 online help (Ctrl+F1).
4. Select a template. On the ribbon, choose the Batches action.
5. You can now fill in resources and their user IDs. If you assigned a journal to a user in User Setup, the correct journal is chosen automatically when you open the journal selection.

Note

A journal must be created for each resource who needs it. If a user cannot assign a time journal, an error message appears.

Only users for whom the Other Res. in Time Tracking checkbox has been selected in User Setup can edit other resources' journals, for example, to post times. When you assign a resource to a journal, the number of the resource is entered automatically on the journal lines.

Note

If employees and their resources are registered on the HR Cockpit, a time journal is created automatically. Although there are other options available—specifically, time sheets and CTC time tracking—every resource should have a journal, as it is the only means by which you can correct time postings.

External resource prices

To set up a price for an external resource:

1. Select the External option in the Type field on the relevant resource card.
2. Enter a Vendor No. so that you can open the Resource Purch. Prices page from the resource or the vendor card.

What external resource prices, resource unit prices and resource unit costs have in common is that they can only be retrieved if the right work type has been specified.

You can specify external resource prices as early as creating budget lines for a job. This is because you can already store basic vendor data for an external resource on a resource card. This data is then copied to a budget line when you enter a resource on it, and a price is determined based on the vendor and work type specified on that line. When you later run the Create Purchase Document function from the budget line, the pricing function enters a suitable price on the document—that is, unless you entered a price manually or selected the Manual Purchase Price checkbox on the budget line, in which case the price on that line is copied to the document instead.

Job Setup

Overview

In Microsoft Dynamics 365 Business Central, business transactions that occur over a relatively long period of time and might involve frequent changes to requirements and expenditures are grouped into jobs. With the help of budgets and line activities, and phase, task, and step codes, you can plan, manage, and invoice these jobs with ease.

At the heart of each job is a work breakdown structure (WBS). The structure is used to track sales and costs and provide the project team with a highly granular view of past, present, and future staff, machine, and material needs. Work packages related to a project can additionally be split into budget line activities, which you can assign as subtasks for specific resources to complete.

Thanks to integrated billing, you can also record the revenues and expenses posted to a job in Sales and Purchasing. However, to work with jobs, you need to set up the functionality first.

Basics

Jobs Setup

This is where you specify number series and default values for jobs.

1. Choose the Search icon, enter Jobs Setup, and then choose the related link.
2. Fill in the fields as described in the following table.

General

Field	Description
Automatic Update Job Item Cost	Turn on this toggle if you want usage costs in job ledger entries updated automatically to match changes in negative inventory adjustments.
In other words, this field determines if cost changes are adjusted when you run the Adjust Cost – Item Entries function. The adjustment process and its results are the same as when you run the Update Job Item Cost batch job.	

Numbering

This FastTab stores the most important number series for managing jobs. To set up a series, use the lookup next to a field or choose Alt + Down Arrow. Both approaches will lead you to the No. Series table, where you can create a new series.

> Note

Number series required for processing jobs, for example, in the purchase, sales, and resource areas, must be selected directly from their setup pages.

Project Management

Field	Description
Job Posting in Quote Status	Turn on this toggle if you intend to post consumption of time and materials as early as the quote stage. That is, the work status on a WBS line can be In Progress or Open while the job is still on Quote.
	Leave the toggle turned off if you want to post expenses only after you set a job to Open on both the job card and the relevant WBS line.
Job Purchase Incl. Inventory	With the toggle turned on, an item is posted to inventory when you post its receipt. This doesn't cover consumption, which must be posted manually at the appropriate time.
	Warning This is an extremely sensitive toggle. Please contact your Business Central partner before changing it.
Dimension Integration	Choose a dimension for which you want a value created and assigned to new jobs automatically. The value will equal the code entered for the job.
Dimension Integration Prefix	The dimension specified previously can be given a prefix in this field.
	Example A job with the number 1000 will show a dimension value of P1000 if the prefix entered in this field is P.
Use WBS Line Dim. as Default	With the toggle turned on, the WBS line dimensions used in job planning are copied to (sales, purchase, and job) documents and to (time, job, and G/L) journals when you assign a unique identifier to a WBS line. This way, you can copy manual dimensions from planning to ledger entries.
	Leave this toggle turned off if you want dimensions entered automatically based on the job number, the relevant work package, and other data, such as the number of a resource or an item.
Use Budget Line Dim. as Default	Works in the same way as the previous toggle, the difference being that the system will copy manually created dimensions from budget lines instead of WBS lines.
Auto PTS Code	Turn on this toggle if you want to use the internal number of a WBS line to designate a phase, task, or step. This might result in a more unique line if a work package is part of multiple WBS lines.
	All new WBS lines must be unique. A line is made unique by combining the codes of a work package, a phase, a task, and a step.

Field	Description
Budget Filter on Time Posting	Sets a filter when you want to link budget lines to a time journal. With the toggle turned on, only resources specified in the job budget can post to budget lines if Budget is chosen as the time posting level on a job card. You must turn on this toggle if you want to use line activities.
Budget Filter on Documents	Sets a filter when you want to link budget lines to purchase or sales lines. This limits postings to items and resources specified in the job budget if Budget is chosen in the Job Doc. Posting Level field on a job card.
Budget Filter in Job Journal	Sets a filter when you link budget lines to job journal lines. With the toggle turned on, only items and resources specified in the job budget can be used to post consumption if Budget is chosen in the Gen. Journal Posting Level field on a job card.
No. Job Journal Doc. No. Check	Turn on this toggle if you don't want the system to check for a document number when you post job journal lines, that is, when you post time spent on a job. **Note** This only applies to postings made by resources. A number is still required when you post items removed from inventory.
Use Job Prices on Sales Doc.	With the toggle turned on, a price entered for a job will also apply to sales documents if the job is linked to a sales line. Turn on this toggle if you want to create quotes and orders both from a WBS and manually by using job-specific unit prices.
Team Filter on Time Posting	Limits the available resources in time tracking to members of the project team. This option is used when the Check Team at Time Posting toggle is turned on for a job.
Strict Team Filter	This toggle expands on the preceding field. With the toggle turned on, users who aren't authorized to post to certain jobs cannot do so even if they fill in the No. field manually. For general jobs, where the Check Team at Time Posting toggle is turned off, there is no team to manage so that all resources can post to the job.
Check Team at Invoice Suggestion	Checks if a user has permission to create invoice suggestions for a certain job. Only users that are part of the project team can create suggestions.

Field	Description
Check Team at Time Release	Before time entries are released, they are copied to a journal in which you can adjust the entries prior to posting. Turn on this toggle if you want the system to check if a user is authorized for this process.
Auto Res. Budget Allocation	Turn on this toggle if you want resource capacity to be determined based on a job budget, that is, have the system distribute planned work in linear fashion between the starting and ending dates of a budget line. With the toggle turned off, you need to trigger the process manually or run the appropriate function. Without allocation, the entire resource capacity is assigned to the starting date.
Default Budget Allocation Period	Specify the default period for distributing project work. This period can be changed again when you run the related allocation function from a budget line. You can distribute amounts on a daily, weekly, or monthly basis throughout the planned duration of a project.
Multi-Use Budget Resources	Turn on this toggle if you want to assign a resource or a resource group to more than one budget line on a WBS line. However, the toggle has no influence over how many activities you can assign to WBS or budget lines. You must turn on this toggle if you want to use budget lines for completing activities. Items and G/L accounts can be budgeted on any number of lines.
Auto Budget Relation at Posting	Establishes a link to a budget line when you post job ledger entries if a link hasn't already been created by a user or a function before posting. The link can then be used for budget-to-actual comparisons on the budget line. A link is only created automatically if a budget line contains a unique type-number combination related to revenues or expenses on the associated WBS line.
Fixed Sales Budget when Ordering	With the toggle turned on, you can set a job to Open without affecting the sales budget of the job's active WBS.
Work Package BOM Calculation	With the toggle turned on, the budget of a bill of materials is multiplied by the quantity on a WBS line if you enter a work package related to the BOM on the budget lines set up for the WBS line.
Confirm WBS	Turn on this toggle to request confirmation when a user attempts to copy

Field	Description
Update from Budget	new budget values to a WBS line after changing the budget and closing the related budget lines. This confirmation dialog only appears when the user sets up a WBS line for storing the budget line total (by selecting the Copy Budget checkbox).
Default Req. Wksh. Template	Specify the template that you want to use when you run the function for creating requisition worksheets from a job budget.
Default Req. Wksh. Name	Specify the worksheet that you want to use when you run the function for creating requisition worksheets from a job budget.
Type Filter to Create Purchase Orders	Specify the default filter that you want to use when you run the Create Purchase Document function from a WBS. In most cases, the default setting, Item, is sufficient. **Note** Users can change the content of this field on the WBS at any time.
Use Purch. Invoice Entries	Turn on this toggle if you want the system to select the checkbox with the same name on the cards of external resources (where you can also clear the field again manually). With the field selected, resource-related purchase documents can only be posted with the help of invoice entries. The toggle is needed when external resources can post times to a job, as purchase receipts might then lead to duplicate postings.
No JLE Posting Date Check	Changing a job ledger entry in fields where this is possible is typically only allowed during the posting period specified in General Ledger Setup. Turn on this toggle to forgo the posting date check.
Adv. Pmt. in Forecast IC	Turn on this toggle if you want to include advance payment invoices when estimating job usage.
Time Comments on Customer Doc.	With the toggle turned on, the Print on Customer Doc. checkbox is selected automatically for each additional comment created in time tracking. Time tracking comments marked in this way are later printed on proof of service statements sent to customers when billing by time and materials. You can clear the checkbox again manually if you want to exclude certain comments from those statements.

Field	Description
Time Sheet Mgt. Approval	Turn on this toggle if you want an employee's time sheet released, that is, checked by a resource (manager) before a batch job can be used to post time entries or job ledger entries from that time sheet.
Time Sheet Posting As	Select a method for posting work hours from time sheets: **Job Time Entry** Requires the project manager to post and release time entries before job ledger entries can be created. **Job Ledger Entry** Posts job ledger entries immediately. This option might affect resource-related evaluations, as no time entries are created by the system. **Time and Ledger Entries** Posts both entries at the same time. Because job ledger entries are posted immediately, the project manager doesn't need to retrieve and release time entries here, although the entries can be used for project evaluations.
Auto Archive Time Sheets Older Than	Enter a formula to define when you want the system to archive time sheets. For example, -1Y means the system will archive all time sheets older than a year. The actual process is performed by the Move Timesheets to Archive batch job in the task queue.
CTC Posting As	Select a method for posting entries from CTC cards: **Job Time Entry** Requires the project manager to post and release time entries before job ledger entries can be created. **Job Ledger Entry** Posts job ledger entries immediately. This option might affect resource-related evaluations, as no time entries are created by the system. **Time and Ledger Entries** Posts both entries at the same time. Because job ledger entries are posted immediately, the project manager doesn't need to retrieve and release time entries here, although the entries can be used for project evaluations.

Field	Description
Post Neg. Time Sheet Qty. as Correction	When you enter a negative quantity in a time sheet, an attempt will be made to post a reversal entry instead. More specifically, the system will search for a reversal entry that matches the number, WBS line, budget line activity, date, and quantity of the job for which the time sheet was created. Alternatively, you can cancel quantities through the time journal.
No Job Accounts	Turn on this toggle if you want to start with the project365 industry solution but don't have a clear idea of what job accounts you'll be using for a certain job. This prevents an error message about non-existent or incomplete accounts when you budget and post to a project. After you created the accounts, and set up the related matrix, you can use a batch job to add the existing ledger entries and budget lines.
Sales Job Budget Sync. Active	Turn on this toggle if you want data synchronized automatically to ensure that certain sales line changes are also copied to project planning.
Sales Job Budget Sync. Error Handling	If you turned on synchronization (see the previous field), you can use this field to specify what you want the system to do if synchronization fails. **Cancel** You receive an error message while the process is canceled entirely, that is, there's no change to the sales line either. Choose this option if you want to ensure the highest level of synchronization between jobs and sales and put the focus on correcting problems in a job first. **Ask** You see an error message asking you if you want to change the sales line. Choose No if you want to cancel the entire process and restore the original line. Choose Yes if you want the sales line changed but not the job itself. At the same time, the problem is logged. **Message** You are only informed about the problem, without synchronization, and the change is only made on the sales line. The issue will be logged, however.
Sales Job Budget Sync. Notification	Turn on this toggle if you want the system to tell you if synchronization was successful. With the toggle turned off, the system doesn't provide feedback to users, except in the form a log entry.

Field	Description
Performance Date Formatting	When you bill services based on time and materials, the invoice includes a service period. This period can have the following format: • [month]/[year] • [month]/[day]/[year] • [month spelled out] [day], [year]
Check Mandatory Job Fields	Turn on this toggle if you want users to fill in certain fields before they can proceed with a job.
Job Completion Reason Required	Turn on this toggle if you want users to specify a reason for setting a job to Completed.
Auto Job vs. (Adv.) Pmt. Plan Check	With the toggle turned on, the system checks if the amounts stated on a job-related payment plan match budgeted sales amounts. Put it another way, the system checks if plan prices differ from those on the WBS. Turning on this toggle, which is only relevant when you bill projects based on invoice suggestions, prevents situations in which the WBS related to a plan was changed (or the line quantity reduced) but the change was never carried over to the plan (in other words, you would invoice too little or too much by using the original plan).
Return Shipments to Job Inventory	This feature only applies to items. When you post a return shipment to a job—that is, when you post negative consumption, credit the project, and then post the item back to inventory—the toggle determines if an item is returned to the general inventory or to the inventory specific to the job.

Measurement

For more information about the fields on this FastTab, see Job Measurement.

Indicators

Used to set up indicators that change color based on job performance.

Field	Description
Budget Indicator Green	Specifies up to which consumption level the light in the Budget field will be green. At higher consumption levels, the light will turn yellow.
Budget Indicator Yellow	Specifies up to which consumption level the light in the Budget field will be yellow. At higher consumption levels, the light will turn red.
Profit Indicator Green	Specifies the margin up to which the light in the Budget field will be green. At lower margins, the light will turn yellow.
Profit Indicator Yellow	Specifies the margin up to which the light in the Budget field will be yellow. At lower margins, the light will turn red.

Time Tracking

Here you can set up your preferred method for recording time in the system. Many companies pick one method for all employees to use.

Nevertheless, we recommend that you leave the job time journals turned on even if you opt for CTC time tracking or time sheets. The journal is still the easiest way for you to post corrections to time entries.

CTC Calendar Colors

Stores colors and styles that are used in CTC time tracking to visualize the progress of time capture on different calendar days.

Set up a user

1. Choose the Search icon, enter User Setup, and then choose the related link.
2. Select a user and choose Edit.
3. Fill in the fields as described in the following table.

General

Field	Description
Jobs Resp. Ctr. Filter	Assign a responsibility center so that users only see jobs that match their area of responsibility. **Note** This filter doesn't apply to time tracking.

Project Management

Field	Description
Resource No.	Specify the resource associated with the user. If the resource isn't an employee, enter a number manually. Filling in this field is crucial, for example, to assigning a resource to a time journal.
Other Res. in Time Tracking	With the toggle turned on, a user can see other resources' time sheets and CTC cards. Turn on this toggle for administrators only.
Plan Own Resource	With the toggle turned on, users with the relevant read/write permissions can schedule their own resources. Usually, only resource managers have these kinds of permissions; other employees can do little more than read entries. Turning on the toggle expands (and at the same time, limits) access to a resource by granting write permission only to the user that is linked to the resource.
Planning Location Code	A resource manager's default filter when handling resource requests.You can clear this filter on the Resource Request page to see all requests made so far.
Resource Manager	Turn on this toggle if the user is a resource manager. Resource managers handle requests posted by coworkers and distribute them among employees with available capacity. A resource manager can see all requests; others only see their own.
Team Filter on Resource Requests	Select a code that you want to set as a filter when you open the Resource Planning page from a resource request.
Planning Department Filter	Select a code that you want to set as a filter when a planner opens the Resource Request page.
You can clear this filter on the page if necessary.	

Specify posting groups

Before you can include a project in your financial reports, you need to specify posting groups and accounts for it.

General Posting Setup

You record WIP and recognize revenues from a project by posting consumption and sales to different G/L accounts in Finance. To set up two of these accounts:

1. Choose the Search icon, enter General Posting Setup, and then choose the related link.
2. Fill in the fields shown in the following table.

Field	Description
Job Sales Adjmt. Account	**(Sales)** In the context of the Post Job Work In Process to G/L batch job, the balancing (P&L) account to the WIP Sales (balance sheet) account. You post to this account income from services rendered but not yet billed during an accounting period.
Job Costs Adjmt. Account	**(Consumption)** In the context of the Post Job Work In Process to G/L batch job, the balancing (P&L) account to the WIP Costs (balance sheet) account. You post to this account items that were consumed during an accounting period but haven't been posted as expenses (through a purchase invoice).

Of course, both accounts are also used when you recognize revenues and expenses by running the Post Job Recognition to G/L function.

Job posting groups

The job posting groups contain other accounts through which you can post project-related WIP and recognition amounts to Finance. To add accounts to these groups:

1. Choose the Search icon, enter project365 Job Posting Groups, and then choose the related link.
2. Fill in the fields shown in the following table.

Field	Description
WIP Costs Account	**(Consumption)** Stores the costs of unfinished jobs.
WIP Sales Account	**(Sales)** The account to which unit prices are credited when you Post Work in Process to G/L and debited when you Post Job Recognition to G/L. When you record WIP, the Job Sales Adjmt. Account from General Posting Setup is used as the balancing account to this account. For revenue recognition, that role is assumed by the Job Sales Account.
Job Costs Account	**(Consumption)** An income account to which unit costs are debited when you run the Post Job Recognition to G/L batch job.
Job Sales Account	**(Sales)** A P&L account to which unit prices are credited when you run the Post Job Recognition to G/L batch job.
G/L Expense Account	Used when posting to job-related G/L accounts. Amounts are credited to the account when job usage is copied to sales lines.
WIP Profit Account	Stores prorated profits according to the percentage of completion (POC) method as defined by IAS.
WIP Profit Applied Account	Contra account to the WIP Profit Account.

For more information, see [Job Measurement](#).

Set up job types

You can use job types as filters on jobs, for example, during measurement. The types are also crucial to specifying job accounts. To set up a job type:

1. Choose the Search icon, enter Job Types, and then choose the related link.
2. Specify default settings as necessary, including for posting levels, internal jobs, and fixed time periods.

Create job templates

Several fields can be filled in automatically when you create a job.

You will want to create at least one template for each type of project you might work on. A template includes basic (and identical) data for setting up a certain kind of job. This data is then copied to new job cards immediately.

1. Choose the Search icon, enter Job Template List, and then choose the related link.
2. On the ribbon, choose New to create a template. Fill in the fields as described in the following table.

General

Field	Description
Code	Specify a code for the template.
Description Description 2	Enter a description that you want to copy to new job cards.
Language Code	Specify a default language. If you don't, the system will use the code that is stored with the customer. This field controls the language used on new sales documents and for descriptions (translations) of item text.
No. Series	Specify the number series that you want to use when creating jobs.
Date Formula Sales Job Acc. Entries	Enter a formula for dates. For example, entering +1M specifies that revenue estimates should be recorded for cost control one month after expected consumption of an item or a resource.
Active Start WBS	Turn on this toggle if you want a new job to start on an active WBS. As the structure doesn't need to be released, you can start posting to the job right away.
Job Type	Choose the type that you want to assign to new jobs by default (see Job Types.
Status	Specify the status in which jobs created from the template should start.
Dimension Integration	Specify the default dimension that you want created and assigned to new jobs automatically.
Dimension Integration Prefix	Enter a prefix to distinguish the dimension integration value stored in the preceding field from the number used for a new job. For example, choosing IT as the prefix creates cost object IT2365 for job 2365.

The remaining fields are described in other project365 help articles.

Lines

On this FastTab, you can set up a WBS that you want to copy to new jobs so that you can specify structural elements such as begin- and end-totals early on. You can store one WBS per template. For more information on how to set up a WBS, see Work Breakdown Structure.

Job budgets

You can also create budget lines for work packages entered on a template WBS. But unlike actual jobs, templates don't include a pricing function. This means that a work package line entered in a template isn't updated when you create budget lines for it.

To set up budget lines:

1. Open a job template.
2. Go to the Lines FastTab and select a WBS line.
3. On the ribbon, choose Line > Job Budget Lines.

For more information about the fields found on budget lines, see [Budget Lines](#)

Specify job accounts

Consumption and sales that you post to jobs are shown on a chart of job accounts. This chart provides you with both cost estimates and analytical tools for monitoring job progress and performance. The accounts available on the chart are specified in Job Accounts Setup.

> Note

When you start using the project365 industry solution but have yet to decide on the structure of your chart, turn on the No Job Accounts toggle in Jobs Setup. This will avoid an error message because of non-existent or incomplete job accounts when you budget and post to jobs.

After you created the accounts, and set up the related matrix, you can use a batch job to add ledger entries and budget lines that already exist. For more information, please contact your Business Central partner.

Chart of job accounts

The account chart is used for cost control and provides you with a detailed view of all job-related revenue and expense accounts. None of them are related to the chart in Finance. To set up the chart:

1. Choose the Search icon, enter Chart of Job Accounts, and then choose the related link.
2. Enter a number and name for the account.
3. In the Account Type field, select one of the options shown in the following table.

Option	Description
Posting	Specifies an account to which you can post.
Heading	Specifies a line of text for structuring a chart.
Total	Specifies a sum derived from totaling job account fields.
Begin-Total	Specifies from where to start totaling account lines. Calculation extends from the Begin-Total to the End-Total field.
End-Total	Specifies the point up to which account lines should be totaled. Calculation starts in the Begin-Total field. The overall sum is shown in the Total field.

1. On the ribbon, select Actions > Indent Chart of Accounts.
2. You are then asked to confirm that you want to indent the chart. Choose Yes.

Comments

Allows you to add information not included in the Job Account card fields. To enter a comment, select a line, and choose Related > Account > Comments on the ribbon. Each comment can have a maximum of 80 characters.

Job Accounts Setup

This page looks almost exactly like a posting matrix in Finance. Here you can assign revenue and expense accounts to general product posting groups. You can then use these accounts to budget and post job usage and sales.

You can specify what accounts are selected for posting with the help of job types or work packages, or both. A job ledger (or budget) entry is then assigned to an account according to its entry type (Sale or Consumption). The following fields stored with all entries are later used to find an account:

• **Gen. Prod. Posting Group**
Shows the general product posting group of a posted resource or a posted item. • **Job Type**
Shows the type selected for a posted job. • **Work Package Code**
Shows the code from a posted WBS line.

Project operations

Project work is typically broken down into different sections called work packages. These packages are then assigned to stages of a project by using phase, task, and step codes.

Work packages

Work packages (packages of services or material) are among the most important components of any work breakdown structure. You can assign budget values to a work package, post to the package, or use it in cost control.

You can also split a work package into subtasks, known as budget line activities in project365.

Each time you enter a package on a WBS, the system copies the same basic data for fields with the same name from the Work Package table. In most cases, you can then change their contents again if necessary.

For more information about work packages, see WBS Lines [WBS Lines](). The following table will describe only those work package fields that you cannot find on the WBS.

Field	Description
Billing Base	Specifies the base for billing a job. This base is used if the work package, that is, the WBS line, is copied to a sales document, such as a quote or an order (with resource being the most common choice here).
Billing No.	Depending on the selected billing base, this field shows the number of a resource, an item, or a G/L account that you want to use on sales lines. Often, a special billing resource and not a person is entered here.
Info BOM Total Cost (LCY)	If a bill of materials has been specified for the work package, this field shows the total unit cost value of that BOM.
Info BOM Total Price (LCY)	If a bill of materials has been specified for the work package, this field shows the total unit price value of that BOM.
Last BOM Recalculation	Shows when the work package BOM was last recalculated.
Use in Resource Planning	Specifies if the work package is available in resource planning. With the toggle turned off, the package contains only material costs.
Budget Type Resource	With the checkbox selected, you can budget the work package on a WBS that includes resources.
Budget Type Item	With the checkbox selected, you can budget the work package on a WBS that includes items.
Budget Type G/L Account	With the checkbox selected, you can budget the work package on a WBS that includes G/L accounts.
Budget Allowed	This checkbox needs to be selected if you want to assign budget lines to a WBS line created from the work package.

Example:

Code	Description	Working type code	Unit code	Type for billing	Billing no.	Billing type
AP007	Training	DL	HOUR	Resource	BILL0001	Time & Materials
AP008	Support (T&M)	DL	HOUR	Resource	BILL0001	Time & Materials
AP009	Introduction	DL	HOUR	Resource	BILL0001	Time & Materials
AP010	Services	DL	HOUR	Resource	BILL0001	Time & Materials

Work package texts

Work packages can include additional text. To add text:

1. Choose the Search icon, enter Work Packages, and then choose the related link.
2. Select a work package. On the ribbon, choose Edit.
3. This opens a page where you can edit the package. On the ribbon, choose Extended Texts.

When you enter a work package with extended texts on a WBS, the texts are copied alongside other data to the relevant line. When you later create sales documents, such as quotes and orders, from the WBS, the texts are copied to these new documents as well. By selecting one of the Print checkboxes on extended text lines, you can specify on which kind of document you want to print the text that you entered.

Alternative sales texts

When you enter a work package on a WBS, the Description and Description 2 fields stored with the package are copied alongside other data to the relevant WBS line, where they can be changed again manually if necessary.

Both fields are also copied to sales lines when you create sales documents. If you, however, want documents to show another description than the one used in-house, you can specify an alternative sales text for the package.

To specify an alternative description:

1. Choose the Search icon, enter Work Packages, and then choose the related link.
2. Select a work package. On the ribbon, choose Edit.
3. This opens a page where you can edit the package. On the ribbon, choose Alternative Sales Texts.

All packages offer a default setting for alternative descriptions and support various language codes for texts relevant to sales. These are then copied to the Description in Sales and Description in Sales 2 fields on WBS lines depending on what language is used for the job.

Work package BOM

For each work package on the Work Packages page, you can specify a simple bill of materials that can be used as the default BOM for detailed planning. This BOM is later copied to the budget lines that you set up for lines containing the package.

Work package info

You can track the consumption of work packages across jobs and document types in the purchasing, sales, and jobs areas with the help of a FactBox. This FactBox indicates how often a package has been retrieved so that you can, for example, identify and delete unused packages. To see the FactBox:

1. Choose the Search icon, enter Work Packages, and then choose the related link.
2. Select a work package. On the ribbon, choose Edit.
3. This opens a page where you can edit the package. On the ribbon, choose Related > Work Package > Info.

Phases, tasks, and steps

Project activities can be divided into phases, tasks, and steps. Additional levels can be set up for work packages on the WBS.

Phases and tasks specify inter-job structures. Steps group all activities specified for a certain job.

Job budget names

You can define several budget names and manage, side by side, several budgets for a job. However, only one of these budgets can be active at any given time. To set up a budget:

1. Choose the Search icon, enter Job Budget Names, and then choose the related link.
2. Choose New to create a name for the budget.
3. Fill in the fields as necessary.

You can also select a default name here and block certain budgets across jobs.

Journal templates

Job journal templates

Every project manager must be assigned a separate job journal. It is enough to use a job journal template named JOB for this.

From the template, you can then create journals for employees who will post to jobs. Creating one journal per project manager and per person responsible for job-related HR matters should be sufficient. For more information, see [Job Time Journals](#).

To specify journals for users:

1. Choose the Search icon, enter Job Journal Templates, and then choose the related link.
2. On the ribbon, choose New to create a template. After filling in the fields, use the Batches action on the ribbon to assign users.

You are then directed to the journal assigned to you when you open the Job Journals page. A user for whom no journal has been created will see an error message.

Job time journals

Employees are assigned to job time journals in the same way as to job journals. The difference is that instead of a user ID, resource numbers are used for the assignment process. These numbers are also added to journal lines when times are recorded.

Job measurement journals

These journals are set up like journals in Finance, which also means that you cannot assign employees or users to them. Creating a template is sufficient here.

Invoice suggestions

These are best created per person to bill. You cannot assign employees or users to suggestions. You need to use the Search icon and go to the Invoice Suggestion page manually the first time you want to create a suggestion.

Create a Job

Overview

A detailed work breakdown structure (WBS) can be a great help when managing jobs in Microsoft Dynamics 365 Business Central.

For this reason, you can enter both a work package code and a group of phase, task, and step codes on the WBS lines of a job. Combined, the four codes not only provide you with a more granular view of your project but uniquely identify each WBS line. As a result, you can enter the same package on more than one line if at least one of the other codes differ.

You can then create budget lines for WBS lines that store work packages and—if you need an even deeper breakdown of project activities—use these budget lines to keep track of tasks assigned to individual resources.

If, on the other hand, you don't want to work with budget lines (that is, with a budget view), you can schedule activities directly on the work breakdown structure. You can also assign a job to a main job. The following chart shows you how jobs are structured within project365:
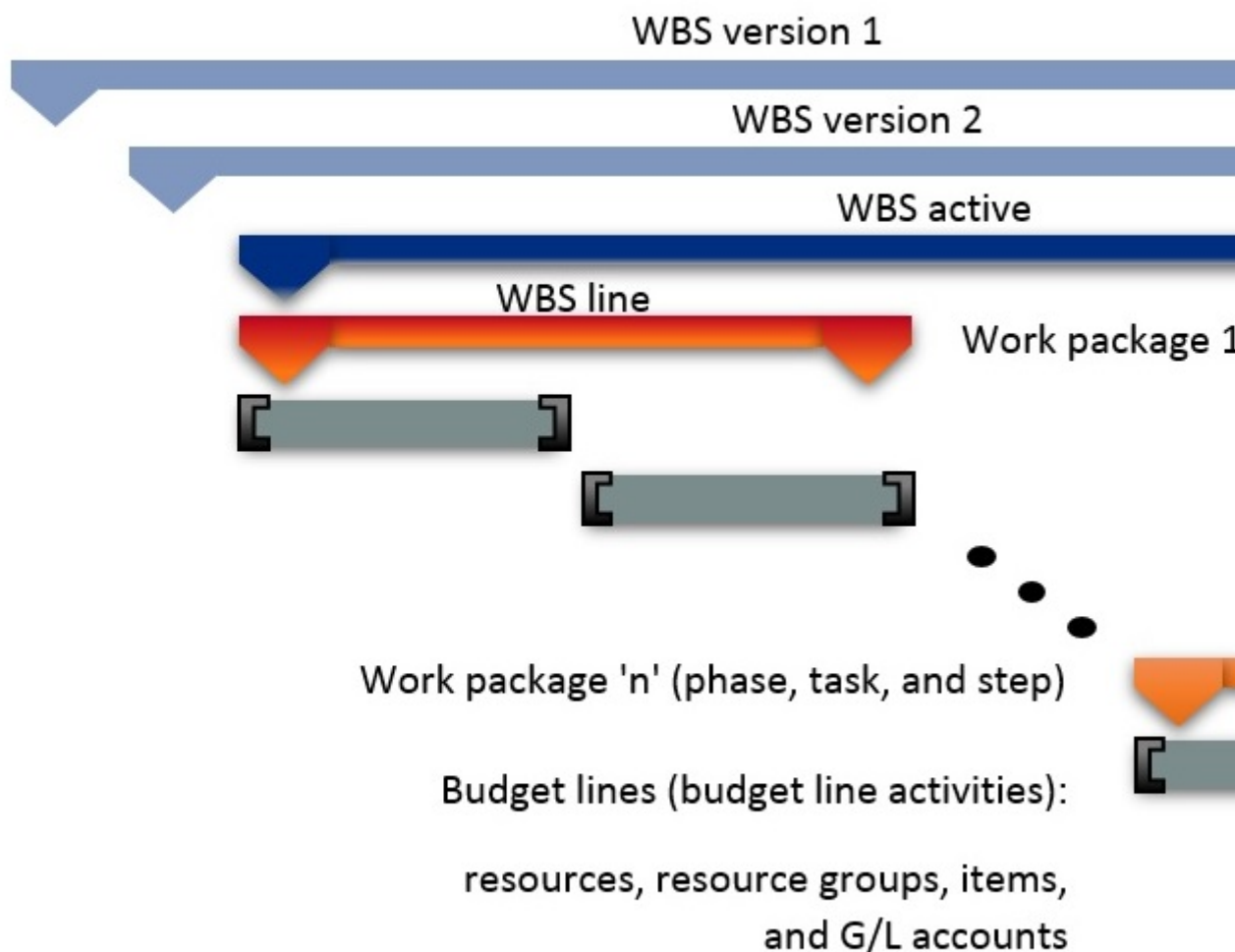
Fill in basic job data

To set up basic job information:

1. Choose the Search icon, enter Jobs, and then choose the related link.
2. On the ribbon, choose New > New to create a job.
3. Fill in the fields as necessary.

See the following tables for more information about the most important fields on job cards. Some are filled in automatically when you use a job template (as noted in the Description).

General

Field	Description
No.	Uniquely identifies a job. You can enter both numbers and letters or have the system assign a number from a series automatically. (This field might be filled in from a job template.)
Customer No.	Shows the number of the customer for whom you want to create quotes and orders.
Sell-to Contact No. (Cust.)	Shows the number of the person or company entered in the Customer No. field. If the job is set to Quote, you can select a contact who hasn't been made a customer yet. As in the sales area, however, a contact must be turned into a customer before a quote can be converted into an order.
Sell-to Customer Template Code	If a job in the Quote stage is set up for a contact who has yet to be made a customer, the code you select here will be used to fill in the fields that are needed to create quotes for the job. The code is also used when you turn a contact into a customer.
Language Code	Copied from the customer, this code specifies the language shown on sales documents created from the job. A code can only be selected if you chose Another Customer or Custom Address in the Bill-to field. You can change the code manually.
Status	All jobs require a status. You can choose between Planning, Quote, Open, and Completed. The status must change in exactly that order. If you created the job from a template, the only status in which you can bill customers is Open. (This field might be filled in from a job template.)
Final Invoice Created	Part of the end stage of a job. Turned on, the toggle confirms you created a final customer invoice so that the job can now be posted to G/L. The project is then set to Completed.
Person Responsible	Indicates who manages the project. When you fill in this field, the job is added to the My Jobs list of the person linked to the selected resource. The system then copies to the job the dimension values entered for this resource in the Dimension Integration field in Resources Setup, allowing you to evaluate cross-job performance. The resource in this field is also used as a filter when time entries are posted to the job journal. This way, a change in who manages the job will only affect new time postings.

Field	Description
Fill-In for Person Responsible	Enter the deputy project manager. This field has no functionality besides providing textual information.
Job Type	Enter a classification code for the job. The type plays an important role in setting up accounts for monitoring job progress and performance. For example, you can use the type to analyze the cost and profit margins of certain types of projects. (This field might be filled in from a job template.)
Use WBS Res. Prices	With the toggle turned on, the resource prices stored on WBS or budget lines are used for pricing. For more information, see About Ressources. (This field might be filled in from a job template.)
Responsibility Center	Like selecting a responsibility center for a sales or purchase document, selecting a center for jobs limits a user's view to projects that fall under the specified area of responsibility.
Blocked	Prevents users from posting to the job in the following ways. **Posting** Blocks postings of both revenues and expenses but permits changes to basic job information and planning data. **All** Blocks both postings and changes to job planning (WBS and budget). **Times** Blocks time recording, for example, in time journals and on CTC cards. Allows postings elsewhere, including in job journals, on purchase credit memos, and on sales credit memos. Also allows changes to basic data and work breakdown structures.

Posting

Field	Description
Time Posting Level	Specifies the level at which times can be posted by resources. This field is used on time sheets, CTC cards, and intercompany orders. **WBS** Hours are posted at the work package level (on WBS lines) of an active work breakdown structure. **Budget** Hours are posted at the budget line level. When you post a time entry, the system also retrieves the related line activity number for use in budget-to-actual comparisons. **Note** When it comes to time postings, the Budget option also posts WBS lines for which there are no budget lines. This is because some WBS lines—such as those to record travel times—are not fine-tuned so that no budget lines are made available for them. (This field might be filled in from a job template.)
Purchase Posting Level	Specifies the level at which costs are allocated to purchase documents. For an explanation of the options shown here, see the Time Posting Level field. (This field might be filled in from a job template.)
Job Doc. Posting Level	Specifies the level at which costs are allocated to a job document, such as a job (vendor) shipment. For an explanation of the options shown here, see the Time Posting Level field. (This field might be filled in from a job template.)
Gen. Journal Posting Level	Specifies the level at which postings are assigned to general journals. For an explanation of the options shown here, see the Time Posting Level field. (This field might be filled in from a job template.)
Job Journal Posting Level	Specifies the level at which costs are allocated in job journals. For an explanation of the options shown here, see the Time Posting Level field. (This field might be filled in from a job template.)
Sales Posting Level	Don't worry if this field doesn't show. It isn't strictly necessary, as every WBS line includes a checkbox (Copy to Sales Doc.) that specifies how the line will be posted to sales.

Field	Description
Check Team at Time Posting	With the toggle turned on, only the project team can post to the job. The project will also be hidden from anyone who isn't a member of the team. This field will become active after you turned on the Team Filter on Time Posting toggle in Jobs Setup. If the toggle is turned off, the job is assumed to be a general job to which all resources can post. (This field might be filled in from a job template.)
Strict Time Budget	With the toggle turned on, resources cannot exceed the time budgeted for them. Attempts to enter more than the budget allows will result in an error message. A crucial factor in this context is the level at which times are being recorded. The WBS budget is used as the baseline if hours are recorded on WBS lines, that is, for work packages. If they aren't, the system uses the values on budget lines (the line activities) when comparing budgeted amounts against the amounts posted and times captured but not yet posted. This field might be filled in from a job template.)

Invoice and Shipping

Field	Description
Bill-to	Shows the customer whom you want to invoice. This customer can be different from the person or company entered in the Customer No. field. The Bill-to field also determines the invoice currency that is copied to the job. However, you can still change the currency manually if necessary.
Bill-to Contact No. (Cust.)	Shows the customer contact to whom invoices are sent. This contact can be different from the person or company entered in the Customer No. field. If a job is set to Open, you can also choose a contact who isn't a customer yet.
Payment Terms Code	Filled in automatically based on the Bill-to field but can be changed manually. The code in this field is also copied to sales documents created from the job.
Gen. Bus. Posting Group	Filled in automatically based on the Bill-to field but can be changed manually. The group in this field is also copied to sales documents created from the job.
VAT Bus. Posting Group	Filled in automatically based on the Bill-to field but can be changed manually. The group in this field is also copied to sales documents created from the job.
Payment Plan Level	Creates a payment plan for an entire job or for individual WBS lines.
Ship-to Code	Contains the code of a shipment address that you want to store with the customer.
[Other Ship-to fields]	These fields show the exact address for job shipments. Nearly all of them can be changed manually.
Invoice Currency Code	Specifies the currency used to bill the job. Prices can then be budgeted on a WBS in local and in invoice currency. All sales documents, including follow-on invoices, however, only show amounts in the invoice currency. **Note** As both currencies are already in use when you budget prices for time and materials entries, you can no longer change this currency after job ledger entries have been posted.
Invoice Currency Date	Specifies the date used to convert budgeted prices into the invoice currency.

Duration

Field	Description
Starting Date	Indicates the date on which work on the job started. This field must be maintained manually.
Fixed Starting Date	With the toggle turned on, planning cannot occur before this date.
Ending Date	Indicates the date on which work on the job is expected to end. This field must be maintained manually.
Fixed Ending Date	With the toggle turned on, you can no longer schedule something on the WBS after this date.
Ending Date on Order	Shows when the job was set to Open. This makes it possible to check later if the originally planned ending date changed throughout the duration of the job.
Creation Date	Shows the date on which the job was created.
Closing Date	Shows when the job was set to Completed.

Planning

Field	Description
Planning Direction	Specifies the planning direction for automatic planning.
Sales Job Acc. Entries From	When you monitor project progress and performance, job account entries represent the budget of a job, with time and materials entries time-linked to this budget. Sales budget values, on the other hand, can be linked to either the budget or a payment plan. Choosing Payment Plan copies the plan stored with the job to cost control in the form of a revenue plan. Choosing Job Budget in this field copies the sales budget instead. You can then use the following two fields to decouple sales from consumption over a certain period.
Base Sales Job Acc. Entries	If you choose Job Budget in the preceding field, you can select in this field whether you want the system to use the expected date of consumption to create analysis entries or a formula based on that date.
Formula Sales Job Acc. Entries	If you choose Job Budget in the Job Sales Job Acc. Entries From field, fill in this field with a formula to decouple budgeted sales from consumption. For example, if you're expecting an item to be used in June, the revenue generated from it can be moved to July by using the formula +1M. The formula applies to an entire job; you cannot decouple consumption for individual entries.
Active Job Budget Name	Shows the name of the job budget used for the active WBS.
Active Version No.	Shows the version number of the active WBS.
Fixed Time Period	With the toggle turned on, times posted by resources are checked against the periods specified on the WBS or for the budget line activity (depending on which time posting level you selected). If CTC cards are used to post time spent on jobs, the check is performed when a card is released.

Field	Description
Cost Status	This field, set by the project manager, shows the job's cost performance. It is part of multiple role centers, such as Project Accountant. The system uses the following colors to indicate performance: • On Budget = Green • Warning = Yellow • Alarm = Red
Time Status	This field, set by the project manager, shows the amount of time spent on the job. The system uses the following colors to indicate whether projects are on track: • On Time = Green • Warning = Yellow • Alarm = Red
Scope Status	This field, set by the project manager, shows how the job is progressing. The system uses the following colors to indicate if projects are on track: • In Scope = Green • Warning = Yellow • Alarm = Red

Internal Information

Field	Description
Cause of Absence Code	Specifies for special jobs to which codes users can post inactivity.
Last Date Modified	Shows when the job was last modified.
Job Template Code	When you create a job, you can select a job template to have several fields filled in automatically. For more information, see Job Templates.
Copy WBS From Template	Specify from which job template you want to create the WBS. This field is filled in automatically with the template used to create the job. You can choose a different template in this field after you set up a job but before you create a WBS.

Dimensions

Field	Description
Global Dimension Code 1	Specify a global dimension that will be posted to the lines.
Global Dimension Code 2	Specify a second global dimension that will be posted to the lines.
Shortcut Dimension 3	Specify a third dimension that will be posted to the lines.
[Other fields]	All these fields contain other shortcut (default) dimensions from the Dimensions table. Fill them in if you want to use certain dimensions and values from the standard table as the default for making postings that include this job. For more information about dimensions, see the Microsoft Dynamics 365 Business Central™ documentation.

Job Billings

On this FastTab, you can specify if and how you want proofs of services to be printed when you bill work based on time and materials.

All fields on this tab also show up on sales documents such as orders and invoices. The values in these fields are copied there from the job card.

You can, however, edit them again in the sales area.

Field	Description
Print Attachment	With the toggle turned on, an attachment—which provides proof of services rendered—is printed alongside an invoice. Leave the toggle turned off if you want users to decide whether to print the attachment.
Print Hours Worked	With the toggle turned on, documents show both the services rendered and the hours spent providing those services.
Print Not Billable	With the toggle turned on, documents show services that aren't billed.
Print Grouping	Specifies according to which criteria you want to group services rendered: • Resource • Resource/Line Activity • Line Activity • Line Activity/Resource
Print Document No.	Turn on this toggle if you want printouts to show document numbers—for example, from purchase invoices—together with the services rendered.
Print Item Lines	Turn on this toggle if you want item lines printed on attached documents. Proof is often only requested for services.
Print Resource Name	With the toggle turned on, attachments show the names of employees who worked on the project. Leave the toggle turned off if you want proofs of services to show only the resource numbers and descriptions of activities.

Intercompany

Field	Description
No. of IC Partners	Specifies the number of IC partners to which the job was sent.
Source IC Partner Code	Indicates if the job was created by another company and then copied from there.
Source IC Partner Job No.	Shows the number given to the job by the company that set up the project. This field is blank if the job wasn't created by another company.
IC Review Status	Jobs transferred from other companies must still be processed by using the IC Review action. This field shows if the review has already occurred.
IC Review Res. Prices Open	Indicates if new resource prices were transferred from a partner and require review.
IC Review WBS Lines Open	Indicates if new WBS lines were transferred from a partner and require review.
IC Review Budget Lines Open	Indicates whether new budget lines were transferred from a partner and need review.

Job status

The status options are crucial to determining the next steps you need to take when managing a project.

Planning
Preliminary estimates can be created. You can also specify the job structure, that is, you can choose work packages and phase, task, and step codes. You can then add budget lines to WBS lines of the work package type. You, however, cannot post anything at this point. Strictly speaking, this status isn't required, and most jobs start on Quote.

Quote
Services can be offered to customers. Preliminary estimates are again possible as well. You can also change the structure and budget of the job.

However, unless the Job Posting in Quote Status toggle is turned on in Jobs Setup, you still cannot post anything to the project.

Open (=Order)
When the job is set to Open, you can record and post times and purchase costs and use sales invoices and credit memos to post revenues. WBS lines can also still be changed at this point. And if you didn't turn on the Job Posting in Quote Status toggle in Jobs Setup, this is the only project stage in which you can post something.

Completed
You can no longer edit the job structure and budgets. This status is used to perform post-job calculations. Actual job costs can then be compared to budgeted amounts. You cannot post to completed jobs.

Create a job from a template

There are two ways to create a job from a template:

1. Choose the Search icon, enter Jobs, and then choose the related link. On the ribbon, choose New > New. Alternatively, open a job card and—on the ribbon—choose New.
2. Go to a job card or the job list. On the ribbon, choose New > Walkthrough.

Both methods are explained in the following.

Use the New action

Choosing the New action on the job list or card creates a new record with a blank No. field.

You can now enter a number from a series, or you can exit the field.

Exit the field. You are asked if you want to use a job template. Choose Yes and then choose a template so that a number can be assigned automatically.

The template will also fill in multiple fields on the new job card. The rest needs to be filled in manually.

Additionally, if the Check Mandatory Job Fields toggle in Jobs Setup is turned on, the job will be blocked until you entered something in all fields required for new projects. For more information, see Mandatory Field Check.

Use the wizard

Choose the Walkthrough action on a job card or the job list if you want help in setting up a job.

A wizard will then guide you through the steps required to fill in basic job data. This includes when the project is set to start, who will manage it, and who the customer will be.

For the wizard to work, you need a job template. At the end of the process, you are asked if you want to import the work breakdown structure stored with the template. You can forgo this step if you want to add the WBS later.

Edit jobs

Not every field can be changed all throughout the life of a job. For example, you can no longer choose another customer after revenues have been posted to a project.

Changes in dimensions can also lead to inconsistencies after you posted to a job. As job ledger entries are unaffected by those changes, an analysis by dimensions might no longer produce accurate results.

If the Check Mandatory Job Fields toggle in Jobs Setup is turned on, you must select the Edit Job action (found on job cards) before you can alter information related to a job. Other users will then be blocked from editing the project.

Delete jobs

You can no longer delete a job to which you have posted something, for example, job ledger or job time entries. The system also checks for cross-references to document lines before deleting the project.

Job responsibility centers

You can assign responsibility centers to jobs just like you can to sales and purchase documents.

To assign a center to a job:

1. Choose the Search icon, enter User Setup, and then choose the related link.
2. Choose a code in the Jobs Resp. Ctr. Filter field.

If you fill in one of the other fields but leave the Jobs Resp. Ctr. field blank, you will see only sales, purchase, or service documents associated with a particular center but all jobs with and without a center.

The Job Resp. Ctr. Filter affects all pages related to a job and cannot be changed by users on those pages. The filter can also be set on some cost control reports.

> Note

The responsibility center filter is unavailable for time tracking, given that members of one center might work on jobs of another. You can still restrict the selection by using the project team feature.

However, because of the special nature of job-related pages, users will not be able to open the job card or view other data of a project from time tracking.

Advertising groups

Extended texts that you enter for an advertising group are copied to a job if the group is set up as a general-purpose group or if it has been assigned to the customer of the job. This works in much the same way as when you copy extended advertising group texts to sales documents.

You use extended texts to store general information such as notes on trade shows, special offers, and company holidays.

Selected actions explained

Create WBS from Job Template

Creates a work breakdown structure for a job from the template stored in the Copy WBS from Template field. This field is filled in automatically together with the Job Template Code field when you create a project from a job template.

You can no longer choose this action when you have set up a WBS for a job.

Create Interaction

Creates an interaction. This function mostly relates to customers and their contacts but might also cover marketing campaigns.

An interaction can be tailored to a specific job and work package.

Update Addresses

Unlike job shipment addresses, bill-to and sell-to addresses cannot be changed on job cards.

If you need to update them, run this function.

Copy Job to IC Partner

Copies a job to an intercompany partner. This function is used to review a job transferred by an intercompany partner.

Create User Task

Creates a user task associated with a job.

This function uses the Related Table and Related Record fields to connect a task to a job.

Job Dimensions

The following options are available if you select Dimensions on the job list; else, the associated dimensions can be viewed on the job card.

Dimensions-Single
Shows the dimensions entered for the selected job. You can also enter new ones or change and delete existing dimensions here.

Dimensions-Multiple
Shows the dimensions that have been filled in for the selected jobs. Also shows the dimension value codes, which are the same for identical fields.

Statistics

Shows the budgeted and actual amounts stored for a job, including budgeted values on the WBS.

Comments

Available for entering comments. These are used internally within a company and aren't copied to subsequent documents created from a job.

Beginning and ending text

Beginning and ending texts are copied to sales documents created from a job and can be printed there as well. As the name implies, beginning texts are shown before, ending texts after sales lines on printouts.

Online Map

Opens the map service that you specified in Online Map Setup to show where a job is located.

Sales doc. job budget change log

Shows a log of all sales document changes copied to jobs.

Interaction log entries

Shows a list of logged correspondence, such as printed cover sheets or sales orders, letters sent and received, phone calls made, and meetings held. Entries are filtered based on the page on which you selected the action. For example, if you select the action on a job card, the log contains all correspondence logged for this specific job.

User tasks

Shows all user tasks associated with a job.

Documents

Shows all documents available for a job. Purchase and sales documents are listed separately, as are open and posted documents.

To view a document, select one and then choose Show on the ribbon. Alternatively, use the lookup on the selected line.

Opportunities

Gives you access to opportunities that were automatically or manually linked to a job through a sales quote.

Steps

Used to manage job-specific partial activities. Steps are set up for every single job, whereas phase and task codes are the same for each of a company's projects.

Contacts

Used to enter information about the people and companies you're expected to be in frequent contact with during the duration of a job.

When you set up a job, the system enters the selected customer on the Job Contacts page automatically.

Project Team

For more information, see [Project Teams](#).

Budget line activitie

Shows work package-related activities at the WBS line or work package level. For more information, see [Budget Line Activities](#).

Project IC Partners

Shows a list of all IC partners related to a job. For more information, see [Intercompany Work](#).

Job measurement

Shows the options for measuring job progress and performance.

For a true representation of a company's scope of services in accounting, revenues and expenses must be compared from period to period.

History

Shows job ledger entries, time entries, and posted invoice entries.

Payment plan

To specify under which conditions and at which times you want to invoice a job, go to the relevant job card and, on the ribbon, choose Related > Job > Payment Plans > Payment Plan.

Billing can include fixed partial amounts or a percentage of the total. You can also invoice by milestones. Plan entries are used when you create invoice suggestions.

Resource prices

Whereas item and resource costs are maintained independently of a specific project, the unit prices for items, resources, and other expenses (overhead) can be stored for each job individually.

Unit prices can be set up for items, resources, and G/L accounts. For each, you can enter a distinct unit price or specify a surcharge on unit costs in percent (=unit cost factor). You can also enter a percentage-based line discount.

Additionally, resources can have different unit prices depending on the type of work being performed.

As for unit costs, they aren't typically maintained for G/L accounts. But you can still store costs you would typically expect for them on the Job G/L Account Prices page. This can be useful in budgeting a project.

You can also specify resource prices per job and IC partner. When a project is later transferred to a partner, the prices are copied to the partner's Job Resource Prices page. When you then review the transfer, they are assigned to the budget fields on copied WBS lines.

Likewise, they will be added to the times posted by IC partners so that the partners can later bill their services at agreed-on prices.

Planning

Includes all options for job planning. For more information, see WBS and Scheduling.

WBS (Work breakdown structure)

Work breakdown structures divide a job into individual stages. They are used to plan, budget, manage, and monitor jobs. A WBS can be created from a stored job template and customized.

Budget line list

Lists all budget lines created for a job.

Budget line activities overview

Lists line activities (=budget lines set up for resources and resource groups) by work package.

Budgeted resources

Lists all resources and resource groups set up for a job. Entries are aggregated per resource or resource group.

WBS scheduling

Used in project planning. For more information, see WBS Scheduling.

Budget vs. actual

Performs a budget-to-actual comparison based on current job data.

Reports

Shows you a list of job reports. As a rule, these are filtered based on the current job.

Main jobs

Main jobs sum up multiple projects. They are essentially a higher-order category. To see a list of all main jobs:

1. Choose the Search icon, enter Main Jobs, and then choose the related link.
2. On the ribbon, choose Related > Main Job and one of the following actions.

Statistics

Shows a budget-to-actual comparison for all jobs assigned to the main job.

Comments

Used to enter notes about the main project.

Documents

Shows all documents for jobs related to the main project.

Budget Line Activities

Shows the line activities that have been set up on the work breakdown structures of jobs related to the main project.

Project teams

You can create a project team per job. To set up a team:

1. Open a job card.
2. On the ribbon, choose Related > Job > Project Team.

Project teams are formed by combining resources. A resource can be assigned to a job only once.

In the Job Title field, choose Project Manager, Deputy Project Manager, Secretary, Subproject Lead, or leave the field blank.

A project team is changed or amended when you:

- Enter a project manager on a job card.
- Fill in a deputy manager on a job card.
- Enter a subproject lead on a WBS line (=work package).
- Set up a resource budget line (=line activity).

In each case, a resource is added to the team and, if necessary, the role of (deputy) project manager is assigned or changed. The Time Posting checkbox is selected for all members added automatically to the team.

When a team member is added as project manager, deputy PM, subproject lead, or secretary (by a user or automatically), the Invoice Suggestion checkbox is selected as well. Besides providing details about members, the project team feature governs access to:

- Time entries (to post to a job)
- Job ledger entries (to release posted times)
- Billing (to create invoice suggestions for a job)

Time entries

To control the posting of times through project teams, you must:

1. Turn on the Check Team at Time Posting toggle so that only certain resources can post to a job.
   With the toggle turned off, all resources can post to a project, as it is considered a general-purpose job.
2. Maintain a project team after turning on the Check Team at Time Posting toggle.
3. Set up resources who post times to a job as project team members and select the Time Posting field for them on the Project Team Setup page.
4. Turn on the Team Filter on Time Posting toggle in Jobs Setup.

   This ensures that the filter on the job list in time tracking is tailored to the relevant resource (=user) and lists mainly jobs for which the resource has been authorized.

   It also shows the jobs to which all resources can post. If the toggle isn't turned on, an employee can see all projects. A check against the project team will only be carried out later, during posting.
5. Turn on the Strict Team Filter toggle in Jobs Setup.

   This ensures that when a job is set to Check Team at Time Posting, but a certain resource isn't part of the project team, the related user can't enter a job number (that is, without using the jobs list) in time tracking.

   Any attempt to post resource hours to jobs for which the user hasn't been set up will then prompt an error message and posting will be blocked.

Billing

To control which resource is allowed to start a billing proposal for a project, the following must be set up:

1. The general setup in the Proj.team field at Abr.proposal in the project setup must be set.

2. There must be at least one entry in the Project Team table for the project, otherwise each resource may perform billing!

3. Each resource (user) that is to create billing proposals for a project must be created as a project team member and the switch in the Billing proposal field must be active.

   Note

During the check, the resource is matched to users who are part of the project team to determine if a user has permission to invoice the job.

If the job is part of the team filter but the current user isn't authorized to bill the job, a message appears when an attempt is made to create a suggestion, noting the lack of permission. The user can then display the jobs blocked for posting.

Resource teams

Not unlike a template, the resource team page allows you to add multiple resources to a project team at the same time.

1. Choose the Search icon, enter Resource Teams, and then choose the related link.
2. Choose New on the ribbon to create a resource team, and then choose New > Members to add members to the team.
3. To remove a member or an entire team, use the Delete function on the pages.

When you add a resource team to a team set up for the job, a note about the origin of each member of the resource team will appear on the relevant project team lines.

My Jobs and profitability chart

The My Jobs tab in the Project Lead role center can be maintained manually. But the tab is also filled in automatically when you enter a resource as a Person Responsible (that is, as the project manager) on a job card.

Related to the My Jobs tab is the Job Profitability chart. This chart shows all the jobs listed under My Jobs unless their Exclude from Business Chart field is filled in.

WBS and Scheduling

General

In the following, you will be introduced to project planning. It will be shown how a project can be structured and how plan values can be stored.

In addition, it is made clear how capacities can be allocated to the individual planning levels, as well as the target/actual comparison based on this.

Work breakdown structure (WBS)

The structure of a project is displayed in the work breakdown structure (WBS). Via the call "Work breakdown structure" in the menu ribbon of the project map or the project overview (for the selected project) an overview of the WBS assigned to the project can be called up.

Via View the respective version can be opened.

Plan values can be entered on work packages (WBS lines). These work packages can in turn be individualized and/or classified by the activities (main, sub and partial activities). Thus, an infinite number of structuring options can be mapped. Only by combining the work package code with the three possible activity codes does a WBS line become unique within a work breakdown structure. This means that if a work package code is used more than once in a WBS, these WBS lines must be individualized by means of an activity code. Which of the activities are used is a purely organizational question. However, this can also be solved automatically by setting up the field Auto activity code in the project setup. Individual WBS lines can in turn be fine-tuned with budget lines. Using budget tasks, WBS lines can be divided into many subtasks and assigned to individual resources for processing.

Each structure plan consists of the WBS header (General info tab) and the WBS lines. Several WBS can be managed per project.

Work breakdown structures can be established in the following ways:

- Using the project function Create WBS from project template
- Using the PSP function Copy PSP from another project (also partial copy)
- Manually erect individual PSP lines
- Transfer of entire blocks from a project template

Project PSP head

The "Project WBS header" consists of the project number (field "No." of the project), the project budget names and the version number. The WBS is managed via this combination. Several WBS can be created and managed per project.

The "General" information tab contains basic information.

Field	Description
Project Budget Name	The project budget name is selected from the stored project budget names. Here there is a marking which project budget name is preset by default. An infinite number of WBSs with different or the same project budget names can be created per project. A separate version number is incremented for each project budget name.
Version no.	The version number of the respective PSP is automatically assigned consecutively by the system.
Description (project)	The "Description (Project)" is taken from the "Description" field from the project.
Description	The "Description" field can be assigned individually for each WBS.
Locked	A PSP can be locked to the application via the "Locked" field.
Sales budget Fixed	With the field "Sales budget fixed" only the sales budget is fixed, cost prices can still be changed. This does not mean that other budget lines can be added, because they automatically bring sales prices. The sales budget fixation is meant to ensure that after the customer has placed an order, the sales amounts will not be changed, but cost prices that are not yet fixed can be changed at any time afterwards. Via the "Fix sales budget on order" facility in the project setup, this field can be set automatically when the project is set to order status.
Active	Which PSP is currently valid is controlled by the "Active" switch. If the WBS is currently valid, the switch is activated. Only one WBS can be active per project. Only released WBS can be marked as active WBS.
Budget status	The budget status indicates whether the WBS including the planned values is "under review", "released" or "rejected".
Released from / on	These fields indicate who released the WBS and when. Postings to a project and to the active WBS can only be made in the "Released" status.

Information register PSP lines

In the WBS lines, the project is created according to certain structuring aspects. It is often useful to consider logical processes and to divide them into individual areas. With the outline options, a WBS can also be created according to its project phases.

The outline types available are "Blank line", "Heading", "From-total", "To-total" and "Total". Block is not an outline, this is an element that copies an entire block from a project template into the current WBS.

A from-total is terminated by a to-total and forms a block with it, which contains totals in the to-total row. Several from-tototal blocks can be nested within each other. The outline type "Sum" is intended for the formation of a total sum. This is always formed from a heading. The combination heading - total cannot be nested.

Only work packages can be budgeted and later posted to.

The most important fields of the PSP lines are explained below:

Field	Description
Position number	In this field the positions of the work breakdown structure are numbered consecutively, i.e. after the work breakdown structure has been created, the positions can be numbered consecutively via "Actions" > "WBS functions" > "Execute position numbering". However, the field can also be filled manually.
Type	The type defines the characteristics of the WBS line. Value-related lines are only possible via the "Work package" selection. The following options are available in this field: **Empty:** is used for text-only lines. **Work package:** means that a work package can be selected for the project WBS line at the "No." field. **Headline:** means that a heading can be entered in the description field, which will then be printed in bold type **From-Sum:** means that all numbers and amount fields are summed up starting from this line. **Bis sum:** means that in this line the sum of all amounts is shown. The summation is done from the line with the type FromSum . From and to totals can also be nested within each other. **Sum:** means that a total sum can be formed. In this case, the values from the heading to the total are added together. Totals cannot be nested. Note: In order to perform the summation, the position numbering must be performed. **Block:** is a special element and is used to insert an entire block from a project template at the current position in the WBS.
No.	Refers to the selected type. Can only be used for value-related lines (type = work package and block). Here, a selection via a lookup is possible.
Start date	Start date of the WBS line, in particular also of the work package. Is preset by default by the start date of the project. A manual entry can be made in this field by the user.

Field	Description
End date	Planned end of services of a WBS line. By default, is preset from the end date of the project. There can be a manual entry in this field by the user.

Here you define how the services of the work package are charged to the customer. You can choose from the following options:

Empty:
identical function as "without calculation"; used for the structure lines (headings, from and to sum).

according to cost:
This WBS line is settled according to expenditure. In the Invoice Suggestion, the booked actual costs (e.g. project times), which have not
yet been invoiced, are proposed. For each project item, a billing quantity can be defined that differs from the actual effort.

Fixed price:
This WBS line is billed in the fixed price as soon as a consumption has been posted. The specified fixed price is suggested in the
Invoice Suggestion. For partial payments, the system proposes the difference.

Without calculation:
This WBS line is not invoiced. No amount is proposed for invoicing in the billing proposal.

Milestone:
A milestone is defined in this WBS line. Billing is based on a fixed price, which is oriented to a milestone plan. The milestone plan is stored in the payment plan of the project. The payment plan line is only taken into account in the billing proposal when a check mark is placed in the "Milestone reached" field there. The milestone plan can be defined per WBS line or for the entire project. In this case, the "Milestone billing" field must be set on the project and the payment plan level must be set on Project.

Progress:
This is also an accounting according to fixed price. The project progress achieved in the WBS line is used as an evaluation. For this purpose, the Invoice Suggestion evaluates the "Percentage of completion" field in the WBS line. The proposed settlement amount is the proportional sales amount depending on the percentage of completion, taking into account amounts that have already been invoiced.

Settlement type

RK Flat Rate:
This is a lump sum for travel expenses. The prerequisite for this is the use of COMSOL's travel expense module. The following must be set up for application: The WBS line, which is defined as RK flat rate, must have the VK price agreed with the customer in the same field. Planning is not necessary. There may well be other work packages in the WBS to include the costs from the travel expenses module. However, these should be set up to "without calculation" unless, in addition to the flat rate, e.g. the travel kilometers are to be settled "according to expenditure". When the travel expenses are posted in the COMSOL module, the costs are posted to the travel expense work packages and, in addition, a project item without a cost amount is posted to the RK flat rate work package with the RK flat rate. When settling with the Invoice Suggestion, only this flat rate per trip is proposed for billing.

Field	Description
Ignore number plan	With this field a WBS line can be uncoupled from the settlement control by the project payment plan. This means, for example, that despite a fixed payment plan for the entire project, the travel expenses incurred on an ongoing basis can be settled permanently according to the actual expenses incurred with the Invoice Suggestion. During the final settlement, the already settled costs are of course no longer taken into account. This check mark is only relevant if the payment plan level has been set to Project and there is actually a payment plan.
Suspend billing	With this check mark, a WBS line can be temporarily removed from the payroll without having to change the payroll type. This line will then not be suggested for billing by the billing proposal. This check mark is used for billing by milestone.
Transfer to VK document	Here you can define which values are transferred to the sales documents. You can choose from the following: **PSP line:** here the data and values of the PSP line are taken over. **Budget lines:** Here, the data and values of the budget lines defined for a WBS line are transferred to the sales documents. **Do not take over:** these lines are not transferred to sales documents. Often these are informational or already transferred WBS lines.
Billing integration	The billing integration is used to control fixed price items during billing in the billing proposal. The options in this field are used to show the billing proposal how the WBS line was transferred to the sales document. This way the billing proposal knows on which level (WBS line, budget lines) it has to search for connected sales order lines to check them after billing is complete. In principle, this information is already in the "Copy to sales document" field, but this field is also used for filtering when creating supplementary orders. In order to create a supplementary order with the "Create sales document" function only with the new WBS lines, the option in the "Copy to sales document" field can be set to "Do not copy". This would mean that the necessary information for settlement would be lost. For this reason, the "Billing integration" field is automatically kept in sync with the "Adopt to sales document" field, unless the option changes to "Do not adopt". The "Settlement integration" field itself cannot be changed by the user.

Field	Description
Status	The Status field is used to determine whether a WBS line is still in the quotation status or already in the order status. This field is necessarily related to the Status field from the project header. If the status in the project is set to Order, the status in the WBS lines also changes to Order. If the status of the project is set to Planning or Quotation, the status of the WBS line cannot be set to Order. If an order is generated from a quotation in the sales documents, the status of the project as well as the status of the WBS lines is set to order. The work package lines must be filled with a value. If a line is still in the status offer, no effort postings are possible.
Work status	This status field can be used to define the status of the individual work packages. In terms of function, only the "in progress" status allows times to be posted; other project consumption (purchasing or stock withdrawals) can be posted in any work status. The other statuses differ only in the information content for the project manager. They have no special function. The work status can only be set to "in progress" if the status is set to "order". You can choose from the following options: **Empty:** for structure lines (heading, from and to sum) **Open:** WBS line is entered, but still open for editing. **In progress:** PSP line can be edited. **Deferred:** WBS line is recorded. For project-related reasons, it is currently on hold. **Finished:** the services of the PSP line are finished. **Decreased:** The services of this WBS line are accepted. **Cancelled:** The work package created here was cancelled for project-related reasons.
Fixed	If a check mark is set in the Fixed field, the corresponding WBS line is fixed. Budget values can no longer be changed. However, postings are still possible. When the checkmark is removed again, changes are possible again.

Field	Description
Disposable	The field Plannable defines whether articles of the associated budget lines should be included in the purchasing process. The default setting of this field is passed on to the budget lines and can also only be used for budget lines with the type "Article". If a check mark is set here, the system checks to what extent the stored articles are available or until when these articles are available via an order process.
Main activity code	Outline level of work packages already described. The main activity selection is defined across projects. To view and select the main activities set up in the Main Activity table, navigate to the corresponding table using the Lookup button to the right of the field.
Underactivity	Outline level of work packages already described. The sub-activity selection is defined across projects. To view and select the subactivities set up in the Subactivity table, navigate to the corresponding table using the Lookup button to the right of the field.
Sub-activity	Outline level of work packages already described. The sub-activities are defined on a project-specific basis. You can define your own sub-activities for each project. To view and select the subactivities set up in the Subactivity table, navigate to the corresponding table using the Lookup button to the right of the field.
Budget adoption	With the function "Transfer value from budget", the sum of the cost prices and sales prices from the associated budget are transferred to the respective WBS lines. If this is not to happen for a WBS line, then the check mark for this field must be removed. This deactivation is intended for WBS lines that are not budgeted but planned directly on the WBS line. In this case, the sales price and cost price from the settlement resource of the work package are used and multiplied by the quantity or settlement quantity on the WBS line.
Description	Specification of the description of the individual WBS line. Line types such as headings, from-total and to-total are displayed in bold; work package lines are displayed normally. When a work package is selected, its description is preset. It can be overwritten at any time.
Percentage of completion %	The project manager can manually enter the project progress (percentage of completion) per WBS line. This entry has an effect on the POC of the entire project in the statistics. Of course, it also has an effect in the target/actual comparison when calculating the earned value and the variance. When billing by progress, the billing proposal determines its billing proposal based on this percentage.
Consumption progress %	Automatic determination of how far the consumption of the budget has progressed. Consumption progress = Consumption (cost amount) * 100 / cost amount Manual revision of the field is not possible.

Field	Description
Task progress %	If budget lines have been defined for the work package, which are used and posted as budget tasks, the employee can indicate how far this task has progressed via the project time confirmation. If several tasks are stored within a work package, these tasks are weighted. This average value over all tasks is displayed on the WBS line. Manual revision of the field is not possible.
Comment	This field shows the number of remarks stored for the current project WBS line. It is a calculated field and therefore cannot be changed. The remarks can be viewed or edited via "Line" > "Texts" > "Remarks".
Pretext	The Pretext field shows whether text lines have been created for the current WBS line. These pre-texts serve, for example, as headings for a work package. The creation is done via "Line" > "Texts" > "Pretext" or DrillDown. It is only possible to create or edit the pre-text for the current line. The printout can be controlled on a document-specific basis for sales documents.
Post text	The Post text field shows whether text lines have been created for the current WBS line. These post-texts serve, for example, as additional descriptions or information about a work package. The creation is done via "Line" > "Texts" > "Post text" or DrillDown. It is only possible to create or edit the subsequent text for the current line. The printout can be controlled on a document-specific basis for sales documents.
Work type code	This field contains the work type code to be used in this WBS line. The work type code is preset by the work package. The work type code is transferred from the WBS line to the budget lines for detailed planning of resource budgets. However, work types are also used with posting consumption and sales in project book. sheets, resource book. sheets, sales documents, etc. Work types indicate the different types of work that a resource can perform, such as overtime or transportation. The work types can be used to set up different prices when budgeting or posting consumption for resources and resource groups, depending on the type of work performed. Each work type has its own unit. This allows you to assign several units to each resource or resource group.
Cost center code	This field contains the first global dimension value code to which the WBS line is linked. Here it is provided with the cost center code. Click the Lookup button in the field to view the dimension value codes you have set up for this dimension in the Dimension Value table.
Cost unit code	This field contains the second global dimension value code to which the WBS line is linked. Here it is assigned the cost object code. Click the Lookup button in the field to view the dimension value codes you have set up for this dimension in the Dimension Value table.

Field	Description
Subproject Manager	Selection of a subproject manager responsible for the work package. This field is for information purposes only. If a subproject manager is entered, the project team is automatically expanded by this resource.
Quantity	The planned quantity per unit for work packages is entered here, which multiplied by the cost price per unit and the sales price per unit results in the respective budget amounts. For lump sum lines, it is best to enter quantity 1, especially if the values for this line are to be taken over from the project budget lines (detailed planning) using the transfer function. If the same unit is used in detailed planning as in the WBS line (e.g. hours), then the planned quantity is also transferred from detailed planning with the budget transfer.
Unit code	Specification of the unit for the entered quantity. If different types of budget values are created in the budget lines (resources, articles, G/L accounts, resource groups), it is advisable to enter package and quantity 1 here. A new execution of the function "Transfer values from budget" updates the price-value data.
Location code	Here you can enter the code for the storage location where the items listed in the row are stored. To view the storage location codes in the Storage Location window, click the Lookup button to the right of the field. A default value for the maintenance of the article budget lines can be entered in this field.
EK price	Specification of the purchase price for the WBS line, if individual articles or resources are planned via the work package. If budget lines are used, the purchase prices are stored at the level of the budget lines. In this case, they are not transferred to the WBS line.
Cost price	Specification of the cost price. The cost price can be specified manually. When using budget lines and transferring the budget values to the WBS line, an averaged cost price is entered (cost amount of the budget / quantity of the WBS line). In this case, if a neutral package is planned with quantity 1 (because different units such as hours and pieces are planned in the detailed budget), then cost price = cost amount.
Cost amount	The cost amount is determined by calculating quantity x cost price.
Settlement quantity	Quantity specification that is preset by the "Quantity" field. The billing quantity can be overwritten at any time Thus, the planned billing quantity (quantity to be offered or later billed to the customer) may differ from the planned consumption quantity. The settlement quantity is also transferred from detailed planning using the "Budget transfer" function if the unit of detailed planning is identical to the unit of the WBS line.

Field	Description
Billing. unit code	Definition in which unit a service is to be billed. This can differ from the service unit. For example, hours can be performed, but days can be billed. Note: The unit is defined by the work type. If other units are to be used, the work type must be changed.
Billing cap	When billing "according to expenditure", a cap on the maximum quantity to be billed can be defined. By checking this field, a cap is agreed upon, which has an effect on the billing proposal. This function is used if an order value may generally be exceeded by a sum x.
Billing cap %	If a billing cap is defined, the cap value is defined here as a percentage. If 0 is entered, no more than the sales budget (sales amount of the WBS line) may be billed. If, for example, 10 is entered, 10% more than the sales budget may be billed.
UK price	A sales price can be entered manually in the "Sales price" field. When using budget lines and transferring the budget values to the WBS line, an averaged sales price is entered (sales amount of the budget / sales quantity of the WBS line). In this case, if a neutral package with sales quantity 1 is planned (because different units such as hours and pieces are planned in the detailed budget), then sales price = sales amount.
Sales amount	The "Sales amount" field represents the value resulting from the calculation of settlement quantity x sales price minus line discount. Manual entries are not possible here.
Line discount %	Line discount in percent for determining the sales amount. This value is also transferred to the offer or order line as line discount %. When using budget lines and transferring the budget values to the WBS line, an averaged line discount % is entered.
Line discount amount	Line discount determined from line discount %. When using budget lines and transferring the budget values to the WBS line, an averaged line discount % is entered.
Quantity (project budget)	This field refers to the Project budget items table and calculates the sum of the budgeted quantity that has been (fine-)planned on the current WBS line. By clicking on the value, you can access the project budget items and view the individual items. The value of this field cannot be changed.
Cost amount (budget)	This field refers to the Project Budget Items table and calculates the sum of the budgeted cost amounts that have been (fine-)planned on the current WBS line.
Sales amount (budget)	This field refers to the Project Budget Items table and calculates the sum of budgeted sales amounts that have been (fine)planned on the current WBS line.

Field	Description
Consumption (quantity)	This is a calculated field that shows the quantity already consumed for this WBS line totaled. The field refers to the Project items table and totals the content of the Quantity field. The value of this field cannot be changed.
Consumption (cost price)	This is a calculated field that shows the total cost amounts that have already been consumed for this WBS line. The field therefore shows how much has been consumed so far (resource times, material, etc.) on this WBS line. The sum of the field of all WBS lines is the total consumption of the project. The field refers to the Project Items table and totals the contents of the Cost Amount field. The value of this field cannot be changed.
Consumption (sales amount)	This is a calculated field that shows the sales amounts of the project items that have already been consumed for this WBS line. The field refers to the Project items table and totals the contents of the Sales amount field. The value of this field cannot be changed.
Sale (quantity)	This field displays the quantity that has been sold (invoiced) to the customer by outgoing invoice so far. Clicking on the value will take you to the project items, allowing you to view the individual items. The value of this field cannot be changed.
Sale (cost amount)	In this field the accumulated cost amounts of the sold quantities are added up. Clicking on the value will take you to the project items, allowing you to view the individual items. The value of this field cannot be changed.
Sale (sale amount)	In this field, the accumulated sales amounts of the sold quantities per line are added up. This field therefore shows which revenue has already been achieved for this WBS line in the project. The sum of this of all WBS lines gives the total revenue for the project so far. Clicking on the value takes you to the project items, allowing you to view the individual items. The value of this field cannot be changed.
DB DB %	Shows the plan contribution margin for this plan line.
Current DB Current DB %	Shows the current contribution margin for this plan line. Only works if, in addition to expenses, revenues are also posted to this plan line.

This field is used to control how the field "n. bill. Services" field in the WBS line should be calculated depending on the "Billing type" field.
This is actually only relevant for billing type "according to expenditure", because for the other billing types the calculation type cannot be changed. It serves here only as information.

Billing according to: Fixed price
Calculation type: Budget calculation
The sales amount of the work package (WBS line) is compared with the amount already invoiced on this work package. The difference is shown in the field "n. bil. Services" field. If a sales order line exists for the WBS line, this is used as a basis. If none exists, the budgeted sales amount of the WBS line is used.

Settlement according to:

without calculation

Calculation type: EMPTY
The field "n. bil. Services" always shows 0.
When billing "according to expenditure", you can choose between "consumption invoice" and "billing item". In the case of "Consumption invoice", it is irrelevant whether you work with or without settlement items.
The "Settlement items" option only makes sense if you actually work with settlement items, otherwise the residual sales amount always remains in full. The settlement items serve on the one hand for documentation (when, with which invoice and with which settlement quantity a project consumption item was invoiced) and thus ensure that a project consumption item is not invoiced more than once.

Calculation type: Consumption invoice
The actual consumption for the WBS line (in sales amount of the project consumption items) is compared with the actually billed (invoiced). So here it is visible if too little or too much was billed. Basically, the field "Consumption (sales amount)" is compared with the field "Sales (sales amount)". Of course, it may be that here the field never runs to 0 if the billing does not correspond 1:1 to the actual effort.

Example:
1. consumption 10 hrs. at 100,- = 1.000,- sales amount
2. consumption 10 hrs. at 120,- = 1.200,- sales amount
Invoice: 1.960,-
Residual sale amount = 240,-

Calculation type Rem. Amount

Calculation type: Settlement item
Each consumption item of the work package is checked whether it already has a billing item, i.e. whether it has already been billed. It does
not matter whether the billing was invoiced with a higher or lower amount (or hours) than actually incurred.
In the calculation of the field, only the project items that do not yet have an accounting item are added up.
1. consumption 10 hrs. at 100,- = 1.000,- sales amount
2. consumption 10 hrs. at 120,- = 1.200,- sales amount

Field	Description
n. billed Services	The difference between the consumed and invoiced amounts is displayed here. The decisive factor is the specification in the field "Calculation type Rem. Amount".
Sales to debtor	An invoice recipient different from the one on the project can be entered here. This is only allowed if the billing integration (the level on which sales documents are created) is defined on the level = WBS line. Alternatively, the entry on the budget lines is possible (with corresponding billing integration). In the case of different customers, separate sales documents are created when creating sales documents and when settling from the Invoice Suggestion.

Copy a PSP

An easier way to create a WBS is to copy one from another project (similar or sample project). Copying is also used when a new version of the WBS is to be built within a project. For more information, see "PSP copying".

Create WBS from project template

The most common way to create a WBS is to transfer it from the project template. For more information, see the section "Project management - Create project".

Insert a block from a project template

The type = block can be used to insert a block from a project template at any point in the WBS. It is advisable to define special project templates for this purpose. This is because the entire WBS is transferred as a block from the project template.

After entering the type = block, the project template whose WBS is to be transferred can be selected in the "No." field. After the selection, the block is dissolved (transferred) using the "Dissolve block" function. To do this, execute the function under "Functions" > "Explode block" on the "WBS lines" info tab.

Actions menu tab

Perform position numbering

Calling up the "Execute position numbering" causes an automatic assignment of a numbering of the WBS lines.

Renumber rows

The function "Renumber lines" has a system-technical background:

Each line in the WBS has a consecutive line number which is automatically assigned in steps of 10,000 when a new line is created. When creating new lines between already existing lines, the new line gets a line number between the first and the second line.

Example: Between 10,000 and 20,000 a line is inserted, this is given the line number 15,000. If this is often carried out at the same position, insertion is no longer possible if the line number is no longer in the integer range. There is no line number with decimal places. To solve this problem, this function reassigns the line numbers for the complete WBS. This means that there is space again to insert new WBS lines.

Calculate predecessor

The function "Calculate predecessors" has as a prerequisite that the fields Milestone, Number of predecessors and Predecessors are shown. These are fields with which you can define the time dependencies between the individual WBS lines. Individual WBS lines can be defined as milestones. A WBS line can have several predecessors, which can be assigned manually. The Calculate predecessors function then enters the corresponding position numbering in the Predecessors field as information. The Number of predecessors field shows how many predecessors were placed in front of this line.

Totals +Not acc. Update performance

This function is necessary if changes occur after opening the WBS that were not yet present when the totals were created at the time of opening (new postings, settlements, etc.). Constant automatic updating is not useful for performance reasons. Basically, the values are updated every time the WBS is opened. Usually it is not necessary to start this function, only in special situations.

Create sales document

The "Create sales document" function can be used in the Sales area to create a quotation or an order from the data in the WBS. The control of which data is transferred to these documents is defined via the column "Transfer to sales document" in the WBS. The WBS line, the budget lines or the tasks can be selected there. It is also possible to define that no values at all are transferred from a line.

Create purchase document

The "Create purchasing document" function supports the user in creating project purchases. Requests and purchase orders can be created from the WBS. All articles and services (external resources) can be purchased from the project budget (detailed budgeting). Further information can be found in the section "External resources".

Create project delivery bill

The function "Create project delivery bill" is explained in more detail in section "Material costs".

Create project provision

The functions "Create project provision" is explained in more detail in section "Material costs".

Create user task

This function can be used to create new user tasks linked to the project. In doing so, the user tasks are automatically linked to the current project via the "Linked table" and "Linked record" link elements.

Copy PSP

The "Copy WBS" function can be used to copy a WBS from the same or another project when creating a plan. It should be noted that plan values from the sample plan can also be copied.

Before exercising the function, the corresponding source as well as the selection modalities can be defined in a selection window.

The PSP Copy function is mainly used for new PSP versions within a project. When creating a new project, it is advisable to work with the project template.

The copy function can be used to copy a complete structure plan or only selected lines. To copy only selected lines, activate the check mark in the same field. After OK you get the selection option of the WBS lines to be copied. With this option it is also possible to copy parts of the current WBS into itself.

If you copy into a WBS that already contains lines, the copied lines are always appended to the end, but an auto-activity must be set up in the project setup so that the copy function can automatically create the work package lines uniquely.

If the current status of a running project is to be "frozen" at a certain point in time, a new version can be created using PSP copy. This new version accesses the same actual values. For each WBS version, however, the project budget items are managed separately. For the posted items, only a reference is created. As soon as actual postings exist on a WBS line, it can no longer be deleted. If a WBS was copied by mistake and therefore refers to already existing postings, it can also no longer be deleted for security reasons. The WBS must then be set to terminated.

Transfer values from budget

The "Transfer values from budget" function takes the budgeted values from the budget lines and enters them in the WBS lines, totaled at work package level. This function is only executed for work breakdown structure lines in which the "Budget transfer" field has been selected.

Update project account items

The function "Update project account items" updates the project account items. If quantities or prices are changed in the WBS lines, the budget values for project controlling change. This function is also available project-neutral in the project overview, you can comfortably call the TellMe function and enter "Update project account costs".

Menu tab Associated

PSP with budget view

By calling up "WBS with budget view", you can view the entire WBS with further information. For more information, see the section "Work breakdown structure with budget view".

Statistics

The statistics show the PSP budget in two perspectives:

The Budget WBS info tab contains the values from all WBS lines. The columns Sales Amount and Cost Amount are displayed as a total.

The values of the individual budget lines are displayed in the detailed planning tab. The values of all stored budget lines are added up and displayed according to the breakdown shown below. WBS lines that do not have dedicated budget lines (detailed planning) are not included here. In terms of content, the values are the same as in the columns Cost Amount (Budget) and Sales Amount (Budget) from the WBS.

Comments

The remarks lines are stored in the "Remarks", which can also be created and viewed via the call in the WBS header.

Receipts

By calling up the documents, all open and posted documents that exist for this project can be listed. The document can be opened from this point by clicking on it.

Project target/actual comparison

With the project target/actual comparison you can compare already created actual data of the project with the stored plan data. Further information can be found in the section ["Target/actual comparisons"](#).

Project account item

All budget entries in the project area are created as project account items. The project account framework represents a possibility to additionally perform evaluations according to different criteria. Posting routines must be defined in advance, analogous to financial accounting. Thus, a dedicated project controlling can be built up on the basis of these project account items.

The call contains all project account items of the current project for each individual WBS.

Functions in the PSP lines info register

Functions Move row

With the function "Move line" the PSP lines can be arranged differently. To do this, you must make the line to be moved the active line and call the function.

If you confirm with "Yes", the PSP line selection opens. Here you specify the position at which the line is to be inserted. The line before which the line to be moved is to be inserted must be selected. Confirming again will move the line. It is now important that the position numbering is carried out again.

Change date

The "Change date" function can be used to shift the start and end date for the active line by the period to be entered.

Line Formula calculation

This menu item takes you to a table in which you can define on the basis of which other work breakdown structure lines the budget values of the current work breakdown structure line are to be calculated automatically. This definition can be determined separately for the budget value Cost amount as well as for Sales amount. To do this, use the "Use as calculation basis" and "Use as calculation basis (sales price)" fields in the Formula calculation overview.

So that the values can be calculated on the basis of these marked WBS lines, the fields "Proportion for allocation (%)" or "Proportion % for sales price" must be provided with a percentage in the header of this overview. This formula calculation can thus be used to represent the following scenario, for example:

A WBS line represents the maintenance costs, these are to be determined automatically with 15 % from the cost amounts of two other WBS lines (manufacturing costs and procurement costs).

For the scenario that all other WBS lines should refer to a special WBS line and new WBS lines should automatically flow into the formula calculation, there are still the two fields "Automatic implementation of a new WBS line for the purchasing calculation" and "Automatic implementation of a new WBS line for the sales calculation" in the header of the table. The whole formula calculation can already be defined in the project template.

Qualifications

Under Qualifications, qualifications necessary for the fulfillment of the work package can be stored. These can already be set up in the project template. These qualifications later serve as an important filter in the "Assign resources with qualification" function to find suitable resources for the work package.

Dimensions

In the dimensions, the assigned dimension values of the active WBS row are displayed.

Work package info

By selecting Work package info, the documents in which the work package of this project is stored can be displayed. Direct access to the document is possible at any time.

Activity log items

In the activity log items those items are displayed that are generated via the activity creation. If changes in the sales document are synchronized in the project, the logs can be viewed under Sales document-project-budget-change-log.

Texts

In the texts there are the following options:

Pretexts / Posttexts

The pre- and post-texts are transferred to sales documents for the project and can be printed there as well. While the pre-texts are printed before the sales lines, the post-texts appear after the sales lines are printed.

Comment

These are line-related remarks that are not used in subsequent documents.

Formula calculation

Here the calculation of the cost price can be defined depending on the cost amounts of other WBS lines. For example, a general administration line can be 5% of the cost of other WBS lines.

User task

All user tasks associated with the project can be viewed here.

Budget lines

Plan values can be assigned to each project via the WBS line. In the course of the project, actual data is generated and compared with the plan data.

The industry solution now offers that these rough planned values can also be budgeted in detail. I.e. the planned quantities are allocated to the lowest planning level (resources, articles, G/L account, resource groups). For example, individual employees are directly assigned to activities. This information is the basis for detailed capacity planning.

While later budgeting is always done for exactly 1 work package, a total overview of all budget lines of a project (across all work packages) can be called from the project map with budget line overview.

Specifications for the use of budget lines

In order to be able to use the budget lines meaningfully, some prerequisites must be observed in the associated work breakdown structure line:

Budget transfer:
On the work breakdown structure line, you can specify in the "Budget transfer" field whether the budget values from the associated budget lines should be transferred to the line. If the check mark is set, the totals of the cost amounts and sales amounts are transferred from the detailed budget to the work breakdown structure line. If the planning structure is homogeneous *(if the same units are used in both the budget lines and the WBS line)*, the planned quantities are also transferred and an (average) price (cost price and sales price) is calculated from the amounts.

Transfer to sales document: Here you can control whether the WBS line itself or the individual budget lines should be transferred to a sales document (quotation, order, invoice).

Regardless of the setting of these two fields, an entry of the effort (e.g. time recording) is possible both on the WBS line itself or on the budget lines. This controls the posting levels on the project map (see there).

Entering the budget line

The call for entering the project budget lines for a WBS line is made either via the WBS by calling up the budget line or via the "Work breakdown structure with budget view".

The individual parameters of the budget lines are described below:

Field	Description
Type	The type identifies the budget options in the project. The following options are available: **Resource:** Any resource that has not been marked as a billing resource can be planned in the budget. **Article:** Material and trade items can be planned in the budget. **Resource Group:** Instead of concrete resources, resource groups can also be used in the budget. Later, these can be replaced by concrete resources. **General Ledger Account:** All costs that cannot be planned using the above types are planned as G/L accounts. Any G/L account that has been marked as "Direct to purchase" can be used for this purpose.
No.	Specification of the data set according to the selected species.
Item reference no.	The article reference used by the customer can be used to search for the correct article.
Start date	Planned start for this budget line, is preset from the WBS line. The value can be overwritten at any time.
End date	Planned end for the budget line. Is preset from the WBS line. The value can be overwritten at any time.
Description	The description of the current budget can be entered here. The input can contain letters and numbers, but must not exceed a max. length of 50 characters.
Description 2	An additional description of the current budget can be entered here. The entry can contain letters and numbers, but must not exceed a max. length of 50 characters

Field	Description
Work type code	This field contains the work type code for the resource in the line. Work types are used in connection with posting consumption and sales in project book. sheets, resource book. sheets, sales invoices etc. Work types indicate the different types of work a resource can perform, such as overtime or transportation. The work types can be used to set up different prices and consumption and billing units for resources and resource groups, depending on the type of work performed. The work type code is pre-populated from the WBS line. This field cannot be used for the items and G/L accounts.
Budget transfer to purchasing	This switch can be used to define whether the budget text (text lines) should be transferred to a purchase order when the budget line is carried forward.
Budget transfer to sales	This switch can be used to define whether the budget text (text lines) should also be transferred when the budget line is transferred to a sales document.
Customer price group	A code from the stored customer price groups can be stored here.
Quantity	The planned quantity of the current budget line can be entered here. If the quantity is confirmed here with Enter, project budget items are automatically generated in the background by the application to which this field links.
Quantity (base)	Displays the quantity in the base unit. This field cannot be changed, planning is always done in the planning unit (Unit field) in the Quantity field.
Reserved quantity	Quantity for items already reserved for this budget line. The reservation is made by a MRP run in purchasing. All articles on budget lines that have the MRP indicator are taken into account.
Disposable	This switch controls whether a budget line should be planned (considered in the planning run) or not. This function can only be used for articles that are not used in plant BOMs (here, the disposition is done in the plant BOM).
Purchasing from vendor	The vendor from the article card (or resource card in case of external resources) is entered automatically, but can be changed manually by the user. This field is used in the Create Purchase Order (PSP Form) function. There, too, the field content can be changed manually.
Quantity in request (base)	Quantity in delivery requests for this budget line (referencing is done via project purchasing with function "Create purchasing document").

Field	Description
Quantity in order (base)	Quantity in purchase orders for this budget line (referencing is made via project purchasing with function "Create purchasing document").
Quantity delivered in purchase (base)	In this field, the application displays the quantity already delivered by the supplier for this budget line.
Consumption (base)	In this field the system shows the consumed quantity for the given budget line. The posted project items are displayed, regardless of their origin. This means that both project purchases and stock consumption (for items) as well as project time bookings (for resources) are displayed.
Remaining order quantity (base)	Is the planned quantity minus the quantity already consumed.
Unit code	By entering a resource or an item, the unit code (base unit) is taken from the respective master data. The planning unit can be changed. Changing the unit is not possible for resources, since the unit here depends on the work type.
Location code	Here you can enter the code for the storage location where the items listed in the row are stored. To view the storage location codes in the Storage Location window, click the Lookup button to the right of the field.
Storage bin code	In this field you can enter a storage location code for the item. The prerequisite is that you have specified a storage location code in the line. After that you can select a bin code for the corresponding warehouse first.
Variant code	Variants can be set up for articles. The individual variant codes can be selected here.
EK price	As soon as an article, resource, G/L account, resource group has been selected with "No.", the purchase price from the respective card is automatically taken over by the application. However, the purchase price can also be entered manually.
Cost price	This field is automatically filled with the cost price of the selected type and number. The value can be overwritten at any time.
Cost amount	The value is determined from the quantity multiplied by the cost price. The value is stored in the project budget items and retrieved from there.
Factor 1	Contains the allocation factor from cost price to sales price. Cost price x factor 1 = sales price.
Lime. Surcharge 1 %	The field contains the factor 1 in %.

Field	Description
Lime. Surcharge 1	The field contains the surcharge per unit resulting from surcharge 1.
Base amount for lime 2	A factor of 2 can be entered for a further surcharge. The base amount for this is calculated from the cost price + the lime. Surcharge 1.
Factor 2	Surcharge factor to be entered manually or preset from the project. The factor 2 refers to the base amount for lime 2.
Lime. Surcharge 2 %	The field contains the factor 2 in %.
Lime. Surcharge 2	The field contains the surcharge per unit resulting from surcharge 2.
Base amount for lime 3	For a third surcharge, the base amount is given here. It corresponds to the cost price. Thus, surcharge 3 is a parallel surcharge to the other two surcharges.
Factor 3	Surcharge factor to be entered manually or preset from the project. Factor 3 refers to the base amount for lime 3.
Lime. Surcharge 3 %	The field contains the unit surcharge resulting from surcharge 3.
Settlement unit	Planning unit of the billing quantity. The base unit of the item is always suggested automatically. The settlement unit can be changed manually. It is not possible to change the unit for resources, because the unit here depends on the work type.
Settlement quantity	If the customer is to be offered and billed for a quantity that differs from the budgeted effort, then a different billing quantity can be entered here. Otherwise, the billing quantity = quantity. The billing quantity is managed in billing unit code.
Settlement quantity (base)	Billing quantity in base unit. This field cannot be changed. Planning is always done in the billing unit.
UK price	As soon as an article, resource, G/L account, resource group is selected with "No.", the sales price is automatically taken over by the application from the respective master data or project prices. However, the sales price can also be entered manually. If a surcharge is entered in surcharges 1 to 3, the sales price is determined on the basis of the cost price.
Line discount %	The line discount % is pulled from the master data or the project price tables, just like the sales price, but can be changed manually.
Line discount amount	Calculated from the Line discount % field, cannot be changed manually.

Field	Description
Sales amount	The value results from the multiplication of the settlement quantity and the sales price. In the background, project budget items are formed, from which the figure is made up arithmetically.
Manual selling price	This field is automatically set when a sales price has been manually changed by the user. This ensures that no new pricing will overwrite this price if one of the price relevant fields (date, resource no. etc.) is changed. The field can be changed manually so that the user can control whether pricing should occur or not. However, for some field changes, a new pricing is mandatory even if the field is set. (See table following "Manual sales price").
Cost center code	Here you can select a dimension value code. Click the Lookup button in the field to view the dimension value codes you have set up for this dimension in the Dimension Values table. The first global dimension is shown here. The field name is renamed accordingly when the dimension is stored. The specification is preset from the resource, item, project or work package. It can be overwritten as needed.
Cost unit code	Here you can select a dimension value code. Click the Lookup button in the field to view the dimension value codes you have set up for this dimension in the Dimension Values table. The second global dimension is shown here. The field name is renamed accordingly when the dimension is stored. The specification is preset from the resource, item, project or work package. It can be overwritten as needed.

Manual sales price

Gepl. type	Type	No.	Quantity	Work type	Start date
Resource group	Type change within resources - *No* Change to article or G/L account - *YES*	No	Yes	No	
article	Yes	Yes	No	not relevant	No
G/L account	Yes	No	No	not relevant	No

The following fields are important for using the budget lines as budget tasks ("Budget tasks" section):

Field	Description
Task no.	All budget tasks for resources/groups in budget lines get a consecutive unique number, which is unique within the client. This number makes a reference to a budget line as a budget task unique. The number is automatically taken from the number series of the project setup and cannot be changed.
Priority	A task can be assigned a priority. This is only an info and has no function and is displayed in different batches depending on the role center.
Status	This is the processing status of a task. Each task has "not started" as status after creation. As soon as the first time booking is posted on a task, the status is automatically changed to "in progress". Employees can only use tasks in these two statuses for time reporting. Tasks in other statuses are invisible to them during time tracking. With time tracking, an employee can set a task to "completed" status by reporting 100% completion. All other statuses are set manually by the project manager. He can also reset a task from "finished" back to "in progress" to enable subsequent postings.
Progress %	With time recording, an employee can record a progress of the task either as a percentage or by specifying the "Remaining quantity for completion" still needed. In both cases, the other field on the budget line as well as the fields "Expected total quantity" and "Expected total amount (MW)" are calculated based on the planned quantity and the already booked times (consumption (base) + quantity time commitment (base).
Quantity	This is the planned quantity (=budget quantity) of the task.
Consumption (base)	These are the hours already spent on a task which have already been released by the project manager.
Quantity Time Commitment (Base)	These are the hours already booked on the project but not yet released by the PL.
Remaining quantity for completion	Either calculated automatically by the system (see Progress % field), or entered by the employee when reporting time.
Expected total quantity	Calculated automatically by the system (see "Progress %" field).
Expected total amount (MW)	Calculated automatically by the system (see "Progress %" field).
DB DB %	Shows the plan contribution margin for this plan line.
Current DB Current DB %	Shows the current contribution margin for this plan line. Only works if, in addition to expenses, revenues are also posted to this plan line.

Field	Description
Sales to debtor	An invoice recipient different from the one on the project can be entered here. This is only allowed if the billing integration (the level on which sales documents are created) is defined on the level = budget line. Alternatively, the entry is possible on the budget lines (with corresponding billing integration). In the case of different customers, separate sales documents are created when creating sales documents and when settling from the Invoice Suggestion.

The following values are listed in the lower section of the budget lines:

Here it is displayed how many resources have been planned. In addition, the summed cost and sales amount is displayed informatively. The same list is available for the articles and the direct budget lines on G/L accounts.

The resource row also displays the total number of hours of tasks for the associated WBS row.

For each line there is the listing of the discount given for this type, DB, DB % as well as the amounts in the currency used.

Budget tasks

Budget lines can serve a rough planning by assigning the budget lines to resource groups. The planning includes the demand of the expected required labor to be able to complete the work package.

However, budget lines can also be used to specifically assign activities to concrete processors or groups. With finer planning via individual tasks, a budget line is not only a planning line, but also a budget task.

In the time recording, the resources/groups can record expenses (times, consumption) for these tasks. In the budget lines they get a consecutive task number, which is unique within a client. The number is automatically drawn from the number series of the project setup and cannot be changed.

Basically, the budget tasks are nothing more than a finely detailed project budget. If in the first planning phases (quotation costing) of a project still a rough planning is sufficient, later it becomes a more and more detailed planning by creating individual tasks on concrete resources from the budget lines on resource groups. The function "Split line" can be used for this purpose. If no concrete resource can be assigned to a task, it can also remain on a resource group.

You can get an overview of all budget tasks of a project on the project map via the item "Budget task overview".

Actions menu tab

Assign resources with resource qualifications

If qualifications are stored in a WBS line, the resources can be assigned according to these qualifications. When selecting the appropriate resource for a budget task, only the qualified resources can be proposed.

With the function "Assign resource with qualification" via the ribbon > "[...]" > "Actions" you can find the suitable resources.

Calling the function leads you to a corresponding matrix.

In this matrix, only those resources are displayed which have all the required qualifications. By calling Quick Assignment, the selected resource is transferred to the task.

Note

The qualifications of the resources can be stored in the resource map.

Unfold parts list

If a bill of materials has been assigned to a work package in the work package overview, it is split into its individual lines using the "Unfold bill of materials" function.

Note

The function "Unfold BOM" can be executed for several selected work package lines (WBS lines) at the same time.

Distribute quantity

The "Distribute quantity" function distributes the quantity of the budget line evenly over the period of the budget line between the start and end dates, and the distribution interval can be selected. Thus, the quantities can be distributed to the weeks or months or even to the day. The default "Distribution interval" can be specified in the project setup. The project budget items are adjusted during the distribution. I.e. a quantity of 20 will be distributed to 10 each month for a period of two months or part thereof.

Split line

The "Split line" function allows you to partially allocate a budget task that was roughly planned to a resource group in the first step to a concrete resource.

For a better estimation of the split quantity, all relevant quantities for the budget line are listed. In the field "New type" either a resource or resource group can be selected. In the field "New No.", depending on the previous selection, a resource and/or a resource group can be selected, which will now be assigned parts of the task. The splitting of the planned quantity can be done either by entering the "Split quantity new line" or by entering the remaining quantity for the old budget line in the field "Remaining quantity current line". In both cases, the calculation of the respective other field is based on the budget quantity. An increase of the total budget quantity cannot be done here, this must be done after splitting in one or even both budget lines. If both budget lines should run under the same task number, this can be defined in the field "Keep task no.". This is useful if the task is still the same after the split and the individual split budget lines are to be considered together later.

Change work package

You can use the "Change work package" function to move a budget line to another WBS line, even if items have already been posted to the budget line.

If items already exist for the corresponding budget line, they are automatically moved with the budget line to the new WBS line. A new pricing may also take place.

Demand creator

The requirements originator can be used to determine whether a corresponding requirements cover (e.g. purchase order) exists for this budget line. The requirements creator can be accessed from the requirements origin form. Conversely, the budget line can also be opened from a purchase order, for example, via the pegged requirements form.

Attribute search

The item search by attributes known from the purchasing and sales documents is also available in the budget lines.

Send to Calender

A specific budget task can also be sent as an Outlook task to the responsible employee.

It is important that a valid e-mail address has been entered for the registered resource in the user setup.

By sending, the employee / in receives an e-mail with the calendar entry and the following information:

- Task description
- Start / End date
- Project number / task no.
- Project Manager
- Customer name
- Phone number customer

If the status of the budget task is set to canceled or on hold, the Outlook calendar task will be recalled automatically.

Change date

The "Change date" function opens an input window via which a time catch-up or a time deferral can be entered.

This function allows you to define exactly the period for the budget task shift by entering a date formula (T = day(e); W = week(n); M = month(e); Q = quarter(e); J = year(e): etc.).

When an incorrect entry is made, the incorrect entry is pointed out and the correct entry data is explained.

With this function the budget can be adjusted due to possibly changed delivery dates. The start and end date changes accordingly for the affected budget lines. Enter the corresponding value in the query.

Assign date

Calling "Assign date" first opens a matrix that shows the project budget lines in a temporal matrix. The system sets the entire effort to the start date.

From this matrix, the quantity can be planned in detail specifically at the level of the project budget items, i.e. the quantity can be planned calendar-wise for the deposited resource or item. The subdivision goes from day exactly to year exactly. In the individual time periods, the budget quantity can now be assigned manually. Thereby project budget items are formed.

The project budget items form the finest planning level. They form the basis for resource capacity planning (see "capacity planning").

Change type + no.

The function "Change type + no." brings a certain flexibility into the planning. In general, these two fields of a budget line can be changed as long as no time booking has been made on the task. After that, a new budget line must be established with the Split line function. If a budget line is only to be rescheduled from one resource to another, then this can be done directly in the budget line without this function. Only when changing from a resource group to a concrete resource, this function must be used for technical reasons.

Reserve

With "Reserve" a reservation can be created manually for the current budget line to a requirement cover (stock, purchase order etc.).

Stock withdrawal

With the function "Stock withdrawal", which can only be called for article budget lines, free (not reserved) article stock can be assigned to the project. The stock already assigned to the project is determined by whether the project number is stored on the article items. When the "Stock withdrawal" function is called, a new interface opens, this shows the project stock already available for this budget line.

Below this is a list of possible assignable article items. These are positive, open and unreserved article items of the project budget item in the storage location of the project budget line that are not yet assigned to a project. The filter on the project number can be removed if necessary to be able to transfer items from other projects. In this list, the quantity to be removed can now be entered for each item, which of course cannot exceed the remaining quantity of the item. When the mask is closed, a confirmation message appears asking whether the stock removal should take place. If this is confirmed, the stock withdrawal takes place. The quantities to be withdrawn from the selected item are transferred to the project warehouse. The transferred quantity is now directly assigned to the project (more precisely, to the project budget line) in which the new article items have the project reference. Finally, the item consumption must be posted via the project delivery bill, only with this the item is posted from the warehouse and a project consumption.

Assign project items

This function is related to the uniqueness of a budget line. To assign project items (=actual values), the line number of a budget line is entered in the project items. This assignment is usually done automatically when posting the project consumption. If a budget line cannot be assigned uniquely by the system because, for example, an item with more than one budget line was planned for a WBS line, the assignment must be made manually. This manual assignment can also be done after posting using the "Assign project items" function.

Using the form, all project items of the WBS line can be assigned to the current budget line.

The following applies:

- Only resource items of the same resource can be assigned to a resource budget line.
- Only resource items of the same resource group (resource must be a member of the resource group) can be assigned to a resource group.
- Only article items of the same article number can be assigned to an article budget line.
- Only G/L account lines of the same G/L account number can be assigned to a G/L account budget line.

Assign:

The assignment is made for all marked items with the call "Connect".

Disconnect:

Existing allocations (budget line number field is filled) can be resolved by calling "Disconnect".

Menu tab Associated

Line Map

This call opens the budget line task card.

Article availability

Various article availability overviews are analogous to the article availability overviews of the same name in the sales documents.

Dimensions

Here you can see the dimensions that are assigned to the budget line.

Reservation item

Via the menu item "Reservation items" you can call up the items reserved for the budget line.

Predecessor / Successor

Predecessors and / or successors can be assigned to each budget line. These are used for planning in WBS scheduling.

Pretext/Next

"Pretext/Next", line texts can be stored for the budget lines, which can be transferred to the sales and / or purchasing documents.

Comment

Internal remarks to the budget line can be stored at "Remark".

Budget tasks Navigate

The task number is used to determine where this task (budget line task) is used. It is searched in purchase and sales documents, as well as in project and time items, CDE lines and timesheets.

Resource Resources per project

With the call "Resources per project" the planned project budget items per project and per selected resource can be viewed. Only the items of the current WBS are taken into account. As soon as another WBS is activated, the printout of the values changes.

The individual items can be viewed in detail again via the lookup. Changes cannot be made in the items here.

Resource gr. per project

The call of the "Resource groups per project" is structured identically. Only the selection filter does not refer to individual resources, but to resource groups.

Capacity plan

The capacity values for all resources are displayed via the capacity plan. Several filter options can be selected. The values of the active WBS are always displayed. These points are dealt with in detail in the section "capacity planning".

Ress. with Qualific. Assign

The planning function "Assign resources with qualif. Assign" offers the possibility to take over resources into the budget that have certain qualifications. These qualifications must be stored before with the resources. The work packages (=PSP lines) can already be assigned necessary qualifications, which serve here as a filter for a suitable resource. The filtering can also be done manually.

All resources are displayed with the different capacity values, i.e. with the gross capacity, the absences, the values already scheduled in offers or orders. Via the command button "Quick allocation" resources can be transferred to the budget in a simple and quick way. Further planning, e.g. quantities, is then done in the budget lines.

With the function Detailed allocation you get to a matrix in which a detailed allocation per quantity planning per week takes place.

Work breakdown structure with budget view

In the work breakdown structure with budget view, the WBS is displayed together with the budget lines. The call always shows the active version of the WBS. While the WBS is shown at the top, the text lines, remarks and, above all, the budget lines belonging to the currently active WBS line are shown in several other subwindows. The values of the window views always refer to the WBS line currently selected by the user.

In a line statistic on the right, the planned resource quantity and the budget divided by type with cost and sales amounts are displayed for the active WBS line. In the lines "Budget line total" the budget values are added up. In the lines "WBS line" the values from the WBS line are compared. Differences between the WBS line and the detailed budget can be seen here immediately. In the "Consumption" lines, the consumption values already achieved are shown on the basis of cost and sales amount.

In the "Invoice" lines, the "Sale-Sale Amount" line shows the amount already invoiced. Below this, in the line "n. abgerech. Services" line shows the outstanding amount that can be invoiced to the customer based on the progress of the service (depending on the billing type of the WBS line).

The functions are the same as in the two individual views Work breakdown structure + Budget lines.

Capacity planning

Capacity management requires the definition of capacity availability and the planning of capacity requirements. For meaningful capacity management, these two variables must be related to each other. Only then is it possible to draw meaningful conclusions from the data.

In the section "Set up capacity" the setup of resource availability on the level of individual resources as well as for resource groups was shown. Each resource, or cumulatively each resource group, has a certain supply of capacities depending on the agreement. These capacities are assigned to the plan lines in the WBS.

In the capacity plan, this data is shown and the difference between availability and consumption already made as well as the remaining demand is presented. Revolving planning can thus be implemented very quickly.

It is assumed here that each resource is based on a capacity. In addition, a flat base calendar, via which the weekends and holidays are maintained, is taken into account in the availability.

The capacity plan can be called from several places, both from the resources area and from the project via the call "Capacity plan" in the group "Planning" or from the project budget lines. Depending on the call, the date filter is preset.

The structure of the capacity plan is based on the following criteria:

The resources are displayed according to resource groups. In addition, the total is displayed for each resource group.

At the top are the resources that have not been assigned to a resource group. Therefore, care should be taken to ensure that all resources are sensibly assigned to a resource group.

Field	Description
Capacity	The planned capacities are displayed in the "Capacities" column. Here, the system accesses the resource capacity items stored per resource. Bookable quantities are marked in advance with a dash. This is because they can be accessed in planning. In addition, totals lines are formed per resource group.
Absence	The column "Absence" displays the resource's missing hours. These are generated via the absence registrations in the personnel module.
Net capacity	Indicates the net capacity of the resource.
Budget offer Budget order	In the columns "Budget (offer)" and "Budget (order)" the already formed project budget items are displayed. The information is given at the level of the resource. In addition, it is indicated in which projects this budgeting took place. For each planned project, a line is displayed for the resource with how many hours the resource was planned here. The project status determines in which of the two columns the planned value is entered.
Booked project time	Indicates the booked project times of the resource.
Utilization	The "Utilization" column shows the level of (planned) utilization of the resource.

Field	Description
	In the "Variance" column, the "open" hours are indicated.
	Depending on the setting of the "Variance filter", in the lower filter area of the page, the following variance values result:
	Net capacity - budget: the variance value includes the available capacity (gross capacity - absences(vacation/flextime)) minus the summed budget values.
	Net capacity - Booked time: the variance value shows the difference between net capacity and already recorded working hours, thus it is visible from which resource time bookings are still to be expected.
Deviation	**Capacity - Booked time:** As above, but the difference between the gross capacity and already recorded working hours is listed, this option is useful when posting to special projects for absences (vacation, etc.).
	Budget - Booked time: the variance value includes the summed budget values minus the recorded working hours. As soon as the variance filter has been changed, the page must be closed with "OK" and called up again. Only then will the recalculation of the values be triggered. The filter always shows the first of the possible selections, regardless of the filter applied.
	Via the call "Open in Excel" in the menu ribbon, you can export the determined values to Excel. Before exporting, the values for the date filter must be selected.

Project scheduling

Whereas project planning in the sense of quantities and values was previously referred to, project scheduling can also be carried out in the industry solution. There is a planning function for this purpose.

In this planning function, planning can be done on WBS line level as well as on budget line level. Start / end date as well as duration, fixed dates and predecessor relationships are taken into account.

Predecessor relationships

The activity relationships form the basis for being able to carry out scheduling. Activity relationships can be defined both at work package level and at budget line level.

Using the line functions Predecessor / Successor, other positions can be assigned to the current position. A corresponding selection appears. The relationship can still be specified with a type and a time interval in days.

The type is based on the types commonly used for activity relationships in MS Project.

Duration in days

Both on the work packages and in the budget lines, the duration in days can be maintained in addition to the start and end dates.

In this case, the dates are calculated automatically as follows, and only working days are taken into account for the duration. red = changed by user green = Calculated

Start date	End date	Duration in days
10.08.	03.09.	19
10.08.	11.09.	25
14.08.	09.09.	19

)

Fixed start date / Fixed end date

Start and / or end date of a WBS line / budget line can be fixed via the fields with the same names. This will be taken into account later in the planning function. This is not checked in the direct entry on the WBS line / budget line.

Do not include in planning

On the WBS lines there is the field "Do not include in planning", so that work packages which are pure cost collectors (e.g. travel expenses, license costs etc.), i.e. which should not be planned as work at all, can be excluded from planning.

Planning direction

On the project map, in the "Planning direction" field, you can define whether project planning should be performed as forward or backward scheduling.

WBS scheduling

The actual planning is carried out in a separate planning window. You can reach this planning window via the menu item "PSP Scheduling".

If a planning simulation already exists for the work breakdown structure, a corresponding message appears asking whether it should be overwritten.

If this message is confirmed with "Yes", the stored simulation values from a previous planning are deleted.

In the planning window, both the WBS and the budget lines are displayed with the necessary planning information. Both levels are planned at the same time.

The planning in this window is created as a simulation and, after checking and any manual corrections, can be transferred to the work breakdown structure using the "Accept planning" function.

The simulation values are stored in the fields Planned start date, Planned end date and Planned duration in days and can also be changed manually.

You can recognize the status of a planning value by its color. These status colors are explained in the Legend info box.

- Red-bold: The planning values exceed the start / end date of the project (on the project map).
- Red: According to planning, this position should already be in progress, but the work status is still open.
- Green: This planning value was changed either manually or by the planning run
- Blue: This is a fixed value which cannot be changed manually or by the planning run

Manual planning only makes sense once the planning function has run through. Manual planning preparations (duration, fix start / end date, define predecessor relationships) are already carried out in one of the two work breakdown structure views. The planning function always starts from these planning parameters of the WBS line / budget line.

The actual planning is executed with the Start planning function. The planning function plans each WBS line and its budget lines, taking into account their predecessor relationships, their duration and the fixed dates. The planning result is entered in the simulation fields Planned start date, Planned end date and Planned duration.

Depending on the planning direction of the project, planning is started from the project start date or project end date. The simulation values are transferred to the WBS using the Transfer planning function. If the user closes the planning window without having taken over the planning, he receives a corresponding message with which he can also take over the planning.

Graphical resource planning (based on budget tasks)

The integrated graphical resource planning is based on the budget tasks (= budget lines). In graphical resource planning, budget tasks can be rescheduled both in the time axis and to other resources.

Project facility

In the Projects setup, the Automatic resource budget distribution must be enabled and set to Daily distribution.

Resources facility

In the resource setup, the fields Resource planner start and Resource planner end must be used to define the period that is to be transferred to the graphical resource planning. Choose a reasonable period of time that allows you a performant planning. If you choose a period that is too long, this will affect the loading time of the graphical planning and the calculation of the utilization.

Example for a period:

-1W / 2 M means:

The planning data is transferred from the previous week to 2 months into the future.

Prepare resources

Only resources and resource groups that are marked in the "Use in resource plan" field are transferred to the graphical resource planning.

Furthermore, resource capacities must have been defined at least for the planning period to be transferred.

Budget tasks

A budget line must meet the following requirements to be transferred to graphical resource planning:

- The project must be in "Offer" or "Order" status
- The WBS line must be in the "open" or "in progress" work status
- The budget line must be of the "Resource" or "Resource group" type
- The budget line must be in "not started" or "in process" status
- The budget line must have both start and end date (at least 1 day)

Absences

Absences from the absence registration are automatically transferred to the graphical resource planning, no further setup is required at this point.

Call

The call is made via the user search with "Resource Planner", or from the budget lines with the same function call.

Rough planning

The graphical resource planning starts with the view "Rough planning". In this view, numerous weeks are visible at a glance.

For performance reasons, no workloads are initially visible in this view, so that the planning can be opened more quickly. The user gets an overview of the tasks.

If it is necessary to view the workload, press the refresh arrow next to the switch for switching between "Rough planning" and "Detailed planning", and the workloads will be calculated.

Detailed planning

In the detailed planning, the user is shown a week directly with the respective utilization. To gain insight into further weeks, this is possible via the rocker in the upper right corner.

Graphic information

The resources are grouped by resource groups. In the timeline, the budget tasks are assigned as blue bars to the resources or resource groups. Tasks that have already been started are displayed in dark blue. Tasks that are displayed in brackets are still in the "Offer" status.

The yellow blocks show the degree of utilization of a resource for the respective day in which the yellow block fills the day proportionally.

Planned absences also reduce the daily capacity. Thus, a vacation day fills the daily capacity completely. An info box on utilization can be called up by clicking on the utilization block.

An overload is displayed in red.

Mousing over the task bar shows an info box about the budget task.

Rescheduling in terms of time and resources

Rescheduling a task is done simply by dragging and dropping with the mouse. A task can be moved in the timeline as well as rescheduled from one resource to another.

Note

This is not a simulation! The planning is immediately transferred to the budget line.

Time extension / shortening of a task

The time length of a budget task can be changed with the mouse. To do this, the bar is lengthened or shortened either at the start or at the end.

Filter on a project

With a right mouse click on a budget task bar a context menu can be opened. There the planning view can be filtered to the project of this budget task.

Split budget line

The function for splitting a budget line can also be called up in this context menu. This is exactly the function that is also available in the work breakdown structure in the budget lines.

Resource planning (detached from budget tasks)

Resource planning would be ideal if it ran hand in hand with project planning. Unfortunately, experience shows that this is very time-consuming. This is because detailed planning at the budget line level (budget task) and, above all, updating it takes a great deal of time. In order to nevertheless obtain a reasonable resource planning at least on the project level, there is another resource planning that can be created detached from the actual project tasks.

Requirements

- The resources must have a resource capacity
- Projects must have been created

Facilities

In addition to the prerequisites already mentioned above, such as resource capacities, there are only a few facilities to be set up for resource planning.

Resource planning facility

In this setup table it is possible to define which information are mandatory fields during resource planning. Furthermore, the numerous filter options in the planning matrix can be activated or deactivated. And it can be specified whether email notification should be sent when the request is completed. Something must be entered in the Resource absence project name field if the absences are to be transferred to the planning. Only a dummy name is entered here, no real existing project has to be entered. This name is only used in the planning matrix to group the absences to a "project".

Planning types

With the planning types, different types of resource planning can be distinguished. For example, it makes sense to separate planned times for internal projects from customer projects. It is also helpful to immediately recognize absences such as vacation. In the planning type table you define an order of display in the planning matrix. So that the planning types can be easily distinguished from each other, a style expression can be selected. These are the same style elements as used elsewhere in Business Central.

Transfer absences to resource planning

Absences from absence registration can be transferred to resource planning. Which absence types are to be transferred is defined in the Reasons for absences in the Plan type field. Each absence reason with a plan type is transferred to the planning. Basically, a common planning type is sufficient, but if, for example, vacation is to be separated from other reasons, different planning types must be defined and assigned. The absences are transferred to resource planning by function.

Overplanning facility

With the "Overplanning setup" you can define for which resources a warning message should appear in case of overplanning (planned quantity > remaining capacity). The setup is done per cost center, resources in turn are assigned to these cost centers.

Planning mask

The core of resource planning is a weekly matrix. Planning is done per calendar week. The hours scheduled for the resource are visible in the matrix. In the rows, the planning can be displayed in detail according to planning type and projects. A color separation makes it easier to distinguish between the individual planning types.

Matrix options

For a better overview, filters can be set in the matrix options. If the user is connected to a resource, its cost center is automatically used in the cost center filter, assuming that usually the planning of the own cost center is interesting. The "no date filter" field causes the matrix to also display resources for which there are no plans in the current period under consideration, but which have older or future plans.

Resource Planning Matrix

In the matrix, initially one row is visible per planned resource. Further levels can be expanded to view planning details. The distribution of the planning per calendar week is visible in the columns. The columns have the calendar week and its start/end date as headers.

Resource line

The top level is the resource row. On this level, the total planning per week can be viewed in the columns. In addition to the planned quantity, the resource capacities for the week are also shown. This provides optimal information on free capacities or over-scheduling.

Planning type level

The next level represents the planning per planning types. Ideally, the planning types are separated by color (see Facilities).

Project level

The lowest level represents the planning per project within the planning types.

The project lines have the same color as the associated planning type.

Preset

The lower part of the mask is a preassignment for new planning. These can be used to preassign the fields "Request from", "Request on" and "Request type".

Planning functions and overviews

The planning functions and overviews can be called up in the matrix.

Insert absentee registrations

Before planning, it is useful to transfer the current absences to the planning matrix. To do this, the function Insert absence registrations is started.

Note

Only resource schedulers (setting in user setup) see this feature.

Transferred absences are automatically updated should they be changed or even deleted in the absence registration.

New planning

When starting the "New" function, pay attention to which resource you are currently standing on in the matrix, because exactly this resource is suggested for planning. The values entered in the Preset tab are also preset in a meaningful way. The week is also entered by default = current week.

You can define the planning week by the week number or by the start date, the end date is not relevant. Fixed date is an indication so that this planning can be taken into account accordingly in the event of subsequent rescheduling, however, a fixed date can also be rescheduled. In the basic data only the fields Type and Project no. have to be entered, Work package and Task no. are optional. If this new planning is used to overplan the resource in the planning week and the overplanning setup is set to a message for the cost center of the resource, a corresponding message appears.

Distribute planning

Several plans can be created at once using the "Distribute planning" window. The total budget must be entered in "Distributable times". The planned times entered in the plan lines are deducted from this and shown as a residual value under "not yet distributed".

Over-scheduling causes a corresponding message, which with one click causes an increase in the total budget quantity under Distributable times.

Free times overview

For each resource the free times (= capacity - resource planning) per calendar week are displayed.

Planning overview

The planning items can not only be filtered quickly in the planning overview according to your own needs, but can also be edited. Thus, in this mask a quick planning change for several planning items is possible. Likewise, new planning can also be created per function. This overview can also be called from the planning matrix from a cell. In this case, the planning items are already filtered with the values of the row (resource, possibly planning type, possibly project) and the column (week).

General planning

General planning can be used to create a constant workload (e.g. base load) over a longer period of time for one or more resources.

Planning Resource Matrix

This overview shows the resource planning from the perspective of the projects, i.e. how many hours are planned on the individual projects in the calendar weeks. Using the filters in the matrix options, it is also convenient to find out, for example, in which projects a particular resource has been scheduled.

Planning Project Matrix

Similar to above, but from a resource perspective. Filtering can be used to find out who was scheduled for when in a particular project.

Plan own resource

Anyone who has the rights to resource planning can generally plan all resources. However, this is usually done by one or more resource planners. In some companies it is regulated in such a way that at least some employees can plan themselves. These employees must generally be given the right to this table, but in addition, in the "User setup", the restriction to his own resource can be set with the field "Only own resources". Plan in Res. plan" can be made in the "User setup".

My planning - where am I needed?

On the project delivery role center, an overview is built in, with which the logged in user can see at a glance how he has been scheduled for the next 3 weeks.

By drilling down on one of the numbers, the user can access the planning items.

Time & Materials

General

In the following, the individual areas are explained in more detail, through which the project, effort and consumption can be assigned.

Thus, on the one hand, the expenses of the resources are recorded in the form of working hours, and on the other hand, article consumption is recorded via stock or project purchasing.

This results in the actual values of a project. Subsequently, these actual values are compared with the planned values.

Personnel/service costs

The implementation of projects includes consumption as well as sales. Project consumption primarily includes the expenditure of resources. Resources can be employees, machines and subcontractors. In the following, only the expenditure due to personnel resources is considered in detail. The resource expenditures via Time Book. sheets and other time recording options are always made in the resource base unit, which was set up in the resource setup in the field with the same name. All person resources should have this code as the base unit on the resource card.

As a rule, "hours" is used as the base unit for the resources. If times are recorded for work types that provide for a different unit as the unit of consumption (e.g. days), the conversion from the base unit to the defined accounting unit is not carried out until the time items booked by the employee are called up in a project book sheet when these project times are released. Thus, the employee always thinks and posts in hours.

Project Time Book. sheets

Via the project time-book. sheets the resources can enter their expenses with a corresponding description on the projects. A book sheet name must have been set up for each resource (see "Set up capacities").

By assigning a resource to a Book. sheet and to a user in the user setup, the correct Time Book. sheet is automatically selected when the Time Book. sheets are opened.

Users, who are marked in the field "Other resources" in the user setup, are allowed to change the book sheet, e.g. to book times for other resources.

If it is not possible for the user to be assigned to a time-book.sheet, the user will receive a corresponding message.

By assigning a resource to a time book. sheet, the resource number is also automatically preassigned in the book. sheet lines.

The following table explains the most important fields in more detail:

Field	Description
Resource no.	Selection of the resource that records the times. Since each resource has its own time book. sheet, the resource is preassigned.
Posting date	Deposit of the booking date for which day the times are recorded.
Project no.	Indication of the project number to which the times must be recorded.
Task number	Specification of the task number of a budget line, which can be stored per WBS line. If "Budget line" is entered in the field Activity for posting in the project card and there are budget lines (=tasks) for this project, these are automatically displayed for selection after entering the project number. Only those budget lines are displayed for selection which have been assigned to the resource as responsible person and those budget lines of the associated resource group. Already completed tasks are no longer displayed for selection. If you want to report on completed tasks, you have to change their status back to "in progress". When a budget line is selected, the work package code fields and the activity fields are automatically filled with the values of the budget line. This means that the times are posted not only to the budget line, but also to the associated WBS line.
Work package code	Specification of the work package code which is assigned to the WBS line to be posted. Is preset when a task is selected.
Description	An activity description with max. 50 characters can be entered here.
Project Time Note	This field can be used to store additional comments on the time booking.
From clock	Start time of the task (not a required field, helps the employee to calculate the duration of a task).
Until clock	End time of the task (not a required field, helps the employee to calculate the duration of a task).
Pause in minutes	Indication of the minutes of break inserted between the two times. The Pause and Quantity fields are then determined automatically.
Break	Specify the break in hours. The fields Break in minutes and Quantity are then determined automatically. The last value entered is the valid one.
Quantity	Worked quantity of the employee in hours. Calculated by the time and break entries. Can be overwritten manually here. Task progress % The resource can indicate here how far the completion of the task is. The user can choose to use this field or the "Quantity to complete" field, editing both in parallel is not possible.

Field	Description
Quantity for completion	This field is only relevant for feedback on budget line level, if the budget lines are used as tasks there. The user has the choice between this field and the field "Task progress %" to report the status of the task. In both cases, the "total expected quantity" and the "total expected amount" are calculated on the budget line.
Settlement type	Transfer of the info from the PSP line. Cannot be changed.
Settlement quantity	The resource can indicate here how much of the quantity performed it believes can ultimately be charged to the customer. This is definitely only decisive if the services can be billed on a time and material basis.
Cancellation of Lfd. No.	This field can be used to control that a posted project time item is to be cancelled. For this purpose, it is possible to enter directly which project time item is to be cancelled.

In the lower part of the project-time-book sheet, the left block displays information about the project and the task of the active row. The right block contains information about the time recording of the current row.

Actions menu tab

Functions

Here you can select a task and a reference to the WBS line via the call "Get work package". Depending on whether a project number has already been entered, this is set as a filter. If a project is set up for confirmation by budget, then all tasks that are assigned to the entering resource or to no resource (neutral tasks) are displayed for selection. If no project number has been entered yet, then the tasks are displayed without a project filter. This way an employee can find his task without knowing the corresponding project number. This selection is used to fill a large part of the fields.

Book

The book sheet is posted via the "Post" function.

Menu tab Related

Project

With the call "Project Card" you have the possibility to switch to the project Card of the selected project of the active line. In addition, you can view the project items via the call "Items" of the selected project.

Resource

With the call "Resource Card" the corresponding Card is called up. The "Time items" function is available for viewing the posted time items. Via the function "Budget tasks (open)" all current budget tasks are displayed.

Line

In the "Line" group you can call the dimensions and the remarks of the active line.

ZDE card (time data capture card) and ZDE time recording

The ZDE card can also be used to record project times of resources. ZDE card and ZDE time recording have the same functions and are based on the same tables, the difference is that the ZDE time recording provides both unbooked and already booked in one view, also there is a calendar available with status colors which also serves for easy selection of the day to be recorded.

There are differences to the time-book.sheet project in that

- certain plausibilities prevent too many project times from being booked in one working day
- the user enters his clock-in and clock-out times. I.e. the quantity of the hours, which he worked, is available by the inputs. In the second step, these hours are distributed to projects.
- Break times can be defined as defaults
- there is only one ZDE card per day / employee, which can have several distribution lines. Several lines with their own clock times must be entered in the ProjectTimeBook .sheet.
- absences can also be recorded via the ZDE card
- the input can be traced at any time via the booked ZDE cards
- Project times must have the status "Released" so that they can be booked

The ZDE Card can be accessed from the Projects menu under both Project Management and Resources.

Determination of the break times

Break times can be specified at different levels.

1. Project Work Time Template
   A "Rule break" can be defined in the "Project work time template". By assigning a project work time template to a resource (in the "Work time template" field on the resource card), this rule break is copied to the "Rule break" field on the "Resource card" and can still be changed at this point if required. This rule break defined on the resource card is in turn transferred to the time recording as a default, which can also be changed manually at this point.
2. Break time per working time
   This list has a higher priority than the regular break described in point 1. This list defines a maximum working time and an associated minimum break time.

Example:

Max. Working time	Break time
4	0
8	1
10	1,25

The working hours / break times listed above have the following meaning:

- up to 4 hours no breaks are necessary, no break time is suggested automatically, but can still be entered manually.
- from 4.01 hours to 8 hours at least 1 hour is necessary, this is also automatically entered in the CDE card. If the time recorder tries to manually change this break smaller, he gets an error message, but more break is possible.
- from 8.01 to 10 hours 1.25 break hours are necessary.
- A recording of more than 10 hours are not possible

Note

In the "Setup projects" there is a setup field "Allow break time under min.", if this is set, then the break time suggested by the system may be undercut manually during the time recording.

Inforegister General

Field	Description
No.	Resource no. of the capturing resource.
Date	Date of the working day for which times are to be recorded.
Employee no.	If the resource is linked to an employee card, the employee number is displayed in this field.
Description	Takeover of the resource name.
Reason absence code	In case of absence, you can select from the stored absences here.
From clock	Start working days.
Until clock	Time of end of work.
Break in hrs	Deposit of the break time. (see ["Determination of the break times"](#))
Quantity	Determined quantity from: To clock - From clock - Pause.
Quantity distributed	Summation of the times distributed to projects in the individual ZDE lines.
Still to distribute	Remainder of times not yet allocated to projects.
Date of last birth	ZDE card Display of the date for which the last ZDE card of this resource was booked.
Cost center code	Printout of the first global dimension, which is preset here from the resource.
Cost unit code	Pressing of the second global dimension.
Status	**Status of the ZDE card:** You can choose between 2 statuses: Open: the ZDE card is in capture status and can still be changed at any time. Released: ZDE card is fully recorded and released for booking.

Inforegister ZDE Lines

The CED lines basically contain the same fields as in the Proj. time book. sheet, among others:

Field	Description
Project no.	Selection of the project on which hours are to be booked.
Work package code	Selection of the work package to which hours are to be booked.
Description	Field for entering the job description.
Quantity	Enter the amount of hours spent on this activity in the project.
Task progress %	The resource can indicate here how far the completion of the budget task is.
Settlement quantity	The resource can indicate here how much of the quantity performed it believes can ultimately be charged to the customer. This is definitely only decisive if the services are billed on a time and material basis.
Billable	Indication of whether these expenses can be charged on to the customer at all. This value is specified in the task.
Settlement type	Transfer of the info from the PSP line. Cannot be changed.
Task number	Specification of the task number of a budget line, which can be stored per WBS line. If "Budget" is stored in the field Activity for posting in the project card and there are budget tasks for this project, these are automatically displayed for selection after entering the project number. Only those budget lines are displayed for selection which have been assigned to the resource as responsible and those budget lines of the associated resource group. Already completed tasks are no longer displayed for selection. If you want to report on completed tasks, you have to change their status back to "in progress". When a budget line is selected, the work package code fields and the activity fields are automatically filled with the values of the budget line. This means that the times are posted not only to the budget line but also to the associated WBS line.
Quantity for completion	This field is only relevant for feedback on budget line level, if the budget lines are used as tasks there. The user has the choice between this field and the field "Task progress %" to report the status of the task. In both cases, the "total expected quantity" and the "total expected amount" are calculated on the budget line.

Functions

Create ZDE cards

The "Create ZDE cards" function can be used to create several ZDE cards with the same values. This is particularly useful when entering absences.

Release ZDE card

The "Release ZDE cards" function sets all completely captured ZDE cards that match the specified filters to "Released".

Release

In contrast, the "Release" function only releases the open ZDE card.

Reset current ZDE Card

If you want to reset the status from "Released" to "Open", use the "Reset current ZDE Card" function.

Copy from existing ZDE card

With this function we go exactly the other way than in the before described copy function, because here we don't move into the current day card, but pull data from a card to be selected into the time recording card in which we stand at the moment.

Copy to today's Card

This function allows you to copy the time sheet card on which you are currently standing to the card of the current day's date. Both the header and the lines are copied. This function is only applicable if there are no time registration lines in the target card yet.

Book / Stack book

The "Post" and "Batch Post" functions can be used to post the recorded and released ZDE cards.

Resources

The call "Resources" opens the corresponding resource card.

Booked Time tickets

You can access the overview of the booked time entries via the Geb. time cards.

Booked ZDE card

As soon as the card is posted, it is removed from the overview of open ZDE cards. The project time items were also formed here with the posting. Call up the born ZDE card via user search by entering 'geb. ZDE-Kartenübersicht'.

Note

As described above, the ZDE Time Recording is in contrast to the simple ZDE card a combined view of unbooked and booked cards, so in the ZDE Time Recording the booked ZDE cards must not be called separately.

Actions menu tab

Via the menu item "Actions" you have the possibility to cancel the Geb. ZDE card. With the cancellation, the project time items are also cancelled. If they have already been transferred to the project, the project items will also be cancelled, provided that the employee has the authorization to post project items. If he does not have the authorizations, he must have the project manager perform the cancellation. In any case, project items can only be cancelled if they have not yet been settled.

Menu tab Related

Here, the resource that the ZDE card is based on can be called up. All items associated with the ZDE card, namely Proj. time items and Project items (if the time items have already been transferred to the project) can also be called up. Absences can be entered under Absence registrations. Furthermore, the dimensions for the Geb. ZDE card header can be displayed.

Inforegister Geb. ZDE lines

In the lines, the "Line remarks" and the "Dimensions" of the respective line can be viewed via the menu call "Line".

Comfort time recording

With the help of the comfort time recording, the user keeps track of individual calendar days by simply navigating in the calendar. Essentially, the comfort time recording corresponds to the presented ZDE cards. Based on the ZDE cards, the entry mask forms a convenient combination of the ZDE cards that have not yet been booked and those that have already been booked.

Calendar colors setup

To define calendar colors for absences, first call up the "Calendar colors" via the user search.

Via "Actions" > "Initialize" colors are automatically set up with their RGB values.

Background colors for absence reasons

After the colors have been initialized, they can be stored with the respective reasons for absence.

To do this, call up the "Reasons for absence" via the user search. Via the field "Calendar background color" you can store any color from the table "Calendar colors".

If the reason for absence is selected during time recording, the corresponding color is displayed for this day in the calendar.

Color representation of the capture status

In the Projects setup, you can store a colored representation for the calendar days for the respective entry statuses.

To do this, call up the "Projects setup" via the user search.

On the "Colors ZDE Calendar" info tab, you can set it up using the table below.

Field	Description
Neutral style	Display for neutral times e.g. Saturdays and Sundays/holidays.
Booked ZDE style	Display for times that have been recorded and posted by the user.
Released ZDE style	Display for times that have been recorded and released by the user, but not yet posted.
Open ZDE style	Display for times that have been entered by the user but not yet released.
Missing ZDE style	Display for times that have not yet been recorded by the user.
Date outside the month style	Representation for times that are outside the month.

Elements of the comfort time recording

The resource number and date are displayed in the header. The resource is automatically preset when the mask is opened. Only employees who have set up the field "Other resources in time recording" in the user setup can select time recording for other employees here. The date is selected via the calendar.

Inforegister ZDE Card

The basic daily data is recorded on the "ZDE map" info register. The fields correspond to those of the ZDE card ("see ZDE card").

Inforegister lines

In the rows, the net times are distributed among the projects and their tasks. First a project is selected, then the task or work package on which the work was done is selected. A meaningful description helps later with the activity allocation. Further descriptions can be entered via remarks.

The working time can be entered either with the auxiliary fields from clock, to clock, break or directly in quantity. The sum of the individual lines must correspond exactly to the quantity in the header, otherwise a release is not possible.

The fields correspond to the fields of the ZDE cards ("see ZDE map").

Infoboxes

On the right side, info boxes give the user more information.

In the time statistics you can see what has to be done for this day according to the resource capa, how much flextime has been entered for this day (only works in connection with the Tempvision module), how much has been booked for this day and for the whole month.

Among them are 3 calendars, for the current month, the previous month and the next month. The calendars serve as an overview of the entry statuses and absences as well as for navigation. With a mouse click on a calendar day, the entry mask is placed on this day.

The ZDE line information represents project and task information for the current line.

The color legend is a guide that provides information about the set background colors of the absences and the capture status.

New acquisition

If an entry is to be made for a new day, the day in question is selected from the calendar. A new entry is prepared automatically. A non-booked ZDE card is set up in the background.

However, new days can also be prepared using the "Create ZDE Cards" function known in the ZDE Cards.

Activity recording

In the rows, the working hours are distributed to the individual activities in the projects. Via the function on the info tab "Lines" > "Functions" > "Get last activity" the last used activity can be entered for a project number previously entered by the employee. The last task / work package used by the employee for this project is searched for.

Release an acquisition

Analogous to the ZDE cards, the recorded days must also be released here before the actual posting. In the process, some plausibility checks are carried out, e.g. whether the quantity of the information register "ZDE card" has been completely distributed in the lines. Each individual day or several days at the same time can be released using the corresponding function.

Posting an entry

Released days are booked. Here, too, each individual day or several days can be booked at the same time using the function. Only with the booking the project time items arise which are taken over by the project manager with the release as project items.

Booked acquisition cards

In contrast to the ZDE cards, which disappear from the view when a card is booked and are stored in the booked ZDE cards, it is not necessary to change the view in the comfort time recording to display the cards / days that have already been booked. Both not yet booked and already booked days are displayed in the same mask, recognizable by the status. Since the ZDE Cards are used in the background, they can also be called up accordingly. Filtered to the current resource, the already booked and the not yet booked ZDE cards are displayed separately, since these are separate data pots. In the unbooked ones there are only ZDE cards for those days for which an acquisition has already been made.

Time sheet

Another way to record project times of resources are the time sheets. In these timesheets, resources can record time consumption in weekly increments of seven days in the form of a matrix.

Before you can use timesheets, you must determine how to set them up and configure them.

Resources must be set up for recording. To do this, it is important that the "Use timesheet" field is activated in the resources card.

The time sheets are created in advance without lines, only the weeks are Cardped. The call is made by entering "Create timesheets" via the user search.

Field	Description
Start date	The date on which the creation of the timesheet is to begin.
Number of periods	Number of calendar weeks for which timesheets are created.

The other filter settings allow you to create timesheets for selected resources or external employees, for example.

Note that only the persons who are defined as "timesheet administrator" in the user setup are allowed to create timesheets.

By executing the "Create timesheets" function, the corresponding timesheets are created and can be viewed via the user search by entering "Timesheets". Access to timesheets is analogous to the ZDE cards, which means that only the user's own timesheets are visible, controlled via the user setup. If it is defined for the user there that "other resources" are visible, the overview of all tables is displayed.

Resources can create timesheets from the resource card by calling the "Create timesheet" function from the "Functions" group in the "Actions" tab.

Once the tables have been created, the resources can report back their hours on a weekly basis. The call is made via the overview. The hours are recorded in the form of a matrix for the calendar week.

After recording, the hours are released with the "Transfer" function so that they can be posted. Through automatic processing, these times are regularly converted to time items. If the status is "Submitted" and the line has not yet been posted to time items (Project Time Items column), the user can "Reset Status" to make changes to the work packages, tasks or quantity.

The "Budget tasks (open)" function shows the user all open budget tasks that are assigned to the resource. Budget tasks for the resource group are not displayed. To copy the complete rows from the previous week, the function "Copy rows from previous timesheet" is used. This way, once created, a table can be copied week by week. If you want to add remarks to the respective time entry, use the text fields directly next to the respective work quantity field. This automatically ensures an assignment to the time item, which is set up with the subsequent booking. These remarks can subsequently also be used in the statement of work to the customer.

Actions menu tab

The menu tab "Actions" contains the possibility to fetch a work package. After calling the function, the user can choose from all tasks that are currently set for his resource or resource group in the system.

Belonging tab

In the "Project" group, the project or the items of the corresponding project can be called directly from the line.

The resource Card or information about the created time items can be found in the "Resources" group (analogous to the ZDE Card).

Project booking sheets

The project time book. sheet, the ZDE card and the time sheet are used to record the project time consumption. To ensure that the projects are also debited with the posted project time items, i.e. the project time items are transferred to so-called project items, the posted time consumptions must be posted via the project book.sheet.

The project posting sheet is used to post project items of all types. For example, material from the warehouse can also be posted here as project consumption. We will only show the transfer of project items from the project time items.

Via "Retrieve time items" an input mask is generated in which the filters for the retrieval can be set specifically.

This function is used to retrieve project time items that have not yet been transferred to project items. As a rule, each project manager retrieves the project time items for which he is responsible. For this purpose, each individual project can be edited or the "Responsible" filter can be used.

The call fills the project book.sheet with all necessary data from the project time item.

One book.sheet line is created per project time item.

After updating, the project book sheet is empty again and the corresponding project items have been created.

External resources

Set up external resource

External resources (type = external) can be purchased via purchasing documents.

For External resources, a vendor can be specified on the resource card. This creditor is the invoicing party, e.g. a personnel service provider. In the case of a freelancer, the freelancer must be created as a resource and as a vendor and linked accordingly.

If an external resource is entered in a project budget, this vendor is transferred to the same field of the budget line. Thus, a cost price determination can be carried out specifically for the combination resource / vendor. Also a creation of a purchase order of the external resource from the project budget takes place with the creditor of the budget line.

For external resources, purchase prices for external resources can be defined in addition to cost prices, sales prices, project resource sales prices.

In contrast to the "normal" cost prices, these always apply in combination with a vendor, i.e. when purchasing an external resource or budgeting it with the vendor specified. If no purchase price is found in this table, a purchase price is taken from the "normal" purchase price table; if no price is defined there either, the purchase price is taken from the resource card.

If you have specific external employees, it is recommended to create an external resource for each of them with allocation of the vendor and purchase prices.

The field "Use EK settlement items" is to be set if an external resource posts hours like an internal resource via time recording. In order to avoid a double debit on the projects, external resources that are marked in this field will be worked with settlement items in the later purchase invoice.

Order external service

The external service can be transferred to a request or purchase order like articles via the "Create purchasing document" function in the WBS.

From a purchase order, project consumption can be posted with its delivery. The project is debited with quantity and amount with a resource consumption. In the case of external services, a delivery is not usually posted; delivery and invoice are posted together. If, however, a delivery and thus the project consumption have been posted first and the subsequent invoice shows a different cost price, the project items are automatically corrected with the subsequent invoice posting.

Project load due to external resources

The external resource can book times via its own time book sheet just like any other resource. This is not necessary for the actual accounting. Ultimately, an EK invoice for the hours worked would also suffice. In practice, however, there is often a considerable time lag between the performance of the service and the EK invoice. This in turn leads to problems when billing the customer for this service. Therefore, it is recommended that the external resource books its times immediately. In order to avoid a double project load, the project items resulting from the time bookings are balanced in the EK invoice.

Purchase invoice with settlement items

When posting the purchase invoice, it is necessary that the already posted project items are cleared. This prevents the project from being debited twice (once by the time posting and once by the purchase invoice). If no times are booked by the external resource, this balancing is omitted.

In order to prevent a purchase invoice for an external service from being posted without settlement items (which are already recorded as project time items), the "Use purchase settlement items" field can be activated on the resource card of the external resource.

Setting this marker defines that no posting (delivery/invoice) can be made without allocation of accounting items. As a rule, in such cases the delivery and the invoice are posted in one entry.

If a separation should nevertheless take place, the allocation of the settlement items must already have taken place with the delivery. Otherwise, project items are posted as usual. Only if the resource has been set up accordingly will an error message be issued if no settlement items exist when the delivery is posted.

Example:
As an example, 6 hours were booked by the external resource via time recording and transferred to the project via the project book. sheet. These 6 hours are now to be invoiced. To do this, first enter these "6" in the "Quantity to be supplied" field. Check the "Purchase price without VAT".

The billing items are assigned directly in the purchasing document via the line menu item "Purch. Settlement items".

Via "Add items" all not yet balanced project items can be added to this external resource of the current project.

These are now marked with the mouse and the selection confirmed with "OK".

The project items to be settled have now been transferred to the purchasing settlement items. In the statistics, a comparison of the values from the purchasing line with the current settlement items is listed. The values from "Quantity to be delivered" are used from the purchasing line.

If there would be an amount difference here, then it must be clarified whether the purchase price in the purchase line or the cost price on the resource card is wrong. If the purchase invoice is correct, then a correction of the project items can still be posted at this point at the same time as this posting. The correction can also be used for a quantity correction and for a combination of both corrections.

Note

For technical reasons, it is unfortunately not possible to update the totals when deleting one or more payroll items. For this purpose, the function Update totals with the same wording must be executed. However, with the next opening of the page or the addition of further project items, the totals would be updated automatically.

The corresponding correction is documented in the purchase line (Project Amount Corr. (MW)) is documented.

When the delivery is posted, the settlement items prevent further project items from being posted.   The value and / or quantity correction takes place only with the posting of the invoice. Several deliveries can be posted to one order and the settlement items can be collected in the process. When posting the invoice, the quantity of the current invoice must correspond to the quantity already delivered. Quantity + Quantity of current delivery.

It is not possible to post a milestone invoice of a delivered quantity, because there is no possibility to assign the settlement items assigned to the purchase line to several milestone invoices. The entire settlement items are always transferred to the posted invoice and the entire correction is always posted to the project.

Posting of the project correction by settlement items

By assigning settlement items, project items are generally only posted when corrections are necessary.

The list below shows examples of what these corrections look like.

	Quantity	Cost Price	Projectpost Amount	Selling Price	Amount	
1)	100	50,00 €	5.000,00 €	70,00 €	7.000,00 €	
Correction			500,00 €			
2)	100	50,00 €	5.000,00 €	70,00 €	7.000,00 €	
Correction	3	50,00 €	150,00 €	70,00 €	210,00 €	
3)	100	50,00 €	5.000,00 €	70,00 €	7.000,00 €	
Correction			- 500,00 €			
4)	100	50,00 €	5.000,00 €	70,00 €	7.000,00 €	
Correction	-2	55,00 €	- 110,00 €	70,00 €	- 140,00 €	
			500,00 €			

Quantity corrections

Quantity corrections are posted as project items as if they were posted in a purchase invoice without settlement items. This is because a quantity correction is always associated with a value correction.

Value adjustments

Value corrections are also posted as project items but without quantity. This corrects the cost amount in the project without changing the quantity or even the settlement quantity. Such value corrections are marked in the resulting project items in the field "Value correction". These are pure corrections of the cost amounts.

Cost of materials

In addition to the time spent on resources, projects also have material costs. This is managed via articles. The demand is defined and planned in the planning lines. The missing parts are ordered via the purchasing module.

Basically, a project purchase (in the purchase line there is a project number) can be carried out without stock management. This means that an article, which is purchased for a project, is automatically consumed immediately for the project with the purchase posting. There is no stock management of the article. The article is added to the warehouse in one go and immediately deducted again with a project consumption.

Project purchasing with inventory management

This can be decoupled in terms of time via the option "Project purchasing with inventory management" in the project setup.

If warehouse management is activated, the item is only added to the warehouse when the purchase delivery is posted. There is no automatic consumption posting. This must be done manually at a suitable time via the project delivery bill.

If the purchase order was created with a planning run for an item with replenishment procedure "Order quantity" or via the function "Create purchasing document" from the WBS, the stock item is linked to the budget line via requirement originator items and via the fields "Project no.", "Work package", "Main", "Sub" and "Partial activity code".

Specifications manual and automatic ordering process

Microsoft Dynamics Business Central™ has a complex function to determine a purchase order requirement. Depending on the facilities in the purchasing and warehouse module, this order proposal can be used by the system to identify the requirement and propose it for ordering. Basically, this order proposal leaves out all the demand that runs directly to projects. This basic function is overridden with the "Can be planned" field. As soon as this field is ticked in the budget line of a project, these articles are taken into account in the order proposal.

Furthermore, a purchasing document can be created manually from the WBS using the function. However, this function does not check the stock level and the order level. It only informs about these values.

It must be taken into account that if both requirements determination options are used, the order may be executed twice in some cases. Basically, the decision for one process should be made here. At least all budget lines, which are ordered manually, should be set to Disponable = "No". In the following, the automatic ordering process is only hinted at, the manual one is described in more detail.

Automatic ordering process

The budgeted article requirement in the WBS becomes relevant for the automatic ordering process via the "Can be planned" field.

The order proposal is called up by entering order proposals in the user search. Via the action "Calculate planning" an input window appears.

In the "Options" info bar, the "Start date" and the "End date" can be entered. The end date ends the planning period. The demand after this date is not considered in this order proposal. With the field "Use planning" a stored planning with defined demand information can be selected.

In the "Exclude planning before" field, the system does not take into account requirements that lie before this date entry when determining requirements.

With regard to the project management, all articles are now taken into account that are stored in the budget lines and have a "YES" in the field Plannable. It should still be noted that only the active WBS and its lines in the Order status are taken into account. During planning, the planning parameters on the article card are taken into account. If an article is not set correctly there, it will not be planned correctly or even not at all.

To create an order from the order proposal line, the action "Execute event message" must be executed in the order proposal. In the following dialog you can control the printout of the documents by checking the option "Print orders/orders". In the Items section, the usual filter options can be applied.

Manual process

In the manual ordering process, an inquiry or an order can be generated directly from the WBS via "New" > "Create purchasing document", bypassing the automatic ordering process.

In the call "Create purchasing document from WBS" certain filters can be entered. For the type filter (article, resource or G/L account) a default value can be specified in the project setup.

In document type you can choose between "Inquiry", "Order" or "Order proposal". The desired vendor must be selected in the lines in the "Purchase from vendor" field. The master vendor from the item card is automatically entered in the budget lines, but it can be changed at any time.

This manual ordering process checks whether the budgeted quantity has already been ordered or even consumed. The budget quantity minus quantity already ordered or consumed is suggested as the order quantity. For information, the quantity in request, quantity in order, quantity in order proposal, quantity delivered in purchase and consumption (quantity) is indicated. With the column "Transfer budget text to purchasing" the line text of the budget lines can be transferred to the purchasing document.

In the first field it is possible to mark each line individually for transfer to the purchasing document. Via "OK" the purchasing document will be created.

Posting of material expenses

As already explained under "Project purchasing with inventory management", the immediate material consumption during purchasing is related to the switch "Project purchasing with inventory management" in the project setup. In the following, the immediate material consumption is shown when the switch is not set:

From the purchase order, the incoming deliveries and invoices can be posted using the "Post" function. With the posting of the incoming delivery, project consumptions are posted. A stock posting takes place twice. In addition to stock receipt, the issue is automatically posted to the project immediately.

For correct posting, the "Credit delivery no." and the "Credit invoice no." must be entered. The order must be released before it can be posted.

Target/actual comparisons

In addition to the flexible evaluations in project controlling, there is also the option of performing plan/actual comparisons in the project itself.

Project target / actual comparison at work package level

The target/actual comparison at work package level can be carried out by selecting the corresponding project in the Projects module and calling up the active work breakdown structure via the project Card, for example. Afterwards, the target/actual comparison can be carried out via the > Project target/actual comparison process.

In the header area, the fields of the WBS from which the call is made are displayed. Changes are not possible here. Regardless of which version of the WBS is used, i.e. which planning version is used as budget values, the same values are always displayed for the actual data. This means that any planning version can be used for the target/actual comparison. Since this is just another view of the PSP, only the fields added here will now be explained.

The values required for comparison are shown at the back of the lines. The planned as well as the consumed quantities including the cumulative quantities can be seen.

Field	Description
Budget quantity	Planned quantity from the work packages
Consumption quantity (base)	This is a calculated field that shows the totaled quantity already consumed for this work package code. The field refers to the Project Items table and totals the contents of the Quantity field
Quantity Time Commitment	The quantity from the time items that has not yet been transferred to the project is displayed here. These hours have already been booked by the employees, but have not yet been transferred to the project by the project manager.
Residual budget amount	Specification of the difference calculation of budget quantity minus consumption quantity (basis) minus quantity time commitment
Budget value (MW)	Planned budget as initial amount.
Consumption Cost amount (MW)	This is a calculated field that shows the quantity already consumed for this work package code totaled. The field refers to the Project Items table and totals the contents of the Cost Amount field.
Order commitment	This field displays the remaining open order value from the purchase orders for the WBS line. The field refers to the Purchasing line table and totals the content of the Remaining order value without tax field.
Time Commitment	The value from the time items that has not yet been transferred to the project is displayed here. These hours have therefore already been booked by the employees, but not yet transferred to the project by the project manager.
Stock obligo	The value procured for the project but still in stock is displayed here. A value can only be created here if project purchasing with stock management has been switched on in the project setup.
Residual budget (MW) incl. commitment	The field determines the difference between the planned cost amount (budget) minus the actual consumption (cost amount) and the two commitments purchase order commitment and time commitment.
Percentage of completion %	Project progress (percentage of completion) recorded manually by the project manager in the work package.
Consumption progress %	Value determined by the system, which is the result of the planned cost amount and the actual consumption.
Consumption progress % with commitment	Value determined by the system, resulting from the planned cost amount, the actual consumption and the two commitments (time commitment, purchase order commitment).

Field	Description
Task progress %	Weighted value from the progress values of the stored budget lines (=tasks), which the resources enter during time recording. Only filled with values if the confirmation is done on budget lines and if the progress % is maintained there.
Completion value	Determined by the system based on budget value and POC. Therefore, it reflects the value of the WBS line just reached in cost amounts.
Cost variance	Determined by the system based on earned value and actual consumption in cost amounts.
Cost variance %	Determined by the system as above, expresses the deviation in percent.
Estimated total cost	Determined by the system from the actual values in relation to the current POC. Assumption: Things continue as well or as badly as before.

The project plan/actual comparison provides an overview of the entire project. All work packages are displayed with the corresponding planned, actual and difference values.

Internal documents

The following explains which internal documents can be used in the project business to make the subsequent project accounting more efficient and transparent.

Project delivery bill

The project delivery bill is intended to provide the client of the project with a delivery bill for the project services performed. Often deliveries are made for which there is no direct sales order line. In the project budget, these values are noted so that a document for goods to be delivered can be created based on this data.

The proposal for the project delivery bill is based on the project budget. The posting of these project delivery bills creates project time items for resources or a stock withdrawal with project consumption, if articles are involved.

The structure of the project delivery bill is identical to the int. project order. In addition, the header has an information tab with the name "Delivery". There, delivery data can be adapted, if they deviate from the default. A more detailed explanation of the individual fields is therefore omitted here.

The only difference to the int. project order is the field "No consumption booking". If a check mark is set here, no consumption posting is made in the background. This is important if the project delivery bill is only to be used as a receipt for the customer, e.g. if an article was purchased directly for the project. In this case, no stock receipt was posted, but the project was debited immediately. Now, of course, no further stock withdrawal and no further project consumption may be posted. Under such circumstances, the check mark is automatically set when the project delivery bill is created from the project.

Project delivery bills can be processed via logistics with goods issues. For this purpose, the project delivery bill must be released. Goods issues can be created either in the goods issue document or still in the project delivery bill with the same function. It is important to note that goods issues are only created for delivery note

lines that have an appropriately set up storage location code and that are not marked in the "no consumption posting" field.

The project delivery bill can be created by entering project documents in the user search and then clicking on "New". Here, the individual lines for the project delivery bill must be entered manually. This is very time-consuming and error-prone. This call should be used to edit the created project delivery bills afterwards.

The more sensible way to generate a project delivery bill is via the action "Create project delivery bill" from the work breakdown structure. All budget lines of an active WBS are displayed.

A check mark can be placed in the "Transfer to project delivery bill" field to supply this budget line. Only the lines from the selection that are marked with a check mark are transferred to the project delivery bill. By confirming with "OK", the message appears that a project delivery bill has been created. This can be viewed directly.

The result is a project delivery bill containing the selected line.

Project provision

A project provision is used to provide articles to a supplier for the production of a purchase order. The project provision is used to withdraw the articles from the warehouse and as a delivery bill to the supplier. The material consumption from the stock withdrawal is debited to the project. The project provision can be assigned to a purchase order and thus to a vendor.

Project provision and the project delivery bill described in the last section are identical, only the processing mask has been adapted. The functions are therefore the same as in the project delivery bill. Of course, the provision can also be delivered via the goods issue. This section therefore only deals with the special features of the project provision.

To create a project provision from a WBS, use the call in the ribbon under "Actions" > "Create documents" > "Create project provision".

There is also a separate item for project provision in the project documents menu. In contrast to the project delivery bill, in the project provision not a customer but a vendor is managed as an addressee. Therefore, a vendor can be selected in the header.

If the provision is assigned to a purchase order entered in the system ("Purchase order no." field), the vendor is automatically transferred from it.

Billings

Overview

The articles in this section focus on how you invoice jobs and their work packages. All project work can be billed via direct invoices or sales orders.

Create sales quotes and orders

Sales documents are the foundation for customer-centered business transactions.

To transfer job sales to a quote or an order, open a work breakdown structure and choose New > Create Sales Document on the ribbon.

On each WBS line, you can select in the Copy to Sales Doc. field if you want to copy the line itself—as representing the total of detailed budgeting—or transfer individual budget lines and their prices.

You will need to decide this on a case-by-case basis. For example, some customers might not require invoices that describe more than a work package, whereas others might need to be billed for individual components or partial services.

If budget lines are transferred to a sales document, items stored on them are often copied automatically. Resources and resource groups, however, must be converted to billing-neutral resources before transfer.

If a WBS line is copied instead, the system will create a sales line that contains the billing base and number of the relevant work package. All sales documents are generated from customer information stored for a job. You can find this information in the sell-to, bill-to, ship-to, and payment terms fields on a job card.

You can add other customers to WBS—and budget—lines based on what option you chose in the Copy to Sales Doc. field on a WBS line. These customers then get their own documents so that you can offer and bill various kinds of services to different companies. Every customer entered this way will be included in invoice suggestions.

When you run the Create Sales Document function, you can also specify a document number manually if necessary (and possible for the number series).

Additionally, you can use the function to assign position numbers, calculate totaling lines, or release the newly created document immediately.

Furthermore, you can update an existing quote instead of creating a new document. In this case, the quotation lines are recreated, and you can archive the existing ones before the update.

Copy attachments to sales documents

Attachments available for a job can be copied to a new sales document by selecting the Copy from Job to Sales checkbox on the Attached Documents page. To open the page, select the hyperlink for attachments on the right-hand side of a job card.

Link a sales order to a WBS

There are other ways in Microsoft Dynamics 365 Business Central to create and link sales documents.

Many sales orders are created from previously generated quotes, whereas the job—and, consequently, the WBS —are set up later.

You can, however, link an existing sales order to a WBS as described in the following.

1. Open a sales document.
2. Select a sales line or multiple sales lines.
3. On the ribbon, choose Line > Functions > Get WP For Current Line or Get WP for Selected Lines.

Based on what you chose in the Copy to Sales Doc. field, the function then creates a link at the work package or budget line level—or no link at all.

This means that what you can choose might vary. Sometimes, both WBS and budget lines might show up. However, a WBS line where values are copied at the budget line level cannot be linked to a line at the work package level and vice versa.

When you run an action to get work packages, all fields needed to set up the link to a sales line or to multiple sales lines are filled in automatically. This includes the Work Package Code field.

Some fields are also checked for discrepancies, such as differences in work types or pricing. If a discrepancy is found, you are asked to confirm that you want to copy the data.

A link can only be established if you entered a resource, an item, or a G/L account in the Type field on the sales line.

If you want to create an order from scratch, we recommend that you use the Create Sales Document action instead.

Link opportunities to jobs

If you link a sales quote to an opportunity, the job number stored on the quote—or, more specifically, on the quote header—is copied to the opportunity.

To see the opportunities linked to a job, open a job card, and choose Related > Job > Opportunities on the ribbon.

Update sales documents

Sales documents and job budgets might change frequently, for example, when you're still negotiating with a customer about the price of a job. All you need to do then is to open the work breakdown structure to recalculate prices and create a new offer from a previous quote.

The process might get more complicated when a sales order is involved, as multiple sales lines might have been shipped or invoiced in the meantime—and can no longer be deleted. In that case, the easiest solution would be to make minor changes to the sales document and run a separate function to synchronize data with the job.

Set up synchronization

1. Choose the search icon, enter Jobs Setup, and then choose the related link.
2. Fill in the fields as described in the following table.

Field	Description
Sales Job Budget Sync. Active	Turn on this toggle if you want budgets and jobs to be synchronized automatically.
Sales Job Budget Sync. Error Handling	Choose what happens if the system encounters an error during synchronization. **Cancel** The process is stopped, and no changes are made to the sales line. An error message pops up. Select this option if you want sales to be as much in synch with jobs as possible. Errors are then corrected within jobs only. **Ask** You see an explanation of the error and are asked if you want to continue with the change on the sales line. Choose No if you want to keep the line as is. Choose Yes if you want to change the sales line but forgo synchronization with the job. The error is logged. **Notify** You are informed about the problem, and the change is made on the sales line but isn't copied to the job. At the same time, the error is logged.
Sales Job Budget Sync. Notification	With the toggle turned on, you get a message that says the job was successfully synchronized. With the toggle turned off, no feedback is given—except for a log entry that you can open later.

Specify synchronization data

You then need to specify in the Sales Doc. Job Budget Change Matrix what you want to synchronize and how. For each document type, you can specify what you want the program to do when you run synchronization.

- **Never**
  Sales lines aren't synchronized with the job; no messages are shown on screen either.
- **Question**
  You are asked if you want to make the change. If you choose No, your reply will be logged.
- **Always**
  Sales line changes immediately trigger the update function.

The matrix also shows which kind of changes can be made:

- Delete a sales line
- Enter a new description on a sales line
- Alter a sales price (including line discounts)
- Reduce or increase quantities on a line

Requirements

- The relevant sales line must be related to an active work breakdown structure.
- The job mustn't be blocked.
- WBS lines mustn't be blocked (even at the budget line level).
- A plausibility check for type and No. has been performed at the budget line level.
- **In the case of line deletion**
  Nothing must be posted to the line in the job.
- **In the case of price changes**
  The invoice currency must be identical to the currency on the sales document. You can ensure this by using the Create Sales Document function on the WBS.
  The unit stored on the sales line must also be identical to the unit used for the job. You can again ensure this by running the Create Sales Document function.
- **In the case of quantity changes**
  The quantity budgeted for the job must be the same as the quantity you plan to invoice. Otherwise, there would be no way to know whether you want to keep or offset the difference, set up a fixed usage/consumption quantity, or change the invoice quantity.|
- **In the case of quantity changes on budget lines** The unit of measure stored on budget lines must be identical to the unit shown on the sales document. To ensure this, run the Create Sales Document function from the WBS. Quantity changes on WBS lines require the same type of unit for usage/consumption and billing.
- **In the case of quantity reductions on budget lines**
  Reductions can only be equal to or lower than what has already been consumed. The quantity consumed consists of actual consumption, the in-stock quantity on the relevant budget line, and the quantity remaining on the associated purchase order.
- **In the case of quantity changes on WBS lines**
  A quantity change on a WBS line can only be made if no budget lines exist. Else, it would be unclear for what purpose the WBS line was changed.

What can be synchronized Sales Document Types

- Quote
- Order

Changes

- Deleting sales lines
- Replacing descriptions
- Altering prices or line discounts
- Reducing or increasing quantities

Job Levels

- WBS lines of type work package
- Budget lines of any type

What cannot be synchronized

- Insertions of new sales lines, as it would be unclear at which level. Also, to set up a new sales line, you would need to assign a WBS line or a work package.
- Deletions of sales documents, based on the assumption that you want to create new documents from a new job budget, not remove an entire job.
- Changes in structural elements, such as Begin-Total and End-Total lines.
- Insertions of new sales lines, as it would be unclear at which level. Also, to set up a new sales line, you would need to assign a WBS line or a work package.
- Deletions of sales documents, based on the assumption that you want to create new documents from a new job budget, not remove an entire job.
- Changes in structural elements, such as Begin-Total and End-Total lines.

Log

The log shows successful and failed synchronization attempts, plus those canceled by a user. To see the log, open a sales document, a job, or a WBS and choose Related > Job > Sales Doc. Job Budget Change Log on the ribbon.

Invoice suggestions

Invoice suggestions include all the data required to bill customers for expenses you incurred while working on jobs for them. However, before you can make the most of these suggestions, you need to set them up properly.

A suggestion is always created from an active work breakdown structure. Each line of the WBS is processed according a billing type. You can select the Suspend Billing checkbox to block lines temporarily from appearing on an invoice.

Set up suggestions

Suggestion templates

To be able to use the invoice suggestion feature, you need at least one template:

1. Choose the Search icon, enter Invoice Suggestion Templates, and then choose the related link.
2. Choose New on the ribbon or fill in a line to create a new template.

We recommend that you set up a separate template for every project manager who performs billing. This ensures that only those working in a certain business unit can bill jobs assigned to that unit.

Job data

An invoice suggestion requires an active WBS, and WBS lines of type work package require a billing type. For more information about billing types, (see Work Breakdown Structure.

If the Billing Type field is left blank, a job is treated the same as if the field were set to No Billing. A type must be chosen on the WBS; the field found on suggestions is used for informational purposes only.

When you create a suggestion, the system determines for each line of an active WBS if the line has already been billed. For time and materials jobs, this means a check on unbilled job ledger entries. For fixed-price jobs, the sales budget needs to be invoiced in full. Each expense left to bill is then included in the suggestion, together with a link to the WBS line on which the expense is stored.

In the Rem. Total Price Calc. Base field on WBS lines, you can specify what you want to see in the Unbilled Work field. This field is used for informational purposes only; it has no impact on the suggestion.

Job ledger entries

Job ledger entries are the basis for billing time and materials jobs. They indicate job usage and tell you how much of that usage is billed to customers. They also tell you if you're still in the middle of billing a customer or have posted a final invoice.

You can adjust the quantity that you want to bill during various stages of a job. For example, resources can adjust the invoice quantity down from the total number of hours worked as early as creating job time entries.

When these entries are then copied to the job ledger, the project manager can again revise the quantity.

The invoice quantity can also be changed for job ledger entries themselves provided they haven't been billed or are already part of an invoice suggestion.

A quantity change can even be made on the invoice suggestion. However, if there is more to adjust than the quantity for billing, a function will need to be run.

To specify an invoice unit of measure that differs from the unit for reporting project progress, use the Work Type field on WBS lines. This way, times can be recorded in hours but billed in days.

You can specify conversions from one unit to another in the Units of Measure table so that values are calculated automatically when you post progress. If, for example, job ledger entries show the hours spent on a job, but the effort is typically billed per day, the entered quantity will be converted to the relevant unit for billing.

Sales orders

Invoicing a WBS line usually requires a sales line. Because every WBS line contains a unique combination of work package, and phase, task, and step codes, these fields (as well as the Job No.) are also used to search for the sales line.

When you invoice time and materials jobs, the budget remaining on a sales line must be large enough to bill and sales and job values, such as the invoice unit of measure, need to match. For example, if a quantity on a WBS line is given in hours, the quantity on the related sales line cannot be stated in pieces.

Open a suggestion

1. Choose the Search icon, enter Invoice Suggestion, and then choose the related link.
2. Select a name to see the latest suggestions. These are deleted automatically when you choose the Create Suggestion Lines action on the ribbon.
3. Set filters if you want to create several types of suggestions. For example, you can use the Customer No. to filter for jobs related to a certain customer or the Person Responsible filter to see only jobs managed by a specific project lead.

Suggestion functions and fields

Invoice suggestions have the following multi-level structure.

Level 0
The level at which suggestions are grouped by customer.

Level 1
The source type level, where suggestions for customers are grouped according to whether they originated with (sales and purchase) orders or jobs. The current focus of this level is on suggestions for jobs. Suggestions for order lines represent unbilled shipments and are used for informational purposes only.

Level 2
This level contains the jobs for which suggestions are available.

Level 3
The fixed-price level. Based on the billing level, you see a WBS line or budget lines. For time and materials jobs, only WBS lines can be found here.

Level 4
This level is for time and materials jobs only. It contains the job ledger entries that have been suggested for billing. These can be changed before creating an invoice. For example, you might still want to adjust the invoice quantity.

The most important fields used on suggestions are described in the following table.

Field	Description
Customer No.	Shows the number of the customer whom you want to bill.
Name	Describes the relevant invoice suggestion level.
Phase Code Task Code Step Code	The contents of these fields are copied from the WBS or job ledger entry.
Line Activity No.	Shows the activity number stored on the budget line. The number is copied from the WBS or the job ledger entries. This field is only filled in if you plan, post, and bill at budget line level.
Billing Type	Copied from the WBS line. The options are (blank), Time & Materials, Fixed, No Billing, Milestone, POC, TE Flat Rate (that is, if you installed the Comsol Travel Expenses app), and Package Invoice.
Posting Date	Shows the posting date of the job ledger entry.
Type	Specifies whether you want to create the invoice for a resource, an item, or a G/L account. The (blank) option is for lines structuring a view.
No.	Shows the number associated with the Type field.
Description	This field is copied from a job, a WBS line, or a job ledger entry based on the level chosen for the suggestion. For resources, it shows a description of activities and for items, the item text.
Quantity	Shows, based on the level chosen for the suggestion, the quantity stored for work packages or job ledger entries. More specifically, the field indicates the quantity budgeted on the WBS line and the quantity reported as finished.
Quantity Invoiced	Shows the (WBS line or job ledger entry) quantity that has been billed so far.
Unit Price	Shows, based on the level chosen for the suggestion, the unit price from the WBS line or job ledger entry. This price is updated from the related sales line. If the price stored with the job ledger entry or job budget is different from the price on the sales order, the price stored on the order takes priority.
Total Price	Shows the result of Quantity * Unit Price.
Amount Invoiced	Shows the (WBS line or job ledger entry) amount that has been billed so far.
Remaining Amt. to Cap	Shows the sales amount that remains on the WBS line and is still available for billing. This field is shown at the WBS line level only.

Field	Description
Invoice Qty.	Shows the billable quantity from the job ledger entry. The value in this field can be changed at any time. If you invoice at the job ledger entry level (typical of time and materials jobs), you can change this quantity for individual entries. If you bill at WBS level (typical of fixed-price jobs), you can change it on the WBS line copied to the suggestion.
Line Base Amount	Shows the result of Unit Price * Invoice Qty. Describes the non-discounted invoice total.
Line Discount %	Shows the line discount in percent, copied from the related sales line. You can enter a discount manually if the suggestion line is not linked to a sales order.
Line Discount Amount	Shows the result of Line Base Amount * Line Discount %. This field cannot be changed.
Total Line Amount	Shows the result of Invoice Qty. * Unit Price. This field is the basis for creating an invoice.
Cross-Ref. Sales Order	Shows the sales order related to the suggestion line.
Cross-Ref. Sales Line	Shows the sales line related to the suggestion line.
Invoice Error Code	Shows a code if an error occurs when the suggestion is processed.
Invoice Error Text	Shows a message that explains the data processing error. The error might prevent the line from being billed.
Note Text	Shows notes that are useful for processing the suggestion. The related line can still be billed.
Prepare for Billing	Indicates a special billing procedure. If you select this checkbox, the sales order related to the suggestion is prepared for billing but isn't posted. The system then creates unposted invoice entries and assigns these entries to sales lines. On the order, the Qty. to Ship and Qty. to Invoice fields are filled in.
Invoice on Order	Indicates a special billing procedure. Select this checkbox to post highlighted sales lines as shipped and copy them to a new invoice for billing. The system then creates unposted invoice entries.
Direct Invoice	Select this checkbox to create a direct invoice if no related sales line has been found. You cannot use this function to create a shipment for a sales line.

Based on the level chosen for a suggestion, suggestion lines store information about a WBS line or a job ledger entry. For a WBS line, the data includes:

- Budget values (Quantity, Unit Price, and Total Price)
- Entries billed (Quantity Invoiced and Amount Invoiced)
- The remaining budget amount (Remaining Total Price)
- Current billing information (Invoice Qty., Invoice Total)—for fixed-price entries
- The assigned sales line (Sales Order and Sales Line Cross-References)

The Quantity Invoiced is the result of dividing the Amount Invoiced by the Unit Price. This might be a theoretical quantity because the invoiced amount is determined based on the sales job ledger entries related to a WBS line.

The same is true for the Invoice Qty., the result of dividing the remaining budget (remaining total price) by the unit price. The quantity at the WBS line level is filled in only for fixed-price entries. For time and materials jobs, work is billed at the job ledger entry level.

For a job ledger entry, the data stored includes:

- Consumption/usage values (Quantity, Unit Price, and Total Price)
- Current billing information (Invoice Qty. and Amount Invoiced)—for time and materials entries

The invoice quantity can be used to determine the quantity you want to bill to the customer for time and materials jobs. The following formula applies: Invoice Qty. * Unit Price = Total Price (of an entry).

Actions Create Suggestion Lines

Creates new invoice suggestions. You can find the function on the ribbon itself or by choosing Actions.

> Note

Running this function will delete the invoice suggestion you are editing.

Comments

Shows detailed information about the current invoice suggestion, including whether it has an invoice currency different from the currency used for the job ledger entries, the payment plan, or the sales order.

The Comments page also shows employees who tried to bill jobs but couldn't. For the comments to appear, you must turn on the Check Team at Time Posting toggle in Jobs Setup.

Close Entries before Billing

Closes job ledger entries without making them part of an invoice. This is only useful for time and materials entries that aren't billed or visible to customers.

Edit Job Ledger Entry

Choose this action if you want to change a job ledger entry related to the suggestion. For more information, (see Edit Ledger Entries

Switch Order

Replaces an order (or order line) that was assigned automatically with another order (or order line). The job number, work package, and phase, task, and step codes (that is, the WBS line relations) must be identical.

This function is only intended for service (resource) lines invoiced based on time and materials. The function filters for activities posted so that the time spent on a budget activity cannot be billed to a sales line related to another activity. In short, you need a neutral sales line or one with the same line activity number.

Delete Sales Order Ref.

Deletes a relation automatically entered by the suggestion so that you can include a job ledger entry in a direct invoice.

Increase Sales Line

Raises the order quantity for entries that are billed based on time and materials and don't have enough quantity left on a certain sales line.

By raising the quantity, you can use the line to invoice the entire project effort.

When you run the function, you see a page that shows the current order quantity, the order amount that remains, and the invoice quantity stored on the sales line. You can then overwrite the value in the Order Quantity field.

If an order has already been released, you can choose Open Order to reset the order status. When you exit the dialog, the order is released again.

Report by Sales Order

Shows you the result of billing per sales order, that is, the page provides an overview of what remains of an order after the current billing cycle.

Job Documents

Shows the documents related to a job.

Create Invoices

Creates invoices and readies them for posting or prepares orders for billing. This process generates unposted invoice entries.

When you run the function, all unbilled job ledger entries are entered in a new invoice suggestion. A suggestion should be as specific as possible to avoid time-consuming corrections; this also means that ledger entries should be prepared for billing in time.

Key job ledger fields related to suggestions are described in the following table.

Field	Description
Billable	Indicates what billing type was chosen on the related WBS line. • Not selected if the type is No Billing. • Selected if the type is Fixed (Price). • Typically selected if the type is Time & Materials, although the field can be cleared, for example, by the project manager. The content of this field is transferred from the Budget Line Activity Card when you post times for activities. Only job ledger entries for which this checkbox is selected are copied to a suggestion. Billable entries are also copied if the invoice quantity is 0 so that you can close time and materials entries that could be billed but aren't for some reason and display them on an invoice. This might be useful, for example, if the entries originate with a goodwill policy.
Invoice Qty.	As explained, this field doesn't play a role in what is copied to invoice suggestions. But it shows for how much a customer is billed (only applies to time and materials entries).
Invoiced	This field is only relevant to time and materials entries. If it is selected, the entries have already been invoiced.
Invoice Entry Posted Invoice Entry	These fields show unposted and posted (that is, final) invoice entries. Unposted entries are used to block job ledger entries that are copied from suggestions to unposted sales invoices or orders you want to bill. After billing, that is, when you posted the relevant document, the unposted entries are deleted, and posted entries take their place. If either field is filled in, an associated job ledger entry will be excluded from new invoice suggestions. When invoice entries are posted, the job ledger entries related to them are considered settled. That remains true even if—for example, as a gesture of goodwill—you invoiced only part of the total quantity.

Related Show WBS

Opens the work breakdown structure of the job that you want to bill.

Card

Opens the card of a resource, an item, or a G/L account depending on what type of job usage or consumption is shown on the suggestion line.

Show Job Ledger Entry

Shows the job ledger entry from which the selected suggestion line was created.

Job Ledger Comment

Shows a note about the job ledger entry (if one is available).

Edit suggestions

When you open a suggestion, you can change certain information yet again.

Change quantity

You can, for example, change the Invoice Qty. field of a job ledger entry. This field can be revised multiple times throughout the billing process.

You don't need to do more than go to the field and replace its value. If you set the quantity to 0, the job ledger entry is still suggested for posting. If you then send a detailed invoice to a customer, the line will show up on the invoice as well.

Edit ledger entries

To change other billing-related fields besides the Invoice Qty. (the work package especially):

1. Open an invoice suggestion and select a line.
2. Choose Actions > Edit Job Ledger Entry on the ribbon.
3. You are then asked if you want to edit the job ledger entry related to the line and have the entry included in the suggestion again. Choose Yes.

You can now edit the fields described in the following table.

Field	Description
Description	Shows a description. You can change this description at any time.
Line Activity No.	Shows the number of a line activity. You can change that number here as well.
Invoice Qty.	Shows the invoice quantity. You can adjust the quantity at any time.
Sales Price	Shows the sales price. You might want to change the price, for example, because of new customer agreements. However, if the price shown in this field is different from the one on the sales order, the system will use the price on the related sales line for billing.
Billable	At this stage, a job ledger entry can still be specified as non-billable. This will exclude the entry from invoices and prevent application. If the entry is set to No Billing, it will also have an invoice quantity of 0.

To replace the work package, choose Change Work Package on the ribbon. You are then asked to confirm your choice.

This is because changing the package might alter the unit cost (as the new package might have another work type), the job account (used to control costs), or any of the dimensions. After you assigned a new package, the WP Modified By/On/At fields are filled in automatically.

Choose OK to close the page. Changes in description, invoice quantity, or unit price are then copied to the relevant suggestion line.

To delete a job ledger entry, clear the Billable checkbox on a line. The next time you open the suggestion, the entry will be gone. If you cleared the checkbox by mistake, reopen the entry on the Job Ledger Entries page to correct the error.

In fact, all job ledger fields that you can edit on a suggestion can also be changed on this page. When you swap out a work package here, you see a message that the line referencing the old package on the suggestion will be deleted.

As changes to job ledger entries might also change WBS line relations and package positions on a suggestion, you then need to recreate the invoice suggestion to copy entries with changed work packages to the right lines.

If you open an entry via the Edit Job Ledger Entry function but choose Cancel to exit the page, you see a message that the line related to the entry has been deleted from the suggestion. You then need to recreate the suggestion if you want to include the entry again.

Delete individual lines/Delete level

You can use Ctrl+Del to delete lines from a suggestion at the job ledger entry level. If you then reopen the suggestion, the lines are again suggested for billing because the related entries are still open.

If you want to delete entries at a higher level—for example, to remove an entire job— use the Delete Level function.

Close entries before billing

Excludes from consideration entries that aren't billed and won't ever be with the help of an invoice suggestion.

This means that these entries will no longer show up when you reopen a suggestion.

This action has the same effect as if you manually cleared the Billable checkbox for job ledger entries. If you cleared a checkbox by mistake, open the relevant entry and re-select the checkbox.

Billing procedures

On each suggestion line, you can choose one of three checkboxes to specify how you want a line copied to invoices. For these options to be available, the line must meet certain requirements as described in the following.

Entries that you want to bill with the help of sales lines need to have the Prepare for Billing or Invoice on Order checkbox selected on the related suggestion lines. Based on how you plan to bill the job, you need to select the checkbox at the fixed-price or time and materials level.

Prepare for Billing Fixed price

If you want to bill an entry based on a fixed job price, select Prepare for Billing at the fixed-price level. Whether job ledger entries already exist doesn't matter. Entries can be billed (even partially) at any given time. The only requirement is for a sales line to be linked to the relevant WBS line.

Time and materials

Select the Prepare for Billing checkbox at the job ledger entry level to focus on actual job usage. Selecting or clearing the field on work package lines also selects or clears the same field on related job ledger entries automatically.

However, the checkboxes on work package lines aren't relevant to billing; only those at the job ledger entry level are.

Note

Billing time and materials jobs requires that a suitable sales line be found. The billing type on the line must match the type specified for the work package. Typically, a billing resource is used for this purpose.

A resource's invoice unit must also match the unit of measure stored for the relevant time and materials entries. This ensures that no item is billed on a sales line that contains a quote for resource working hours. Additionally, the line quantity cannot be 1, as this is a common value for flat rate payments.

Invoice error codes

Lines that show an error code cannot be selected for billing (if no error was found, the Invoice Error Code field shows 0). The six possible codes are:

1. No valid sales line could be found.
2. The type stored with the job ledger entry doesn't match the type found on the sales line.
3. What is left on the sales line is insufficient. You need to increase the quantity. (You can use the Increase Sales Line action to do this.)
4. Fixed-price positions require the same unit of measure on the sales line and the WBS line.
5. The fixed price has already been invoiced in full. (The only option left is to close the line by issuing a final invoice.)
6. The sales order reference was deleted manually.

Impact on orders

Prepare for Billing requires both a sales order cross-reference and a sales line cross-reference on invoice suggestion lines.

This is because the following changes are made to the referenced sales order when you create an invoice from a suggestion where the Prepare for Billing checkbox is selected:

• An invoice entry is added to an order line for each job ledger entry that you want to bill.
• The total invoice quantity is entered in the Qty. to Ship and Qty. to Invoice fields. On lines that have no invoice entries, the fields are set to 0 to prevent accidental billing.

To view a new invoice entry for a prepared line, open the related order, select the line, and choose Line > Related > Invoice Entries on the ribbon. The number of the entry is shown in the Assigned Job Ledger Entry field.

You can then again update individual entries on the sales order.

Impact on job ledger and invoice entries

No more than a single invoice entry can be applied to a job ledger entry billed based on time and materials. It is for this reason that we recommend you make necessary quantity and value adjustments as early as possible, that is, on invoice suggestions.

As mentioned earlier, time and materials entries are considered settled when invoice entries are assigned to them, even if only partial quantities have been billed.

When you post a shipment and an invoice from a sales order, the invoice entries on the sales lines are copied to the newly posted invoice. Additionally, each now-posted invoice entry is linked to a time and materials entry.

Posting invoices also creates job ledger entries with filled-in Applies-to Sales fields. These fields show the number of posted and applied entries—that is, billed job ledger entries—linked to a job ledger entry originating in sales.

Unlike time and materials entries, job ledger entries generated in sales can relate to multiple posted invoice entries, as a sales job ledger entry often applies to more than one time and materials entry.

To see a list of the posted invoice entries, use the lookup in the Posted Invoice Entry or Applies-to Sales field. The relevant time and materials entry can then be found in the Assigned Job Ledger Entry field. The Sales Job Ledger Entry field shows the number of the series that you set up for creating job ledger entries in sales.

A posted invoice entry can be opened from the billed time and materials entry or the sales job ledger entry (and vice versa).

Delete posted suggestions

If ambiguities arise after you copy data from an invoice suggestion to a sales order, use the Delete Invoice Entries function on the ribbon to remove invoice entries from an order. This reopens the related time and materials entries, which can then be copied to a new invoice suggestion.

Note

The Qty. to Ship and Qty. to Bill fields on the order retain their values when you delete invoice entries, and no posted invoice entries are created if you posted something by mistake. Nothing applies to open time and materials entries either, although you can post their application manually if necessary.

Invoice on Order

This option is based on the same program logic as Prepare for Billing. The difference is that the quantity invoiced from a sales order is immediately posted as shipped and that this shipment is copied to an unposted invoice.

Unposted invoice entries are then available on the lines. However, unposted invoices don't mirror the structure of sales orders. Instead, they contain only the lines that you want to bill, that is, the lines shipped automatically. Additionally, order fields used for informational purposes aren't copied during this process.

Besides the lack of billing information compared to the first method, this option has the distinct disadvantage that if you need to recreate an invoice due to a billing error, you must first delete the unposted invoice so that you can unblock the related ledger entries.

A further issue compounding the problem is that the deletion of invoice entries does nothing to affect the quantity already posted. This quantity—considered shipped but not invoiced—will instead be copied to a new invoice created from a suggestion.

Changing the invoice quantity in the meantime can then lead to unwanted results. If you increased the quantity, a second shipment needs to be posted so that more than one shipment will be shown on an invoice, which might look confusing on a printout. If you reduced the quantity, only a part of what has been posted as shipped might be needed so that the remainder is kept and copied to a new suggestion.

The easiest way to deal with this is to delete the invoice. This way, all shipments are canceled before you open a new suggestion.

All other requirements for fixed-price and time and materials billing are the same as described earlier.

Impact on documents at invoice creation

When you run the Create Invoices function, you are first informed that sales lines still need to be shipped (unless none are available).

You can now decide to post the lines as shipped or exit the page. Choose Cancel to leave for the invoice suggestion. Choose OK if you want to post the lines and create a sales invoice.

You are then asked if you want to edit the invoice. Choose Yes to open the unposted document.

By using the lookup in the Invoice Entry field, you can see all unposted entries related to the invoice. The underlying order also shows the invoice quantity as shipped.

With the shipped quantity copied to the invoice, each invoice line has been assigned to a posted shipment line. It is for this reason that you cannot raise invoice quantities if you use this option—you simply cannot bill more than you delivered to a customer.

Impact on job ledger and invoice entries

The impact on invoice entries, posted invoice entries, job ledger entries, and applied entries is the same as if you had selected the Prepare for Billing option.

Create direct invoices

If no sales line exists for a job ledger entry, a suggestion line can be billed with the help of a direct invoice. Afterward, posting a shipment will no longer be possible.

Direct billing is often used to pay for travel expenses, that is, for time and materials entries that aren't related to sales lines. Although typically part of a project agreement, a rate for these kinds of expenses isn't included in the budget (even the sales budget), as this is often considered unhelpful.

Entries you want to bill in this way must have the Direct Invoice checkbox selected.

When you create an invoice suggestion based on job ledger entries with and without sales lines, the direct invoice lines, that is, those without shipments, are added to an invoice after the order lines. If the current billing process includes only direct invoice lines, however, a new invoice will be created.

If you want to bill various kinds of suggestion lines at the same time, use the Create Invoices action after selecting all lines. If done separately, that is, if you mark Invoice on Order lines and create an invoice before you mark other lines for direct billing and run the function again, lines not related to a sales order aren't added to the unposted invoice, even if you started the process from the same invoice suggestion.

During processing, job ledger entries are aggregated on a single direct invoice line if their Type, No., and Unit of Measure Code fields match. One invoice entry is created per line to close a job ledger entry.

Impact on job ledger and invoice entries

A direct invoice includes one invoice entry for each line to bill.

When you post the invoice, the system creates a posted invoice entry for each line to establish a link between time and materials entries and job ledger entries in sales. It also applies the posted invoice entry to the other two entries.

Budget line billing

You can incorporate budget line activities into sales lines to create more detail-rich sales documents and invoices based on an invoice suggestion.

The invoice suggestion function checks the Billing Integration field on each WBS line to determine the level at which to invoice the relevant job.

If billing level = budget line...

WBS lines that are billed by time and materials are copied to a suggestion grouped by line activity, with unbilled job ledger entries shown underneath. For fixed-price jobs, a suggestion doesn't show WBS lines but the budget lines that need to be invoiced.

Regardless of whether you bill a WBS line or its activities, job sales are always visible on the WBS line when you post an invoice. Revenues from line activities (if you bill at this level) can then be seen on the budget lines.

Ledger entries and application

In project billing, ledger entries of type sales offset ledger entries of type usage. That is, you bill customers for the time spent on a job by creating sales job ledger entries.

An exact match between both types of entries is exceedingly rare. Usage entries are typically combined and billed on a single sales line. This means that the number of entries and the quantities often differ on invoices created from a job.

As explained earlier, you can use invoice entries to post the application of job ledger entries automatically (on a suggestion) or do so manually. The following paragraphs are only meant to sum up again how you achieve this.

Job ledger entries

With the help of invoice entries, job usage—that is, time and materials— entries are closed by job ledger entries created in sales.

Invoice entries

Invoice entries link job ledger entries billed based on time and materials to sales job ledger entries.

Unposted invoice entries

Unposted invoice entries are created when you use the Invoice Suggestion function to prepare a sales order for billing or set up a direct invoice. To see a list of all invoice entries, use the Invoice Entries function on a sales order or a direct invoice.

Posted invoice entries

A posted invoice entry represents the main link between usage entries and sales job ledger entries, as it is assigned to both a time and materials entry and a ledger entry posted alongside an invoice in sales.

If you post an invoice from a sales order or from a direct invoice, all unposted invoice entries disappear and posted entries are created and transferred with an Entry No. to job ledger entries billed based on time and materials. No more than one invoice entry can be applied to this type of job ledger entry.

One job ledger entry in sales is then posted per line to bill. However, as multiple time and materials entries are typically aggregated on one line, the posted invoice entries create a 1-to-n relationship between sales job ledger and time and materials entries.

To see the job ledger entries, open a job card and choose Related > Ledger Entries on the ribbon. To see a list of all posted invoice entries, use the lookup in the Posted Invoice Entry field.

Applies to sales

Shows for a sales job ledger entry the number of applied job ledger entries that were billed based on time and materials.

Manual application

Entries are applied automatically when you use invoice suggestions. However, you can do so manually as well.

Example
A customer is billed a flat rate for travel expenses. At the time of billing, the cost of the hotel that you stayed in hadn't been posted yet to Business Central. A few days later, the invoice is posted to the job and a job ledger entry is assigned to close the ledger entry in sales.

To post application manually, you need to run the Apply Entries function from either a usage or a sales job ledger entry. Running the function opens a dialog page where you can then choose from all open time and materials or sales job ledger entries.

Select the relevant entry in the Set Applies-to ID field on the page. As more than one instance of job usage can be assigned to a sales job ledger entry, you can assign multiple time and materials entries to an entry here. Apply the entries by pressing F9.

Like automatic application, manual application closes the time and materials entries and creates posted invoice entries. These are linked to the posted invoice via the job ledger entries in sales, which means that manually created invoice entries also show up on posted sales invoices.

Reverse application

Job ledger entries can be unapplied at any time. This reopens the time and materials entries.

To delete a relation between entries, select a posted invoice entry, and then choose Unapply Entries on the ribbon.

Invoice entry relations deleted by users are identified by the following description: "Unapplied manually on... by..."

To be able to track the changes users make, the values in the Assigned Job Ledger Entry and Sales Job Ledger Entry fields are copied to the Old Job Ledger Entry and Old Sales Job Ledger Entry fields. However, after using the Unapply function, data regarding work packages and budget line activities can no longer be restored.

Print duration on invoices

To meet legal requirements, an invoice must indicate a delivery date. For invoicing services, delivery usually extends over a period. This period is determined based on the invoice entries for services billed by time and materials.

For invoice printouts to show periods in the format you want, use the Performance Date Formatting field in Jobs Setup.

When you open a job card, you will then see the period in the specified format on the Job Billings FastTab. You can again change the format there.

Billing caps

When you invoice a job by time and materials, you might see work hours exceed the number of billable hours a customer has agreed to. Typically, this means you either cannot bill some of the work or you need to put in a change request.

However, many agreements contain a clause that, up to a point, grants exceptions to scheduled quantities.

For work packages

You can set a cap for time and materials billing as early as creating work packages.

Field	Description
Billing Cap	Select this checkbox to set a limit up to which usage recorded for the work package can be billed even after the sales budget of a job is exhausted. This limit is determined by the total price stored on the relevant WBS line.
Billing Cap %	Specifies the limit for billing time and materials after exhausting a job's sales budget. This field can only be filled in if you selected the Billing Cap checkbox. If you enter nothing, the field is set to 0 and you cannot exceed the price specified on the relevant WBS line.

In job templates

You can then make use of the cap when you create a job template. When you enter a work package on a job template line, the billing cap values are copied to the line alongside other work package fields.

On WBS lines

Likewise, when you set up a new work package line, an available billing cap is copied automatically from the package to the line. The same is true when you create a WBS from a template. You can also set up or change billing caps on WBS lines later.

On invoice suggestions

Billing caps mainly inform those who create customer invoices. FactBoxes show the total billing limit and the amount remaining until that limit is reached.

Example:
An invoice suggestion includes a time and materials work package with a 10% cap. The package has the following data:

The work package has the following data:

> USD700.00 sales budget
> - USD560.00 already billed
>
> = USD140.00 remaining

Based on a USD770.00 billing limit, this means:

> USD700.00 sales budget
> + 10% cap (USD70.00)
>
> USD770.00 incl. billing cap
> - USD560.00 already billed
>
> = USD210.00 remaining until cap

Mark for cap

When you use a suggestion to invoice a work package, the related job ledger entries are marked for billing regardless of the limit you specified. You can, however, see in the Remaining Amt. to Cap field at what point the limit will be exceeded.

For an invoice quantity to match the cap, you need to choose the Billing Cap action on the ribbon. This adds up the ledger entries from the top until you reach the limit specified. The entry that would have otherwise exceeded the cap is then reduced in quantity. All subsequent entries are set to 0.

Example:

As before, USD210 remain until the cap is reached. The following job ledger entries are now marked for billing:

Quantity	Invoice Qty.	Unit Price (USD)	Total Line Amount (USD)
3	3	30	90
3	3	30	90
5	5	30	150
4	4	30	120

The entries add up to USD450 in total. After running the Billing Cap function, you see the following reductions in quantity to match the cap:

Quantity	Invoice Qty.	Unit Price (USD)	Total Line Amount (USD)
3	3	30	90
3	3	30	90
5	1	30	30
4	0	30	0

The calculation might result in rounding differences, shown in the Rem. Amount to Cap field.

> Note

A proof of performance statement continues to show all job ledger entries, including those with a quantity of 0, as all of them are still copied to billing as invoice entries.

Manual override

The person in charge of billing can edit job ledger entries manually to exceed the cap on purpose. However, the quantity available on the related sales order would need to be adjusted in this case see [Invoice Error Code] (ProjectAccounting.md#Handling-according-to-expenditure and [Invoice Error Text](#)

Manual billing

If you don't mark WBS lines but individual job ledger entries for billing, a cap will have no effect. Only the Remaining Amt. to Cap field will be updated.

Sales credit memos

IRunning the Copy Document function to create a credit memo from a posted sales invoice also copies all invoice entries to the memo.

If you created the credit memo because you need to correct and re-send an invoice, we recommend that you keep the entries as they are. But if the memo represents a discount, the entries should be deleted before you post the memo.

If you use the invoice entries to post a sales credit memo, applied job ledger entries are unapplied. The entries aren't deleted; only their relations are.

Unapplied entries can be identified by an altered description. It reads: "Reopened by Credit Memo [no. of posted memo])."

The Assigned Job Ledger Entry and Sales Job Ledger Entry fields are then cleared, and their values copied to the Old Job Ledger Entry and Old Sales Job Ledger Entry fields for tracking purposes.

The posted credit memo also includes posted invoice entries. Because the Old Job Ledger Entry and Old Sales Job Ledger Entry fields now reference unapplied ledger entries, the values in these fields are identical to the values stored for the unapplied invoice entries (see above).

The Sales Job Ledger Entry field, on the other hand, contains the job ledger entry that the system created when you posted the memo. Only the Assigned Job Ledger Entry field will remain blank, as no posted invoice entries are applied to time and materials entries.

Payment plans

A payment plan provides a schedule for project billings, that is, it records times of cash inflow. Payment plans are used on invoice suggestions and in cost control.

To work with payment plans, you must set up the feature. A plan can cover a whole job or single WBS lines. You choose your preferred option in the Payment Plan Level field on a job card.

You can then run the Payment Plan function on a WBS to set up the plan. Depending on the plan level, the system will use the sales budget stored for the entire job or for individual WBS lines to schedule payments.

For jobs

If you set the payment plan level to Job, payment plan lines refer to an entire project and no source work package can be selected. The net amount stored for the plan is calculated automatically from the sales budget set up for the job.

> Note

You, however, need a target work package to use a plan on invoice suggestions or in cost control (the purpose of which will be explained later).

For WBS lines

If the payment plan level is set to WBS Line, you must select a source work package. As the plan lines now refer to a specific line on the WBS, a net amount is determined automatically based on the portion of the sales budget stored there.

Not every WBS line needs to be part of the payment plan if you want to use the plan only for invoice suggestions and need to bill periodically for an item or a service.

For example, an expensive piece of equipment might have been budgeted on a WBS line. You then create a plan for this one line together with the customer, whereas the rest of the job will be billed based on effort.

Unlike a payment plan for an entire job, this option requires that you specify a source WBS line in the Source Work Package field or choose the Get Source Work Package action when you create a plan. The net plan amount is then calculated from the WBS line budget with the help of the Pmt. Plan Amount % field.

Fill in a payment plan

Fill in the fields of a plan as described in the following table.

Field	Description
Planning Type	Choose Invoice if the plan refers to separate (partial) invoices or Final Invoice if this is the final billing. When you use a payment plan on an invoice suggestion, the system determines the actual effort to bill, suggests this amount on the relevant date, and applies it to invoices already created.
Date (Scheduled)	Choose the date on which you want to bill. This date is included in all parts of the payment plan.
Pmt. Plan Amount %	Used to calculate a net invoice amount. At the job level, the value is calculated in percent from the budgeted total price of a job. If you entered a value in the Net Amount field, this field is filled in automatically.
Net Amount	Specifies the budgeted net invoice amount. You can fill in this field manually or have the system use the Pmt. Plan Amount % field to calculate the value.
Currency Code	Shows the currency stored for the job.
Billing Base Billing No.	The billing base and number are retrieved based on the WBS line to which you post sales (see also the Work Package field) and determine if a G/L account or a resource is entered on a suggestion line. Often, these fields contain a G/L account and number. If you select a sales account, the system will create a suggestion line based on this account—and not the billing base and number set up for the work package. You can override both values in payment plans. **Note** The standard procedure is to use the billing base and number from the target work package.
Payment Terms Code	This field is copied from the customer but can be changed manually. The terms are used on invoices.
Description	Enter a descriptive text that will later be shown on the relevant invoice line.
Milestone Reached	Relevant to billing by milestone. This field indicates what payment plan lines—that is, lines available for a milestone plan—have reached an agreed milestone. If, based on the plan level, a job or WBS line is set up for milestone billing, an invoice suggestion shows all lines for which the checkbox is selected but which haven't been billed yet.

Field	Description
Copy to Suggestion	Specify if you want a plan line included in an invoice suggestion. Otherwise, the line will only be used for cost control and cashflow forecasts.
Copied to Sales	If this checkbox is selected, the plan line was copied to an unposted invoice. A line can only be copied to an invoice once.
Invoice No.	Shows the number of an invoice if a payment plan line has been posted together with one.
Copied to Sales (Final invoice)	If this checkbox is selected, the plan line is used for a final invoice and has already been copied to a credit memo. On the memo, the actual amount from the line is credited, not the amount stored in the Net Amount field.
Document No. (Final Invoice)	Shows the number of a credit memo if a final invoice line has been posted together with one.
Work Package Code	Shows the work package code of the WBS line to which you want to post sales. For revenue billed at the job level, we recommend that you specify a WBS line that isn't related to a budget and is intended solely for storing sales from partial invoices.

You then need to ensure that you selected Fixed or Time & Materials in the Billing Type field on the line if you want a payment plan included in an invoice suggestion. Which type you choose doesn't matter, as the amount stored on the plan line will also be used on the invoice.

You can select WBS lines via the Work Package Code field or the Get Work Package function.

A warning message appears if you don't select a line or if the WBS line you selected isn't suitable for billing. |

On invoice suggestions

Plan lines for which you selected the Copy to Suggestion checkbox are given priority on invoice suggestions. If a suggestion contains open payment plan lines, the typical billing process is interrupted.

The following rules apply when you use payment plans on invoice suggestions:

1. The Copy to Suggestion field must be selected on the plan lines.
2. The scheduled posting date can be used as a filter so that the system suggests only partial invoices with even amounts.
3. Plan lines must relate to a valid WBS line. If there is no valid line, the plan lines will show an error message and cannot be copied to a suggestion.
4. Only a final invoice can close a payment plan.
5. If there are open plan lines, standard project billing is suspended, and the next amount due (filtered by posting date) is suggested instead.
6. Payment plans are always billed by direct invoice and not on an order.
7. Actual billing takes place with the final invoice. Depending on how you set this up, WBS lines will be suggested based on time and materials or fixed-price billing. The invoice is then created from associated sales orders. A credit memo is applied to any partial invoice.
8. This procedure can be used for an entire project or for specific WBS lines, as specified in the Payment Plan Level field on the job card.
9. If a plan relates to specific WBS lines, standard billing will be used for all lines not connected to a plan.
10. If a plan relates to an entire job, a WBS line can be removed from the plan by selecting the Ignore Payment Plan checkbox so that it is suggested for billing immediately.

This can be helpful, for example, if you want to bill travel expenses based on time and materials despite the plan saying otherwise. These expenses also aren't included in the final invoice.

On credit memos

Full credit

If a credit memo fully settles a posted invoice created from a payment plan, that is, if the entire amount on a plan line has been offset by a memo, the line is treated as if it had never been billed.

You can then delete, change, or recopy the line to billing unchanged.

Partial credit

If a credit memo only partly settles the amount on a posted invoice created from a payment plan, that is, only part of the line amount is offset by the memo, the line is adjusted so that the amount on the line matches the amount on the invoice, minus the value of the credit memo.

In cost control

To create job account entries for cost control, a job budget is used. This budget is distributed onto accounts according to the account setup you specified when you turned on the cost control feature across jobs.

The difficulty when budgeting project effort is how to estimate revenue on budget lines. The time spent on a job often doesn't translate into immediate sales but will show up later, on a fixed-price invoice.

A payment plan can rectify this problem by providing you with reasonable estimates of cash inflow in cost control. To use the feature, you must choose Payment Plan in the Sales Job Acc. Entries From field on a job card.

When you now run the Update Job Account Entries batch job, a payment plan rather than the job budget will be used to determine sales accounts. Finding an account is then a matter of matching it to the (target) work package to which you want to post revenue.

Milestone billing

Overview

Milestones can be billed in three ways. You can also create milestone invoices per job or WBS line and invoice work at a fixed price or by using a special billing method for each work package (that is, WBS line).

Billing level	Billing type	Payment plan	Notes
On the job card, the Invoice Job by Milestones toggle is turned on.

The payment plan level is set to Job. | Fixed price on each payment plan line.

A final invoice can be used to bill every WBS line and apply credit memos to billed lines. | YES
Only lines on which the Milestone Reached checkbox is selected are suggested for billing. | You can choose Final Invoice in the Planning Type field to schedule a final invoice.

When the invoice is due, the invoice suggestion function will include all relevant WBS lines, their billing types, and the billed fixed-price entries as credit memos.

You can, at any time, delete WBS lines and invoice them separately (that is, parallel to payment plan invoices).

This billing method posts, in accordance with the payment plan, revenues to a milestone line of the work package type on the WBS. |
| Work packages

The Invoice Job by Milestones field is turned off.

The payment plan level is set to WBS Line. | Fixed price on each payment plan line.

A final invoice can be used to bill every WBS line and apply credit memos to billed lines. | YES

Only lines on which the Milestone Reached checkbox is selected are suggested for billing. | You can choose Final Invoice in the Planning Type field to schedule a final invoice.

When the invoice is due, the invoice suggestion function will include all relevant WBS lines, their billing types, and the billed fixed-price entries as credit memos. |

Billing level	Billing type	Payment plan	Notes
Work packages No special setup is required.	Instant billing per package.	NO	Instant, one-time billing of WBS lines related to a milestone line when the milestone is reached.
		No plan necessary (can be set up to provide payment info, but the Copy to Suggestion checkbox must be cleared).	A final invoice will not be created. This billing method uses a milestone line of the blank type to post sales to WBS lines directly.

For jobs

The following paragraphs explain plan-based milestone billing for an entire job.

Jobs Setup

Field	Description
Payment Plan Level	Choose Job.
Invoice Job by Milestones	Turn on this toggle.

WBS milestones

Lines for billing an entire project by milestones must be of the work package type, as they are later used to store revenue from plan invoices. For lines to be processed on an invoice suggestion, their billing type must be set to Fixed (Price).

Milestone lines are highlighted in color.

For work packages specified as milestones, certain restrictions apply. The packages can neither have budget lines, nor can quantities and prices be changed. A milestone line isn't used for budgeting but is an element of time scheduling.

Work packages

To assign a milestone line to a work package, select a line, and then choose Line > Milestone Definition in the WBS Lines section. You can choose only work packages that haven't already been set as milestones.

Milestone plan

To set up payment plan lines for milestone lines, choose (Advance) Payment Plans > Create Milestone Line Pmt. Plan in the WBS Lines section.

When you run the function, you see a message that says new plan lines were set up for a certain number of milestone lines. No existing lines are updated; that would be done in the amount and date fields.

The system then assigns milestones to work packages and creates a payment plan line from the total price and the ending date stored on a milestone line.

Work breakdown structure

On the WBS, milestone lines are highlighted in color.

Payment plan

Payment plan lines where the Copy to Suggestion checkbox is selected can be used on invoice suggestions. As the payment plan applies to an entire job, individual WBS lines aren't included in the suggestion. With a job set to Milestone Billing, the invoice suggestion also includes only lines for which Milestone Reached is selected.

Milestone Reached

When a milestone is reached, the work status on the WBS milestone line changes to Finished or Accepted (other statuses aren't possible in milestone billing).

The Milestone Reached field on the related payment plan line is also filled in, making that line available for billing on an invoice suggestion.

WBS lines without payment plan

If you don't want to bill work packages based on a payment plan, as some expenses need to be invoiced regardless of whether milestones are reached, select the Ignore Payment Plan checkbox on the relevant WBS line(s).

Invoice suggestions

A suggestion only includes plan lines on which the Milestone Reached checkbox has been selected.

Final invoice

A final invoice isn't strictly necessary. If you want to use one to bill actual expenses on WBS lines, select Final Invoice in the Planning Type field. The WBS lines are then included in a suggestion after every line on non-final invoices has been billed.

On the final invoice, the WBS is suggested for billing as if no plan existed. Each WBS line is also processed based on its billing type.

Additionally, invoices created from the payment plan are added as credit memos to the invoice.

For a WBS line

The following paragraphs explain plan-based milestone billing for a WBS line.

Jobs Setup

Field	Description
Payment Plan Level	Choose WBS Line.
Invoice Job by Milestones	This field is not and cannot be turned on.

Work breakdown structure

No milestones are needed on the WBS, as the job as such isn't billed by milestones.

Work packages that you want to bill according to a milestone payment plan require that Milestone be selected in the Billing Type field.

Payment plan

Payment plans for individual lines are created manually. As you no longer specify plans for entire jobs, the focus will be on work package relations, that is, for which source work package you want to create a plan line.

As the same work package is invoiced, source and target packages are identical. You can use the Pmt. Plan Amt. % field to establish a relation to a package. The value in this field is calculated from the total price shown on the related WBS line.

Milestone billing creates partial, fixed-price invoices at multiple stages of a job. The total price from the WBS line thus needs to be included in the payment plan, and the planning type must be set to Invoice.

Note

Don't use the Final Invoice planning type here. This would create a final invoice and credit memos of already posted invoices.

For inclusion in suggestions, the Copy to Suggestion checkbox needs to be selected on the plan lines (done automatically). With the Milestone billing type chosen on the WBS line, a plan line is only included in a suggestion if the Milestone Reached field is selected. This must be done manually and corresponds roughly to the release of an invoice.

Invoice Suggestion

To release a milestone for billing, select the relevant checkbox.

Without payment plan

A milestone plan can also be created from a WBS without the use of a payment plan. When a milestone is reached, the related work package is then billed according to its billing type.

Jobs Setup

No setup is needed on the job card.

WBS milestones

Not unlike the method described earlier, milestones are planned on the WBS. But this time, the Billing Type field needs to be blank, as work packages—not milestones—are billed.

Work packages

To assign a milestone line to a work package, select a line, and then choose Line > Milestone Definition in the WBS Lines section.

You can choose only work packages that haven't already been set as milestones.

Suspend Billing

If you don't want to bill work packages related to a milestone until that milestone is reached, select the Suspend Billing checkbox on each work package line to prevent invoice suggestions from including the package prematurely.

When WBS lines are assigned to a milestone line of the blank type, you are asked if you want to exclude these WBS lines from billing. This way, billing takes place when the milestone is reached.

Milestone Reached

When a milestone is reached, its Work Status field is set to Finished. The system then checks if the Suspend Billing checkbox is selected on related WBS lines, as these can now be released for billing with the help of a dialog.

Invoice suggestions

The rest follows standard billing procedures for WBS lines based on billing types.

Statement of services rendered

For time and materials entries, a statement of the services rendered is typically sent alongside an invoice. This statement includes invoice entries from posted or prepared invoices. Proof of performance documents can already be printed when you are about to bill an order so that you can make invoice corrections before posting. This eliminates the need for revising invoices not accepted by a customer.

To print service statements alongside invoices:

1. Open a sales order.
2. On the Job Billings tab, turn on the Print Attachment toggle.

Even if the toggle isn't turned on, you can still print a statement manually. This field and all other fields used for printouts can already be preset on a job card.

The fields are later copied to posted invoices as well. You cannot change them there, but you can overwrite them on the request page associated with a statement.

Intercompany Work

General

In practice, it can happen that companies are structured in several independently operating business units. The reasons for such a structure can be, for example, different territorial areas of activity or different scopes of services of the individual parts of the company.

These independent parts of the company can be mapped as independent clients in Microsoft Dynamics Business Central™. In Microsoft Dynamics Business Central™, clients have completely self-contained data with their own financial accounting.

Despite the separation of a company into several clients, it can happen in practice that project services towards an end customer are to be provided by several clients at the same time, for example against the background of the use of special qualifications of the respective employees in the individual clients.

The goal of the service area "cross-client project management" of the industry solution KUMAVISION project365 is to support project management across several clients including mutual activity allocation.

Overview of the scope of functions, role distribution between billing client and service client

If a company is commissioned by a customer to provide a project service, a specific client of the company generally always acts as the general contractor for this customer. This client sets up a project whose WBS lines represent the complete scope of services to be provided for the customer order. This client is referred to below as the "billing client".

For the provision of individual partial services, the billing client can now engage another client as a subcontractor. This client is referred to below as the "service client".

In this case, the business relationship between the billing client and the service client exclusively covers the respective concrete project. It is not a general hierarchical relationship between these two clients. In other projects, the roles can also be reversed and the current service client then acts as a billing client vis-à-vis a customer. A billing client can commission several service clients for a project and, of course, it can always provide its own services.

In the accounting client, the service client is set up as a vendor. Conversely, the accounting client is set up as a customer in the service client.

The project always contains the number of the end customer as the customer number in the billing client. Only the billing client will invoice to this customer.

To transfer partial services of the project to a service client, the relevant WBS lines in the project are assigned to the service client in the accounting client and the project is transferred to the service client with the marked WBS lines using a function.

The service client will always invoice its services to the billing client and never directly to the client / end customer.

The outgoing invoices created by the service client to the settlement client are automatically received as incoming invoices. The project items resulting from the posting of the incoming invoice are assigned to the relevant WBS lines in the project of the billing client. They are later invoiced to the end customer there in the

course of normal billing. Separate price agreements apply to the billing of services between billing clients and service clients, which are assigned to the respective project and are used for billing the services.

In principle, accounting clients and service clients can have different client currencies. In such a case, this also affects the activity allocation between the two clients. To demonstrate this, we have chosen two clients in this example where this is the case.

The accounting client has stored the client currency "EUR" in the Financial Accounting setup in the field "Client currency code".

The service client has stored the client currency "DKK" in the Financial Accounting setup in the field "Client currency code".

Establishment

Setup en in the billing client

In preparation for the transfer of project data between the accounting client and the service client, there are some necessary one-time arrangements that need to be made.

IC Facilities

The service client must be set up as an IC partner in the accounting client. To do this, call up the "Intercompany partners" via the user search. You can create a new IC partner via "New" in the menu ribbon.

The most important fields of the IC partner card are explained in more detail below.

Inforegister General

Field	Description
Currency code	Specifies the currency code of the service client.
Transfer type	In the current scope of services of the cross-client project processing of KUMAVISION Project, the data exchange between billing client and service client is only supported for clients that are physically located in the same database. Therefore, the field Input type must contain the option value "Database".
Company name	In the current scope of services of the cross-client project processing of KUMAVISION Project, the data exchange between billing client and service client is only supported for clients that are physically located in the same database. The Company name field must contain the name of the service client.

Inforegister purchase transaction

In the accounting client there must exist a vendor which is connected to this IC partner. You set the connection on the respective vendor card in the field "IC partner code" on the info tab "General".

The "Vendor no." field on the "Purchasing transaction" info tab in the IC partner card is then automatically filled with the respective vendor number.

KUMAVISION Project Information Register

The WBS lines and budget lines entered in the payroll client have references to the following master data tables:

- Resources and resource groups
- Work packages
- Main activities
- Sub-activities
- Sub-activities
- Work types

This master data does not necessarily have to use the same primary key (field no. or code) in the respective service client for the data records stored there.

To make the transfer of the project between the clients flexible, the way in which the primary key is determined in the service client from the received primary key of this data of the accounting client is defined in the accounting client.

These determinations are made entirely in the billing client.

The primary key of all master data tables listed above can be determined in the service client in 3 different ways from the primary key of the billing client.

The fields in the info tab "KUMAVISION Project" are therefore optional fields and have the following option values each:

Field	Description
Internal code (for resources "Internal No.")	The code (or no.) is transferred 1:1 from the billing client to the service client without further conversion.
Common code (for resources "Common No.")	The code (or no.) in the service client always results from the "Same code" field in the master data table of the billing client.
Activity IC partner reference (for resources "Resource IC partner reference")	The code (or no.) in the service client always results from a sub-table "IC Partner Reference", which can be stored as linked information in the respective window for all master data tables listed above.

Example:
The work package "Project management" has the code "AP001", common code "PL" and new no. "RAB001" in the accounting client and is used in the accounting client in a WBS line of a project that is to be transferred to a service client.

Internal code:
the work package "project management" will receive the same code (also "AP001") in all service clients as in the billing client

Common code:
the work package "Project management" will receive the code "PL" in all service clients (see the value of the "Common code" field in the figure above)

Activity IC-Partner Reference:

the work package "Project management" will receive the code RAB001 in the service client IC1020 (see value in the field "New no. " of the sub-table "Activity IC partner reference" in the figure above)

In principle, a project can be transferred from one accounting client to several service clients. The first two option values "Internal code" and "Common code" thus apply equally to all existing service clients, while the third option allows a client-dependent calculation of the Code field in the service client. The third option thus represents the most flexible reference option, but also requires the greatest effort in defining the master data.

A special feature still exists for the conversion of resources or resource groups during the transfer from the accounting client to a service client:

All the options of references described above exist here as well. In addition, however, there is still the possibility of converting the resource used in each case (in the billing client) into a resource group (in the service client) during the transfer. This option is particularly useful if a special resource has been planned in a budget line in the accounting client, but only the execution by a member of a resource group is to be requested in the service client - or vice versa.

For this purpose, the "Resource IC partner reference" option is selected in the "Outgoing project resource no. type" field.

On the respective resource card, the reference to the service mandates must be defined via the "IC Partner Refrenz" call (Ribbon > Belonging > Resource > IC Partner Reference).

Field	Description
Type	Specifies the type of the respective record. In this case, the system automatically defaults the type to "Resource".
No.	Specifies the respective no. of the respective data set. In this case, this is automatically preset with the respective resource no.
Reference type	Specifies the reference type of the respective service client. In this case, the reference type is "Vendor".
Reference no.	Specifies the respective reference number of the respective service client. In this case, this is the vendor number of the service client.
New type	Specifies the respective type in the service client. E.g. "Resource group".
New no.	Specifies the new number depending on the new type in the service client.
Description	Specifies a description of the reference.

Special attention must be paid to the setup field "Outgoing project number". This defines the number with which a project to be transferred to a service client is to be created.

The following options are available:

Field	Description
New number	The project is created in the service client with the next number from the standard number series for projects there.
Common project number	The project keeps the number, so it has the same number in both clients
Number series	A number is drawn from a number series to be defined (which must exist in both clients). This number is entered in the "Outgoing project no. series" field.

Facilities in the performance client

One-time necessary setups must also be made in the power client.

IC Facilities

The accounting client must be set up as an IC partner in the service client. To do this, call up the "Intercompany partners" via the user search. You can create a new IC partner via "New" in the menu ribbon.

The most important fields of the IC partner card are explained in more detail below.

Inforegister General

Field	Description
Currency code	Specifies the currency code of the billing mandate. If the service client and the accounting client have different client currencies, the client currency of the accounting client must be set up with the same code as the currency in the service client. In our example, the billing client has the client currency EUR, while the service client has the client currency DKK. Therefore, EUR must be defined as currency in the service client.
Transfer type	In the current scope of services of the cross-client project processing of KUMAVISION Project, the data exchange between billing client and service client is only supported for clients that are physically located in the same database. Therefore, the field Input type must contain the option value "Database".
Company name	In the current scope of services of the cross-client project processing of KUMAVISION Project, the data exchange between billing client and service client is only supported for clients that are physically located in the same database. The Company name field must contain the name of the billing client.

Information register sales transaction

In the service client there must be a customer which is connected to this IC partner. You set the connection on the respective customer card in the field "IC partner code" on the info tab "General".

The "Customer no." field on the "Sales transaction" info tab in the IC partner card is then automatically filled with the relevant customer number.

Billing of the service client's services is done by sales invoices to the billing client using billing resources in the invoice lines. The billing resources can have different numbers in the service client and in the billing client. In order to enable the flexible transfer of the invoice between the clients, it is defined in the service client how the resource number of the settlement resource of the service client (IC sales invoice) is translated into the settlement resource of the settlement client (IC purchase invoice).

This definition is made in the service client in the partner card of the IC partner in the field "Outgoing UK resource no. type".

The field "Outgoing VK resource no. type" is a choice field and has 3 option values. The option values of the field have the following effect:

Field	Description
Internal no.	The number of the billing resource used in the line of the outgoing invoice in the service client is copied to the line of the incoming invoice in the billing client without further conversion.
Common resource no.	The No. of the billing resource in the incoming invoice in the billing client results from the "Common No." field of the Resource table in the service client.
Resource IC Partner Reference	The No. of the settlement resource in the incoming invoice in the settlement client results from the sub-table Resource IC-Partner Reference, which is stored as linked information to the resource card in the service client.

Note

• The "Outgoing UK resource no. type" field in the IC partner table must not be confused with the "Outgoing project resource no. type" field in the same IC partner table. • The field "Outgoing project resource type" is only used for the transfer of projects including selected WBS lines and budget lines from the accounting client to the service client. • Therefore, this field is always maintained in the accounting client (see Facilities in the Accounting Client above). • The field "Outgoing CC resource no. type" is used exclusively for the conversion of the resource no. in the CC invoices of the service client to be transferred to the settlement client. This field is always maintained in the service client. • The field "Outgoing sales resource no.-type" extends the standard in the same way as the article to include the transfer of sales invoices with lines of the type resource to the other client, because this is needed for the calculation of project consumptions by means of billing resources. • This extension can also be used in general - e.g. without project reference - to transfer sales invoices with lines of the type resource between different clients. • In sales invoices (and purchase invoices) it is not possible to use resource groups, only resources. Therefore, the option value of the "Common type" or "New type" fields must always be Resource - not Resource group.

Transfer project from the billing client to the service client

Prerequisite for the transfer of a project from a billing client to a service client is the previously described setup as IC partner as well as respectively as debtor or creditor.

Furthermore, the conversion rules of the master data to be used (resources, resource groups, work packages, main activities, sub-activities, sub-activities and work types) between billing clients and activity clients must have been completely defined.

Set up project in billing client

The billing client is set up as a "general contractor" vis-à-vis the customer, so to speak. A "normal" project is created, including all WBS lines and budget lines. The end customer who has commissioned the project is used as the customer.

The Intercompany info tab of the project card contains additional information fields that document the status of the transfer between the accounting client and the service client. In the billing client only the following field "Number of IC partners" is informative. This field is a calculated field and shows the number of service clients to which the project has already been transferred.

The remaining fields of the "Intercompany" info tab are required in the service client. They will be described later.

Before the project can be transferred to a service client, the WBS lines to be transferred must be selected in the work breakdown structure. The assignment is made via the "IC partner code " field.

The field has a relationship to the "IC partner" table. You can assign an IC partner to each individual WBS line. The assigned WBS lines are transferred to the IC partner.

The transfer itself is not done in the WBS, but by calling the function "Transfer project to IC partner" in the project map.

Example:

A project is to be transferred to the IC partner. In our example, this IC partner is commissioned by the billing client to complete the selected WBS lines as the service client. The remaining work packages are completed by the billing client itself.

When the project is transferred to the service client, in addition to the selected WBS lines, the corresponding budget lines are also transferred, which are erected for the selected WBS lines.

In our example, in addition to the service to be ordered, another budget line has been set up for reconciliations with the IC partner. This should not be transferred, because the expenses for reconciliation with the commissioned IC partner are posted to this line. We achieve this by marking the field "no IC transfer".

IC Partner Define Resource Prices for Project

In addition to the WBS lines and their budget lines, price information can also be transferred that is to apply in the relevant project for the billing of the services between the service client and the billing client. You can store this project price information if required.

The entries in the "Project IC partner resource prices" table only apply to the project for which they have been defined. They are transferred to the "Res.-VK-Preise Projekt" table of the service client when the project is transferred. The fields of the tables "IC partner resource prices" and "Res.-VK prices project" are identical.

Depending on the selected option of the Type field, prices can be stored for specific resources, resource groups or for all.

The prices in the field "Price (MW)" are always in the client currency of the accounting client, because the invoicing of the provided services of the service client will be done in the client currency of the accounting client.

Transfer project to the performance client

Prerequisites for transferring a project from the billing client to the service client are:

- The project must have the status Order
- The WBS lines to be transferred must have the work status In process or Open
  The transfer of the project from the billing client to the service client is done by calling the function "Transfer project to IC partner" on the project card:

The IC partner to which the project is to be transferred is selected in the Options area of the function's requirements map.

By pressing "OK" the transfer is started. The application executes the transfer and shows the number of transferred records at the end.

In the accounting client, the "Number of IC partners" field (on the project card in the Intercompany tab) has been increased for the project.

The field shows the number of IC partners to which the project has been transferred so far.

By clicking on the field you can display the list of project IC partners.

The list shows the project IC partners and the number the project got there.

As a project can be transferred several times to the same IC partner in order to transmit updates in the billing client to the service clients, the number of transfers is also displayed. By clicking on the field "Number of transfers" you will get a transfer log.

The execution of the above described function "Transfer project to IC partner" from the project card of the accounting client, transfers the project with each call only to one IC partner. However, the function can be repeated as often as required if the project is also to be transferred to further IC partners.

Likewise, the function can be repeated several times to the same IC partner, for example if further WBS lines of the project have been assigned to the IC partner for transfer since the last call of the function or if new price agreements have been added to the table "Project IC partner resource prices" for this IC partner since then.

Repeated execution of the function for the same project and for the same IC partner increases the "Number of transfers" field in the "Project IC partner" table. The transfer function checks whether sufficient master data is stored in the accounting client for all resources, resource groups, work packages, main activities, sub-activities, sub-activities and work types used in the transfer - corresponding to the facilities in the IC partner table. For example, if in the IC partner the field "Outgoing project resource no. type" has the option value "Common no.", then for each resource and resource group to be transferred, the application will check whether the field "Common no." there has a value not equal to <empty>, which the application will then use as the new value in the service client. The same applies to conversion using the option value "Activity IC partner reference." If this conversion rule is used, a corresponding entry must be defined in the corresponding reference table in the payroll client for all master data to be transferred. The "New no." field there must not be empty. On the other hand, when executing the above transfer function, the application does not check whether the new value determined by the conversion rule is a valid value in the service client.

Follow up the project in the performance client

The application has transferred the project to the service client by executing the function Transfer project to IC partner.

Before the actual follow-up, the scope of the data of the project in the service client after its transfer from the accounting client is first considered below as an example.

Scope of the transferred data of the project in the performance client

The project from the billing client has been transferred to the service client, it has automatically received a new number there. This is the same number that was also documented in the billing client in the project there in the list "Project IC partner". The assignment of a new number in the service client is related to the setting in the billing client in the field "Outgoing project number". The option "new number" has been set up there.

Conversely, in the service client, the origin of the project was documented on the project card of the new project in the "Intercompany" info tab. The two projects in the accounting client and the service client thus know each other. This is the prerequisite for the subsequent transfer of invoices and allocations of items between the two clients, as described in the following sections.

The "Intercompany" info tab on the project card contains the following new fields - relevant for the service client:

Field	Description
Origin IC partner code	In case the project was transferred from a billing client, the field contains the code of the IC partner. The field is empty if the project is a "normal" project, without intercompany reference.
Origin IC partner Project no.	In case the project was transferred from a billing client, the field contains the project number in the billing client. The field is empty if the project is a "normal" project.
Status IC postprocessing	In case the project was transferred from a billing client, it must be post-processed in the current service client before the project can be posted. The field shows the status of this postprocessing with its option value: **blank** The project is a "normal" project that has not been transferred from a billing client. **Open** The postprocessing still has to be carried out. The project automatically receives this status after the first transfer from the billing client. During a repeated execution of the transfer of the project from the billing client, the field receives this option value again if additional new data was transferred to the project during the transfer. **Performed** The follow-up was fully performed.
IC Follow-up Ress. prices open	The field shows whether with the transfer of the project also data records of the table Ress. VK-Preise Projekt were transferred with the transfer of the project and these have not yet all been post-processed.
IC Postprocessing WBS lines open	The field indicates whether WBS lines were also transferred with the project transfer and these have not yet all been post-processed.
IC Follow-up Budget lines open	The field indicates whether budget lines have been transferred with the transfer of the project, but not all of them have been post-processed yet.

In the service client the customer has been replaced in the project. In contrast to the billing client, this is not the customer, but the debtor of the ordering IC partner.

In case the accounting client and the service client have different client currencies, it is recommended to store the accounting currency in the service client already with the customer of the accounting client.

The subsequent settlement of services between the service client and the settlement client always takes place in the currency of the settlement client.

The transfer of the project to the service client also includes the data of the WBS header as well as the WBS lines selected in the accounting client with their budget lines.

The commissioned work package was also transferred. The remaining work packages of the project are performed by the billing client itself.

The WBS lines or budget lines of the service client are also linked to the original WBS lines or budget lines of the settlement client. A project can be transferred several times from one accounting client to the same service client. When the project is transferred repeatedly, a check is first made for each WBS line to see whether it has already been transferred previously. If this is the case, it will be ignored during a new transfer. This also applies to all your budget lines. There is no comparison of whether a WBS line has been changed in individual fields since the last transfer, and there is also no comparison of any budget lines that may have been changed since the last transfer. For this reason, a budget line always has the same status IC Postprocessing as its WBS line. In the performance client, the transferred WBS lines and budget lines can be changed and WBS lines and budget lines can also be created manually, the latter also for WBS lines that were transferred from a settlement client. This means that a project in the performance client can always have WBS lines and budget lines both with and without reference to a settlement client. During the transfer from the accounting client to the service client, heading texts and additional texts for the WBS lines and budget lines are also transferred so that they are available to the service client as explanatory information for the provision of the required service. This is also only done when the WBS line or budget line is transferred for the first time. In the case of a repeated transfer, no comparison is made of any texts that may have been changed in the billing client in the meantime. Remark lines for project, WBS line and budget line are not transferred to the service client, because they represent internal information in the accounting client. The project IC partner resource prices stored in the billing client for the project were transferred to the project IC prices during the transfer of the project to the service client.

During the transfer, the application in the project converted the data of some master data used (resources, resource groups work packages, main activities, sub-activities, sub-activities and work types) according to the conversion rules agreed in the billing client.

However, after the project has been transferred to the service client, a number of fields in the project header, WBS lines and budget lines have not yet been calculated. These include, for example, the address data of the project header and all price specifications in the WBS lines and budget lines.

The dimensions (for the project header, for the WBS lines and for the budget lines) are generally not transferred, they are always recalculated in the service client on the basis of the specifications made there for the master data used in the project.

The application has only strictly applied the conversion rules during the transfer of the data from the project of the billing client to the service client and made the corresponding replacements in the service client. However, the application has not yet checked whether these replacements actually represent valid data in the service client.

For example, although the usages of the corresponding resource group were triggered, the transfer of the project did not yet check whether the corresponding resource group is actually a valid resource group in the service client.

Due to this missing and partially unchecked data, the Locked field of the project has been automatically assigned the option value Post by the transfer. The project must therefore be post-processed before it can be posted.

Follow up project in the service client

The follow-up of the project in the service client is done by calling the function "Intercompany follow-up" on the project card.

Due to the conversion of the data during the transfer of the project, it may also happen that the codes of the main, sub and partial activities used in the activity client in the new project are invalid, because they do not exist in the activity client.

In the option part of the function, the user can choose whether the master data records of these 3 tables should be created automatically by the function in such a case, or whether the function should abort with a corresponding error message. If the transfer of the project has led to incorrect data of the other converted master data (e.g. missing resource group), the function will generally abort.

Confirming with "OK" starts the postprocessing.

The function now analyzes all data of the project for correctness and completes missing data as described above. If the function encounters errors during this check, it terminates with a corresponding error message. The user can correct the error manually and start the function again.

In the Intercompany tab of the project map, the fields displaying the status of IC follow-up have been updated:

Field	Description
Status IC postprocessing	The status for IC follow-up has been set to "Performed".
IC Follow-up Res. prices Open	The status the res. prices open for IC follow-up was set to "No".
IC Postprocessing WBS lines Open	The status the WBS lines open for IC follow-up has been set to "No".

The function has also assigned the option value <empty> to the "Locked" field for the project in the General info tab, thus removing the posting lock for the project.

The status of the project in the service client is still "Offer". To execute the project, the project must still be changed to status "Order", this is done as with normal projects by changing the status field.

Also, a project manager must be provided by filling the "Responsible" field with the responsible project manager.

In order to be able to post project consumption to the work packages, they must be released for posting by setting the work status there.

Additional work packages can be added to the work breakdown structure in the service client.

Example:

A work package is set up for coordination with the ordering PLC. This work package is not charged to the IC partner, which is why it is set to "without charge" in the "Settlement type" field. This further WBS line has no reference to a WBS line in the billing client.

Post time items and project consumption in the service client

The prerequisite for posting time items and project consumption in the service client is that the follow-up described above has already been carried out for the project.

In the service client, the project is now treated like any other project. Times are booked, these are retrieved by the project manager and booked to the project after control. Subsequently, the settlement takes place via the Invoice Suggestion. Only when the sales invoice is posted to the IC partner is there a process enhancement compared to normal projects. The posted sales invoices are transferred to the IC partner via the IC transfer and end up there in the incoming invoices.

As long as the consumption posted in the service client has not yet been invoiced, these project items form the intercompany commitment in the settlement client. For details, refer to the following section.

In the following, the previous example is continued and some postings are made in the service client.

Post time items in the service client

In order to post time items on a WBS line, the work status must first be set to "In process" in the WBS line.

Subsequently, the time entries can be recorded and posted in the project time sheet.

Example:

2 hours are booked on the coordination with the IC partner, the remaining hours run on the service ordered by the IC partner.

Post project items in the service client

To transfer the posted time items to project consumption items, call up the project book sheet. You can use the "Retrieve time items" function to retrieve the posted time items.

Then the lines of the book sheet are posted. The posting thus creates the project items.

Intercompany commitment in the settlement client

The basis for subsequent invoicing between the clients will be the project consumption items posted in the service client. These in turn are usually based on time items as an upstream posting step.

Since in practice there may be longer periods between the posting of time items, their transfer as project consumption items and their invoicing by means of a sales invoice, it is of interest to be able to see the expected expenses from the service clients already before invoicing in the accounting client.

The intercompany commitment is used in the accounting client to preview the expected invoices from the service clients before any invoices are sent from the service clients to the accounting client.

The intercompany commitment is based on the one hand on the time items already posted in the service clients, which have not yet been called up in project consumption items, and on the other hand on the project consumption items already posted there, which have not yet been invoiced. In both cases, however, only items are included that can be invoiced at all and which concern WBS lines that were previously transferred from the accounting client to an activity client.

The calculation of the intercompany commitment in the billing client is done by means of a function. With this function (as a periodic activity) first the time items and project consumption items relevant in the service

clients for the later invoicing are collected and compiled in the table "Project IC commitment line". This table is displayed in the billing client in the Project IC-Obligo window.

Calculated fields can be used to display the intercompany commitment for a specific WBS line or budget line. These calculated fields are calculated based on the records of the "Project IC commitment line" table.

Collecting the items that have not yet been invoiced in the Project IC Commitment window

The window "Project IC-Obligo" has the appearance of a book sheet. However, it is not used for posting, but only for the periodic collection of data. These data originate from the service clients and are displayed in the accounting client.

Since an accounting client can have several service clients, but their data may be available at different times, a separate book sheet is used for the data of each service client. The name of the service client is assigned to the book sheet name.

You can find the IC-Obligo window via the user search under the search term "Project IC-Obligo". To transfer the data from the service client, the corresponding book sheet is first selected via the "Name" field. The transfer of the data from the service client to the respective book sheet of the accounting client is done with the help of the function "Calculate rows".

The book sheet then contains the data transferred from the service client. If there are no time items in the service client that have not yet been called up, only project items are entered in the IC commitment (Item type field).

Furthermore, only those items that belong to the ordered, billable work package are transferred. The non-billable work package is not displayed in the IC commitment.

The individual fields are explained in more detail below:

Field	Description
Project no.	Specifies the project no. from the billing client.
Project Description, Sell to deb. no. / name	Information fields from the billing client's project.
PSP Line no.	Specifies the line no. of the WBS line from the payroll client.
Type, no., main, sub, partial activity code	Specify the values of the WBS line of the accounting client.
Budget Line no.	Specifies the line no. of the budget line from the accounting client.
ICP Project no.	Specifies the project no. from the service client.
ICP PSP Line no.	Specifies the line no. of the WBS line from the service client.
ICP no. ICP main, sub, partial activity code	Specify the values from the WBS line of the service client.
ICP Budget Line no.	Specifies the line no. of the budget line from the service client.
Item type, Item no.	The Item type field is a choice field with two options: Time item and Project (consumption not fact.). The line from the book sheet refers to either a time item or a project item of the service client. The Item no. field specifies the line no. of the item from the service client. No. of the item from the service client.
Posting date, Document no. Resources no, Description, From time, Until time	Specify the values from the time item or project consumption item of the service client.
Quantity, Unit code, Quantity per unit, Quantity (base)	The quantity data and the unit code come from the time item or project consumption item of the service client.

Field	Description
UK Price (MW), Line discount %, Sales amount (MW)	The sales price (MW) is the expected sales price of the subsequent sales invoice from the service client to the settlement client. This sales invoice will always be invoiced in the client currency of the billing client, therefore the UK prices and amounts shown here are always in (MW).
	If the book sheet line refers to a project consumption item of the service client (see field Item type), the fields originate from the project consumption item of the service client (there in settlement currency).
	If the book sheet line refers to a time item of the service client, the fields are taken from the values of the budget line of the service client, if available. Otherwise, they are equal to 0.
Performance Date, Performing resource code, Performing unit code, Performing resource name	These fields also originate from the time item or project consumption item of the service client. They are purely information fields for a more detailed description of the service provided. When the service client later invoices the settlement client, these fields are also transferred as additional fields. They are inherited in the settlement client from the purchase invoice of the service client's vendor via the project items there to the outgoing invoice to the ordering customer (see Sales to customer no. field).

The above "Calculate rows" function always deletes any rows that may already exist in the book sheet (from a previous transfer run) and retransfers all the data for the relevant service client. The rows of the "Project IC commitment" window are updated exclusively by the above transfer function (and not online by postings of time items and project items in the service client). The function must therefore be executed in the payroll client as a periodic activity by the user sufficiently often, at the latest, however, before the calculated fields available in the WBS lines of the payroll client are to be used to calculate the intercompany commitment in evaluations.

Calculated fields based on the Project IC commitment table

In the two tables of the WBS lines and the budget lines, 2 calculated fields each have been created, which calculate the intercompany commitment for the settlement client on a quantity or value basis. The basis of the calculated fields are the lines of the above described window Project IC commitment, whereby all service clients are always included. The calculated fields of the WBS lines should therefore only be used for evaluations after all book sheets of the window have been updated.

Additional calculated fields of the WBS line and budget lines tables (for use in the payroll client):

Field	Description
Quantity IC commitment (base)	The field is a calculated field and is calculated from the sum of the Quantity (Base) field of all records in the Project IC Obligo Line table.
Sales amount IC commitment (MW)	The field is a calculated field and is calculated from the sum of the Sales Amount (MW)) field of all records in the Project IC Obligo row table.

Billing of the service client's services, sending of the sales invoice to the billing client by means of IC outbound transaction

In this section, the project consumption entries posted in the service client are invoiced to the billing client.

Creation of a sales invoice by means of a Invoice Suggestion in the service client

As with other projects, the sales invoice is created in the "Invoice Suggestion" window in the service client using the "Create Invoice Suggestion" function there.

Proposed are the posted project consumption items, which are ticked in the "Create direct invoice lines" field.

The sales invoice is created to the customer by calling the "Create settlement" function and confirming the subsequent query with "OK".

Sales invoice in the service client

The customer of the project, i.e. the one assigned to the IC partner of the project, acts as the customer of the sales invoice.

In our example, the invoicing is done in EUR, the client currency of the accounting client. EUR represents a foreign currency for the service client, as its client currency in our example is DKK.

The application has created an invoice line with the type resource. The No. used in the lines is the number of the billing resource of the work package.

The invoice line has accounting items with which the project items to be settled are closed, these also serve as proof of performance.

Posting the sales invoice and creating an IC outbound transaction

The invoice is posted. The application creates a posted sales invoice in the service client with posted invoice lines and associated posted settlement items, as well as the corresponding G/L items, resource items, and project items of type Sales.

Since the customer used in the invoice is linked to an IC partner, the application also creates an associated IC outbound transaction in the service client during posting to the posted sales invoice.

By default, Microsoft Dynamics Business Central™ collects all (outgoing) documents (invoices, credit notes, etc.) to be sent to an IC partner in the IC outgoing transactions dataset.

The industry solution KUMAVISION project365 uses this standard process to send the (outgoing) posted sales invoices of the service client to the billing client. In the details, the document to be transferred can be viewed.

This IC outbound transaction is used to send the sales invoice posted in our example from the service client to its IC partner, the settlement client. The invoice concerns the customer, which is linked to the IC partner with the same name. It is issued in the foreign currency EUR.

By default, Microsoft Dynamics Business Central™ can only send invoices in an IC outbound transaction whose line type is "Item" or "G/L Account".

The industry solution KUMAVISION project365 extends this standard by the possibility to send invoices with line type "Resource" as well, because the invoicing of project services in KUMAVISION project365 is done by means of billing resources.

Furthermore, the lines of the IC outbound transaction have been extended by the data of the target project in the billing client (fields Origin IC partner project no., Origin IC partner work package code, etc.).

There are also settlement items for the lines of the IC outbound transaction, which have been copied by the application from the settlement items of the lines of the posted sales invoice when creating the IC outbound transaction.

Both the internal and the settlement remarks of the settled project items can be viewed under "Remarks" and "Remarks project items" respectively.

When the IC outbound transaction is subsequently sent to the settlement client, only the settlement-relevant remarks for the settlement item are sent along with it, but not the internal item remarks of the project items.

The IC outbound transaction can now be sent by the user from the service client to its IC partner (the billing client).

Sending the IC outbound transaction from the service client to the accounting client

This dispatch happens in the IC Outgoing Transactions window and is performed in 2 steps:

In a preparatory step, all IC outbound transactions to be sent must first be given the option value "Send to IC partner" in the "Line action" field. To do this, the user selects all IC outbound transactions to be sent in the overview (Windows marker) and executes the "Set line action" > "Send to IC partner" function via the ribbon.

The function changes the option value of the Line action field in the previously selected lines to the value "Send to IC partner".

Subsequently, the IC output transactions selected in this way can be sent. To do this, execute the "Complete line actions" function in the menu ribbon and confirm the subsequent query with "OK".

The IC output transactions are sent to the respective IC partner.

For our example, this means that the IC outbound transaction created in the service client, with the data of the associated Posted Sales Invoice is sent to the billing client. After successful sending of the IC outbound transaction, the IC document moves from the IC outbound transactions to the Processed IC outbound transactions.

Receipt of the IC incoming transaction in the settlement client, creation of a purchase invoice.

Now the sent IC outbound transaction of the service client is received in the billing client as an IC inbound transaction. Here, the scope of the received data of the IC inbound transaction is examined and finally converted into a purchase invoice.

The purchase invoice is later posted in the settlement client, increasing the project consumption of the project there by the services provided by the service client.

IC incoming transaction received in settlement client

Since the service client and the accounting client must currently always be stored in the same database, the sending of the IC outbound transaction of the service client has automatically created an IC inbound transaction in the accounting client at the same time.

Data of the received IC inbound transaction in the settlement client

To view the scope of the received data of the IC input transaction, select the Details menu item.

The IC inbound transaction contains in the header the data of the IC partner and its assigned vendor. This information was converted from the IC outbound transaction during the transfer. They are shown here from the view of the settlement client.

The lines of the IC incoming transaction refer in their details to a project to be posted in the settlement client as well as its WBS line(s).

During the transfer of the project from the accounting client to the service client, the project number and the reference values of the WBS line to be transferred were transferred as information to the WBS line of the service client.

When the IC outbound transaction of the service client is transferred to the IC inbound transaction of the settlement client, these transferred key fields are used again to identify the project to be posted and the WBS lines. Both (project and WBS lines) must necessarily exist in real in the settlement client.

The resource no. of the service client used in the line of the IC outbound transaction is initially copied exactly to the line of the IC inbound transaction of the settlement client during the transfer. It does not necessarily have to represent a resource that is actually valid in the table of resources of the billing client.

Later a purchase invoice will be created from the IC input transaction. The resource no. in the line of the IC inbound transaction will be converted. Only the resource no. used in the line of the purchase invoice then represents a valid resource in the table of resources of the billing client.

During the transfer of the IC outbound transaction to the IC inbound transaction, the accounting items (and, if applicable, their comment lines) associated with the lines of the IC outbound transaction were also transferred.

These are now available at the lines of the IC input calculation as linked information.

The transfer of the IC outbound transaction to the IC inbound transaction also includes any remark lines stored for the settlement items of the IC outbound transaction lines.

However, the transfer no longer includes the item remarks for the project item of the service client, since these include internal information (from the viewpoint of the service client).

Accept the IC incoming transaction and create a purchase invoice

After you have checked the data of the received IC incoming transaction in the settlement client, a purchase invoice is now created from this.

The creation of the incoming invoice from the data of an IC incoming transaction is done in the IC incoming transactions window in 2 steps:

In a preparatory step, all IC input transactions checked and accepted by the user must first be given the option value Accepted in the "Line action" field.

To do this, the user marks accepted IC input transactions in the overview (Windows marker) and executes the "Set line action" function via the ribbon.

The function changes the option value of the "Line Action" field in the previously selected lines to "Accepted".

The IC input transactions selected in this way can then be converted into a follow-on document. To do this, call up the "Complete line actions" function.

No further specifications and restrictions need to be made in the function's request window.

The IC input transactions accepted in the overview are now completed.

For the IC input transaction from our example, this means its conversion to a purchase invoice.

After successful completion of the IC input transaction, it moves from IC input transactions to Processed IC input transactions.

Posting the purchase invoice in the settlement client

Data of the purchase invoice in the settlement client

In the header of the purchase invoice the vendor was used, which is connected in the settlement client with the IC partner of the service client.

The currency code of the purchase invoice is because the sales invoice of the service client was created in EUR, this is the client currency of the settlement client.

The No. used in the IC incoming transaction lines is the accounting resource of the service client. It is not necessarily transferred exactly like this to the purchase invoice lines during the transfer of the IC incoming transaction to an incoming invoice, but it goes through a conversion.

The field "Outgoing CC resource no. type" in the IC partner table in the service client is decisive for this conversion.

The field is a choice field and shapes

- depending on the selected option value
- the application of several conversion rules.

As an example, in the IC partner of the service client, the option value "Internal no." was selected in the Outgoing CC resource no. type field.

Exactly for this reason, the resource number used in the line of the IC outbound transaction runs through the simplest of the possible conversion rules:

It is taken over here again in the billing client with the same value.

Note

In the accounting client, this resource must have the type = External.
This is the only way to use this resource in a purchasing line.

The settlement items of the rows of the IC incoming transaction are transferred to the purchasing row Project Distribution during the transfer of the IC incoming transaction to the incoming invoice. This table is assigned to the purchasing rows as a sub-table and can be viewed in the Purchasing Invoice window as linked information to the rows. To do this, go to the "Rows" info tab and select the menu item "Rows" > "Project breakdown purchasing row".

A project breakdown line can also have remark lines. These corresponding remark lines, which were assigned to the settlement items of the input transaction lines. The data of the tables of the purchase invoice in the settlement client thus correspond overall in content to the data of the sales invoice formerly posted in the service client.

Posting the purchase invoice in the settlement client

Before we post the received purchase invoice in the billing client, a general note about the Purchase Line Project Breakdown table used above:

- The use of the Purchasing Line Project Breakdown table, as a sub-table to the Purchasing Line, is not necessarily limited to the specific use described here - the transfer of invoices between the service client and the billing client
- The table can be used as a sub-table for all purchasing lines of the type resource, which have a reference to a project and a WBS line. Hence the name of the table. In general, the table is used to record different partial services for a purchasing line of the type resource with project reference.
- The no. of the resource used in the purchasing line and the reference to project and WBS line specified there apply equally to all project breakdown lines, as do the price specifications and the dimensions of the purchasing line.
- If a purchase line has records of the Purchase Line Project Split table, their sum of the quantity fields of all project split lines must always correspond to the quantities of the purchase line.
- The advantage of the Purchasing Line Project Breakdown table is not only in the more detailed description of different partial services for the purchasing line, but it is also especially in the separate posting of project consumption items for the purchasing line. If a purchasing line has records of the Purchasing Line Project Breakdown table, the purchasing document posting will post a separate project consumption item for each record of this table (instead of just one project consumption item for the purchasing line itself, as would have been the case without using this sub-table). This special feature of the table will be used in the further process of transferring the data from the service client to the billing client.

The purchase invoice is posted.

The associated project breakdown lines (including any remark lines) are also transferred to the posted purchase invoice and assigned to the posted invoice lines.

In addition to the posted purchase invoice, posting the invoice generates the related G/L items, vendor items, resource items, and project consumption items.

The project consumption item was posted to the WBS line in the project of the accounting client, which was originally transferred to the service client for service provision during project transfer. The application has posted a separate project consumption item for each data record in the Purchasing Line Project Distribution table and has also transferred any existing remarks for this as item remarks for the project consumption item. The project consumption items in the application client also contain, in particular, the fields Service date, Performing resource name, etc., which help to describe the service provided in the service client in more detail.

Invoicing to the end customer in the billing client

Invoicing to the end customer takes place in the invoicing client in the same way as invoicing of a project without IC services. The original origin of the project items to be billed is irrelevant.

Control Costs

Overview

In essence, project cost control is concerned with the difference between budgeted and actual values. It helps ensure that the revenues you earn and the expenses you incur match estimates as much as possible. Comparing these figures over multiple periods is crucial for timely, effective project management.

The cost control functionality in Microsoft Dynamics 365 Business Central uses job ledger and job account entries to monitor projects. The job ledger entries record the revenues and expenses related to day-to-day operations, such as item consumption or hours spent on a job. The work breakdown structure and the budget, on the other hand, contain the expected sales and costs and form the basis for creating account entries from a chart of job accounts.

The accounts are linked to both the job ledger and the budget. This means that, like in Finance, you can use the account chart and a column layout to create views that compare budget to actuals for multiple cost types and provide you with a variety of business insights.

For even more insights into project performance, you can set up views that analyze the dimensions stored with job ledger and account entries. You can then set filters on budgeted and actual values, or on their variances, to specify what to include in a view.

Basics

The chart of job accounts is the most important component of cost control. It covers the key values used to evaluate jobs, that is, the types of revenues and expenses that you might encounter. A chart can be as compact or as large (detailed) as you want.

Both the job ledger and the job account entries are created based on this chart. They are later consolidated in a job account schedule.

Chart of job accounts and account setup

Not unlike G/L entries in Finance, entries related to projects are linked to accounts with the help of Job Accounts Setup.

All job accounts are identified by their general product posting group, job type, work package, and phase code. Any combination of these can be assigned to a sales and a cost account from the account chart. See the following table for more information.

Field	Description
Gen. Prod. Posting Group	Represents the general product posting group of an item, a resource, or a G/L account for which you specified usage or consumption, budget values or revenue. This group is the only mandatory field on the Job Accounts Setup page.
Job Type	Specifies the type of job.
Work Package Code	Specifies the work package from the WBS line on which you posted or budgeted usage or revenue.
Phase Code	Specifies the phase code from the WBS line on which you posted or budgeted usage or revenue.

You can use this information, for example, to determine

- resource expenses when managing research projects with internal resources.
- the cost of small items for onsite assembly.
- travel times of external employees for major projects.
- follow-on orders (=phase code) for customer projects.

You must set up the chart of job accounts and fill in the Job Accounts Setup page based on what you want to analyze later.

Multi-use accounts

You can add an account more than once to Job Accounts Setup. To see if and how often an account is used:

1. Choose the search icon, enter Chart of Job Accounts, and then choose the related link.
2. Select an account. On the ribbon, choose Related > Account > Where-Used List.

Besides use of the account in setup, the page shows in which templates associated with advanced job measurement you can find the account.

Switch to setup with phase codes

Previous project365 releases didn't include phase codes in Job Accounts Setup. You need to switch to a newer version to make use of this feature.

1. Choose the Search icon, enter KUMAVISION Module Setup, and then choose the related link.
2. On the ribbon, choose Actions > Setup > project365 App Setup.
3. Turn on the Use Phase Code in Job Accounts toggle. This opens a dialog. Choose Yes.

Existing entries are now copied to a new setup page and deleted from the old one.

Note

The setup without phase codes has been discontinued. Newer versions no longer support this feature. You must change to the more recent setup.

Job ledger entries = actual values

Each posting that goes toward a job creates a job ledger entry. These entries are the basis for billing, that is, they show job usage and consumption and store the revenue generated from invoices. They are also used to measure job progress.

When you post to a job, an account is assigned to the created job ledger entry based on what you entered in Job Accounts Setup. This gives you access to the latest data on job usage and sales so that you can track revenues and expenses throughout the lifecycle of a project.

Job account entries = budget figures

Job account entries store the quantities and values from planning. They are created based on the planning level of a WBS line. They originate with budget line entries if you selected the Copy Budget checkbox on available budget lines or with the WBS line itself if planning is set to that level.

You need to run a function to create job account entries:

1. Choose the Search icon, enter Update Job Account Entries, and then choose the related link.
2. Set filters as necessary. If you don't set filters, account entries are created for all jobs.

You can also update entries for a single work breakdown structure. Open a WBS and choose Actions > Functions > Update Job Account Entries on the ribbon.

If you rerun the function, the account entries are deleted and recreated from scratch. This gives you greater flexibility when budgeting a job, as the dimensions, prices, and planning level of a project might be subject to constant change.

See the following table for an explanation of the Job Account Entries page. You can view this page by choosing Related > Job Account Entries on a WBS, for example.

Field	Description
Date	Uses the planning level to show the starting date of the relevant WBS or budget line.
Job Account No.	Shows the number of a cost account from the chart of job accounts.
Sales Job Account No.	Shows the number of a revenue account from the chart of job accounts.
Work Package Code	Shows the related work package.
Quantity (Base)	Shows the related quantity.
Total Cost (LCY)	Shows the related cost.
Total Price (LCY)	Shows the related price.
Entry No.	This field is filled in automatically when a job account entry is created.

As explained earlier, the product posting group is crucial to identifying the correct job account for cost control. If an account is retrieved based on budget lines, the system uses the group of the resource or item stored there to find the account.

If you plan at the WBS line level, the posting group related to the work package billing type and number is used. Typically, this is the group of a billing resource. Because of how account entries are stored in the system, you need to run the update function each time you change planning data.

If a job has more than one WBS, job account entries are created for all structures, but only the WBS that is currently active is shown in cost control.

We recommend you use the job queue to update account data on a regular basis.

Account entries for revenues

Typically, cash inflow is recorded later than expenses. In fact, project work is often paid for only in subsequent accounting periods.

However, to monitor jobs accurately, the system needs to store expected sales prior to payment. This is what the Sales Job Acc. Entries From field on the job card is for. You can find the field on the Planning tab. It has the following options:

Job Budget

Choose this option if you want job account entries to be created as described earlier. You can still use the Base Date Sales Job Acc. Entries and Date Formula Sales Job Acc. Entries fields to change the workflow to some extent.

If you choose Planning Date in the Base Date Sales Job Acc. Entries field, the assumption is that you generate revenue when you record job usage, and a date formula doesn't apply.

If the field is set to Date Formula, the date on which sales are generated is calculated based on the budget date and a specified formula.

Example

The budget line shows 05/15/21. The system then calculates 06/15/21 as the date that needs to be stored with the sales account entry.

(Advance) Payment Plan

Payment and advance payment plans work in the same way. The only difference is their data source. For more information, see the [Advance Payments](#) feature.

If you choose one of these options in the Sales Job Acc. Entries From field, you can no longer enter a base date or a date formula.

From this point on, the job budget is no longer required. Instead, revenue is created according to the payment plan. The plan is used to store all information needed for billing a job, such as posting dates and prices.

Allocating a sales account to a payment plan works in the same way as allocating a cost account when you create job account entries from a WBS line. The system will use a work package, a billing type, and a billing number (usually of a billing resource) to determine the correct account.

For cost control to capture the entire cash inflow, the final invoice must also be part of the plan. However, this invoice must include only the amount that remains after all partial invoices have been subtracted from the total price.

When you create the final invoice based on an invoice suggestion, the total price is shown on the invoice in addition to the partial amounts applied as credit memos.

If you want to use a payment plan in-house and remove it from billing, clear the Copy to Suggestion checkbox on the payment plan lines.

Set up job account schedules

You can now use the job ledger and account entries that have been created to set up account schedules that specify how and based on which criteria you want to analyze jobs. The schedules have the same purpose and function as those for analyzing G/L accounts and entries in Finance.

Schedule names

You can use several schedule names to set up a multi-level view of job results. For example, you might want to create different analysis environments for internal and customer jobs.

1. Choose the Search icon, enter Job Acc. Schedule Names, and then choose the related link.
2. On the ribbon, choose New, and fill in the fields as described in the following table.

Field	Description
Name	Enter a name for the schedule.
Description	Enter a text that describes the schedule.
Default Column Layout	Specify the criteria for analysis in the columns. The layout stored in this field is used when you open a job account schedule but can be changed at any time.
Job Analysis View Code	This field is required to structure the view.

Account schedules

The schedule itself is set up like a report in which you assign accounts to individual lines. You can also specify formulas or enter lines that total amounts or quantities.

1. Choose the Search icon, enter Job Acc. Schedule Names, and then choose the related link.
2. Select a name. On the ribbon, choose Edit Account Schedule and fill in the fields as described in the following table.

Field	Description
Row No.	Specify a number to sort lines according to your requirements.
Description	Specify the area that you want to show on the line.
Totaling Type	Choose one of the following options: **Job Accounts** Shows the value of one or more job accounts. **Total Accounts** Includes total lines from the chart of job accounts. **Formula** Uses a formula on the schedule. **Set Base for Percent** Calculates percentages of a total.
Totaling	Fill in this field based on what you selected as a totaling type.
Line Amt. Type	Specify whether you want the line to show total prices or costs.
Show Opposite Sign	Select this checkbox if you want to show negative amounts as positive and positive amounts as negative.
Show	Specify whether the line is shown on screen and on printouts. Select If Any Column Not Zero, When Positive Balance, or When Negative Balance if you want to include the line only under the specified circumstances.
Bold Italic Underline Double Underline	Select one of these checkboxes if you want to see text in bold, in italics, underlined, or double underlined.
New Page	Select this checkbox if you want to insert a page break after the line.

Actions

To see the entire schedule, choose Process > Overview on the ribbon. The page that opens shows the values specified for the schedule and column layout.

To insert an account into a line of an account schedule, choose Actions > Functions > Insert Accounts. The line can then be used immediately. You can also use the Edit Column Layout Setup action to set up column layouts.

Select Reports > Print to set filters for printouts. First, you need to select an account schedule and a column layout name on the Options tab. You can then specify which fields you want to print.

Set Up Column Layouts

1. Choose the Search icon, enter Job Acc. Schedule Names, and then choose the related link.
2. Select a name. On the ribbon, choose Actions > Functions > Edit Column Layout Setup and fill in the fields as described in the following table.

Field	Description
Column No.	Specify a column in this field.
Column Heading	Enter a name to describe the column on screen and on printouts.
Column Type	Specify the purpose of the column: **Formula** Used with other columns to perform calculations. **Net Change** Shows only transaction data. **Balance** at Date Totals data up to a given date. **Beginning Balance** Shows the starting balance of accounts assigned to this line. **Year to Date** Shows all values created in the current year up to a given date. **Remaining Fiscal Year** Shows all values from a given date. **Entire Fiscal Year** Shows all values created during a full fiscal year.
Entry Type	Specify if you want to show job ledger entries, job account entries, or one of two commitments.
Value Base	Specify if the entry represents an amount or a quantity.
Formula	Fill in this field if you selected Formula in the Column Type field.
Show Opposite Sign	Select this checkbox if you want to show debit amounts as negative and credit amounts as positive values.
Comparison Date Formula	Fill in this field if you want to specify a period for budget vs. actual comparisons in relation to the period set in report requests. You can enter a common unit of time here (D, WD, W, M, Q, or Y).
Comparison Period Formula	Fill in this field if you want to compare accounting periods. You don't enter a unit of time here but a formula. For example, enter -1P if you want the system to retrieve the same range of dates one accounting period earlier.

Field	Description
Show	Specify if the column is always or never shown or only shown when values are positive or negative.
Rounding Factor	Specify if and how to round for clarity.

Acc. Schedule Overview

As mentioned earlier, you can select Process > Overview on the ribbon to see the job account schedule you created. The overview shows the lines of the schedule and the columns from column layout according to the filters you set.

The header displays the names of the schedule and the column layout. You can filter data there as well.

All default values on the page can be changed to meet your requirements. You can also use the lookup on a field to see how it relates to the chart of job accounts. On the page that opens, you can then use another lookup if you want to know where an entry comes from.

To switch from one analysis period to another, choose Period on the ribbon, and then select Previous Period or Next Period.

To copy the overview to a new Excel worksheet for further editing, choose Actions > Excel > Export to Excel.

Analyze dimensions

Besides job ledger and account entries, you can use dimensions to monitor projects. Dimension-based analysis includes both global dimensions—posted directly to a job ledger entry—and additional dimensions that specify an entry related to a project. For easy filtering, they are included in the following aggregated entries:

- Job analysis view entries—created from job ledger entries—to represent actual values.
- Job analysis view budget entries—created from job budget entries—to display budget figures.

However, before you can analyze jobs this way, you need to set up the feature.

Job analysis views

Job analysis views offer insights into project data based on analysis view entries and analysis view budget entries.

Analysis view entries can be set up on the job analysis view card. You can use four additional dimensions per card.

To open a list of all cards, choose the Search icon, enter Job Analysis View List, and then choose the related link.

Each line on the page shows if budget values will be created from the card, when the card was last modified, and what dimensions are available.

Choose a card for editing and then fill in the fields as necessary.

General

Field	Description
Code	Specifies a code for the job analysis view. The code must be unique and can reflect the purpose of the view.
Name	Specifies the name of the view.
Job Account Filter	Specifies the accounts that will be analyzed. If the field is left blank, the job analysis will include all accounts.
Job Filter	Specifies the jobs shown in the view.
Date Compression	Used to define for which period entries need to be merged, that is, how detailed a view will be. For example, if you want a monthly summary, you can use this field to total the job ledger entries created during a full month and combine them into a single entry. The date of the first posted job ledger entry is then assigned to the entire period. Entries are totaled in a way that no data required for analysis is lost. For example, entries included in the analysis must have identical dimensions.
Starting Date	Used to set a date from which entries are included in the view. All job ledger entries posted on or after this date are then compressed to the level you chose in the Date Compression field. Earlier entries are merged into one entry shown on the date immediately preceding the starting date.
Last Updated On	Shows when the card was last updated.
Last Entry No.	Shows the number of the last job ledger entry that was posted before you updated the view. Entries posted since the last update aren't included in a view.
Last Budget Entry No.	Shows the number of the last job budget entry that was entered before you updated the view. Entries specified since the last update aren't included in a view.
Include Budgets	With the toggle turned on, job budget entries are also updated. This creates analysis view budget entries automatically.
Blocked	If this toggle is turned on, the view cannot be used at all.

Dimensions

On the Dimensions tab, choose the four additional dimensions you want to analyze on the card.

Actions

To store selected dimension values, choose Related > Analysis > Filter on the ribbon. This ensures that only certain values are totaled on the card.

You can also choose Update to find all job ledger and account entries that match the filters you set and use them to create job analysis view and budget entries.

If card changes affect existing analysis entries, the entries are deleted. For example, if you edit the Date Compression field or a dimension filter, the job analysis view and budget entries are recreated at the next update. This step is necessary because the criteria for creating entries have changed.

Entries created

Every time you update a view, the system creates data-rich job analysis view and job analysis view budget entries from the job ledger and job budget entries that include the four dimensions you want to analyze.

The analysis view budget entries contain the values shown in the view, the budget name, and the job account, followed by the four dimensions, the posting date, the quantity, and the amount. In short, they represent the link between key data stored with job account entries and the dimensions of a document.

The same is true for analysis view entries. In this case, dimension data is merged with data from job ledger entries.

In the Quantity and Amount fields, you can use a lookup to see where an entry originates.

Analysis view entries on account schedules

You analyze by dimensions in the same way you analyze by job ledger and account entries.

Open the Job Acc. Schedule Names page to look at the Analysis View Code column. If you chose both a view and a column layout, the account schedule view is filled in automatically with analysis view entries when you select the Overview action.

You can use the lookups on overview lines to identify what analysis view entry was used to fill in a certain line. Choosing the lookup first opens a page that shows the job account chart related to the account used in a certain column.

When you then select a Quantity or a Cost Amount field, you can see the job analysis view entry and the dimensions stored for the analysis view.

Difference to standard functionality

At a cursory glance, the added views might not seem to offer anything new. But you can now set flow filters on the four dimensions described earlier.

You can already store these filters when you set up an account schedule. To use them, unhide the four columns that show the relevant dimension values.

The benefit of specifying filters on the schedule instead of each card individually is that analyses will all have the same design and thus remain comparable over time.

Job analysis by dimensions

TJob analysis by dimensions uses the same analysis view and analysis view budget entries that have already been described earlier.

1. Choose the Search icon, enter Job Analysis View List, and then choose the related link. This shows you list of all views that have been specified so far.
2. On the ribbon, choose Analysis by Dimensions to open the setup and filter view. The date, job account, job, budget, and responsibility center filters are included by default.
3. Choose the other four dimensions based on the selected analysis view. Each dimension can be assigned to a line or a column. You don't need to specify a default value for a dimension like you do for an account schedule. To link the dimension to an account, the system will use the job accounts stored for the card, and you can set filters on them there.

The other fields shown on the card are described in the following table.

Filters

Field	Description
Date Filter	Limits the period for analysis based on a posting date.
Job Account Filter	Further limits the number of accounts copied from the job analysis view card.
Budget Filter	Used to include a certain budget. You limit the display of budget values on the Options tab.

Options

Field	Description
Show	**Actual Amounts** Shows the actual values posted. **Budgeted Amounts** Shows the values allocated to the budget on the Filter tab. **Variance** Shows the difference between budgeted and actual values as a number. **Variance %** Shows the difference between budgeted and actual values in percent. **Index %** Shows the difference between budgeted and actual values as an index. An index of 100 means that the values are identical. If the percentage is above or below 100, the actual values are greater or smaller than the budgeted values.
Show Amount Field	Two options are available in this field. **Quantity** Shows the values as quantities only. For usage entries, these are the actual posted quantities—changes to invoice quantities not included. **Amount** Shows the amounts stored with the relevant entries.
Rounding Factor	This field reduces large values If you want to see more than one column in a view. **None** Shows values unchanged and with all decimals. **1** Shows integer values without decimals. **1000** Shows values in units of thousands. **1000000** Shows values in millions.
Show Column Names	Specifies if you want to show the names of individual columns. For example, you can use this field to switch between job account numbers and descriptions.

Field	Description
Show Opposite Sign	Specifies if you want to show negative values as positive and positive values as negative.

Actions

To swap line and column views, choose Related > Actions > Reverse Lines and Columns on the ribbon.

To open the analysis by dimensions matrix, choose the Show Matrix action. There, you can choose Export to Excel to copy the analysis data to a new Excel worksheet.

Job analysis views vs. job analysis by dimensions

Both options create analysis view and analysis view budget entries based on a job analysis view card.

Job analysis uses a view that has fixed lines and columns, created from an account schedule and a column layout. For a more targeted assessment of jobs, you can set filters on up to four additional dimensions.

However, job analysis by dimensions puts even fewer restrictions on how views can be structured. Both the lines and columns can show default dimensions, such as the job account and period, and additional dimensions set up on the analysis view card.

Moreover, you can swap the lines and columns, and you don't need to create a layout for either. The drawback is that you can only see what has been budgeted, posted, or the difference between those numbers. But, as an example, you cannot use this view to compare budget to actuals by including all three values.

Job statistics

The statistics available for jobs and main jobs can provide you with key insights into project progress and performance. They include budgeted and actual figures and the variance between both.

Show statistics

There are two ways you can take a quick look at how well a job is performing.

Statistics

Open a job card. On the ribbon, choose Related > Job > Statistics. You can now see a job's budgeted and actual values.

Budgeted

This tab shows you the budgeted values at the level of the WBS and the budget lines, that is, detailed planning.

Actual

This tab shows you how far the job has progressed.

The fields of both tabs are described in the following table.

Field	Description
Budget (LCY)	Shows the budgeted total cost based on WBS lines in local currency.
Earned Value (LCY)	Shows the result of Budget (LCY) * Job Completion %.
Usage (LCY)	Shows the usage total costs in local currency.
Cost Variance (LCY)	Shows the result of Earned Value (LCY) - Usage (LCY). This tells you by how much a job deviates from budgeted values because of the percentage of completion.
Cost Variance %	Same calculation as for the Cost Variance (LCY) field, the difference being that this field shows the deviation from the budget in percent.
Job Completion %	Shows how much work has been completed compared to the total amount of work required to finish the job. The value in this field is determined by comparing the WBS line values entered by the project manager to the job budget.
Estimated Total Cost (LCY)	Indicates the total cost of the job if work continues as before. This field is determined by comparing the Usage (LCY) and Job Completion % fields.
Posting Progress %	Shows how much of the total budget has been used.
Cost Efficiency	Shows the ratio of earned value to usage. A value below 1 indicates a poor result.
alue below 1 badly indicates a poor result.	

Budget vs. Actual

Compares job usage to budget figures.

Advance

For more on this FastTab, see [Advanced Job Measurement](#) and [Advance Payments](#).

Job cockpit

Both the job list and card contain elements of a job cockpit. In some cases, you need to use the Personalize function to unhide these elements.

Except for the color indicators, the cockpit on the job card shows the same fields as the cockpit on the list.

The list cockpit is split into two areas. The indicators are shown directly on the list in the form of columns. The info panes that describe the job can be found to the right.

Indicators

Two list indicators are available to visualize actual usage and profit in percent.

To turn on these indicators, you need to specify in Jobs Setup when you want one of them to go from green to yellow and from yellow to red. This setup will then be used for all jobs.

The symbols you want to show can be imported as a JPG file to the Documents tab on the Company Information page.

Infopanes

The info panes provide a clear, concise overview of various kinds of project-related information. You can also personalize them to meet your needs. All the panes are available on job cards as well.

Budget/Usage Incl. Commitments

On the first line below the heading, the job budget is given in local currency. Click this value to see the active WBS.

The remaining values are shown in the form of bars so that you can visually compare job budget and usage, that is, actual usage and commitments.

Budget vs. Actual

Displays the same values as the previous pane but shows them as numbers. Except for Stock Commitment and Remaining Budget, which are determined automatically, you can open the source tables of all lines by clicking the relevant figure on the pane.

Job Documents

Broken down by sales, purchase, and job documents, this list shows the number of documents associated with the job. Click a number to view the related documents.

Payment Plan

Indicates when the payment plan says you need to send the next invoice. This plan isn't the same as an advance payment plan, which would show on another pane (advance payments are handled by a separate app). Besides a projected invoice date, the plan includes the total price expected for the job.

Invoice Overview

Provides a visual update on billing. The bar on the left shows—in local currency—the budgeted total price according to the WBS.

The bar in the middle displays the total price invoiced so far and the open job ledger entries. It is the most important bar regarding jobs that are billed based on time and materials. The bar on the right shows what entries remain according to the payment plan. As you can use plans for both fixed-price and time and materials jobs, this bar is relevant in both cases.

Run a Forecast

Overview

The forecast functionality can help you predict the costs needed to complete a job (estimate at completion) and determine the value of work finished thus far (earned value). A job forecast is based on current plans, expenses incurred, and the project manager's assessment.

For tracking purposes, the actual figures used to predict project outcomes must be frozen in time when you create a forecast.

The values can be retrieved from a WBS line or from detailed schedules that include budget lines. The functionality currently only checks if budget lines are available for a WBS line and then uses those to give estimates. If there are none, the values from the WBS line are used.

This condition could conceivably be replaced by one that relies on a checkbox (such as the already available Copy Budget field). Selecting this checkbox on the WBS line could then tell the system to use the values stored on the budget lines.

Setup

Before you can use forecasts, you need to set up a number series for them. 1. Choose the Search icon, enter Jobs Setup, and then choose the related link. 2. On the Numbering tab, fill in the Forecast Nos. field.

Work with forecasts

View forecasts

Choose the Search icon, enter Job Forecast List, and then choose the related link.

This opens an overview of the forecasts you created. Select an entry from this list to view the related forecast card.

Create a new forecast

1. Choose the Search icon, enter Job Forecast List, and then choose the related link.
2. On the ribbon, choose New. This creates an empty card. When you leave the No. field, a number is assigned automatically from the series that you set up for this purpose.
3. Choose a job in the Job No. field. The current WBS version of this job is then copied to the new forecast. You can select another version at any time.

The descriptions stored with the job and the WBS version are also copied to the new forecast. A forecast description can be added manually.

Run a forecast

To run a forecast based on the budget and actual figures of a specific WBS version, choose Actions > Functions > Run Forecast on the new forecast card. The actual values include posted job usage, posted job sales, and commitments.

The system then creates one forecast line for each WBS line, which includes any line that structures the WBS (such as Begin-Total and End-Total). It also adds lines of the Work Package type with their budget and actual values.

Each forecast has five major areas as described in the following table.

Area	Description
Hours	Planned resource hours
PC	Planned personnel (labor) costs based on hours specified
MC	Planned cost of materials
TC	All costs added together (no manual planning)
SR	Planned sales revenue

The PC, MC, and TC fields are described in more detail in the following table.

Field	Description
Estimated Total Prev. Version	Shows the value of a previous forecast, that is, of the forecast specified in the Base Forecast No. field. If no base version is available, this field is filled in with the value stored in the relevant Expected BAC field. For more information about working with base versions, [see Forecast Status](#)
.	
Expected BAC	The value in this field is copied from the WBS (or budget). • If a WBS line is related to at least one budget line, this field is filled in based on budget lines. The type of a budget line determines if a line value is assigned to PC (resources and resource groups) or MC (items and G/L accounts). • If no budget lines are available, the WBS line is used. The billing type chosen for the related work package determines if a value is added to PC or MC. **(Lookup)** Shows the job budget or WBS line of the relevant WBS version.
Actual AC	Shows costs already posted. This field is filled in based on job ledger entries. **(Lookup)** Shows, based on Historical FC Data, the key job ledger entry values that led to this value.

Field	Description
Commitment [multiple fields]	Shows costs not yet posted to the job but recorded in the system. These result from the following areas: **Hours Committed** Shows the number of hours that were posted by resources but haven't been copied to the job. **Purchase Commitment** Shows purchase orders, including partial quantities, not posted as received. **Stock Committed** Shows receipts posted but not used by the job. This commitment only shows up if you selected the Job Purchase Incl. Inventory checkbox in Jobs Setup. Else, usage is posted automatically when you post the receipt, and no commitment is created. **(Lookup)** Shows, based on Historical FC Data, the key job ledger entry values that led to this value.
Confirmed IC	Shows the result of adding up the actual values and commitments.

Field	Description
Forecast ETC	Shows the result of the following formula, which is used as a default after the forecast lines are created: Target - (Actual + Commitments) This makes the remaining budget the default value. Planners can later change this field if it turns out that the remaining budget is too small or too large. Forecast values are entered in these types of fields in the following ways: • Regarding material, planners can manually fill in the remaining amount (cost amount) they expect will be needed for the job. • When it comes to labor costs, the following formula is used to fill in the field: Hours Forecast * Hourly Rate. This means that work is planned in hours. Planners then add the hours needed to finish a job. The hourly rate is copied from the WBS line and cannot be changed. **Warning** in all cases, the remaining effort must be entered without commitments so that planning doesn't include values twice. If you used a base version, the value in this field is copied from the forecast run for that version but can now be updated by the planner.
Estimated Total EAC	Shows the result of adding up actual and forecast values, plus commitments.
Earned Value (Cutoff Date)	Shows the result of the following formula: (Actual + Commitments) / Estimated Total * Expected
Variance	Shows the difference between total and budgeted costs. A negative amount means costs are expected to exceed the budget.

Status options

A forecast can have the following statuses:

- Open
- Released

To change the status of a forecast, open the relevant card and choose Actions > Functions > Release Status or Reopen on the ribbon. However, you cannot reopen a forecast version that has already been used to create another forecast. Only released versions can be the basis for other (newer) versions. A released forecast is entered automatically as the base version when you create a new forecast for the same job.

Base forecasts

If you fill in the Base Forecast No. field on a forecast card before you select the Run Forecast action (the field is filled in automatically with the most recent forecast set to Released), the new prediction will use the values of this base forecast instead of the estimated amounts from the job budget.

> Note

Earned values are still calculated based on the budget. Just because a budget isn't met doesn't mean that the project increases in value.

Added effort

An increase in project effort can happen for multiple reasons. If caused by increased material consumption or extra work, the costs of which the contractor must bear, the earned value of the job decreases, and the variance turns negative. Such a reason for added expenses might be an incorrect calculation, needed rework, or bad pricing.

However, if the additional expenses can be billed to the customer, planning needs to reflect the increase in job value. This requires raising the budget, typically by creating a new WBS version. Based on that, and the higher budget, you can then create a new version of the forecast to adjust the earned value and the variance.

Historical entries

When you select the Run Forecast action, the program will copy all job ledger entries, time entries, item ledger entries, and purchase lines related to the forecast to a list of historical forecast entries, essentially freezing them in time.

You can then use the Lookup in the Historical Entry No. field to identify, for example, changes to item ledger entries because of recent inventory adjustments.

Print a forecast

You can print a forecast at any time.

1. Go to the relevant forecast card.
2. On the ribbon, choose Reports > Print.

For an easier overview, the report will show a reduced number of forecast columns, rearranged into a pattern of rows that are printed below one another. Whereas the hours stored in the first area aren't printed, each of the remaining four areas is aggregated on a separate row. Because of limited space, commitments are combined into one column per area. You can then use the Microsoft SQL Server Reporting Services to export the report to Excel or PDF.

Alternate Currencies

Overview

You can use the invoice currency feature to bill jobs in a foreign currency.

You can already store this currency when you set up a WBS for a job. Revenues are then shown in the invoice currency and in local currency. Sales documents that you create from the WBS, however, will show amounts in the invoice currency only.

As the name implies, invoice currencies are used not only on quotes and orders but on all sales documents created for a job, including invoices.

Note

A currency of this type cannot be changed during the later stages of a project. If you want to bill a job in different currencies, leave the Invoice Currency Code field blank.

To provide sales estimates, a budget rate is used. Although specified on the job card, this rate might differ from one WBS version to another. However, the rate isn't copied when you post a sales document. All Total Price (LCY) fields are instead recalculated based on the exchange rate available at the time.

You can change invoice currencies in the planning stage. You can no longer change currencies after job ledger entries have been posted.

Usage entries contain budgeted sales amounts in both local and invoice currencies. Sales entries, on the other hand, contain actual values only in the currency in which you want to bill the job. These are then converted into local currency when you post the entries.

One area where invoice currencies aren't used is the job budget. All jobs are planned in local currency—even if you intend to purchase goods from abroad. LCY is also the only currency used for cost control, that is, for charts of job accounts and dimension analyses, as amounts stated in another currency might make it extremely difficult to compare costs across jobs.

On job cards

As an example, you create a job from a template and select a customer you want to bill in Canadian dollars. You set the status to Open and pick a starting date.

The Invoice Currency Code field on the Job Billings tab is then filled in automatically based on the Bill-to field, if you selected a customer there, or a currency needs to be chosen manually from the Currency table.

Like on sales documents, you can now choose the Assist button next to the Invoice Currency Code field to modify the exchange rate for the job.

Alternatively, you can fill in the Invoice Currency Date field. This field was introduced because jobs lack the type of fields, such as a Posting Date field, required to calculate exchange rates. If you enter a date in this field, the rate is determined based on what is stored in the Currency Exchange Rate table.

The rate shown on the job card is only a default value. It will later be copied to the WBS versions, where it can be modified if necessary.

Note

You can no longer change the invoice currency on a job card after job ledger entries have been created. Only the exchange rate can still be altered. A change in currency is copied to all WBS versions of a job, and total prices are recalculated as a result.

By contrast, modified rates aren't copied to the WBS versions considering you might want to compute versions at different exchange rates.

For sales prices

You can specify sales prices in several places throughout the app. Typically, these prices are given in local currency and are converted into a different currency if necessary. If you want to bill a job in a foreign currency for which no general prices are available, we recommend that you set up prices specific to a job.

To set up job-specific prices for resources, items, or G/L accounts:

1. Choose the Search icon, enter Jobs, and then choose the related link.
2. Open the relevant job card. On the ribbon, go to Related > Prices and choose Resource, Item, or G/L Account. The invoice currency you specify is then used as the default currency when you set up a new sales price.

For a WBS

Each work breakdown structure contains the following fields on the Billing tab:

- Invoice Currency Code
- Invoice Currency Factor
- Invoice Currency Date

These fields match those shown on the job card considering their values are copied from there. Except for the invoice currency, the values can be changed in each WBS version so that you can calculate jobs at different exchange rates across multiple versions.

Note

Modifications you make to the Invoice Currency Factor field on the WBS header are copied to all related WBS lines. Total prices are then recalculated.

On WBS lines

You reopen the job card set up in our earlier example. On the ribbon, you choose Actions > Create WBS from Job Template.

You then see a message that says the job has an invoice currency and asks if you want to copy the currency from the job card. You choose Yes.

Afterward, you unhide the Invoice Currency Date and Invoice Currency Factor fields on the WBS lines. The contents of these fields are copied from the header. When a unit price is now calculated on a WBS line--that is,

you didn't select the Copy Budget checkbox, as you don't want to use budget lines for detailed planning—the price will be converted in one of two ways:

- A price stored in local currency will be converted into the invoice currency.
- A price specified in the invoice currency, for example, in the Job Resource Price table, will be converted into local currency and entered in the Unit Price (LCY) field.

In our example, the system calculates a unit price (LCY) of EUR 70. This price is then converted into Canadian dollars by using the currency factor found on the WBS line.

After calculation, you use the Assist button next to the Invoice Currency Factor field on the Job Billings tab and enter a factor of 1.5 for the current WBS version.

You are then asked if you want the new factor to apply to all existing WBS lines and their budget lines (or only to new WBS lines). You are also informed that the change has no effect on existing sales documents. You choose Yes.

The factor is now applied to all WBS lines, and the unit price is recalculated in CAD.

On budget lines

You can also enter invoice currencies on budget lines. The use of job-specific unit prices in this context has already been discussed earlier. Based on our previous example, you specify a price of CAD90 for resources of work type CONSULT and set up a budget line for a resource. The pricing functionality then calculates a price of CAD90 and converts this amount into local currency. Although the price was determined based on the currency factor stored on the related WBS line, you can still change the factor on the budget line. The following changes are also made on the budget line:

- The Unit Price (FCY) checkbox is selected. This means that the price calculated for sales is stored in the invoice currency and converted into LCY.
- The Fixed Job Price checkbox is selected, which indicates that a job resource price was used.

On sales documents

As an example, you use the number of the job set up earlier to create a new sales order.

Customer data to fill in the sell-to and bill-to fields is then copied automatically. The invoice currency is also copied from the job. In our case, it's the currency stored for the customer, although that's not always true. Attempts to enter a different currency on the sales header will prompt an error message.

You then open the WBS. On the ribbon, you choose New > Create Sales Document. The status of the job must be set to Open. After the status has been verified for all WBS lines, the Create Sales Document function is run.

> Note

You need to ensure you select the Order document type when you run the function.

The system now checks if all WBS lines and budget lines—including all unit prices—are stored in Canadian dollars on the sales order.

The prices given in invoice currencies aren't converted again when you create a sales document from a WBS. Instead, they are copied as they are to guarantee that manual prices are transferred over as well. The budget rate stored on the WBS is also copied to the document but can be updated there before you post an invoice.

The Unit Price (LCY) fields found on WBS and budget lines are only used to budget a job. These prices will be recalculated at the available exchange rate when you post a sales invoice and will then be copied to the sales job ledger entries.

For job ledger/usage entries and purchase documents

At first look, invoice currencies have little in common with job usage. However, even job usage entries include unit prices for services that need to be invoiced. This helps determine what to:

- Include when measuring job progress.
- Use for billing time & materials jobs not related to a sales order line.

For this reason, the fields described in the following table have been added to the job ledger entries.

Field	Description	Means for Sales Entries	Means for Usage Entries
Unit Price	Shows the unit price in the invoice currency.	All work was billed at this price. The unit price was copied from the Job Resource Price table, the WBS line, or the sales line.	All work will be billed at this price, also known as the budgeted unit price.
Unit Price (LCY)	Shows the unit price in local currency.	All work was billed at this price, now converted into LCY. Conversion occurs based on the exchange rate that was valid at the time of posting the sales entries.	States the budgeted unit price in local currency.
Total Price	Shows the total price in the invoice currency.	Shows the result of Qty. to Invoice * Unit Price.	Shows the result of Qty. to Invoice * Unit Price, which equals the budgeted total price.
Total Price (LCY)	Shows the total price in local currency.	Shows the result of Qty. to Invoice * Unit Price (LCY).	States the budgeted total price in local currency.
Line Discount Amount	Shows the line discount amount in the invoice currency.	Contains the line discount copied from the sales invoice line.	Contains the expected line discount, which equals the budgeted line discount amount.
Line Discount Amount (LCY)	Shows the line discount amount in local currency.	Contains the line discount copied from the sales invoice line in local currency.	States the budgeted line discount amount in local currency.
Line Amount	Shows the discounted line amount in the invoice currency.	Shows the result of Total Price - Line Discount Amount.	Contains the expected line amount, which is equal to the budgeted line amount.
Line Amount (LCY)	Shows the discounted line amount in local currency.	Shows the result of Total Price - Line Discount Amount in local currency.	States the budgeted line amount in LCY.

Field	Description	Means for Sales Entries	Means for Usage Entries
Invoice Currency Code	Shows the invoice currency entered on the job card.	Stores the currency used for unit and total prices.	Stores the currency used to budget unit and total prices.
Invoice Currency Factor	Shows the currency factor, that is, the exchange rate at the time of posting.	States the exchange rate at which unit and total prices are converted from the invoice currency to LCY	Represents the exchange rate for converting unit and total prices from the invoice currency to LCY.

Coming back to our earlier example, you now want to create a purchase invoice for an external resource. You create a purchase order for a vendor that bills in USD and purchase an external service, that is, a service rendered by an external resource.

As the purchase has been linked to a WBS line, the work type is already known to the system. This makes it easier to determine on the purchase line a budgeted unit price in the invoice currency stored for the job. In our case, the price comes to CAD140.

This price is then converted into local currency at the latest exchange rate—1.4962 in our example. The Unit Price (LCY) field now shows USD93.57. The rate entered on the budget line was 1.5, so the amount used to be USD93.33 only.

> Note

You need to ensure that the related WBS line has a valid posting status, that is, the status is set to Open or In Progress when you purchase external services.

Before posting the purchase order, you alter the exchange rate to 1.3 in the Currency Exchange Rate table. You then post the order.

Whether you choose Post or Post and Print, the system creates a job usage entry in both cases. Variations in price between the receipt and the subsequent invoice only affect unit costs but not budgeted sales amounts.

A look at the job ledger entry created shows that usage is billed at the expected unit price of CAD140. At a 1.30 exchange rate, this works out to USD107.69—but that is irrelevant to billing, where the price is kept at CAD140.

In payment plans

Like sales documents, payment plans are created based on the currency specified for a job.

Following on from our earlier example, you set up a payment plan for the entire job. This will copy the code from the Invoice Currency Code field on the job card to this payment plan, where it can no longer be changed.

Note

When you choose a WBS line on the payment plan lines, you need to ensure that the line can be used for invoice revenue. The Warning column must be blank. Lines that show a warning message aren't copied to an invoice suggestion.

On invoice suggestions

If a payment plan is available, an invoice suggestion will include every payment plan line until all are posted as billed in full. Only when you create a final invoice to bill the entire job can you turn invoices based on a payment plan into credit memos.

For a suggestion, choose the Search icon, enter Invoice Suggestion, and then choose the related link. On the ribbon, choose Create Suggestion Lines.

You can set filters to limit the number of suggestions. For example, you can filter for a specific job.

Lines related to payment plans can only be copied to direct invoices.

1. Open the relevant invoice suggestion.
2. Select the Direct Invoice checkbox on the lines you want to bill.
3. On the ribbon, choose Actions > Create Invoice to create a partial invoice.

The invoice currency used for the relevant job is then included in both the suggestion and the direct invoice. The direct invoice also applies the current exchange rate to all amounts.

Earned Value

Overview

Earned Value Management (EVM) integrates project scope, schedule, and cost data to provide project management teams with an advanced method for measuring and evaluating job progress and performance. EVM needs an integrated baseline against which performance can be measured. The principles of the technique can be applied to projects in any industry.

The main tool of earned value management is earned value analysis (EVA). For each work package and control account, it tracks the following dimensions:

- Planned Value (PV)
- Earned Value (EV)
- Actual Cost (AC)

You can use these to identify where a job deviates from the approved baseline. The cost and schedule variances derived from them can also be converted to efficiency indicators to help determine job status and provide a basis for estimating costs and schedule outcome.

Abbreviations

Acronym	Description
PV	Planned value
AC	Actual cost
EV	Earned value
CV	Cost variance
SV	Schedule variance
CPI	Cost performance index
SPI	Schedule performance index
BAC	Budget at completion (expected costs)
EAC	Estimate at completion (estimated costs)
ETC	Estimate to complete (estimated costs to completion)
TCPI	To-complete performance index

Setup

Turn on EVM

You need to set up earned value management before first use. 1. Choose the Search icon, enter EVM Setup, and then choose the related link. 2. Fill in the fields as described in the following table.

Field	Description
Completion Method	Specify the method for measuring job progress. **0:100** Shows 0% until work is complete. **20:80** After work has started, progress is set to 20%. When work is complete, progress will be set to 100%. **50:50** After work has started, progress is set to 50%. When work is complete, progress will be set to 100%. **+25** When employees post their times, they can choose to set progress to 0%, 25%, 50%, 75%, or 100%. **Custom** Employees can freely choose the level of progress when posting their times.
Calculation Base	Specify if you want earned value analysis to use sales or purchase prices to calculate values. The field is set to Purchase Price by default.
Default Calc. Level	Specify at which level earned value analyses are run automatically. **WBS** Only include WBS lines in calculations. **Budget** Only include budget lines in calculations. **Custom** For each WBS line, the system checks the work package to determine whether to calculate at WBS or budget line level.
SPI Warning	Enter a value below which the time status of a job is set to Warning.
SPI Alarm	Enter a value below which the time status of a job is set to Alarm.
CPI Warning	Enter a value below which the cost status of a job is set to Warning.
CPI Alarm	Enter a value below which the cost status of a job is set to Alarm.
CPI Tolerance	CPI values that deviate downward from 1 to a greater extent than the value you enter in this field will later be shown in red on certain pages. Variances in the opposite direction will be shown in green.

Field	Description
SPI Tolerance	SPI values that deviate downward from 1 to a greater extent than the value you enter in this field will later be shown in red on certain pages. Variances in the opposite direction will be shown in green.
TCPI Tolerance	TCPI values that deviate downward from 1 to a greater extent than the value you enter in this field will later be shown in red on certain pages. Variances in the opposite direction will be shown in green.
EAC Tolerance	EAC values that deviate downward from 1 to a greater extent than the value you enter in this field will later be shown in red on certain pages. Variances in the opposite direction will be shown in green.

Use EVM on a job

You also need to set up earned value management for the job that you want to track.

1. Open the relevant job card.
2. On the General tab, fill in the fields as described in the following table.

Field	Description
Use EVM	Turn on this toggle if you want to use earned value management. With the toggle turned off, neither manual nor automatic calculations are possible for this job.
Calculation Level	Specify at which level you want to calculate earned value. If you leave the field blank, the value in this field will be copied from EVM Setup.

Use on work packages

For work packages, use the following fields to configure earned value management.

Field	Description
Ignore in EVA	Specify whether to exclude WBS lines related to this work package from EVA calculations. This might be useful if a package is called Miles Travelled, for example.
Calculation Level	Specify for a WBS line related to this work package if you want to use the WBS line or one of its budget lines for EVA calculation. This field is crucial if you set the default calculation level to Custom. The option you choose in this field is copied to the WBS line but can be changed there.
Auto Progress Calc.	If you select this checkbox, WBS line progress is calculated automatically. The calculation is based on the following formula: Line Activity Progress WBS % = Line Activity Progress % * (quantity planned on all budget lines or quantity planned on WBS line) If this checkbox isn't selected, progress is copied from the Job Completion % field. If that field is blank, the value from the Line Activity Progress % field is used. A check mark in this field is transferred from the work package to the WBS line and can be changed there.

Run earned value analysis

All EVM functionality related to entire jobs can be found on the job card. To see an overview of EVA calculations for a specific job:

1. Open the relevant job card.
2. On the ribbon, choose Actions > Earned Value > Earned Value Analysis.

EVA fields and functions are explained in the following.

Validate an analysis

1. Open the relevant job card. On the ribbon, choose Actions > Earned Value > Earned Value Analysis.

2. Another page opens. On the ribbon, choose Actions > Check Job to determine whether you have filled in the fields described in the following table.

For	Fields
Jobs	• Starting Date • Ending Date • Use EVM • An active WBS
WBS lines	• Starting Date • Ending Date • Work Status (= In Progress, Open, or Finished) • Duration (Days) • Quantity (Base) • Unit Cost (LCY)
Budget lines (if available)	• Starting Date • Ending Date • Work Status (= In Progress or Finished) • Duration (Days) • Quantity • Unit Cost (LCY) • No. • Qty. to Complete

If all fields are filled in, you will see a message that earned value management is now available. Else, you will get an error message that tells you what field has no value.

Analyze jobs

You run EVAs from the Earned Value Mgt. Job page. To perform an analysis, you first need to validate all EVA fields as described earlier. 1. Open the relevant job card. On the ribbon, select Earned Value > Earned Value Analysis. 2. Another page opens. On the ribbon, select Actions > Check Job to validate an EVA. 3. If validation is successful, choose New > Earned Value Analysis. This opens a dialog where you can choose if you want to

run calculations based on WBS or budget lines. Select your preferred method and click OK. The system then recalculates and updates all fields on the page. See the following table for more information about these fields.

Field	Description
Description	Shows the name of the job.
No.	Shows the number of the job.
Starting Date	Shows the start of the job.
Ending Date	Shows the end of the job.
Completion %	Shows job progress in percent. **Calculation** Completion % = Earned Value / Estimate at Completion * 100
Person Responsible	Shows the resource responsible for the job.
Calculation Date	Shows the date on which EVA was calculated.
No. of Calculations	Shows the number of EVA calculations performed.
Calculation Level	Specifies if the calculation was performed based on budget or WBS lines.
Calculation Base	Specifies if earned value analysis uses sales or purchase prices to calculate values.
PV Calculation Date	Shows, up to the calculation date, the total planned job value, made up of all PV Calculation Date fields on the budget or WBS lines.
Actual Cost	Shows the total actual cost from all WBS or budget lines based on job ledger entries. **Calculation** Actual Cost = Usage (Total Cost) or Usage (Total Price) based on setup
Earned Value	Shows the sum of earned values from all WBS or budget lines. **Calculation** Earned Value = Planned Value * Completion %
Schedule Variance	Shows the result of comparing time entries for this job to the baseline. If the value is negative, the job is behind schedule, whereas a positive value means the opposite is true. **Calculation** Schedule Variance = Earned Value - Planned Value

Field	Description
Cost Variance	Shows how the job performs financially compared to the baseline. If the value is negative, the job costs more than planned. If the value is positive, the opposite is true. **Calculation** Cost Variance = Earned Value - Actual Cost
Schedule Performance Index	Shows the relation between the earned and planned value at a specific point in time. An SPI greater than 1 means that more work than planned has been completed. A value smaller than 1 means the opposite. **Calculation** Schedule Performance Index = Earned Value / Planned Value
Cost Performance Index	Shows the ratio of earned value to actual cost incurred as a result. The CPI is the most important EVA metric, as it indicates the cost efficiency of a job. A value below 1 means completed work exceeded cost estimates. If the value is greater than 1, the opposite is true. **Calculation** Cost Performance Index = Earned Value / Actual Cost
Budget at Completion	Shows the total estimated cost at the end of a job, that is, the total budget from all WBS or budget lines. **Calculation** Budget at Completion = Quantity (Base) * Unit Cost (Base)
Estimate at Completion	Shows a forecast of total job cost. **Calculation** Estimate at Completion = Actual Cost + (Planned Value - Earned Value)
Estimate to Complete	Shows what you expect to pay until the job is complete, assuming that the remaining work will be finished at the same rate as before. **Calculation** Estimate to Complete = Estimate at Completion - Actual Cost

Field	Description
To-Complete Performance Index	Shows the projected cost performance you need to achieve to remain on budget and within the scope set by project management. There are two options for calculating the index. If total costs are in line with the costs that you expect to remain, the calculation is as follows: **Calculation** To-Complete Performance Index = (Budget at Completion - Earned Value) / (Budget at Completion - Actual Cost) If the costs to completion are greater than the estimated total costs, the index is calculated based on the following formula: **Calculation** To-Complete Performance Index = (Budget at Completion - Earned Value) / (Estimate at Completion - Actual Cost)
Earned Schedule	Provides an alternative calculation method for job progress. This method includes not just monetary values but times as well. The value itself has no significance but is the basis for alternative calculations of schedule variances and the schedule performance index. **Calculation** (Calculation Date - Job Starting Date) + (Earned Value - Planned Value) / (Planned Value +1 - Planned Value)
Schedule Variance (ES Base)	See the Schedule Variance field. **Calculation** Earned Schedule - (Calculation Date - Job Starting Date)
Schedule Performance Index (ES Base)	See the Schedule Performance Index field. **Calculation** Earned Schedule / (Calculation Date - Job Starting Date)

Key figures are shown in the Cost Control section of the Project Lead home page. To see a list of all EVA calculations for a job, go to the ribbon and choose Actions > Earned Value > Earned Value History.

You can then use the Show WBS Lines or Show Budget Lines action on the ribbon to see all lines included in a calculation.

Analyze WBS lines

You can analyze individual WBS lines as well.

1. Open the relevant job card. On the ribbon, choose Job > WBS.
2. In the WBS Lines section, choose the line you want to analyze.
3. On the ribbon, select Line > History > Earned Value Analysis.

The page that opens looks almost exactly like the one for jobs. The actions available on the ribbon are Check WBS Line and Earned Value Analysis.

The first checks whether the WBS line meets the requirements described earlier. The second action starts the analysis. Negative variances of more than 10% are shown in red. Positive variances of more than 10% are shown in green.

For a list of all line-related EVAs, choose Line > History > Earned Value History.

Analyze budget lines

You can also analyze individual budget lines.

1. Open the job card. On the ribbon, choose Job > WBS Incl. Budget View.
2. In the Job Budget section, choose the line you want to analyze.
3. On the ribbon, select Line > History > Earned Value Analysis.

The page that opens looks almost exactly like the pages for analyzing jobs and WBS lines. The actions available to you are Check Budget Line and Earned Value Analysis. The first checks whether the budget line meets the requirements described earlier. The second starts the analysis. Negative variances of more than 10% are shown in red. Positive variances of more than 10% are shown in green.

For a list of all line-related EVAs, choose Line > History > Earned Value History.

Calculate values automatically

If you don't want to calculate EVAs manually for each job, you can create a report that can be added to the job queue and will analyze jobs for which Use EVM was turned on.

Evaluate overall performance

You can also use EVM to evaluate entire companies or job types.

1. Choose the Search icon, enter Jobs, and then choose the related link.
2. On the ribbon, select Reports > EVA Company Overview. This opens a report where you can set filters on job types and dates. If you don't set filters, the report will include all jobs to which EVM currently applies.

The No. of Jobs line on the report itself indicates the number of jobs included in the calculation, and the Calculate From field shows the date filter if a filter was set. The job type filter, if available, is displayed above the No. of Jobs field. The values represent the average of all EVA calculations.

Evaluate jobs

The following options are available for evaluating jobs. 1. Open a job card. On the ribbon, choose Actions > Earned Value > Earned Value History to see all calculations for the job. You can now also see differences in

analyses over time. 2. Alternatively, go to the Earned Value Mgt. Job page that relates to the job. On the ribbon, choose Report > Job History to see detailed EVA information. The upper part of the report shows all current data from an earned value analysis. The lower part contains a visual representation of key metrics.

Archive analyses

You can archive the EVA results of completed jobs so that they are no longer included in the company overview, for example.

1. Open the Earned Value Mgt. Job page from the job for which you want to archive analyses.
2. On the ribbon, choose Actions > Archive Job. This opens a dialog that asks you if you want to archive the results.
3. Choose Yes. You will then see a message that the job has been archived successfully.

To see the results of EVAs run for a job, open the job card, and choose Actions > Earned Value > Earned Value Archive on the ribbon.

Support Contracts

Overview

Support contracts are used to bill customers for products and services periodically. The built-in license feature helps you assign a customer to a license before you add that license to a contract and use a support job to record revenues and expenses and send invoices.

For each contract, the effort spent on updates and help desk inquiries is calculated, reported, and invoiced separately.

Setup

Support contract setup

Before you can work with support contracts, you need to set up the functionality.

1. Choose the Search icon, enter Support Contract Setup, and then choose the related link.
2. Fill in the fields as described in the following table.

General

Field	Description
Use Support Contracts	Turn on this toggle if you want to use the functionality. With the toggle turned off, support contracts aren't visible in the system.

Numbering

Field	Description
Support Contract Nos.	Specify the series that you want to use to assign numbers to contracts.

Contract Details

Field	Description
No Starting Date Restriction	Turn on this toggle if you want to set a date other than the first of a month.
Multi-Year Contract Term	Turn on this toggle if you want support contracts to run for more than a year. If the toggle is turned off, you must create a new contract version at the end of each year.
WP Item Sales Filter	To see changes to update-related job ledger entries, that is, to the calculation base for contracts of the update type, choose the work package you want to use to invoice items associated with the update process. These revenues will then be the basis for identifying update-related entries.
WP Services Filter	To see changes to update-related job ledger entries, that is, to the calculation base for contracts of the update type, choose the work package you want to use to invoice services associated with the update process. These revenues will then be the basis for identifying update-related entries.
Base Update Fees %	Shows the default update costs. This field can be changed on the support contract.
Contract Hours per Quarter	Shows the default value for new contracts. The value will change if you enter a support package in the contract. This field is used for informational purposes only.

Support Contract Matrix

Choose the Search icon, enter Support Contract Matrix, and then choose the related link.

This opens a page where you can specify the item, resource, or G/L account that you want to use to bill a specific support component.

Support packages

Choose the Search icon, enter Support Packages, and then choose the related link. This opens a page where you can set up the support packages you want to offer to customers.

> Note

The Hours per Quarter field on this page is used for informational purposes only.

Other services

Other services might be, for example, additional hours of support.

To specify these kinds of services, choose the Search icon, enter Other Services, and then choose the related link.

License types

You need this feature if a product is sold with more than one type of license.

1. Choose the search icon, enter License Types, and then choose the related link.
2. Fill in the fields as necessary.

Select the Default checkbox if you want to specify a standard license that is filled in automatically on new support contract lines. The other fields are used for informational purposes only and indicate how much information is available for a license type in the system, including information on related product types, products, versions, and service packs.

Product types

Each license type can be linked to multiple product types. To set up a product type, choose Related > Product Types on the ribbon.

Example
You set up a license type called Industry Solution. You then use product types such as Project, Trade, and Factory to cover a variety of industries. The main aim of the product type feature is to identify the purpose of a customer license. The Use field on each line specifies if you can use a type more than once within in a license —or if it determines the version of the license itself.

Note

In a Microsoft Dynamics 365 Business Central environment, the license version is, of course, determined by the app.

In the Contract Type field, you can then choose if you want to link the product type to your company's (own) products, to products from third-party vendors, or to the base application.

Note

In a Microsoft Dynamics 365 Business Central environment, the base application is, of course, the standard Microsoft Dynamics 365 Business Central app.

Products

To assign a product to a product type, choose Related > Products on the Product Types page.

Example
You specify an Apps product type. You then store two solutions—named Sanctions Check and Shipping & Handling—for this type. The Update Fees % field on the Products page can be used to enter the yearly update fees as a percentage of the total license value.

Versions

To specify what versions are available for a product, choose Related > Versions on the Products page.

Service packs

To link service packs to individual product versions, choose Related > Service Packs on the Versions page.

This is the lowest level of the support contract structure.

Customer licenses

To see a list of all customer licenses, choose the Search icon, enter Customer Licenses, and then choose the related link.

The fields shown on a customer license card are described in the following table.

Field	Description
License No.	Shows the number of the license. You can enter a number manually.
Customer No.	Specifies a customer for the license. A license is assumed to be the customer's main license if no other has been assigned.
Customer Name	Uses the Customer No. field to show the name of the customer.
Licensee	Uses the Customer No. field to show the licensee.
Licensee 2	Uses the Customer No. field to show the licensee's additional name.
License Date	Specifies when the license was activated.
Expiration Date	Specifies when the license expires.
Main License	Module versions are later copied to support contracts based on this field. The toggle turns on automatically when you enter a license specified as a default license. However, this requires that no other default license has been entered for this customer beforehand.
Main Customer No.	This field is filled in together with the Main License field. The main customer can be changed manually (for example, to indicate a group of companies).
Main Customer Name	Uses the Main Customer No. field to show the name of the main customer.
License Type	Specifies the type of license.
Internal Description	If necessary, you can fill in this field with a description used in-house for the license.

Configuration

For each license, you can specify an application base and additional modules.

1. Open a customer license card.
2. On the ribbon, choose Related > Configuration.
3. Select the modules you want from the product types and codes.

The Technical Build and Application Build checkboxes can be selected if you chose the Version option in the Use field on the related product type card.

Modules

You can also link individual modules to item sales instead of a license configuration.

1. Open a customer license card.
2. On the ribbon, choose Related > Modules.

The No. of Update-Related Entries and Total Update-Related Entries fields show how many items of this type were sold during a certain period. More sales typically mean an increase in the total quantity relevant to licensing.

Example

One item is sold per user. In the beginning, a certain customer purchases 20 items for 20 users. In the following year, the same customer buys the item for another 5 users, leading to an entry in sales. By running a function that will be described later, this entry is then copied to the New Update-Related Entry table.

The entry, in turn, indicates recent sales, and these sales increase module quantity.

Jobs

License jobs are used to specify the relationship between a license and various jobs. For example, you might want to use one and the same job to bill help desk inquiries and updates, another to invoice customizations, and a third to sell items that result in update-related entries.

To set all these up, open a customer license card and choose Related > Jobs on the ribbon.

Related support contracts

To see active contracts or contract lines, open a customer license card and choose Support Contracts or Support Contract Lines on the ribbon.

Create a contract

You set up a support contract per customer and license. Contracts can have multiple versions. To bill a contract, one of these needs to be active. Other versions might be in preparation. Completed versions are best archived.

Support contracts might last for a year—or longer if you turned on the relevant toggle in Support Contract Setup. Setting the contract term to less than a year is possible in any case.

Typically, support starts at the first of a month. You can move this date if you turn on the No Starting Date Restriction toggle in setup.

Note

Whether a contract starts on the first or in the middle of a month, it must always run for a full month because that is the basis for both calculation and billing (regardless of what invoice period you agreed on).

Examples

Valid:
01/01/2022 – 12/31/2022 (12 months)
01/15/2022 – 07/14/2023 (18 months)
Not valid:
01/01/2022 – 07/20/2023 (18 months + 6 days)

To create a new support contract 1. Choose the Search icon, enter Support Contracts, and then choose the related link. 2. On the ribbon, choose the New action. 3. Fill in the fields as described in the following table.

General

Field	Description
No.	Shows the number of the contract. This field is filled in automatically with a number from the series that you set up for this purpose.
Version	This field is incremented automatically with every new version that you create by using the New Version function.
Active	Indicates if the contract version is active. Only one version of a contract can be active and used for billing at any given time.
Customer No.	Specify the customer assigned to the license. This customer will then be billed later.
Customer Name	Uses the Customer No. field to show the name of the customer.
Customer City	Uses the Customer No. field to show the customer's location.
Install Location	Uses the Customer No. field to show the installation site.
Install Location Name	Uses the Customer No. field to show the name of the installation site.
External Document No.	Fill in this field if you want to copy a document number to the External Document No. field on invoices created from the contract. The number serves as a unique identifier for the customer and will remain the same on all invoices.
License No.	Enter the number of a license. Only licenses set up for the customer can be entered in this field.
Contract Date	Enter the contract date.
Starting Date / Ending Date	Specify the time during which the contract will be billed. The dates must mark the beginning and end of a month.
Invoice Period	Specify the frequency at which you want to bill the customer. This might be once every year, half year, quarter, or month.
Hours per Quarter	This field is filled in automatically with the value from Support Contract Setup. The value will change if you enter a support package.
Payment Terms Code	This field shows the payment terms code stored in the Customer table but can be changed manually. The code in this field is used instead of the code from the Customer table when you create an invoice from the contract.
New Items (Total Price)	Shows the total price of new update-related entries and indicates if a contract must be adjusted because more items were billed for the job.
Calculation Date	Shows the date on which the Calculate Contract action was last used.

Field	Description
Next Invoice Starting Date Next Invoice Ending Date	These fields are important if customers aren't billed annually so that you can see the number of months covered by the next invoice.
Exclude from Invoice Batch	With the toggle turned on, the contract can be excluded from periodic billing (batch runs). You then need to run the Calculate Contract action manually to bill the amount.
Update Fees per Month Help Desk per Month	Show the field totals from the support contract lines after the Calculate Contract action has been run. The values in these fields are used to calculate invoice totals based on the number of months between the dates specified in the Next Invoice Starting and Ending Date fields.
Update Fees per Year Help Desk per Year	Show the field totals from the support contract lines after the Calculate Contract action has been run. These fields might display a prorated yearly amount, that is, if the contract term is under a year, they will show a value proportional to the term.
Update Fees per Term Help Desk per Term	Show the field totals from the support contract lines after the Calculate Contract action has been run. These fields indicate the total amount owed over the full contract term.
Update Fees on Invoice Help Desk on Invoice	Show the result of multiplying the monthly amount with the number of months covered by the invoice period. These fields are filled in when you run the Calculate Contract function. The calculation of the amounts is based on the invoice period. However, the actual invoice amount of individual contract lines depends on the invoice starting and ending dates, that is, if a line has been or will still need to be invoiced.
Support Job	Shows the first job specified for the license.

Contract lines

The lines state the purpose of the contract. As they cannot be created automatically, you need to fill them in as described in the following table.

Field	Description
Type Product Code	Choose the services or products that are part of the contract. These fields also define what counts as an update and what is billed as a help desk service.
Update Fees %	Shows the yearly update fees in percent. This field is copied from the product but can be changed here.
Starting Date Ending Date	These fields are filled in with the dates from the contract header but can still be changed if, for example, additional services were purchased later. Like on the header, the dates must mark the beginning and end of a month.
License No.	The value in this field is copied from the header but can still be changed, for example, if a product is now part of another customer license.
Relevant Base	Shows a product's total price, which determines the update fees. No price calculations are performed in this field. The price is determined with the help of sales entries or contract documents.
Update Fees per Year	Uses the Relevant Base and Update Fees % fields to calculate the yearly update fees.
Help Desk per Year	Shows the annual help desk amount for support packages. The value in this field is copied from the support package.
Update Fees per Month	Shows the monthly amount for updates, that is, the Update Fees per Year divided by 12. The value in this field is used if a contract lasts for less than a year. The values of all Update Fees per Month fields on the lines are also added up on the header to show the total update-related amount per month. **Note** When you bill the amount, the value in this field will be multiplied by the number of relevant months (see Months to Bill).
Help Desk per Month	Shows the monthly amount for help desk services, that is, the Help Desk per Year divided by 12. The value in this field is used if a contract lasts for less than a year. The values of all Help Desk per Month fields on the lines are also added up on the header to show the total help desk amount per month. **Note** When you bill the amount, the value in this field will be multiplied by the number of relevant months (see Months to Bill).

Field	Description
Months	Shows how many months there are between the Starting Date and the Ending Date fields stored on this contract line.
Update Fees per Term	Shows the update fees billed over the duration of the contract.
Help Desk per Term	Shows the help desk amount billed over the duration of the contract.

Months to bill

As explained earlier, you can set up support contracts with varying durations but only based on a multiple of full months. If a contract runs for fewer than 12 months or for more than a year, the total support amount will be divided by 12 and multiplied by the actual number of months. The starting and ending dates entered on the contract lines are then used to invoice the customer.

Billing might get complicated if amounts aren't billed once a year but every half year, three months, or one month—and even more so if the lines include different contract terms.

Example

Support contract lines	Update Fees License A	Update Fees License B	He
Start – End	05/01 – 12/31	09/01 – 12/31	09/0
No. of months	8	4	
Per year	1200.00	600.00	
Per month	100.00	50.00	
Per contract term	800.00	200.00	

Support contract header	Update Fees	Help
Per month	150.00	
Per contract term	1000.00	

Support contract header	Update Fees	Help
On Invoice Year	1000.00	
On Invoice Quarter	450.00 (3 * 150)	6
On Invoice Half Year	900.00 (6 * 150)	12
On Invoice Month	150.00	

The amounts per invoice period show the maximum total value if all amounts were due in the same period. What you can invoice depends on the billing period and the invoice period specified on a line.

Amounts that are due on the next invoice are shown in the Update Fees on Invoice, Help Desk on Invoice, and Invoice Total fields on a support contract header.

Billing	Update Fees	Help D
On invoice **Year**	1 * **1000.00**	
On invoice **Quarter** 　　　　　01/01 　　　　　04/01 　　　　　07/01 　　　　　10/01	0.00 **200.00** (2 * 100) **350.00** (3 * 100 + 1 * 50) **450.00** (3 * 100 + 3 * 50)	 2(6(
On invoice **Half Year** 　　　　　01/01 　　　　　07/01	**200** (100 * 2) **800** (100 * 6 + 50 * 4)	
On invoice **Month** 　　From 05/01 　　From 09/01	100.00 150.00	

Services rendered

You can print a note about the services rendered together with a signature block. To enter texts for later printouts, open a support contract and choose Related > Contract > Contract Text on the ribbon.

Invoice

To invoice services for the period between the Next Invoice Starting and Ending Date fields, choose the Create Invoice action on the ribbon. Running this function creates an unposted sales invoice, which you can open immediately.

Although contract headers already include invoice-related update fees and help desk amounts, the entries relevant to billing are found on the support contract lines. Their starting and ending dates determine if a line is invoiced within a certain period.

Partial invoices might be due as well. For example, the quarterly invoice period might run from 04/01 to 06/30, but a specific contract line might only be valid starting on 05/01. This line would then be billed based on a prorated two-month amount.

Information about unposted and posted invoices and credit notes remains available even after the lines have been billed. To view that information, go to the Invoices tab and select one of the figures highlighted in blue.

Invoice batch

You can also create invoices for multiple contracts at once.

1. Choose the Search icon, enter Support Contracts, and then choose the related link.
2. On the ribbon, choose Actions > Invoice > Create Invoice Batch.
3. Set filters, for example, to include only certain customers for billing.

This action considers active support contracts for which the Excl. from Invoice Batch checkbox wasn't selected. It can be opened on the list of support contracts but isn't available on individual contract cards.

Unposted invoices

When you open an unposted invoice for a support contract, you can see the number of the relevant contract and the invoice period on the Support Contract tab.

This information can also be found on the invoice lines.

Posted invoices

When you post an invoice, information about the invoice is copied to the Invoice tab of the relevant support contract. On this tab, you can select a number highlighted in blue to view a posted document. The Last Invoice Starting and Ending Date fields—and the Posted Invoices field—on the tab are updated each time you post an invoice, as are the Next Invoice Starting and Ending Date fields.

Credit memos

Credit memos cannot be created from a support contract. Instead, choose the Copy Document action when you create a credit memo for a contract-related invoice. The support contract fields on the credit memo are then filled in like on a posted invoice.

The invoice period is reset when you post the memo.

Versions and archive

You can archive contract versions that have been fully billed after a year. To continue using the underlying contract, you need to create another version. Contracts can have multiple versions, although only one of them can be active. Other versions are either being set up or have already been invoiced (and archived).

To create a new contract version

1. Choose the Search icon, enter Support Contracts, and then choose the related link.
2. Open the relevant service contract.
3. On the ribbon, choose Actions > Contract > New Version.

   Note

You must edit the date fields for the new version. If you want to create a follow-on to an existing version, move the starting and ending dates one year into the future.

Active version

Only one version of a support contract can be active. To activate a new version, you must either turn off or archive the current version when it is completed, that is, when it has been invoiced in full.

Track Progress

General

The content of the following sections is formed by the modules Projects and Project Evaluation. The following section serves as an overview of the contents of the modules.

Setup master data projects

This section explains which master data must be made for project valuation in general so that projects can be valued automatically. In addition, the use of cost prices for resources is discussed.

The following master data must be set up in order to use project evaluation:

- Set up valuation books
- Fibu integration codes
- Evaluation templates
- Pricing for resources

In all parts, the relationship between the Resources, Projects and Financial Accounting modules in Microsoft Dynamics Business Central™ is addressed.

Set up valuation books

At least one assessment book must be set up in order to use the advanced project assessment.

Separate valuation ledgers must be created for each of the different valuation methods (e.g. HGB, IFRS).

The following parameters must be set for the books:

Field	Description
Code	A unique code must be assigned here.
Description	Here you can store a description.
Fibu integration	Place a check mark here if you want valuations according to this book to be transferred to financial accounting.
Project booking group	In the case of a valuation for project items, a corresponding posting group must be specified here.
Valuation Template	If an evaluation template (calculation scheme) is to be used, a check mark must be set here.
Rating to	Here you specify how the evaluation is to be performed. **Options are:** - Project items: the posted project items are used for valuation purposes - Cumulative quantity: a cumulative quantity is determined that can be used for further calculation in the valuation template. - Valuation template: the calculation is performed using a freely definable calculation scheme
Activation method	You use this setting to define which prices are used in the valuation. Options are: • None • Initial prices: • UK prices • HGB rates
Activation of	For the valuation for project items, you can define which items are to be used. Options are: • Both • Consumption • Sale
Deactivation method	The time of deactivation is set here. Options are: • Percentage of manufacturing • On completion
Log calculation	Activates the logging of the calculation for project activation for a later traceability of the valuation amounts.If the logging is active, the log can be called up via AssistEdit button in the unposted and posted project valuation lines. The entire calculation path is listed in detail

The valuation books can be assigned to the project templates. If projects are created via the project templates, the assessment books are automatically assigned to these new projects. If projects are created without a

template, the assessment books must be assigned to the projects manually (in the project map or overview via Belonging > Project > Project assessment > Assessment books). If the "Valuation to project items" option is selected, the standard project valuation will be applied, no project valuation templates will be created. For this case, the accounts must be defined through the project posting groups.

setup project booking groups

Calling up "Project booking group Project365" takes you to the overview of project booking groups. In the project booking groups, accounts are stored to which the various project costs are booked.

The individual fields are explained in more detail below:

Field	Description
Code	Unique identifier of the project booking group
Description	Description of the project booking group
Cost n. abgs. Arb.	Consumption: Post debit entries of cost prices in batch processing project activation or post credit entry in batch processing project deactivation. With the activation the account project costs Regul. Account from the posting matrix represents the contra account. When deactivating, the project costs account from the project posting group is the contra account.
Sales after deductions Arb.	Sales: Post credit entries of sales prices in case of batch processing activation or post debit entries in case of batch processing deactivation. With the activation the account project turnover Regul. Account from the posting matrix represents the contra account. In the case of deactivation, the project revenue account from the project posting group represents the contra account.
Cost type	Consumption: Post debit entries of the cost prices on this P&L account with batch processing Deactivation.
Project revenue account	Sales: Post credit entries of sales prices to this P&L account with batch processing deactivation.
Sales account and. Project cost	Used only for postings to G/L accounts for projects. A credit amount is posted to this account when the project consumption is retrieved in the sales lines.
Profit Share Account	Account used to proportionally allocate profit according to the Percentage Of Completion (POC) method as defined by IAS. The account is only required in the case of a progress review.
Profit share account	Offsetting account for the profit share account. The account is only required in the case of a progress review.

Note

The accounts for posting in Financial Accounting are not drawn from the project posting group during project valuation according to valuation templates. The accounts from the accounting integration codes are used.

Fibuintegration codes set up

Fibuintegration codes are assigned in the valuation templates for the lines whose amount is to be posted to financial accounting.

The debit and credit accounts for activation and deactivation are defined in the Fibuintegration codes.

For the different valuation methods (HGB, IFRS), separate Fibuintegration codes must be set up for each posting record. The codes must be assigned to the respective lines in the valuation template (see section "Set up valuation templates").

Field	Description
Code	A unique code must be assigned here.
Description	Here you can store a description.
Integration type	The integration type can be used to access already posted project valuation items in the project valuation template. Example: In the valuation according to HGB, for example, the balance sheet statement posted in the previous year must be calculated. Options are: • blank • Balance sheet disclosure • Balance sheet material • Balance sheet disclosure Power • Prepayments(Assets) • Prepayments(liabilities) • Demand POC • Future Ford. POC(Active) • Future Ford. POC(Passive) • IFRS Deposit
Debit account act.	The debit amount of the relevant project valuation item is posted to this account when the capitalization is posted.
Credit account Act.	The credit amount of the relevant project valuation item is posted to this account when the capitalization is posted.
Debit account Deact.	The debit amount of the relevant project valuation item is posted to this account when the deactivation is posted.
Credit account Deact.	The credit amount of the relevant project valuation item is posted to this account when the deactivation is posted.

Set up rating templates

In each case, a valuation template must be set up for the determining valuation, e.g. valuation books according to IFRS and HGB.

The fields in the evaluation template are to be filled as follows:

Field	Description
Heading no.	Specify a unique code e.g. R10. This code can be used to access other lines in formula and if-lines (field summation or fields for arguments).
Description	Specify a description for the rating line.
Cost line	A check mark must be placed in this field if project items or residual costs are accessed in the origin table and these should only contain cost amounts.
System calculation	A check mark must be placed in this field if the row is to be calculated by Navision using item tables.
Origin table	Here you can define on the basis of which data the amount of this line should be calculated. **The following options are available:** • Non-cash items • Project item • Project account • Valuation Template • Order amount • Valuation item • Residual costs • Status • Down payments • Down payment invoices **Note** Please note that the options "Down payments" and "Down payment invoices" are only available in connection with the app Advance Payment. The field Total can then be used to further filter the data.Further filtering of the data can then be performed via the Totalization field.
Use cost prices	If a check mark is set here, cost prices are generally used, even if a valuation at HGB rates is set in the valuation book.

Field	Description
Down payment amount type	**Select one of these options for the Down Payments and Down Payment Invoices origin tables:** • Gross amount • Net amount For all other origin tables, the field remains empty. Counting type **Options for this field are:** • Account (for non-cash items, project items, project account items) • Formula • When
Counting up	**Fill the field as follows:** **- Origin table project items and project account items:** project account numbers **- Valuation item origin table:** Fibuintegration Code **- Origin Table Evaluation Template:** Heading Number **- Origin table for G/L items:** G/L account numbers **- Formula summation type:** Heading numbers and arithmetic operators For all other options, the field remains empty.
Argument 1 / Condition / Argument 2 / Argument 3 / Argument 4	These fields must be filled if the summation type, If is used. **The fields must be filled according to the following logic:** If argument 1 condition argument 2, then argument 3 otherwise argument 4 **Important:** The arguments may only contain rubric numbers and arithmetic operators or numbers. **Options for condition:** blank < > = <= >= For all other summation types, the fields remain empty.

Field	Description
Calculation date filter	In the case of system postings (calculation of item tables), a corresponding date filter may have to be specified. Then one of the following options must be selected. Otherwise the field remains empty. • blank • Previous year • Year to date • act. Period • Balance until date
View	Rows that contain a check mark here will be output in the Raw Result Specification report.
Fibu integration	A financial integration code must be entered here if a project valuation item is to be generated for this line. This will be entered in the accounts stored in the financial integration when it is posted in the financial accounting.
Print description	This description is printed as a heading when the valuation line is printed in the Raw result specification report. If the field is empty, the normal description is printed.

Pricing for resources

On the resource card, in addition to the cost price, the purchase price can also be calculated. The calculation is performed as follows:

- Personnel cost rate + Personnel cost % + Personnel overhead = EC price
- Cost price + Indirect costs % = Cost price

Both EK price and cost price can be used in project evaluation. The personnel overhead costs can also be updated per function for several resources at once. The purchase price and the cost price are recalculated. The function "Change personnel overhead costs" is used for this.

Filters can be set in the Resource info tab if only certain resources are affected by the update.

The options must specify the new applicable personnel overhead costs.

Posting process project evaluation with evaluation templates

The posting procedure for project evaluation is explained in brief in this section using an example. The following points are covered:

- Create project assessment templates
- View project progress
- Review and post project assessment templates
- Booked Project Assessment Templates
- Book activation
- Close projects
- Propose project evaluation for deactivation
- Book deactivation

Create project assessment templates

Project assessment templates are created using the "Create project assessment templates" function. Limit the projects to be evaluated in the "Project evaluation book" info tab. Please note that the project rating must first be determined according to the cumulative quantity (setting in the rating book). This is mandatory, because only here the cumulative quantity is determined. In the case of a further valuation according to valuation template, this can then also be accessed.

In the "Options" tab, you must then select the "Valuation month" (e.g. 01.01.21 for January 2021). If you check the "Post" box, the project valuation templates will be created and posted directly (as project valuation items - not in financial accounting). If you want to check the project valuation template before posting, do not set a check mark here.

If a check mark is set in the "Data transfer" field, the project valuation templates are marked as posted to financial accounting. This means that the values determined / posted here will no longer be transferred to financial accounting. This is particularly relevant if a project valuation template is created for projects that records the status when the data is transferred. The values in Financial Accounting are usually posted here with the other account balances. If the project valuation templates were then posted to Financial Accounting again, these values would exist twice.

View project progress

By creating the project assessment template by cumulative quantity, the project cumulative quantity has been created for the corresponding month. You can view it in the project map via "Belonging" > "Project" > "Project Rating" > "Progress".

The individual fields are determined as follows:

Field	Description
Plan profit amount	Corresponds to the plan HKD. In Navision, this is the planned sales amount - planned cost amount (= DB).
Cost amount	Actual cost accumulated at the end of the period
Progress %	Actual cost amount / planned cost amount * 100
Plan HKD %	Planned profit amount / planned sales amount
Profit share	Capitalization amount - Cost amount
Capitalization amount	Cost amount / (1-Plan HKD %)

Review and post project assessment templates

If the project assessment templates have been created (and not posted), they can be viewed before posting. This can be done per project or via the list of unposted project evaluation templates. To do this, either open "Belonging" > "Project" > "Project evaluation" > "Evaluation templates" via the project card or open the "Project evaluation template overview".

You can view the determined values in the project valuation template. One project evaluation template is created for each evaluation book. If necessary, you can also delete the unbooked project valuation template and then create it again.

The project valuation template can be posted via the "Post" button. Posting creates project valuation items that serve as the basis for posting the valuation to financial accounting.

Alternatively, the created and unposted project evaluation templates can also be posted in the batch ("Post project evaluation templates" function).

Here you can still set a filter before booking, so that only certain project evaluation templates are taken into account when booking.

posted project evaluation templates

You can view booked project evaluation templates in the project map via "Belonging" > "Project" > "Project evaluation" > "Booked evaluation templates" or alternatively via the "Booked project evaluation template overview".

Via "Associated" > "Geb. Projektbewerungsvorlage" > "Bewertungsposten" you can view the created project valuation items for this valuation. In the field "Fibu Integration" you can see which postings are generated with the step "Post Activation" in the financial accounting. The "Valuation Amount" field shows the amount to be posted as calculated by the project valuation template. The field "Valuation amount calculated" will be filled as soon as you have carried out the step "Post activation".

Book activation

For posting to financial accounting, the function "Project valuation act. Post" function must be called up.

In the "Project" info tab you can set filters on the projects to be considered. In the "Project Valuation Items" info tab, you can set filters for the valuation book and the date period to be considered.

If you would like to post the valuation separately according to IFRS and HGB in the financial accounting, set an appropriate filter in the "Valuation book code" field. In the field "Posting date" a filter should be set until the end of the month, e.g. .31.01.21.

In the "Options" tab, you can choose whether to post per project valuation item or per project. For the per project option, any figures will flow cumulatively into financial accounting. Then enter a posting date, a document number and a posting description. In the posting description, %1 is replaced with the posting type (activation or deactivation) and %2 with the project posting group (e.g. IFRS or HGB).

With the "Post" field you determine whether the posting should be made with the print / preview, without a check mark only the report will be printed / displayed.

Then click Preview to check the posting to Financial Accounting.

> Note

If the "Post" field is checked, the page view is not a preview either. In this case, the page view is used to trigger postings in Financial Accounting.

You can then view the posted values in Financial Accounting on the corresponding accounts of the Financial Accounting Integration (for accounts and posting records, see section ["Set up valuation templates"](#)).

To do this, go to the last journal you posted to via the Fibujournals and open the G/L items.

If you have set a filter for the valuation book in the Project Valuation Items info tab, you must call up the "Post Project Valuation Act." function a second time for each of the other valuation books.

Close projects

In order for projects to be deactivated again in Financial Accounting, the status of the project must be set to Closed. Alternatively, a check mark can be set for the project in the "Closed" field.

> Note

You can no longer post to completed projects, but you can post to final invoiced projects. However, only "residual postings" (e.g. for warranty or rework) should be made to these projects, as these projects are no longer included in the project valuation. Thus, once a project has the status Completed or has been set to Final Billed, it will no longer be considered when creating the project evaluation templates for project activation.

Propose project evaluation for deactivation

Completed or finally invoiced projects must be proposed for deactivation via the "Project valuation ledger sheet" and subsequently posted.The "Project deactivation proposal" function is used for this purpose.

In the "Project" info tab you can set filters on the projects to be considered. In the "Project valuation book" info tab, you can set a filter on the valuation book if you want to make the deactivation proposal separately for IFRS and HGB, for example. In the "Project valuation items" info tab, you can set filters if you want to suggest only certain activated project valuation items for deactivation. In the "Options" tab, you specify the posting date, the

document no. and the posting description for deactivation. %1 in the description is replaced by the posting date. This function proposes all project valuation items included in the capitalization for deactivation.

No postings are made in financial accounting when the book.sheet is posted, only project valuation items for deactivation are generated. You can view the project valuation items in the project map via the posted project valuation templates or via the valuation books.

Book deactivation

You must then transfer the project valuation items generated for the deactivation to Financial Accounting. Call up the "Post deact. project valuation" function. In the "Project" info tab you can set filters on the projects to be considered. In the "Project valuation book" info tab, you can set a filter on the valuation book if you want to make the deactivation proposal separately for IFRS and HGB. In the Project Valuation Items tab, you can set filters if you want to suggest only certain activated project valuation items for deactivation. In the "Options" tab, you can choose whether to post per project valuation item or per project. For the per project option, any figures will flow cumulatively into the financial accounting. Then enter a posting date, a document number and a posting description. In the posting description, %1 is replaced with the posting type (activation or deactivation) and %2 with the project posting group (e.g. IFRS or HGB). With the field Post you determine if the posting should be done with print / page view, without check only the report will be printed / displayed.

      Note

If the field Post is marked, the page view is also not a preview, with the page view in this case postings are triggered in the Fibu!
You can then view the posted values in the financial accounting on the corresponding accounts of the Fibuintegration (accounts and posting records for activation see section "Set up valuation templates" - deactivation posts in the opposite direction). To do this, go to the last journal you posted to via the financial accounting journals and open the G/L items.

Cancellation of project evaluations

Booked project evaluations can be cancelled. The procedure in this point is to be conveyed:

- Reverse bid project evaluation templates
- Reversal of the born. project valuation templates in financial accounting
- Rebuild Project Assessment Templates

Based on these focal points, the entire process of project evaluation is to be demonstrated by means of an example project, which will enable you to subsequently control the procedure yourself in Microsoft Dynamics Business Central™. In doing so, you will learn about the effects on the modules Projects, Resources and Financial Accounting.

Reverse bid project evaluation templates

Call up the "Cancel posted project evaluation" function. In the request window, it is essential to define via filter which booked project evaluation templates are to be cancelled.

Example:
For the correction of the HGB project assessment templates for February 2021, at least the filter must be set:

Valuation book code HGB
Posting period 01.02.21

The function deletes all selected posted project valuation templates (header and rows) and corrects the valuation amount in the posted project valuation items to 0. In addition, the Reversed amount field is filled with the valuation amount of the project valuation item posted up to that point. Confirming the query window triggers the cancellation.

Reversal of posted project valuation templates in financial accounting.

The corrected project valuation items must now be transferred to Financial Accounting again. The difference between the valuation amount and the bid valuation amount is posted to Financial Accounting. By setting the valuation amount to zero in the section "Reverse the used project valuation templates", the valuation amount that has already been posted is now reversed in Financial Accounting by means of a reverse posting.

To do this, the "Post project valuation act." function must be executed again (see section "Posting_activation").

Example:

For posting the correction of e.g. the cancelled HGB project valuation templates for February 2021 to Financial Accounting, at least the filter for the project valuation items must be set:
Valuation book code HGB
Booking period 01.02.21..28.02.21

Note

The filter should be selected the same as when canceling the booked project evaluation templates. The voucher no. and / or the booking description, which can be specified for the activation, can give an indication of the cancellation.

Rebuild Project Assessment Templates

The cancelled project evaluation templates can then be recreated, posted and activated in Financial Accounting (see the sections "Create project evaluation templates", "View project progress", "Check and post project evaluation templates", "Posted project evaluation templates" and "Post activation".

Posting procedure project valuation by project item

All postings for consumption and sales are not automatically transferred to financial accounting, but are triggered via batch processing.

When posting, a distinction is made between activation and deactivation. A project is activated in order, for example, to compare stock consumption, salaries, etc. with a stock of work in progress or similar. At the end of the period, capitalization must be carried out for ongoing projects for accounting reasons. Batch processing is available for capitalization and deactivation.

When a project is completed (or partially completed), the work in progress must be derecognized because it has left the company. This process is called deactivation. Project deactivation entries are recorded in the work in progress accounts. Deactivation of a project depends on its degree of completion. The deactivation entries neutralize the amounts in the work in progress accounts and transfer the deactivated values to the respective G/L accounts for project sales and project costs.

The project valuation ledger sheets are used to call the activation and deactivation. It is necessary to differentiate the call. Via the periodic activities the valuations are transferred to the Fibu.

The first part deals with the valuation for project items, the second part with the valuation for cumulative quantities. Project valuation templates belong to the module "extended project valuation" and are explained in more detail in the section with the same name.

Valuation by project item

Valuation by project item is the common method used in HGB valuation. It is valued at cost and at the end of the project the deactivation is posted.

Activation by project item

The first step is to call up the project items via the project valuation ledger sheet and to form the project valuation items. Subsequently, the transfer and posting in the financial accounting takes place.

In the project valuation ledger sheet, Project activation proposal is called up.

Individual projects can be entered with No. If the entry is missing, the call goes over all projects. In the valuation book code, the valuation book must be entered, according to which valuation is to be carried out in this proposal. If no entry is made, all evaluation books are taken into account. In the Options bar, the fields Valuation from and Valuation to are used to specify the period for which the posted items that are included in the valuation are used. Furthermore, the posting date is required as well as a document number and a posting description.

!!! note "Note The placeholder %1 can be used in the document no. and posting description. This is automatically replaced by the booking date.

With "OK" the project valuation proposal is entered in the book sheet.

If the project evaluation book sheet is filled via this call, normally no manual changes to the data need to be made. If a call is made with incorrect data, the lines can be deleted at any time and the call repeated.

A valuation ledger for capitalizing project consumption items at cost is set up as follows:

Field	Description
Code	HGB-P
Description	HGB n. Items
Integration Fibu	Activated
Valuation template	Deactivated
Valuation to	Project items
Activation method	Initial prices
Activation of	Consumption
Deactivation method	on completion

The project items of the consumption item type are valuated at cost prices. If required, the accounting integration is activated.

This way, only the project items with the type consumption will be retrieved to the ledger sheet. The project items with the type sale are not considered at all. The valuation amount is taken from the Cost price field of the respective project item. The sales price has only an informative character here.

The subsequent posting generates project valuation items that can be viewed via the project. There is a reference from the project valuation item to the valuated project item via the Lfd. No. project item.

The capitalization amount has been stored in the project item itself. From the project map, you can call up an overview of the current status of the valuation in a matrix by selecting Project valuation → Valuation. The posted valuation items appear in the Activation column of the posting period.

A lookup in the Activation field shows the project valuation items. Incorrect valuation basis: If the valuation basis was selected incorrectly, a second valuation can be performed. However, only the project items that were not included in the previous project valuation will be used. The valuation book must be changed accordingly and reassigned to the project. Cancellation of the posted project valuation is not possible.

Posting project capitalization to financial accounting

The project valuation items generated via the project valuation ledger, which only affect the project area, can be transferred to financial accounting via batch processing. It is important that the valuation items to be transferred have a check mark in the "Integration Financial Accounting" field, which is controlled via the project valuation ledger.

The values are transferred to financial accounting via the periodic activity. The call is made via Projects > Project valuation > Periodic activities > Post activation. Individual projects can be selected in the Project tab. It is also possible to select further fields of the Project table and to specify corresponding filter values.

In the Project Valuation Items tab, filters can be specified on the project valuation items. It makes sense here to specifically delimit only the time period. The item delimitation should already be carried out in the first step via the project valuation ledger sheet.

In the Options tab, the method to be used for posting is specified. It is possible to create a general ledger item for each project valuation item or only one general ledger item in total for all these items. In addition, the posting date must be specified with which the posting is to be made in the FIBU. Likewise the voucher no. and the posting description must be deposited. With the checkbox Post it can be controlled whether first a preview of the activation should be carried out (no checkbox) or whether the posting should actually be carried out.

The booking or its preview is triggered via the Print or Preview buttons. A report of the activations will be displayed.

As soon as the project activation has been posted to the financial accounting, it can be seen via the call of the valuation per project that these postings have been carried out. The Activation Posted column shows the same value for the month as the Activation column. After the posting of the activation, the field "Proj. posting date" is updated in the corresponding project valuation book. The project valuation items included in the posting have been updated in the Project Valuation Amount field.

The individual posting records have been posted in the financial accounting. Since the posting method "per project valuation item" was selected when posting the capitalization, a large number of posting records were posted. For the valuation at cumulative quantity, the process is identical. Only the progress must be

determined for the period under consideration. The valuation proposal in the proj. valuation ledger sheet then picks up these values. The posting to financial accounting is also carried out identically. However, the underlying account determinations are completely different.

Deactivation by project item

For deactivation, the stored information is important when deactivation takes place, whether after percentage of production or on completion. On completion, the status of the project must be Closed. The deactivation is called up in the project evaluation book sheet via the menu ribbon.

In the Options area, the deactivation posting date is specified. Furthermore, the document no. and the posting description must be maintained. In the Project area, a project can be entered specifically or, if no entry is made, all projects are taken into account.

In the Project valuation book area, a special valuation book can be entered as a filter. If no entry is made, all valuation books are taken into account.

The Project valuation items area can be used to filter specifically for certain posted project valuation items. Via the item type, the selection via consumption or sale is possible. If no entry is made, all items are taken into account accordingly.

Analogous to the activation, the project valuation book sheet must now still be posted. The deactivated project items can now also be found in the valuation matrix under the Deactivation column.

Posting the project deactivation to financial accounting

The deactivation has now taken place in the project area. The posting in the financial accounting must still be triggered via the period. Activity command Projects > Project evaluation > Periodic activities > Post deactivation.

Individual projects can be selected via the Project tab if required.

In the Project valuation book tab, it can be defined from which valuation book is to be deactivated. In the Project Valuation Items tab, you can specify which project valuation items are to be transferred to the financial accounting system for deactivation.

In the Options tab, you can specify whether each project valuation item is to be created individually or in total as a G/L item in Financial Accounting. In addition, a posting date, a document number and the posting description must be entered. Only if the Post button is checked, will the project actually be posted to the FIBU, otherwise only a control report will be generated.

Analogous to the activation, numerous G/L item postings were again deducted in the FIBU during the deactivation.

Posting procedure Project valuation by progress

Valuation by progress is largely identical to valuation by project item. Only the steps that differ are explained in detail here.

This concerns the determination of progress. This has already been dealt with in detail, so that only a brief description of this issue is given here.

Furthermore, the posting records are structured completely differently, which was already apparent from the deposit of the accounts in the project posting group.

Calculate project progress

The calculation of the progress of a project takes place in the project under the point Project evaluation -> Progress. With the function Calculate progress the progress lines result.

Activation according to progress

For the evaluation according to progress, a suitable project evaluation book must be created for the project. Decisive is the field "Valuation to", here progress number must be entered.

Analogous to the valuation by project item shown above, a project valuation proposal is also now called up in the project valuation book sheet. Note on the date filtering, now the data from the project progress are relevant.

The further process (posting the project valuation as a project valuation item -> posting the project valuation item to FIBU [if the project valuation ledger provides for this accordingly] > deactivating the project valuation item > posting the project capitalization to FIBU) is identical to the valuation by project item.

Evaluation options

The extended project evaluation offers additional evaluation options of the relevant project data.

Gross profit target report

This report prints the rows and values of the posted project valuation template for a selected project valuation (e.g. IFRS or HGB for a defined month). Only those rows are printed that have a corresponding indicator (Show) set in the valuation template. In the "Temp Project Dimension Values" info tab, a dimension can first be selected according to which the projects are grouped. In the "Dimension value" field, a characteristic of this dimension can then be selected; only projects that have this dimension assigned as a default dimension (e.g. range 30) will then be printed. To restrict the projects printed, a filter can be set in the "Project No." field.

A date must be selected in the "Options" info tab, the project evaluation templates that fall in this month will then be output. In the Valuation book code field, the valuation book for printing must be specified. If a check mark is set in the Preview field, not only posted but also created and unposted project evaluation templates will be output in this report.

German HOAI Fees

Note

Despite being implemented decades ago, the German HOAI regulations on architects' and engineers' fees continue to have little to no influence over fee schedules developed outside Germany.

The highly localized nature of HOAI is reflected in the online help articles by limiting the language used to describe the related functionality to German.

1.2.5 project365 Real Estate

KUMAVISION project365 Real Estate

General

The micro industry solution KUMAVISION project365 Real Estate extends the industry solution [KUMAVISION project365](#) with the most important functionalities for real estate developers.

In the basic version of [KUMAVISION project365](#) a main project (e.g. property or land) serves as a bracket for related projects (e.g. buildings). Based on this, KUMAVISION project365 Real Estate allows the assignment of any number of objects (e.g. apartments) to a project.

The KUMAVISION project365 Real Estate is an independent app in the [Microsoft AppSource](#), that

- the [Microsoft Dynamics Business Central™ Standard](#),
- the [KUMAVISION project365](#),
- the [Advance Payment](#) incl. Bridge App
- the project365 Real Estate

contains.

Setup

project365 Real Estate comes with a setup wizard that guides you step-by-step through the required object and project setups and provides the essential information. This setup wizard can be called up via "Object setup > Setup wizard".

Alternatively, the following section describes how to set up objects and projects separately.

Object setup

The "Object setup" defines the basic facilities for the objects available in KUMAVISION project365 Real Estate.

The following fields are available there:

field	description
Number Series Objects	Indicates the code of the number series that will be used when a new object is created.
Guarantee number series	Indicates the code of the number series that will be used when a new guarantee is created.
Automatic sales price update disabled	Specifies the status from which the sales price of an object may no longer be automatically adjusted.
Default minimum margin %	Specifies the default margin for calculating the sales price of an object in this client. If required, the default margin of any project can be overwritten on the project map (see Project creation - tab "Real estate").
Allow assignment to multiple projects	Allows an object to be assigned to multiple projects. In this case, the sales price and customer will be carried over from the last object calculation that was changed.
Object unit budget line type	Specifies the type of budget line to be used when creating budget lines for object units.
Object unit budget line no.	Specifies the budget line no. to be used when creating budget lines for object units.
Max. Marking duration	Specifies the maximum time in days (T) before a binding reservation must be triggered by the interested party. If the reservation time of a prospect is exceeded, he will automatically not be considered for the further sales process.
Reservation fee payment deadline	Indicates the maximum time in days (T) until the reservation fee must be paid after a reservation. If the payment period of a prospective customer is exceeded, he will automatically not be considered for the further sales process.
Pre-booking time (T)	Indicates the minimum time in days (T) that the buyer has after a pre-booking before the housing unit can be pre-booked/reserved by another interested party.
Pre-booking Grace Period for Subsequent Reservation	Indicates the time in days (T) that can be accepted after the assured pre-booking period has expired and a new buyer has requested the unit.
Style Indicators	Indicates the respective style for overdue prebooked, for overdue reserved as well as for sold objects in the object list.

Project facility

In the table "Facility Projects" (see Project Facility) the basic facilities for project management are defined. These setup facilities have been extended by some fields that are available in KUMAVISION project365 Real Estate:

field	description
Register Numbering Property Acquisition Number Series	Indicates the code of the number series which will be used when a new property acquisition is created.
Register Project Handling Budget Line Dimension as Default Dimensions	Indicates that the default dimensions of the project will be inherited by the budget lines. Note: This identifier is mandatory to be set in order to use the distribution function (see "distribution function"). Once the identifier is set and a project with distribution function exists, the setting cannot be undone.
Register Real Estate Dimension code for objects	Specifies the code of the dimension which should be used for the automatic creation of the dimension for the object number.

Alternatively, an individual project template can be created by yourself see Project Setup.

Project template

DIN276 is a defined structure for costing and budget monitoring in the construction industry that is used by many companies in real estate development. For this reason, it makes sense to use a project template that is based on the cost groups of DIN276.

By default, such a project template up to cost group level 3 is provided by KUMAVISION via data import (Rapid Start package) in Microsoft Dynamics Business Central™. The individual cost groups are mapped via correspondingly defined work packages (see project setup). These work packages serve as cost collectors for hourly bookings, down payments, calculated/budgeted costs of the WBS line, etc. and are not settled. A distribution function is used to redistribute and settle all project costs to separate revenue WBS lines based on the objects as budget lines [see "Distribution function".

Alternatively, an individual project template can be created by yourself see Project Setup.

Object creation

Before objects can be assigned to a project, they must be created in the "Object list" table. The "New" button opens an empty object card. The following fields can be filled there:

General information register

Field	Description
No.	Indicates the number of the object. Note: This field is automatically drawn from the number series set up ([see „Object Setup"](#)). If a manual number assignment is stored in the number series, an object number can be entered manually.
Project object no.	Specifies the project-specific object number.
Parcel No.	Indicates the parcel number of the property.
Description	Specifies an individual description of the object.
Status Type	Indicates the type of a project.
Cost center code	Specifies the code for shortcut dimension 1 (set up in the "Financial accounting setup").
Cost Object Code	Specifies the code for shortcut dimension 2 (set up in "Financial Accounting Setup").
Fixed Asset	Indicates that the object is a fixed asset.
Acquisition Date	Indicates the date when the object was marked as an asset.
Asset set by	Indicates by whom the object was marked as an asset.
Address	Indicates the address, additional address information, city and postal code of the property.
Selling Price	Indicates the selling price for the property. Note: This value is automatically pulled from the project's property calculation.
Wage (realization model)	Indicates the price for the wage for the work.
Price (realization model)	Specifies the sales price for the object including the work wage (realization model).
From parking space	Indicates the price of the parking space.
Land Registry Entry	Indicates the value of the land registry entry.
Notary Deed	Indicates the notary deed number of the property.
Date of Notarial Deed	Indicates the date on which the notarial deed was issued.

Field	Description
Transfer of benefits and encumbrances property	Indicates the date on which the transfer of benefits and encumbrances takes place.
Ready for occupancy as of	Indicates the date as of which the property is ready for occupancy.
Brokerage Agreement	Indicates the brokerage agreement.
Brokerage Contract Date	Indicates the date on which the brokerage contract was concluded.

Reservation status info register

Field	Description
Contact No.	Indicates the customer's contact number.
Contact Name	Indicates the contact name of the customer.
Status	Indicates the status of the object.
Last status change	Indicates the date when the status was last changed.
Seller	Indicates the seller responsible for the object.
Reservation Fee	Indicates the amount of the reservation fee.
Credit Check Available	Indicates that a credit check has been performed.
Planned Notary Date	Indicates the date on which the notary appointment is scheduled. Note: The field is editable once the status of the property is set to "Reserved".
Reservation Fee Paid	Indicates the date the reservation fee was paid.
Reservation fee returned	Indicates the date on which the reservation fee was paid back. Note: The field is editable once a date is entered in "Reservation fee paid".

Info tab Properties

Field	Description
Property type	Indicates the property type of the object.
Property Type	Indicates the property type of the object. Note: The field is editable once a property type is specified.
Lot Area (Parcel)	Indicates the lot area of the property.
Floor Area	Indicates the floor area of the property.
Gross Floor Area	Gross floor area of the object.
Living Area	Indicates the living area of the object.
Floor Indicates	the floor of the object.
Number of rooms	Indicates the number of rooms of the object.
Parking Spaces	Indicates the number of parking spaces assigned to the property.
Type of parking space	Indicates the type of parking space.
Co-ownership share	Indicates the rental ownership share of the property.
Year of construction	Indicates the year of construction of the object.
Publicly Subsidized Housing	Indicates that the property is publicly subsidized housing.
Business	Indicates that the property is used for business purposes.
Location	Indicates the location of the property.

Reservation management info register

All interested parties for the object can be stored on the "Reservation management" info tab. This is used to organize the successors, should the contact currently stored in the Reservation status tab miss a deadline or no longer be interested in the object. For this purpose, it can be defined via "Manage" whether a successor is determined automatically or manually.

Rental status info register

All contacts who have rented the object over time can be stored on the "Rental status" info tab.

Attributes

In addition to the master data on the object map, further object-specific attributes can be stored by calling "Attributes > Attributes". These are freely definable characteristics that can be used to (further) classify and evaluate objects. The attribute values contain the following fields:

field	description
Attribute	Indicates a freely definable attribute for the object.
Value	Indicates the value of the object attribute.

Project creation

New projects can be created either manually or via the existing wizard (see project management).

Besides the standard fields of KUMAVISION project365 Basis (see Project Management) KUMAVISION project365 Real Estate offers additional fields on the project map:

General information register

Field	Description
Sales Description	Specifies a sales description for the external sales process for the project.
Sales Status	Indicates the sales status for the project.
Number of Objects	Indicates the number of objects assigned in the project (see "Assigning objects to a project").

Real estate information register

Field	Description
Calculation basis distribution key	Indicates the selected calculation basis for the distribution key of the project (see "Distribution key").
Calculation Distribution Key incl. Business	Indicates that the default distribution key for this project has been calculated taking into account the business objects.
Distribution active	Indicates that the default distribution is active for this project.
Default Minimum Margin %	Indicates the minimum margin for calculating the selling price of an object in this project.

Assigning objects to a project

In the section "Creating objects" (see "Object-creation"), the creation of new objects was described.

In the "Object list", the desired objects that are to be assigned to a project are selected (hold down the SHIFT or CTRL key and select objects with a mouse click). The desired project, into which the selected objects are to be transferred, is selected via the "Task > Transfer to project" function.

The list of project object units ("Project Map > Process > Objects") contains all objects that are assigned to the project. The essential information from the object card of the individual objects is also listed here. If required, the object card of the selected object can be opened from this view via the "Object" call.

Work breakdown structure

The work breakdown structure (with/without budget view) includes all standard fields and options of KUMAVISION project365 Basis see Project Planning. KUMAVISION project365 Real Estate offers the following additional fields:

field	description
No Distribution	Indicates that the distribution key for this WBS line has been deactivated.
Different distribution	Indicates that the calculation base of the distribution key has been manually overwritten and therefore differs from the default distribution of the project map. Note: The identifier is automatically set when the calculation base for the distribution key is overwritten.
Calculation basis distribution key	Indicates the calculation basis for the distribution key of the WBS line. Note: Using the call "Associated > WBS Distribution > Calculate distribution key", the selected distribution key can be individually overwritten for individual WBS lines if required.
Calculate distribution key incl. business	Indicates that the distribution key for this WBS line has been calculated taking into account the business objects.
Cost Amount Redistributed	Indicates the cost amount (for the revenue WBS line) that was redistributed based on the distribution function (from the cost WBS lines).
Sales amount redistributed	Indicates the sales amount (for the revenue WBS line) that was redistributed based on the distribution function (from the cost WBS lines).

In the real estate industry, certain values (e.g., incidental land costs) are derived as a percentage from other items. For any WBS lines, a corresponding formula calculation can be stored for this purpose via the call "Associated > Formula Calculation" see Project Planning.

For each object assigned to the project (see "Assigning objects to a project"), a budget line can be automatically created within any revenue WBS line using the function "New > Create budget lines for objects". Object numbers and default dimensions are specified for this via the object setups made, so that uniform controlling is ensured at object level.

Distribution function

The distribution key calculation is based on the data of the objects assigned to a project.

The distribution key for the project is defined in the project unit list ("Project map > Process > Objects") via the call "Calculate distribution key" for all objects, only for private objects or only for business objects. It is possible to choose between different distribution key figures on the basis of which the distribution key is calculated (e.g. living area, property area, uniform (calculation in equal parts), manual, etc.).

If the distribution key is set manually for one object, but should be calculated automatically for the remaining objects based on a key figure, it is possible to select whether objects with manual distribution should be taken into account when (re)calculating the distribution key. If the corresponding identifier is set to "No", the distribution of all distribution lines that have not been manually adjusted will be calculated with the remaining value (i.e. 100 minus manually entered distribution keys).

To transfer the selected distribution key to the WBS, the "Transfer distribution to WBS lines" function must be executed.

If required, a different distribution key can be selected for each WBS line to be used for the cost calculation ([see "Work breakdown structure"](#).

The selected distribution key can also be seen on the project map in the Real Estate tab. In addition, further settings are possible here:

- The "Minimum margin (%)" field is automatically filled based on the setting made in the property setup (see "Property setup" in this document). If required, the minimum margin (%) to be achieved with the realization of the project can be manually overwritten on the project card at any time. If budget lines have already been created for object units, the sales amount (minimum margin) will be adjusted automatically.
- The "Distribution active" identifier can only be set if the "Default dimension at budget line level" identifier is activated in the project setup. Setting the "Distribution active" identifier activates the distribution function for the project. From this point on, it is no longer permissible to change the distribution key. If any necessary changes are to be made, the identifier must first be deactivated. This deletes all distribution items.

Finally, the individual distribution items are formed via "Project map > Process > Execute distribution" - taking into account the selected distribution key - and the incurred project costs are distributed to the created budget lines for objects, i.e. a redistributed cost amount is created per object.

The distribution of the objects for the respective selected WBS line can be seen via the call "Belonging > WBS Distribution" within the WBS.

Object calculation

In the object calculation ("Project map > Process > Object calculation") the entire sales price calculation takes place. This table contains all objects belonging to the project with a link to the budget line number as well as the essential information for the sales amount calculation:

field	description
Cost Amount Redistributed	Indicates the cost amount for the budget line that was determined based on the distribution function performed.
Minimum Margin %	Indicates the minimum margin % for calculating the sales amount that was set on the project card. Note: The minimum margin amount is automatically determined based on the percentage set and cannot be manually overridden.
Sale Amount (Minimum Margin)	Indicates the sale amount of the object based on the minimum margin (and redistributed cost amount) stored on the project.
Calculation Factor	Indicates the calculation factor for the calculation of the sales amount, which is additionally added to the sales amount (minimum margin). Note: The calculation factor can be specified either in percentage or monetary terms.
Sales price	Indicates the sales price of the object/budget line.
Sale Amount	Indicates the sale amount in settlement currency for the object/budget line.
Sale to customer no./name	Indicates the number/name of the customer for the object/budget line. Note: This record is automatically pulled from the object card if a customer has been maintained there. Analogously, a synchronization from the object costing into the object card takes place, should the customer be adjusted in the costing.

In the distribution items (value of "Cost amount redistributed") you can see how the cost amount of an object is composed, i.e. from which WBS lines the costs were redistributed to this object in which amount based on the distribution function.

All objects are linked to the object costing and can be called up here if required ("Belonging > Line > Map"). The sales price calculated in the object calculation is automatically preset in the object map. There, the value cannot be overwritten manually; this is only possible by recalculating the sales price in the object calculation.

Down payments

In KUMAVISION project365 Real Estate, invoices are usually issued via a down payment plan. For this the app Advance Payment is necessary see Advance Payment.

Land acquisition

The table "Property Acquisition" can be used as an overview to maintain properties viewed, offered or rejected there. The following fields can be populated:

field	description
No.	Indicates the number of the land acquisition.
Type	Indicates the acquisition type of the plot selected from the "Plot acquisition types" table.
Acquisition Type	Indicates the description of the acquisition type.
Status	Indicates the status of the land acquisition. You can choose between the options "Open", "In progress", "Waiting", "Purchased" and "Rejected".
Address	Indicates the address of the property.
Zip code	Indicates the zip code.
City	Indicates the city.
Federal Region	Gives the federal region.
Country/Region Code	Indicates the country selected from the "Countries/Regions" table.
Field No.	Indicates the field number of the property.
Show on Map	Opens the stored address on the map (e.g. Google Maps, Bing Maps)
Broker	Indicates the broker selected from the "Contacts" table.
Owner	Indicates the owner selected from the "Contacts" table.
Property Type	Specifies the property type. It is possible to choose between the options "Residential" and "Business".
Property Area	Indicates the area of the property.
Responsible	Indicates the (internal) responsible person selected from the "Users" table.
Area	Indicates the value of the selected "Plot type".
Property Type	Indicates the property type.
Offered Purchase Price	Indicates the offered purchase price.
Comment	If required, the property can be described with an individual comment.
Client	Indicates the client that is selected from the "Clients" table.

Guarantees

The "Guarantees" table can be used as an overview to maintain all guarantees there across projects. The following fields can be filled:

field	description
No	Indicates the number of the guarantee.
External Guaranty No.	Indicates the external guaranty number.
Description	Indicates the description of the guarantee.
Guarantee Type	Specifies the guarantee type selected from the "Guarantee Types" table.
Guarantee Type Description	Gives the description of the guarantee type.
Guaranty Posting Group	Gives the guaranty posting group.
Account Type	Specifies the account type. You can choose between customer and vendor.
Account Number	Indicates the number of the selected customer/vendor.
Account Name	Indicates the name of the selected customer/vendor.
Issuing Bank (Contact No.)	Indicates the contact of the bank.
Issuing bank (contact name)	Indicates the contact name of the bank.
Start Date	Gives the start date.
End Date	Indicates the end date.
Amount (MW)	Gives the guarantee amount (in client currency).
Commission %	Indicates the value of the commission in %.
Commission Amount (MW)	Indicates the value of the commission.
Project number	Indicates the project number.

Project valuation

Valuation template

In order to be able to use the project evaluation, evaluation templates are necessary see Advanced project evaluation.

Since a distinction is made between objects in fixed and current assets, the field "Origin table" has been extended by three selection options:

table	description
Actual costs AV	The actual costs AV are determined via the object budget lines from the project via the actual distributed actual costs per object. Only objects that are marked as "asset" in the object card are taken into account
Actual costs UV	The actual costs UV are determined via the object budget lines from the project via the actual distributed actual costs per object. Only objects that are not marked as "asset" in the object card are taken into account.
Order value UV	The order value UV are the sales budget items of the object budget lines from the project, whose objects are not marked as "asset". Objects that are final billed and therefore completely finished are not taken into account.

Project accounts

In project365 Basis the information about the product booking group, the project type, the work package code as well as the main activity code is used to find the respective project account (see Project Controlling).

By project365 Real Estate it is first checked if it is a project item that has been created by a distribution (see "Distribution key"). If this is the case, the product posting group, project type, work package code and main activity code from the original project item are used to determine the project account determination. This procedure allows - as in the Business Central Standard - the actual costs to be considered separately.

1.2.6 trade365

KUMAVISION trade365

With KUMAVISION trade365 you can easily master the balancing act between service, costs, logistics and adherence to delivery dates. The industry solution is perfectly tailored to the needs of the wholesale sector and offers all functionalities in one system.

- Fast order entry with discount calculation
- Warehouse organization that grows with your business, including inventory optimization
- Scanner connection to support error-free logistics and batch tracking
- Transparent service processes
- Processing of blanket orders
- Offer Management
- Expansion of customer loyalty through rental of machines and equipment

Content

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[Link to Microsoft App Source "KUMAVISION trade365"](#)

Basic Setup

Inactive sellers/buyers

The salespersons/buyers are used in the sales and purchasing documents and control, for example, the printing of contact data on the documents. If an employee leaves, the entry in the salesperson/buyer table can no longer be deleted, as documents in which this person was entered can then no longer be subsequently printed. This may result in a large list of salespersons/buyers.

In order to now only work with active sellers / buyers in the current process and thus keep the corresponding selection lists in the system short, there is the option of switching a seller or buyer to inactive. This is done via a check mark in the salesperson/buyer list If an employee is marked as inactive, the lookup in the purchase and sales documents is opened filtered to active employees only. The filter can be removed if necessary.

Article Book.sheet templates without superscript of book.sheet name

In Microsoft Dynamics Business Central™ Standard, Article Book. Sheet templates that have a numeric element in their name, the numeric value is always incremented by 1 after completing the Book. Sheet, the numeric value is always incremented by 1 (Microsoft Dynamics Business Central™ Standard). This can be prevented in KUMAVISION trade365.

To do this, the check mark is set in the Book. Sheet Templates article is checked in each case for Do not increment book. sheet name. This way, the "name" of the worksheet always remains the same.

Basics

2-stage variant

In addition to the single-level variants in the article master, it is necessary to work with 2-level variants in certain industries. KUMAVISION trade365 enables the simple generation and easy handling in the sales and purchasing process of 2-level variants.

Establishment

The following describes how to set up on the article master for 2-level variants.

Warehouse facility

When creating 2-level variants, the variant description is combined from the two variant characteristics. In order to separate these visually, it is possible to set up in the warehouse facility with which separator the two descriptions are separated.

To do this, call up the "Stock setup" via the user search. On the information tab "KUMAVISION" you have the possibility to enter the desired separator in the field "Separator for variant description".

Article variant features

2-level variants are mapped with so-called variant characteristics. For this purpose, article variant characteristics are first created in general and these in turn are assigned characteristic values. The article variant characteristics can be used for the creation of n:articles.

To define an article variant characteristic, call up the "Article variant characteristics" via the user search.

Via "New" in the menu ribbon you can define a new article variant characteristic with the help of the table below:

Field	Description
Code	Defines the unique code of the article variant characteristic
Description	The description of the article variant characteristic is entered here.
Variant description 2	Used for the item description of the variant in the Description 2 field. The placeholder %1 enables the variant description 2 of the characteristic value to be transferred to the variant description 2. For example, if an article is to be created as a T-shirt blue size XL, the value Size %1 must be entered in the Variant description 2 field of the article variant characteristic Size.

You can then use the ribbon to create the characteristic values for the respective article variant characteristic.

Individual characteristic values can be locked. These will then no longer be offered when variants are created for the article. However, if article variants with this characteristic were created earlier, they are still available and are not locked. The sort sequence of the characteristic values determines the sequence in which the characteristics are displayed in the variant creation matrix.

Article card

The following fields are then set up on the desired item card on the "Stock" info tab:

- Subject to variants
- Variant characteristic 1
- Variant characteristic 2

To create the variants now, select via the menu item > "Actions" > "Functions" > "Create variants (matrix)".

The matrix for creating 2-step variants for an article opens.

Here you can select which combinations of characteristic 1 and characteristic 2 are to be created by the system as variants for the article. Click on "OK" to create the selected variants.

Further processing of the 2-step variants takes place conventionally in the sales and purchasing processes.

If translations are to be created for the article variants, the article variant characteristics and their attributes must be translated in each case.

When the article variants are created, the translations for the individual variants are also created automatically. Only the translations for language codes that have also been previously stored in the article master record are created.

Variant fast entry

Especially in the area of variant-capable articles, assortments consisting of different variants of the same basic article are often purchased. For this purpose, it is necessary to offer fast entry for easy selection of different variant quantities.

The fast entry can be set up per article for purchasing. For this purpose, a new field "Purchase - Fast entry variants" has been integrated in the article master. This field can be used to set the article for which fast entry is desired.

> Note

The variant fast entry is directly related to the enhancements in the "Stock" area - and .

Establishment

To set up fast variant entry for an article, first call up the desired article card.

On the "Stock" info tab, the following fields must be activated:

- Subject to variants
- VK variants fast entry
- EK variants Fast entry
- Transfer order variants Fast entry
- Article book sheet - variants fast entry

Use in process

If the field is activated for the purchasing area, the variant fast entry is opened after entering the article number within a transaction.

The desired quantities for the respective variants can now be entered via this fast entry.

After confirming the window with the "OK" button, the respective lines are added to the original document.

Analogously, this process is also integrated into the sales process.

Variants text modules

The extended text modules are also available for article variants in KUMAVISION trade365.

Thus, individual text modules can be stored for each article variant. The functionality of text modules is described in the section "Additional texts".

Article history

In the article master there is an overview in KUMAVISION trade365 with the documents entered for the article. The article history can be called up from the article card. It is called up via Belonging > Availability > Statistics > Article history, after which you can select between sales and purchase history.

All documents in which the corresponding article was used are displayed, sorted by document type.

Advanced item ledger entries

For improved evaluation and to simplify searches at item level, the following fields have been shown or newly added:

Field	Description
Type of origin	**Options:** Item, Vendor, Customer
Origin no.	**Option:** assembly order, production order, customer number, vendor number
Name	In the case of the Vendor or Customer options, the "Name" field of the corresponding master record is displayed.

This makes it possible to directly research or evaluate within the article items which delivery went from which supplier or to which customer or was consumed via which assembly or production order.

Purchasing

Purchase order types and payment terms

Purchase order types can optionally be provided with payment terms. These payment terms override the payment terms stored in the vendor's master data.

The payment terms can be additionally changed manually in the purchase order. When using the purchase order type in the document, the payment term of the purchase order type is entered.

To store payment terms for a purchase order type, call up the purchase order types via User search.

Via "New" in the menu ribbon you can create a new purchase order type or via "Edit list" you can edit an already existing purchase order type.

In the field "Zlg. condition code" you can add a payment condition to the respective purchase order type.

If a purchasing document is now created with the corresponding purchase order type, the payment term of the purchase order type is transferred to the document. The payment term of the vendor will be overridden.

Create article reference from shopping line

Suppliers usually list their own article numbers in their price lists. These supplier article numbers can be used in the "Reference number" field during order entry, provided they are maintained in the article or vendor master under Reference numbers.

In order to facilitate master data maintenance at this point, these reference numbers can be maintained or created in KUMAVISION trade365 from the purchasing line.

Establishment

To use this function, the "Insert article reference record" button on the "KUMAVISION" info tab must be activated in the "Accounts Payable & Purchasing Setup".

Procedure

A purchase line is recorded with the following fields:

Type	No.	Reference number	Unit	Variant code
Article	Item number	Supplier article number	Article purchasing unit	(can optionally be filled depending on the article as well)

The system now automatically creates a reference entry for this item and this vendor.

If there is already a reference entry in the system for this supplier and this article number, the user is prompted whether the existing reference entry should be overwritten.

If this message is confirmed with "Yes", the existing reference entry is overwritten.

If "No" is selected, the process is aborted.

Extension for direct delivery / special order

In Microsoft Dynamics Business Central™ Standard, direct delivery purchase orders and orders are firmly linked. This means that once a purchase order has been created, no more changes are possible in terms of deviating quantities, units or items.

Especially in the retail environment with daily changing articles or critical availability times, this circumstance is not feasible, because e.g. an article was ordered, but another article is delivered by the supplier as a replacement.

This enhancement makes it possible to modify purchase orders that were created as direct deliveries for orders, as well as to delete purchase orders that were created as direct deliveries.

The following enhancements were made:

- Exchange of articles (article A1 was ordered, but manufacturer can only deliver article A2)
- Quantity reduction (5 pieces of article A1 were ordered, but manufacturer can deliver only 3 pieces)
- Delete link (order was entered as direct delivery, but the manufacturer does not deliver the goods to the customer, but to the house).
- Posting the sales invoice before the purchase invoice

Exchange / change of article, quantity and unit code

To exchange an item in a direct delivery order or to make changes to the quantity / unit code, first call up the purchase order in the system.

Make the changes in the corresponding order line. After entering a different article number or changing the quantity / unit codes, the system will ask you if you want to update the changes in the corresponding sales order. Confirm the query with "Yes".

The change is executed. The link between the sales order line and the order line remains intact.

When the order is deleted, the referencing is also removed from the order line so that the order can be processed further as a "normal order" or a new direct delivery order can be created.

Delete "Direct delivery" or "Special order" link from the order

In the purchase order, the referencing of the direct delivery and the special order to the sales line can be deleted via menu items

To do this, first call up the purchase order in the system.

Then select the desired order line and choose "Lines" > "Order" > "Direct delivery" or "Special order" in the info tab and then execute the "Remove direct delivery link / special order link" function.

When these menu items are called, the corresponding link of the order line currently selected in the order to a sales line is deleted, there is then no direct delivery link or special order link between the order line and the sales order line, the documents can continue to be processed as "normal" order line and sales order line

Archiving reasons purchasing documents

Purchasing documents can be archived for different reasons. The system archiving reasons are automatically written to the archive.

Archiving reasons for requests:

- Manual
- Delete
- Print
- Request after order

Archiving reasons for purchase orders/purchase complaints:

- Manual
- Delete
- Print
- Booking

Archiving reasons for blanket orders:

- Manual
- Delete
- Print

Marking sale items in purchase

Sales articles are articles that are being discontinued from the product range. They can either be articles that are no longer reordered by the company or articles that are no longer supplied by the supplier. So that the purchasing department is informed in the ordering process that the supplier may no longer be able to fulfill this order because the article is being removed from the range.

A sale item can be either an item itself or variants of the item.

To mark an article or an article variant as a sale article, first call up the desired article card.

On the "Item" info tab, you can mark the item accordingly by activating the "For sale" button.

Alternatively, you can mark each variant by checking the "For sale" checkbox for the corresponding variant. Article variants can thus be marked individually "For sale".

> Note

If an article that has article variants is itself marked as "On sale", this automatically applies to all its variants, regardless of whether they themselves have been marked as "On sale" in the Article variants table.

When entering an item marked for sale in a purchase request/order, the user receives a notice that this is just such an item.

The order or request can be processed by default, as this is only a message.

The planned receipt is also displayed in the availability overview of the article.

Minimum order quantity and purchase lot size

If a company works with the order worksheets function, the lot sizes in which an item can be purchased can basically be controlled on the item card or the inventory data. However, if an item is ordered from several suppliers and their minimum order quantity and purchase lot size are different, this can no longer be mapped in the Microsoft Dynamics Business Central™ standard. In addition, if the minimum lot size is entered, no information is sent to the user when he manually enters a purchase order for this item. This is solved in KUMAVISION trade365 by the function of the minimum order quantity and purchase lot size per supplier.

Basically, if you work with minimum order quantity, purchase lot size and stock/receipt lot size, these sizes must be maintained in dependence on each other. The minimum order quantity must always be a multiple of the purchase lot size. If you also work with the stock/receipt lot size, this must correspond to the purchase lot size or the minimum lot size.

Minimum order quantity

The minimum order quantity is used in the article/supplier catalog to control per supplier how large the smallest quantity to be ordered may be. If, for example, the supplier requires a minimum purchase quantity of 1,000 pieces, 1,000 is entered here.

The minimum order quantity has no effect on the order worksheets. The purchase order worksheet is controlled for the minimum order quantity via the min. lot size field.

However, the purchase order worksheet will check if a minimum order quantity exists for this vendor if

- Manually entered the field quantity
- Manually the creditor no. is entered.

A corresponding warning message is issued by the system. This message is a warning message, not a cancellation message. I.e. a smaller quantity than the minimum order quantity can be ordered. If the smaller quantity is ordered from the order worksheet, a note will no longer appear.

The check for the minimum order quantity is also performed when an order is entered manually.

Here it is checked if:

- The field quantity is entered
- The field Variant code is entered (even if the article with variant obligation is entered via the matrix window).* The reference number is entered
- The unit is entered.

The system also checks for the supplier's minimum order quantity when a purchase order is released from a blanket purchase order.

If an item with minimum order quantity is a related item, and the order is placed on the matching vendor, the minimum order quantity related to this vendor is displayed in the Related Item Selection window.

The minimum order quantity is primarily used to intercept manual changes. If an order for an item with minimum order quantity is created via the order worksheet without any changes, the warning message will not appear anywhere.

Purchasing lot size

The purchasing lot size corresponds to the min. lot size field. However, it controls the purchasing lot size per supplier. It has no effect when calculating the purchase order worksheet.

This is calculated based on the default min. lot size field.

However, if a purchase order is created via Execute Event Message, the user will receive an abort message if the quantity of the purchase order worksheet line is not a multiple of the purchasing lot size.

In contrast to the minimum order quantity message, the message leads to a cancellation.

If a purchase order is entered manually, or the purchase order worksheet line is changed manually in the Quantity field, the user is asked whether to round to the next larger purchase lot size, or round down.

This allows only a quantity that is a multiple of the purchase lot size to be entered and ordered.

When entering an article with a purchase lot size in a blanket purchase order, there is only a message that the quantity does not correspond to the purchase lot size. However, when the quantity of the current delivery is called off from a blanket purchase order in a purchase order, the check is performed again. If the quantity of the current delivery does not correspond to a multiple of the purchase lot size, the process is aborted and the purchase order cannot be created. If the quantity of the current delivery is entered manually, the Round to purchase lot size window appears again and you can round up or down.

Inventory/acceptance lot size

To control fixed stock lot sizes in purchasing, there is a field called "Stock lot size" in the "Stock" info tab of the article master. If a value is entered here, this article can only be purchased in this lot size or a multiple of it. The multiple always applies with reference to the storage location, per storage bin and per batch number.

If the article has variants, deviating stock/receipt lot sizes are maintained at the article variant. If no value is entered in the variant, the stock/receipt lot size from the article card is used.

This fixed inventory lot size applies only to purchasing lines that refer to storage locations that are not a quarry warehouse.

If an item is subsequently entered in the processes with a quantity that does not correspond to a multiple of the inventory/withdrawal lot size, the user receives a corresponding message.

The system offers to round up the quantity to the lot size. If you confirm the message with "Yes", the "Quantity" field of the purchase line will be rounded up. If you choose the option "No", the quantity will be rounded down to 0 pieces.

The above message always appears,

- when the Quantity field is entered in purchasing documents (except blanket purchase order).
- when the To Deliver field is entered in a blanket purchase order line.
- when the Quantity field is entered in a stock transfer order line.
  If the "Quantity" field is entered in a blanket purchase order, the user will only receive an info message without any rounding up or down function. This also applies when changing "No.", "Variant code", "Reference no.", "Storage location code" and "Unit code" if the quantity is already filled.

If a delivery that has already been posted is called off or credited to a purchase invoice, there is no longer a check against the inventory lot size, since the "crooked" delivery has already been posted.

Display of volume and weight per vendor in the order worksheet

For better planning of the purchase of items from the purchase order worksheet, you can display the total volume and total weight planned per vendor according to the purchase order worksheet.

To do this, select a line in the order worksheet whose master vendor is the desired vendor.

By clicking on Volume / Weight (Vendor) in the ribbon, the system calculates the volume and net weight of the goods to be ordered from all the lines in the order worksheet and displays the values.

Statistics on-time delivery

The on-time delivery performance of suppliers can be evaluated. Optionally, "desired date of receipt of goods", "confirmed date of receipt of goods" or "expected date of receipt of goods" can be defined as evaluation criteria. The setting which date should be evaluated is done in the "Accounts Payable & Purchasing Setup" on the info tab "KUMAVISION".

The evaluation table is called up directly at the respective vendor via the button Delivery date reliability. The table shows the number of deliveries by week or day(selectable).

It is possible to select in which time horizon the deliveries should be considered, i.e. how much deviation should be considered in the evaluation.

All deliveries that are not in the time grid are displayed as before or later.

Order worksheet without date reference

The purchase order worksheet in Microsoft Dynamics Business Central™ Standard always calculates the items to be ordered at the correct time based on demand originators and demand coverers. This leads especially in case of postponements to cancellation proposals and new orders based on the correct requirement date. In retail, the Microsoft Dynamics Business Central™ suggestion with strict date reference cannot always be implemented effectively.

For customers, who cannot reorder goods once ordered and for whose requirements in purchasing it is sufficient to get suggested goods orders and after issuing the order simply see the ordered quantity as requirement cover, without reference to goods issue and goods receipt data shifts, there is therefore an addition in KUMAVISION trade365 in the order worksheet.

In the order worksheet, the "Simplified plan calculation" can now be called up and executed via the ribbon.

Calculation of the order quantities with the simplified plan calculation

In general, all requirement quantities are totaled, as are all requirement coverages. Requirement sources in the simplified plan calculation are the same as in the normal order worksheet, i.e. also minimum stock and safety stock messages.

The planning period is always start date to end date. If the total requirement is greater than the requirement coverage in this period, an order worksheet line is created with order date = work date.

The replenishment procedures are supported:

- Fixed order quantity
- Replenish to maximum stock
- Lot-by-lot

Replenishment parameters from the inventory data have priority over the replenishment parameters of the article card analogous to the standard order worksheet.

In addition, open sales or purchase documents can be excluded for the calculation of the purchase order worksheet.

Process Simplified plan calculation

Call up the planning run as described above from the order worksheet.

This opens the options page, where the desired planning parameters are entered:

Options tab:

Field	Description
Start date / End date	The Start/End date fields limit the planning period. Within this period, the demand sources are calculated against the demand covers. The setting is selected analogously to the standard order worksheet.
Consider blanket orders	In simplified planning, blanket orders are not planned, contrary to the standard order worksheet. If blanket orders are to be demand generators, the field must be activated here.
Only released orders	In the standard order worksheet, all orders are costed as requirements originators. However, as very often only the released orders are to be planned for process-related reasons, this can be controlled by activating this field.
Only released orders	In the standard purchase order worksheet, all purchase orders are calculated as requirement covers. However, since very often only the released purchase orders are to be planned for process-related reasons, this can be controlled by activating this field.
Only released Uml. Orders	In the standard purchase order worksheet, all stock transfer orders are costed as demand creators or demand coverers. However, since very often only the released stock transfer orders are to be planned from a process-technical point of view, this can be controlled by activating this field.

In the "Articles" tab, individual articles or article groups can be filtered for planning analogous to standard planning.

When planning, the storage location filter must always be set.

As a result, the user receives a filled order worksheet. From here, as before, it can be decided which default lines will be ordered.

Minimum order value and freight limits in purchasing

For the wholesale trade an optimization of the order costs is mandatory. In KUMAVISION trade365 it is possible to consider minimum order values and freight limits of suppliers in the ordering process.

To define a minimum order value or freight limit for your supplier, call up the desired vendor card.

Enter the desired amounts on the "Delivery" info tab in the "Minimum order value" or "Freight limit" fields. The specification of the two fields for the vendor always refer to the currency of the vendor.

The values entered here are displayed in the order statistics and in the order worksheets.

Order statistics

In an order, you can view the order statistics in the ribbon > "Order" > "Statistics".

In the "Vendor" info tab, the two fields "Minimum order value" and "Freight allowance" are included. Thus, this information can be viewed directly in the order creation process. The display of the two fields "Minimum order value" and "Freight limit" in the order statistics in the info tab "Vendor" is always done in the currency of the vendor, regardless of which currency the purchasing document currently has.

Order worksheet

In the purchase order worksheet, below the proposal sheet, you will also see the minimum order values and freight limits (if any) of the vendor.

In addition, the amount already planned in this order worksheet and by the respective vendor is displayed in the Vendor order value field.

When an entered order is released, the values are checked against the freight allowance and the minimum order value. If the values fall below these limits, a corresponding message is displayed to the user.

When releasing an order, a check of the order value against the minimum order value happens only if the currency of the order is the same as the currency of the creditor.

The user can decide at this point if he still wants to release the order or not.

The minimum order value, which is stored at the vendor, is compared with the net or gross value of the order lines in the check run, depending on the setting of the switch "Purchase prices incl. VAT". If this switch is set, it is compared with the value incl. VAT of the order line and it is determined whether the minimum order value is reached. Therefore, when releasing the order, a check is only made if this switch is the same as the switch of the vendor for the order to be released. In the purchase order worksheet, the purchase prices are recorded accordingly. There is no line amount field in the order worksheet line. Here, the "line amount" is simply added, which would result from the fields quantity, purchase price and line discount%.

In case of EK price incl. VAT = Yes, the VAT amount to be expected in an order is added per line.

Note

Any existing invoice discount will not be taken into account during the check.

If the purchase from vendor and the payment to vendor differ, the settings of the purchase from vendor will be taken into account for the check run.

Manual assignment of blanket order

If a purchase order is entered manually, the user can also transfer the conditions of the blanket purchase order by assigning the blanket purchase order line in the purchase order. For this purpose, the relevant blanket purchase order no. is entered in the purchase line in the blanket purchase order no. column. The user is asked whether the purchase price and line discount % are to be taken from the blanket purchase order line.

If you confirm with Yes, the corresponding conditions will be transferred. If you confirm with No, the price of this line will be kept as entered in the order.

Time limitation of blanket orders

The blanket order can be limited in time in addition to the standard limitation of the quantity by KUMAVISION trade365. A time limit was added so that after the expiration of the validity, the conditions of the blanket order can no longer be used.

In the blanket purchase order card, the validity of the blanket purchase order can be entered in the new "Valid until" field. If the field is not filled, the blanket purchase order is considered to be valid for an unlimited period of time.

Note

The "Blanket Purchase Order: valid until" field has also been added to the purchasing lines to later control the validity of blanket purchase orders at the line level as well, if desired. Currently, the fields are not included in the respective forms and contain the values from the same fields blanket purchase order header.

Frame order Remaining quantity

In blanket purchase orders, the remaining quantity to be delivered is visible. What is not directly visible to the user is the quantity from the blanket purchase order that has already been called off in a purchase order but has not yet been delivered. For this purpose, the blanket purchase order lines have been extended by the fields "Quantity in purchase order" and "Remaining quantity less purchase order".

Container management

In overseas business, the ordered goods are usually delivered by ship or air freight in containers. The delivered containers often contain various partial deliveries from several orders.

Suppliers are invoiced by the container, as payment is usually due when the container is loaded onto the ship, i.e. when the risk is transferred.

The compilation of the individual partial deliveries by container takes place several times during the handling of the business process in Microsoft Dynamics Business Central™, e.g. when goods are received on board, when they are transferred to the bonded warehouse, when invoices are issued, when surcharges for customs and freight charges are distributed. To simplify these processes, container management is integrated in KUMAVISION trade365.

Container plant

First, containers are created with the container number. To do this, call up the "Containers" via the user search. Via "New" in the menu ribbon you can define a new container with the help of the table below.

Field	Description
Code	In this field, a unique code is assigned per container. The code can contain 20 digits.
Description	The description is used to describe the container in more detail.
External document number	In the External document number field, for example, the document ID for the container can be entered. The external document number is inherited by all documents where this container is entered.
Quantity ...Purchasing heads ...purchase lines ...Purchasing delivery heads ...purchase delivery lines ...Goods Receiving Heads ...goods receipt lines ...rearrangement heads ...rearrangement lines ...rearrangement output heads ...stock transfer output lines ...rearrangement input heads ...Stock transfer input lines	Specifies the number of document headers / document lines in which the container is used. By clicking on the number you can view the corresponding document.

In the list of containers it is possible to branch to the documents in which this container number is used. Containers can be displayed in

- Orders
- Goods receipts
- Post. purchase deliveries
- Stock transfer orders

be used.

Container in orders

Containers can already be assigned in a purchase order at header or row level. This procedure simplifies the later creation of a goods receipt consisting of different purchase orders.

To assign a container to a purchase order at the header level, first call up the desired purchase order. On the "General" info tab, you have the option of assigning a container to the purchase order in the "Container no." field.

If the container is already stored in the order header, it can be automatically entered on all lines of the order if the query is answered with Yes. This query appears only if lines are already included.

When entering the lines, the container number is automatically transferred from the header to the lines. In the order lines the container numbers can be changed manually if this goods is packed in another container.

Create goods receipt for container

Manual assignment

If the container number is not yet maintained in an order, it can be assigned via the goods receipt. For this purpose, a goods receipt is created, the container number is entered in the header and the order lines are retrieved via the available functions Get origin document or Get origin document lines.

The container number from the header is automatically transferred to the lines. When the goods receipt is posted, the container number at line level is also transferred to the posted delivery lines and is thus available for further processing.

Retrieve container to a goods receipt

As an alternative to manual assignment, by maintaining the container number in the order lines or order header, you can filter on this when executing the Get origin document or line function.

Create transfer order for container

To create the transfer order from the warehouse at the port to the customs warehouse or even the final warehouse, the necessary transfer order can be created for the Create transfer order function in the container list.

First, a page opens where both storage locations (the departure and the arrival storage location) and the transit storage location for this stock transfer are specified. By clicking OK the stock transfer order is created.

This can be accessed via the lookup on the number of stock transfer order lines.

The external document number from the container is transferred and all posted goods receipts to the issue warehouse with this container number are transferred to the stock transfer order lines.

When posting the stock transfer, the container number is transferred to the respective posted documents.

Alternatively, the stock transfer order can be created manually and the Get Container function will retrieve all purchase delivery entries for this container number.

As an alternative to the container number, the purchase order number or the vendor delivery note number can also be used to retrieve the containers.

Retrieve container in purchase invoices

To retrieve deliveries from a container into a purchase invoice of the supplier, a new purchase invoice is created and the function Get goods receipt lines is used to branch to the posted deliveries. Here it is then possible to filter on the container number.

Allocation of addition/deduction for containers

If a customs invoice or a freight invoice is subsequently posted, the costs of which are to be allocated to the delivery from a container, then the container number can also be filtered in the allocation of surcharges/deductions.

Inventory/acceptance lot size

To control fixed stock lot sizes in purchasing, there is a field "Stock lot size" on the "Stock" information tab in the article master. If a value is entered here, this article can only be purchased in this lot size or a multiple thereof. The multiple always applies with reference to the storage location, per storage bin and per batch number.

If the article has variants, deviating stock/receipt lot sizes are maintained at the article variant. If no value is entered in the variant, the stock/receipt lot size from the article card is used.

This fixed inventory lot size applies only to purchasing lines that refer to storage locations that are not a quarry warehouse.

If an item line in a purchasing document is entered with a quantity below the stock/acceptance size, the user receives a corresponding message. The system offers a rounding up of the quantity to the lot size.

The hint message always appears,

- when the Quantity field is entered in purchasing documents (except blanket purchase order).
- when the To Deliver field is entered in a blanket purchase order line.
- when the Quantity field is entered in a stock transfer order line.

If the Quantity field is entered in a blanket purchase order, the user will only receive an info message without any rounding up or down function. This also applies when changing "No.", "Variant code", "Reference no.", "Storage location code" and "Unit code" if the quantity is already filled.

If a delivery that has already been posted is called off or credited to a purchase invoice, there is no longer a check against the inventory lot size, since the "crooked" delivery has already been posted.

Inventory/acceptance lot size:

The inventory lot size at a transit storage location is not checked. I.e. a transit storage location is always treated as an "Anbruch Lager".

When entering the inventory lot size at the item, it is checked that the item tracking in sales is without serial no. Conversely, if an item tracking code with serial number requirement is entered, it is checked that inventory lot size = 0 for the item and for all item variants. The stock lot size can only be changed for the article (article variant) if there are no open article items for this purpose in a storage location with "Start of stock" = "No". This restriction also applies if the stock lot size is set to 0. The system does not check whether the remaining quantity of the open article items is divisible by the inventory lot size (since the remaining quantity could be

distributed to different storage bins). It is not checked whether the item is entered in open or released documents.

The field "Break warehouse" can only be changed at the storage location if there are no open item positions for an item/item variant with an inventory lot size at this storage location.

This restriction is also valid when setting "Break bulk stock" (so that an accidental setting of the field can be undone without clearing the entire stock).

When posting with a serial no., an inventory lot size is not allowed (check in code unit 21 "Item Jnl.-Check Line", as the error basically refers to the item master data).

In the book. sheets (articles, inventory, etc.) there is no check when entering the quantity (not even in the variant fast entry), no rounding up/down of the quantity. The verification is done only at the time of booking.

Production and assembly orders are also not checked until they are posted (code unit 21).

The combination of "controlled putaway and picking" and inventory lot size is not allowed. The check is performed in the function that calculates the stock lot size. The error message for this combination is therefore general and has no relation to the current process (manual entry of the quantity in the document, release, posting, etc.)

Country of origin in item

If goods are purchased in different countries, the indication of the country of origin on the article card alone is not sufficient. It must be possible to store this information specifically for each goods receipt at the article item. If one and the same article and several countries of origin are to be worked with at the same time, it is absolutely necessary to work with serial / or batch numbers and the corresponding information cards.

In order to use the function of storing countries of origin in the serial or batch information cards, it must be activated once in the warehouse setup.

To do this, call up the "Stock setup" via the user search. On the info tab "KUMAVISION" activate the checkbox "Country of origin per serial no./batch".

In the goods receipt document, the serial or batch numbers are entered as usual. The country of origin field is preset from the article card and can be changed if required.

The goods receipt is posted. In the article items of the article, the countries of origin are now specifically stored per serial number/batch.

This article item information can now be accessed in reports or evaluations if required.

The country of origin of the item card is always preset with the country of origin of the item card in the item tracking. However, it can be changed only if a serial or batch information card is necessary in the item tracking code used.

If the item tracking is called from the order document and the country of origin field is not updated, the data can be displayed according to the posting in the goods receipt using the Update country of origin function.

Vendors delivery bill no. in delivery lines

To improve the management of purchasing deliveries, the field "Credit delivery no." has been added to the purchasing delivery lines. If a delivery is posted in the goods receipt, the credit delivery number is transferred from the corresponding field in the order header or goods receipt header to the posted delivery at line level.

The credit delivery number is also available when calling up goods receipt lines in purchase invoices, so that the assignment of the vendor delivery to a vendor invoice is simplified.

Range planning

The classic minimum inventory planning is sufficient in most cases of retail customers. However, due to the usually very large article masters, it is almost impossible to permanently maintain this MRP parameter. The range of coverage planning functionality calculates the average consumption per day for a defined period. This value multiplied with the procurement time is then entered again as minimum stock in the article. I.e. an increasing or decreasing sales of articles is "automatically" taken into account in the MRP.

The prerequisite for this is that a so-called weighting scheme is stored for the article, in which the date formulas for the reference periods with percentage weighting are stored. The basis for the calculations of the range of coverage planning are the article items with the item type sales and consumption.

The weighting scheme can be stored at the following levels and in this prioritization:

- Article category
- Article
- Stock data

Setup weight scheme:

The weight scheme is used to measure the weighted "consumption" of an item in the Items table. Here we understand the "consumption" of the article as the sum of its article items of the Sales item type or the Consumption in production item type. The consumption of the item is measured in different time periods defined in the rows of the weight scheme. Variable periods (Date formula) or fixed periods (Fixed date) can be defined. In the case of the former, date formulas are specified for the beginning and end of a period, and in the case of the latter, a concrete start date and end date are specified. The weighting of the individual periods can be different per period. This is specified in the Weighting % field. The sum of the field over all lines of the weighting scheme must add up to 100%.

To create a new weighting scheme, call up the "Weighting scheme overview" via the user search.

Via "New" in the menu ribbon you can define a new weighting scheme with the help of the table below:

"General" information tab

Field	Description
Code	Clear meaningful abbreviation of the respective weighting scheme.
Description	Description of the weighting scheme.

"Weighting scheme lines subform" info tab

A period or several periods with different weightings can now be entered in the rows of the scheme.

Field	Description
Line type	Specifies whether a formula for calculating a date (date formula) or a fixed date is entered in the line.
Start date formula	Can only be edited if date formula has been entered in the line type. A formula for calculating a start date for the weighting is entered here. The date value that the system calculates from this can be viewed in the Start date column.
End date formula	Can only be edited if date formula has been entered in the line type. A formula for calculating an end date for the weighting is entered here. The date value that the system calculates from this can be viewed in the End date column.
Fixed start date	Can only be edited if Fixed date has been entered in the line type. A concrete date is entered here. For example, "01.01.2021".
Fixed end date	Can only be edited if Fixed date has been entered in the line type. A concrete date is entered here. For example, "31.01.2021".
Weighting %	Here the user enters the percentage with which this weighting period is to be evaluated. The sum of the lines must add up to 100%.
Description	Here the user specifies the description of the weighting line.

Assignment weight scheme

The weighting scheme can be stored at the following levels and in this prioritization:

- Article category
- Article
- Stock data

Article category

Call up the article categories via the user search. In the desired article category, you have the option of storing the weight scheme via the "Consumption weight scheme code" field.

Article

Call up the articles via the user search. On the desired article card, you have the option of storing the weight scheme on the "Planning" info tab via the "Consumption weight scheme code" field.

Stock data

In the inventory data of the item on the info tab "Planning" via the field "Consumption weight scheme code" the possibility to store the weight scheme.

Range Planning Procedure:

Range planning is carried out in the article Planning parameter proposal. You can call this up via the user search. This is a book sheet. As with other book sheets, any number of book sheet names can be created for different filling runs.

In the book sheet the data of the article are shown with or without special data for variants or storage locations. The "Calculate rows" report in the ribbon is used for filling.

The filling run passes through all articles (filtered by the user, if applicable). The user has the option of first transferring all the data to the book sheet, editing it there and then transferring the edited data to the database. One or more book sheet rows are created per article, depending on the setting in the options part of the report.

The following logic is used to determine the data when filling the book sheet and the weight scheme of a book sheet line determined in the process:

Priority 1:

Have the article and the stockkeeping data equally. If a concrete data record from the stockkeeping data exists for the article and the data for the used storage location filter and article variant filter of the book sheet line, then the weighting scheme assigned to the stockkeeping scheme is determined, otherwise, the weighting scheme assigned to the article (The determination of stockkeeping data can therefore, if these exist at all, only be successful if the used storage location filter contains exactly the code of a storage location and not a filter of several storage locations, the same applies to the article variants in analogy. The "Stock data available" field of the book sheet also shows this. If in this way a weight scheme is already determined either from the article or from the stockkeeping data, this weight scheme will be used.

Priority 2:

Then has the item category assigned to the item, if any, and the weighting scheme assigned there. If no weighting scheme has been determined in this way for a concrete book sheet line, the book sheet line will not be inserted into the book sheet during filling, because no range can be determined for the data of the book sheet line without a weighting scheme.

For range of coverage calculation, the value of the Stock field is applied as a characteristic of the weight scheme.

> Note

The stock level is the stock level of the item with the application of the used variant filter and/or used storage location filter at the moment of performing the fill run. The Stock field of the book sheet is not a calculated field. If necessary, the user can display a number of calculated fields. If required, the user can display a series of calculated fields of the article, including the current stock level.

The stock is now applied to the determined weight scheme. The result is a "Calculated consumption per day". Taking into account the "Reference date" (this comes from the field of the same name from the options part of the filling report), the result is a range (date) of the stock.

The calculation of the "Calculated consumption per day" can also be displayed visually for the user to check. To do this, click either on the drilldown arrow of the field itself or on the button Line - Range calculation in the menu ribbon. A corresponding scheme for display appears.

In addition to the range calculation with current stock and weighted consumption, the article parameter proposal also suggests new planning parameters based on these values. These can be edited in order to enter deviating data manually, if necessary. For this purpose, the read-only old planning parameters that have been transferred from the master data are displayed.

The logic of how the new parameters are derived from the old parameters is as follows:

- **The New Safety Stock is the same as the Old Safety Stock with the following exception:** In case the Lime. Consumption per day of the book sheet line is <= 0 and the user has ticked the "Delete safety stock at 0 consumption" checkbox in the options section of the filling run, the new safety stock is = 0.
- The New minimum stock level is equal to the New safety stock level plus the consumption that would result from the calculated consumption per day. Consumption per day in the time span procurement time + safety margin procurement time would result.
- The New Maximum Stock is equal to the New Minimum Stock plus the consumption that would result from the Calc. Consumption per day in the time span of the order cycle.

When filling the book sheet, it is also possible to include in the book sheet only those lines whose values in the proposed New parameters differ from the values in the Old parameters. This is done with the help of the "Show rows without changes" button in the options part of the filling run, that the user leaves unchecked in this case.

The user can now - after having manually adjusted the suggested New Parameters if required - transfer them to the master data of the article or the stockkeeping data. For this purpose, 2 functions ("Apply changes to article..." and "Apply changes to stock data...") are available, both of which act on the lines previously marked in the book sheet (Windows mark).

Sale proposal

The same fill-up as for range of coverage planning and the same prerequisites regarding the weighting scheme can be used to fill the "Article sales proposal" booklet. You can call up the article sales proposal via the user search.

The Item Sales Proposal book sheet contains the cost price and the sales price of the item as well as the contribution margin. The application fills these by the filling run with the corresponding fields of the article or the stock data (cost price only). Here, too, the values previously contained in the master data in read-only Old Fields of the book sheet are compared with the editable values in New Fields. The suggestions of the values of the New fields are always set equal to the values of the Old fields by Fillup. The user can change them manually. The user can transfer the values of the selected lines to a campaign by means of a function. This campaign will be created and the new prices from the selected lines will be set up as sales prices for this campaign. This is done via the function call "Create sales campaign" in the menu ribbon.

Alternatively, new sales prices can be calculated with the function Calculate sales prices and these are transferred to the article.

Note

The transferred prices are transferred to the Sales price field of the item, not to the Item sales prices table.

Catalog item extension BMEcat

While the active article master of a typical wholesale company basically contains about 40 - 50,000 articles, several 100,000 articles can in principle be supplied. This difference results from the fact that a company can procure all articles from the corresponding partner companies. From a performance point of view as well as from the area of data maintenance, a direct transfer of the article data of the suppliers into the article master of the company does not make sense. For this reason, the catalog management area is used for this purpose. In Microsoft Dynamics Business Central™ Standard, catalog articles should represent the so-called "shadow article master", i.e. all articles that could in principle be supplied but have never been moved.

Microsoft Dynamics Business Central™ Standard offers the possibility to read in article catalogs from suppliers via a standard interface into the catalog articles. For wholesalers, however, it is necessary not only to read in new articles, but also to make changes to the master data of the articles via import or to obtain information about which articles have been changed by the supplier, e.g. in price. This is possible for the interface BMEcat.

Procedure:

It is first read in via an import list from the input files (incl. mapping). In addition, an import proposal is available, which offers certain specifications and options for the transfer. From the import list is imported into the catalog item master, e.g. also items that have changed are marked separately.

TRADE Catalog Article Furnishings

To define the necessary facilities in advance, call up the "TRADE catalog item facility" via the user search.

The setup fields are explained in more detail below:

Field	Description
No. Format	Sets the format of the catalog item number that appears on the item card. **You can choose from:** • Credit item no. • Prod. + credit item no. • Credit item no. + Prod. • Lfd. No. • Catalog item no. • Independent No. Series
No. Format Separator	Specifies the character that separates the elements of the catalog item format, if the format uses a code and a number.
Number series	This can be used to store an internal number series for the catalog items to be imported.
Standard Article	Creation Template In this field you can define a default article creation template that will be used for the automated transfer of catalog articles into the article master.
Standard Article Change Template	In this field you can define a default article change template that will be used for automated, transfer of changes to the article master.
Use the KUMAVISION article catalog module	Activate the switch to use the "KUMAVISION Article Catalog" module.

Catalog items interfaces

Catalog item interfaces are used to define the various import formats. The call is made via the user search "TRADE catalog article interface".

BC objects are assigned to the freely storable codes and descriptions via the Object type and Object ID fields, which provide for the import of the respective data.

In KUMAVISION trade365 the report 5157138 for BMEcat import is included by default. Alternative objects could process e.g. Excel files, CSV or other separated files, XML-based formats as well as Datanorm, Eldanorm or custom formats

Catalog Articles Catalogs

Different catalogs can be stored for each catalog item interface. The catalogs are used to identify the imported data and are saved with the catalog article import or the catalog article. The catalogs can be used to name different suppliers that use the same interface, as well as to store the annual catalogs for the import.

To store different catalogs of a catalog item interface, first select the desired interface. You can define the catalogs via the Ribbon > "Associated" > "Interface" > "Catalogs".

Data mapping

A data mapping code can be assigned to each catalog article catalog. This code is used to name the respective data mapping that is to be used for the corresponding import. Field value substitutions can be made via the data mapping. For example, the value "PCE" is transferred via a supplier catalog for the unit "Piece". This can be converted into the customer-specific unit via the data mapping. The mapping itself takes place during the import.

Behind the mapping codes are the field assignments that define the individual field mappings.

A special feature applies here in relation to the article categories and product groups, since these must be set via a hierarchical assignment, the fields are to be deposited via a special area.

TRADE Catalog Article Templates

Via the "TRADE Catalog Item Templates" different formats can be defined which are used for the transfer of catalog item imports into catalog items. Thus, for example, it can be set up that a creation template is used for the creation and modification of the data, whereas another template is only used for the transfer of price changes and does not change any master data.

Importing an article catalog in BMEcat format

To perform the import, call up the "TRADE catalog item import overview" via the user search.

Via the "Actions" > "Functions" > "Import Catalog Items..." ribbon you have the possibility to select a corresponding catalog and import it.

This is followed by the selection of the file name for the import, the specification of a directory for the MIME information (images, documents, etc.) and the selection of a creditor.

Now the import run is started. And the articles are read into the "Trade catalog articles import overview".

To transfer the catalog items read in this way to the catalog item master, the "Transfer catalog item import" function is called up in the Actions menu ribbon.

The selection of the import template follows. Afterwards the articles are created or changed in the catalog article master.

Comparison report and comparison list

To get an overview of the changed or new articles of a import, there is a comparison report. The comparison report is called up via the ribbon from the "Catalog items import overview" > "Reports" > "Print comparison..." window.

The report runs over all catalog items import entries. Filters or options can still be set.

In the Catalog Item Import Log (Ribbon > "Actions" > "Functions" > "Import Log") it is recorded who has imported what and when.

Sales and Marketing

Create article reference from sales line

In retail, customers often have their own article numbers. These article numbers can be used in the "Reference number" field during order entry, provided they are maintained in the article or customer master under Reference numbers.

If these article numbers are not yet maintained, this reference number can be entered and permanently created in KUMAVISION trade365 during order entry in the respective line.

Establishment

In order to use this function, the "Insert article reference record" button on the "KUMAVISION" info tab must be activated in the "Accounts Receivable and Sales Setup".

Procedure

A sales line is recorded with the following fields:

Type	No.	Reference number	Unit	Variant code
Article	Item number	Customer article number	Article purchasing unit	(can optionally be filled depending on the article as well)

A reference entry is automatically created for this item and this customer.

If there is already a reference entry in the system for this customer and this article number, it will be displayed as soon as the field with the article number is left.

The reference entries can be called up and edited at the customer.

Order types and payment terms

Via order types on the one hand the documents can be distinguished and structured and on the other hand the behavior can be defined.

The order types exist in addition to the standard for service orders for the following documents:

- Order as sales order type
- Purchase order as purchase order type
- Stock transfer as stock transfer order type
- Production order as production order type

Distinguishing characteristics can be, for example, normal order, rush order, consignment order, external production order or also rework order.

Depending on the order type, a payment term can be assigned that overrides the customer's payment term.

To create a new sales order type, first call it up via the search.

Then the sales order type overview opens, where you can create and define a new order type using the table below via the "New" menu item.

Field	Comment
Code	Unique meaningful abbreviation of the respective sales order type
Description	Description of the sales order type
Zlg. condition code	Specifies the payment term of the respective order type. This payment term overrides the payment term stored in the customer's master data. The payment terms can be additionally changed manually in the order. When using the sales order type in the document, the payment term of the order type is entered.
Minimum DB%	Indication in %. To check for the contribution margin in the processes (VK order).
Standard	Default sales order type. This is then automatically preassigned when new sales documents are created.
Reference to recorded orders	**Note during order entry** If an order with the same combination (order type / customer / article) already exists in the system, a corresponding message appears.

Dimensions assignment

Sales order types can be assigned dimensions for later analysis, which are inherited by the documents.

To do this, select in the ribbon > "Associated" > "Sales order type" > "Assignment for current record" and/or "Assignment for selected records" for the dimension assignment.

The default dimensions card opens where you can make the assignment using the table below:

Field	Comment
Dimension code	Specifies the code for the default dimension - a selection from the Dimensions overview table is possible here
Dimension value code	Specifies the dimension value code that is proposed as the default dimension - a selection from the Dimension values overview table is possible here
Dimension value posting	Specifies how to use default dimensions and their values. **Choice between:** • Code necessary • Same code • No code

Report selection by order type

In addition to the use of order types as a distinguishing criterion and the presetting of dimensions, different printouts can be controlled for each order type. For this purpose, in addition to the selection of the actual document, the sales order type can also be selected in the report selection of sales, in order to then be able to store different reports accordingly, e.g. other order confirmations for spare parts orders.

To do this, first call up the "Report selection - Sales" via the user search.

Via the "Usage" you can first define for which document you want to make your setups. In addition to selecting the actual document in the rows via the "Report ID" field, you have the option of storing different reports according to the respective sales order type via the "Report selection order types" menu item.

As already in the standard report selection, it is also possible to store several reports in a defined sequence in connection with order types. In addition, it is also possible to refine these printouts in relation to a customer. I.e. per customer and order type different documents can be created if necessary.

Automatic display of delivery addresses during order entry

To minimize data entry errors and streamline the overall sales document entry process, shipping addresses to customers are automatically displayed for selection when a customer is selected in a sales transaction.

After validating the field "Sales to deb. no.", the system checks whether delivery addresses are stored for the respective customer. If this is the case, a list is displayed from which the clerk can select the appropriate delivery address for the transaction. If none of the displayed delivery addresses are to be used, the window can be closed by clicking "Cancel". This will not change the delivery address.

   Note

• The selection of the delivery addresses only occurs when the user enters the sales to customer no. in the sales document header - if a document is created via a function from the customer, the selection of delivery addresses does not occur automatically. • If a default delivery address is stored on the debit card in the "Delivery" info tab in the "Delivery to code" field for the customer, the system does not display the delivery address selection during sales document entry, but automatically transfers the address of the default delivery address to the delivery information.

To activate the automatic delivery address display, first call up the Customer & Sales setup via the user search.

The Accounts Receivable & Sales setup opens. Then activate the switch "Display delivery addresses in sales entry" on the info tab "KUMAVISION".

Other fields in delivery addresses

In order to override various fields in the sales document depending on the delivery address, the following fields have been added to the delivery address card of the customers:

- Seller code
- Seller code 2
- VAT Business posting group
- Business posting group
- VAT No.
- Contact (with lookup to the contacts of the customer)
- Consignment storage location code
- GLN number

If nothing is entered in these fields on the delivery address, the corresponding fields of the customer are used in the sales document. As soon as a value is entered in these fields, this field content will be set in the sales document.

By specifying the VAT. Business Posting Group, VAT ID and Business Posting Group at shipping address level, it is possible to pre-populate the appropriate VAT for deliveries abroad for otherwise domestic customers without having to do this manually on a case-by-case basis in the order. This increases the data quality in order entry. By overriding the seller codes depending on the delivery address, it is easy to implement e.g. commissions by area.

Invoice shipping address

In practice, it often happens that an order confirmation is to be sent to the customer's main company for approval, but the associated invoice is sent to an address abroad or third party (e.g. billing office).

In KUMAVISION trade365 it is possible to enter several invoice addresses for one customer for sending invoices, similar to the delivery addresses. These invoice addresses can then be used in the sales documents.

To store the invoice addresses with a customer, first call up the desired customer card.

Via the Ribbon > "More options" > "Related" > "Customer" > "Invoice to addresses", you can store several addresses for invoicing, analogous to the delivery addresses. Each billing address is identified by a unique code to be entered for each customer.

When creating the billing address, the complete address is entered including contact person and communication data. All other information regarding delivery, invoice will be taken from the customer's master record when using this billing address.

On the customer card, you can then preassign a default billing address in the "Invoice to Code" field in the "Invoicing" info tab. Invoice to Code" in the "Invoice to Code" field on the "Accounts Receivable" tab. The lookup button displays the entered invoice addresses. If you enter a default invoice address, this will automatically be taken into account in the sales documents.

However, if no standard invoice address has been stored for the respective customer, the user is shown the invoice addresses stored in the customer master for selection during sales document entry. He can then decide per document which is the correct billing address. If the window is closed with "Cancel", the address of the customer master record is transferred to the document.

In order to activate the automatic display of invoice addresses, the checkbox "Display invoice addresses in sales entry" must be activated on the info tab "KUMAVISION" in the Customer & Sales setup.

Separate collective invoice

Especially with regard to customers that have group structures, many delivery addresses are often used in the form of customer cost centers. In order to be able to split the collective invoice according to delivery addresses in this case, a new field "Separate collective invoice according to" has been included on the "Delivery" info tab in the customer master record.

This field can be used to specify for the corresponding customer that a subdivision of the collective invoice is to be made according to "Sales to deb. no." (e.g. for association invoices) or according to "Delivery to code".

In these cases, the collective invoice run will create a new invoice document for differing records in each case.

If this option field is left <empty>, no separation will be made when creating the collective invoice.

Text modules in delivery addresses

If you work with delivery-to-addresses in sales, it is necessary to print different information per delivery address in the documents. For this purpose KUMAVISION trade365 offers the possibility to create specific text modules for delivery addresses. The functionality is analogous to the document texts.

The text modules in delivery addresses are called up via the ribbon > "Addresses" > "Text modules" of the respective customer.

Enchancement of the info box in posted and archived sales documents

Similar to the Infoboxes extension in the open sales documents, the following infoboxes are also available in the posted and archived sales documents:

- Accounts Receivable Sales History - Sales to Deb.
- Sale document information
- Sale document line information

The number of documents displayed in the Customer Sales History - Sales to Customer infobox refers to the documents currently available in the system. Whereas the displayed document text refers to the posted or archived document.

Inventory/acceptance lot size

In order to control fixed purchase lot sizes in sales, there is a field called "Stock/Purchase Lot Size" on the "Stock" information tab in the article master. If a value is entered here, this article can only be sold in this lot size or a multiple of it. The multiple always applies with reference to the storage location, per storage bin and per batch number.

If the article has variants, deviating stock/receipt lot sizes are maintained at the article variant. If no value is entered in the variant, the stock/receipt lot size from the article card is used.

This fixed inventory lot size applies only to sales lines that refer to storage locations that are not a quarry warehouse.

If an item line in a sales order is entered with a quantity below the stock/acceptance size, the user will receive a corresponding message. The system offers a rounding up of the quantity to the lot size.

The hint message always appears,

- when the "Quantity" field is entered in sales documents (except the blanket order).
- when the "To be delivered" field is entered in a blanket order line.
- when the "Quantity" field is entered in a stock transfer order line.

If the "Quantity" field is entered in the blanket order, the user only receives an info message without any rounding up or down function. This also applies when changing "No.", "Variant code", "Reference no.", "Storage location code" and "Unit code" if the quantity is already filled.

If the stock/receipt lot size is only changed after an order or quotation has already been created, this is checked again when releasing, posting and creating an order from a quotation.

An error message is issued in each case.

If an invoice is created and deliveries are called off there, there is no longer a check for the purchase lot size when the invoice is posted, since this has already been delivered. The same applies to credit notes for complaint lines.

Reservation in connection with replenishment lead times

If companies work with the "Reserve" function, then reservations can be made, for example, in sales for outstanding orders or also for warehouse stock. If existing stocks are reserved for orders whose goods issue lies far in the future, so that the goods can be procured in this period, an unnecessary amount of stock is built up when reserving, which ties up capital.

Therefore, in KUMAVISION trade365 the possibility of reservation can be limited to the respective replenishment times of the articles.

Example:
Today is 01.09.2021. An order is entered with goods issue date 13.09.2021. The article has a replenishment lead time of 10 days, so it can be procured today on goods receipt 10.09.2021. In this case it is unnecessary to reserve the stock.

In order to prevent such reservations the procurement periods must be maintained on the article and the function must be switched on in the Accounts Receivable & Sales setup with the switch "Check replenishment period on reservation" on the info tab "KUMAVISION".

Note

If no procurement time is stored in the article and at the same time the switch is activated in the Accounts Receivable & Sales setup, the article can never be reserved. Unaffected by this setting are also articles that are set to Reserve Always. These are always reserved regardless of the replenishment period.

If the procurement period is exceeded with the goods issue date of the order line, the user receives a corresponding message when reserving.

Time limitation of blanket orders

In the case of blanket orders, there is not only a quantity limit, but also a time limit to prevent the conditions of the blanket order from continuing to be used after the validity has expired.

For the time limitation of blanket orders, an additional field "Valid until" is inserted in the blanket orders and provided with a function. An error message is issued during manual retrieval.

> Note

The field "Blanket order:
valid until" has also been added to the sales lines in order to be able to control the validity of blanket orders at the line level later on, if desired. Currently, the fields are not included in the respective windows and contain the values from the blanket order header.

Blanket order Remaining quantity

In blanket orders, the remaining quantity to be delivered to the customer is visible. What is not directly visible to the user is the quantity from the blanket order that has already been called off to an order but has not yet been delivered. For this purpose, the blanket order lines have been extended by the fields "Remaining quantity in order" and "Remaining quantity less order.

Sale items

Sales articles are articles that are being discontinued from the product range. They can either be articles that are no longer reordered by the company or articles that are no longer supplied by the supplier. In order for the sales department in wholesale to be aware of this when entering orders for these articles, there is a sales message through the system with the availability check.

A sales item can be either an item itself or variants of the item.

To mark an article or an article variant as a sale article, first call up the desired article card.

On the "Item" info tab, you can mark the item accordingly by activating the "For sale" button.

Alternatively, you can mark each variant by checking the "For sale" checkbox for the corresponding variant. Article variants can thus be marked individually "For sale".

> Note

If an article that has article variants is itself marked as "On sale", this automatically applies to all its variants, regardless of whether they themselves have been marked as "On sale" in the Article variants table.

When entering an item marked for sale in a sales order, the user receives a notice with the availability message that this is just such an item.

Any existing orders for this item will not be displayed for items marked for sale in the availability check. Planned receipt is always set to 0, as it cannot be guaranteed that this order will still be delivered.

Note

If an order exists for this item, it will not be included in the availability message if the delivery date of the order is later than the delivery date of the order.

If the desired delivery date of the order is earlier than the planned goods receipt, an "Earliest availability date" is displayed.

No residues on sale

There are customers who do not want an order to be re-delivered. Only what can be delivered in one shipment should be delivered from the ordered goods, the rest of the order is reordered by the customer.

For this requirement, KUMAVISION trade365 has the function "No residues in sales".

Establishment

To set this up, first call up the desired customer who does not want a subsequent delivery.

Then activate the "One-time delivery per order" checkbox on the "Delivery" info tab.

Use in process

One time delivery per order

If you then enter a sales order for a customer with the "One-time delivery per order" checkbox enabled, the "One-time delivery per order" field will be transferred from the customer master record to the order. The field is editable in the sales documents. I.e. it is possible to allow one-time exceptions from the default setting of a customer.

If there is subsequently a quantity deviation of the "Quantity" field from the quantity to be delivered / invoiced, the system automatically reduces the quantity when posting and sets the order to completed.

If you work with logistics in goods issue / picking for a one-time delivery, the quantity of the respective item is also reduced in the order by posting the delivery.

The posted delivery of the order contains the field "Order quantity original". Here, the originally ordered order quantity is displayed and recorded, which enables later evaluations of the delivery capability.

Orders with one-time delivery are not automatically deleted when the invoice is posted. To delete these orders, the standard function "Delete completed orders" is used.

The logic for the one-time delivery can not only be set for the complete order as described above, but also per order line differently, if e.g. only for a certain article of the order is not subsequently delivered, but for all other articles of the order is subsequently delivered. To do this, set the "One-time delivery per order" checkbox.

Note

The setting Shipping type:
Complete delivery and additionally One-time delivery = Yes exclude each other. With complete delivery, the system expects that the order quantity is also completely available.

One time delivery for direct delivery

If an order with one-time delivery and an order via the direct delivery function are linked, the user is informed about the one-time delivery of the order when processing the order.

If the quantity of the order line is changed manually before posting the delivery, nothing changes to the usual procedure of direct delivery. The user is asked whether the order should also be reduced.

However, if the quantity of current delivery of the order line is reduced, the user receives the information that in the related sales order line the field "One-time delivery per order" is set and neither in the order line nor in the order line the quantity is automatically adjusted to the delivered quantity.

This means that the quantities must now be adjusted manually here. This note is only made in the purchase order, not in the goods receipt or in the putaway, since with direct delivery only the purchase order is always worked with.

Detailed prepayment invoices / credits

The standard "Prepayment" function is used to pre-bill part or 100% of the order value to the customer. The prepayment amount can be calculated as a total amount ("Compress prepayment") or per order item. However, information about the item, unit price and unit is lost, because in the standard the corresponding G/L account of the accounting is printed.

In KUMAVISION trade365 there is therefore the possibility to enrich the prepayment invoices and credit notes with detailed information. For this purpose, the switch "Detailed information for prepayment" has to be set in the Accounts Receivable & Sales setup on the info tab "KUMAVISION". In the sales order, the "Compress prepayment" checkmark must not be set in the Prepayment tab.

Now, when a prepayment invoice is posted to the customer and printed, it contains the same detailed information as a normal sales invoice.

Consignment processing

Via the consignment stock control, the user is able to manage an "external warehouse" at his customer's site and to settle the consumption on the part of the customer.

Since the goods at the customer storage location remain the property of the user until resale to the end customer, the goods must be properly distributed to storage locations within Microsoft Dynamics Business Central™.

Example of application-side flow :

The consignment warehouse is "initially loaded" by transfer order, e.g. from the user's main storage location (MAIN) to the customer's consignment warehouse (KONSI).

The customer consumes / sells these goods. The consumption is reported by the customer to the user. This can be done either by sales reports or new orders.

Within Microsoft Dynamics Business Central™ an order/invoice is now created for the customer with corresponding positions. If the field "Consignment storage location code" is filled in the customer, the consignment warehouse is used as storage location for the sale after user query.

The order lines automatically receive the storage location "consignment storage location code" from the header as the preliminary storage location.

The delivery of the order is posted and invoiced (either by individual or collective invoice). Thus the stock / stock value on the consignment stock is reduced and the consumptions are invoiced to the customers. This process also ensures that items requiring batch or serial numbers are handled properly.

When posting the delivery, a new stock transfer order for the consumed items is automatically created in the background of the application after a user query ("Do you want to replenish the consumed goods at the consignment warehouse?"), so that the stock of the consignment warehouse is replenished without any further manual effort and without explicit logistical interventions (standard logistics expansion stages are used).

Establishment

Consignment stores

To set up a consignment store, first call up the "Storage locations" via the user search.

Via "New" in the menu ribbon you can create a new storage location as usual.

The following fields must be additionally set up for the consignment store on the "General" info tab:

Field	Description
VK Consignment Camp	Activate the switch to indicate that the storage location is a consignment store.
Consi. Apportion. from code	Enter the storage location code in this field from where consignment stocking is to take place. This entry is necessary for the stock transfer.

Note

In the storage location map, certain storage locations can be marked as sales consignment warehouses (field "Is sales consignment warehouse" = Yes). In addition, a defined storage location can be set up in the "Consi. stock transfer from code" field for stock transfers to it for replenishment. If no "Stock transfer from code" storage location is defined, the stock will be transferred from the customer storage location or the standard storage location.

Debtor

In order to assign the consignment storage location set up to the desired customer, first call up the customer card.

Then enter the corresponding consignment warehouse on the "Delivery" info tab in the "Consignment storage location code" field. If a storage location is entered here, it is considered the consignment warehouse of the customer. A unique assignment of a consignment storage location to exactly one customer must be maintained.

Alternatively, a consignment location can be assigned to a single delivery address of the customer in the .

To do this, call up the "Deliveries to addresses" via the ribbon > Associated > Customer and enter the corresponding consignment warehouse in the "Consignment storage location code" field.

Note

If a consignment storage location was assigned to a delivery address, this has a higher priority than the assignment on the customer.

For a quick overview, it is possible to call up the overview "Articles by storage location" filtered according to the "Consignment storage location" stored in the customer card from the customer card via the menu item "Belonging" > "History" > "Article stock by consignment storage location".

Relocation routes

Set up the stock transfer routes accordingly for consignment stocking. To do this, call up the "Stock transfer routes" via the user search. For more information on the stock transfer routes, refer to the [Microsoft Dynamics Business Central™ Helpsite (F1)](#).

Stock posting setup

In addition, the G/L accounts for the consignment warehouse must be entered in the warehouse posting setup. To do this, call up the "Stock posting setup" via the user search. For further information on the warehouse posting setup, please refer to the [Microsoft Dynamics Business Central™ Helpsite (F1)](#).

Article

On the respective article card you have the possibility to display articles in consignment storage location via the menu ribbon > "Belonging" > "Availability" > "Article by storage location". As soon as you set the switch, only the storage locations with "Is consignment stock" = Yes will be displayed in the storage location overview.

In addition, you can set up the inventory data as usual.

Consignment processing on the customer side

When entering a customer in the field "Sales to customer no." in a sales order or a sales invoice, the system checks whether a consignment storage location is assigned to the customer in his customer card. If this is the case, a query is made as to whether a consignment issue is to be processed.

If the user confirms this query with "Yes", the consignment storage location assigned to the customer is entered in the sales order header in the new field "Consignment storage location" and this consignment storage location is entered in all sales order lines of the sales order in the field "Storage location" (issue warehouse).

Note

If the storage location is changed in the Delivery to code field, a query is issued. The storage location in the sales order lines is editable as in the standard, i.e. a storage location different from the consi storage location of the order header can be entered in the respective lines.

There is a corresponding availability check based on the storage location when the items are entered. After posting the delivery (from the sales order or from the goods issue), the system checks whether at least one line to be delivered contains the consignment storage location from the sales order header as a storage location. If this is the case, a query is sent to the user asking whether the consumed goods should be replenished at the consignment warehouse.

If this query is confirmed, a stock transfer order is created for the consignment storage location from the sales order header with the delivered lines of the order as items.

When creating a stock transfer order for consignment storage locations, the system checks that the selected consignment storage location is assigned to only one customer. If this is not the case, the system terminates with an error message.

Note

For this functionality (creating the stock transfer orders) it is necessary to set up the various stock transfer routes, as the transit storage location codes are required for the stock transfer orders.

In the stock transfer order, the following fields are filled according to the sales order:

Field	Description
Apportion. by code	The consignment storage location is entered in the stock transfer header and stock transfer lines.
Quantity	If the "Quantity to be delivered" from the sales order line (i.e. the quantity just delivered by the current delivery) is in the stock transfer lines
Apportion. from code	**Is determined in the following hierarchy:** The stockkeeping data of the article with the storage location code of the consignment storage location are checked. If the corresponding storage data are found, the "Stock transfer from code" storage location stored there is decisive as the issue storage location. In the second step, the system checks whether a storage location code is stored in the "Cons. Stock transfer from code", if necessary this is defined as issue storage location. If necessary, the next step is to check whether a storage location has been assigned to the customer. If none of the preceding hierarchy levels apply, the standard storage location is defined as the issue warehouse. If the determination of the storage location in this 4-step hierarchy search did not result in a storage location for the article, no stock transfer line is created for the sales line. So, if the corresponding stock transfer lines could not be created for all article lines of the delivery, a corresponding message will be issued at the end. If several stock transfer orders have been created (because different \ have been determined for the different items), a message with the first and the last no. of the newly created stock transfer orders is issued and the overview of stock transfer orders with the newly created stock transfer orders is opened.

In the stock transfer order, the two fields External document number and Your reference can be filled manually. Data contained there will be printed in the logistics documents. This allows detailed information about the customer order on a delivery bill or in the EDI message.

Notes on consignment processing during printing

If the document lines with the consignment storage location exist in the sales order (storage location of the sales line is the same storage location from the "Consignment storage location" field in the sales header, the warning that at least one document line with the consignment processing relevant storage location exists for the order is issued before the sales order confirmation is called.

The same check is performed with a message also in the goods issue when printing the document, as well as in the document "Posted sales delivery".

In report 208 "Sales delivery bill" a corresponding note has been added to the respective delivery line for consignment.

Archiving reasons sales documents

Sales documents can be archived for different reasons. The system archiving reasons are automatically written to the archive.

Archiving reasons for offers:

- Manual
- Delete
- Print
- Offer according to order

Archiving reasons for orders/sales complaints:

- Manual
- Delete
- Print
- Booking

Archiving reasons for blanket orders:

- Manual
- Delete
- Print

Follow-up task for offers

In standard Microsoft Dynamics Business Central™, when printing a quote, the user is always asked if he wants to create a follow-up task for the quote. Customers who do not work with the task management do not need this query. Therefore, in KUMAVISION trade365 the follow-up task is always disabled when printing a quotation. It can be reactivated by setting up "Enable follow-up task" in the Accounts Receivable & Sales setup.

Periodic billing

In standard Microsoft Dynamics Business Central™, customers can be assigned a "Collective Invoice" identifier. With this, collective invoices can be created. However, not in intervals, but always only in manual accrual of posted delivery dates. In companies, however, there are various constellations of how a company can issue its invoices to the customer. Collective invoicing at fixed intervals, collective invoicing for an order with the last delivery for this order, immediate invoicing, etc. In order to take these possible constellations into account, the invoicing can be handled using the "Periodic Invoice" function. This function issues invoices to customers as agreed with the customer.

The periodic billing cannot be used in combination with prepayment invoices. In case of prepayment, the prepayment invoices must still be posted manually.

Establishment

The setup for periodic billing is mainly done on the customer card. To do this, you first call this up.

The possible setups of periodic billing are explained below:

Collective invoice (period)

For the collective invoice (period), make the following setup on the desired customer card:

"Invoicing" information register

Field	Description
Invoicing type	For the collective invoice (period), the "Invoicing type" field must be set to "Collective invoice (period)".
Invoicing rhythm	The "Invoicing rhythm" field must be set to "Periodic" for the collective invoice (period).
Invoicing interval code	In the "Invoicing interval code" field, the corresponding interval code is stored. For example 2W
Next billing date	The Next billing date field is calculated automatically by the system. When setting up the customer, it must first be set for the first invoice interval.

"Delivery" information register

Field	Description
Collective invoice	The "Collective invoice" switch must be active.

If the periodic billing document is now created, all posted deliveries of the customer are retrieved in a new sales invoice, which are currently pending for billing. See also Periodic billing process. Depending on the billing date of the periodic billing document and the next billing date on the customer, the delivered items are retrieved into a collective invoice. If the next billing date has not yet been reached, the collective invoice will not be created.

Invoice per order (period)

The setup is analogous to the setup for collective invoice (period). Only in the field "Invoicing type" the option "Invoice per order (period)" is set. All other settings must be made in the same way.

In the Periodic billing run, all deliveries of an order that lie within the billing period are now combined into one sales invoice. One collective invoice is thus generated per order per billing period.

Invoice per order (last delivery)

This setting is about invoicing per order, i.e. not combining multiple orders into one invoice. However, the invoice is generated only after the order is completely delivered. If the order still contains an item with remaining quantity, it will not be proposed for billing in the periodic billing.

The required customer is set up as follows:

Invoicing information register

Field	Description
Invoicing type	For the invoice per order (last delivery), the "Invoicing type" field must be set to "Invoice per order with last delivery".
Invoicing rhythm	The "Invoicing rhythm" field must be set to "Immediately".

"Delivery" information register

Field	Description
Collective invoice	The "Collective invoice" switch must be active.

Invoice per delivery bill

The setting Invoice per delivery bill corresponds to the procedure of manual posting Deliver + Invoice. A sales invoice is generated for each delivery posted by the customer.

The following settings are to be set up on the customer:

"Invoicing" information register

Field Description Invoicing type For the invoice per delivery bill, the "Invoicing type" field must be set to "Invoice per delivery bill". Invoicing rhythm The "Invoicing rhythm" field must be set to "Immediately".

"Delivery" information register

Field	Description
Collective invoice	The "Collective invoice" switch must be active.

Periodic billing process

To trigger the periodic billing, first call up the "Periodic billing log" via the user search.

To create all invoices for the current day, call up the "Execute periodic billing" menu item from the ribbon.

The execution screen for periodic billing opens where you can set the following filters for executing the billing:

Options tab:

Field	Description
Posting date	Posting date for the invoices to be posted
Replace posting date	Yes replaces the posting date of the created sales invoices with the posting date from the options.
Replace document date	Yes replaces the document date of the created sales invoices with the posting date from the options.
Calculate invoice discount	Yes calculates the invoice discount for the customer in the generated document.
Invoicing date	This date is checked for the collective invoices to be created or invoices per order that are settled periodically. If the billing date from the options is not identical or is greater than the Next billing date on the debit card, no sales invoices will yet be created for the customer in question.
Update next invoice date for customer	The next billing date field of the customer card is entered based on the billing interval. This is done regardless of whether invoices are currently being created for a given customer. As soon as it is in the filter of customers to be passed through, its invoicing date will be updated.
Post invoice	Yes causes the generated sales invoice to be posted directly.
Print booked invoice	Yes causes the posted sales invoice to be printed on the Windows default printer.
Delivery date filter	Specifies the period of time to search for posted deliveries in order to create sales invoices.

Customer tab and Sales order tab:

If filter criteria are entered in these two tabs, they will be taken into account when the "Execute periodic billing" function is run. For example, only orders from a specific customer. Only orders without prepayment, etc.

After you have made your filters, confirm your input with "Ok" to execute the periodic billing.

All invoices that have been created are set in the "Periodic invoice" overview. Green marked rows are posted invoices. Yellow marked lines are set invoices that have not been posted yet. Red marked rows are invoices that could not be posted due to error messages. In this case, the errors must be corrected manually and the invoices must be posted manually.

The posted and unposted documents can be opened from the overview. In addition, the messages due to which a posting could not be made are displayed in the error log.

The error text can also be called up separately in the menu ribbon under [...] - "Actions". In addition, the actions for deleting older entries are also located under this menu item.

In the ribbon under [...] - "Related" the report "Adjust periodic billing settings at customer" can be called.

This allows the Next invoicing date to be overwritten or reset on the customer card. With the type "Fixed date" a new fixed invoicing date, e.g. 01.01.2021, is entered manually. With the type "Date of last invoice" a new next invoicing date is calculated based on the last invoicing date of the customer and his invoicing interval and stored on the customer. In the "Customer" tab, the selection of customers to be processed can be limited.

When periodic billing is run, sales invoices are created, it is not posted directly from the order. The effect of this is that orders that have been fully billed using this function are not automatically deleted on completion. They are only displayed in the overview as fully billed.

To delete these orders from the system, the "Delete completed orders" report must be run at regular intervals.

Dispatch of reminders incl. associated invoices

For the end customer, it is easier to process reminded invoices if the invoices are sent directly to him together with the reminder. In addition, this eliminates the need for the end customer to request invoice documents that can no longer be found. Therefore, in KUMAVISION trade365, when printing or sending registered reminders by e-mail, the corresponding invoices are printed automatically.

If the reminders for a customer are sent by e-mail document dispatch, the invoices are integrated as PDF documents in the e-mail document. When printing at the printer, please note that the reminder and the attachments are each printed on the printer set up in the printer selection. This leads to the fact that with PDF printing (not with e-mail document sending) the reminder is generated as PDF, but the attachments to it on the standard printer set up at the user.

Long-term supplier declaration

For deliveries to recipients within the European Union, certificates of the originating status of a good must be issued per long-term supplier's declaration. And this in terms of a preferential arrangement maintained by the European Union. In order to generate a Long Term Supplier Declaration based on the underlying item sales in Microsoft Dynamics Business Central™, a new report Long Term - Supplier Declaration has been developed in KUMAVISION trade365.

Establishment

For the Lanzeit supplier declaration, some basic setups must first be made, which are explained in more detail below:

Accounts Payable & Purchasing Setup

Call up the "Accounts Payable & Purchasing Setup" via the user search. On the info tab "KUMAVISION" you have the possibility to enter a text for the printout for the European countries of origin in the field "European country of origin text".

Countries / Regions

In the countries/regions list, the countries of the European Union are marked. To do this, call up the "Countries / Regions" list via the user search. In the "European Union" field, place a check mark next to the countries that belong to the European Union.

All countries marked here, are supplemented in the report edition with the text for European countries of origin.

Article - Preferential countries assignment

Since there is no uniform rule for the assignment of articles to the preference rule, the respective preference countries for a particular article must also be stored there. The countries stored on the article are listed in the long-term supplier declaration.

To make this assignment, first call up the desired article card. You can call up the preference country table via the "Belonging" > "Article" > "Preference countries" ribbon. All valid preference countries for this article are entered in the table.

Execution of the report long-term - supplier declaration

The Long-Term Vendor Declaration report can be accessed from the Accounts Receivable list or from the User Search.

Basically, the report checks items for a given customer in a given period of time and creates a long-term vendor declaration for the items sold to the customer in that period of time.

To run the long-term supplier declaration, access it first. The criteria for executing the report are explained in more detail below:

Register languages:

Here you can select in which language the supplier declaration should be created. You can choose between German or English.

Register Customer:

Field	Description
Debitor no.	Enter here the customer no. for which you want to create the supplier declaration.
Contact no.	In this field you can specify a contact person to be printed in the report.

Register goods delivery date:

In the tab "Goods delivery date" the filter for the posting period of the article items is entered. I.e. all articles from sales article items of this customer in the posting period From to will be listed in the long-term supplier declaration.

Register validity period:

In the Validity period, enter the validity period with Valid from date and To date, which will be printed on the report.

Accumulation tab:

If there are items for which the cumulation indicator must be specified because a component of the item was manufactured in Morocco, for example, even though the item itself has a region of origin within the EU, the indicator must be checked when the report is run.

If you have made all the entries, you can first view the supplier declaration via "Preview" or send it or print it out in advance via "Send to" or "Print".

If you have activated the "Cumulation" check box, the input table for the articles with cumulation notes will appear first. If the checkmark is not set, this table will be skipped.

In the table "Cumulated articles" all articles are entered, for which you have to indicate a cumulation note in the Lanzeitlieferantenerklärung. The selection of the articles is done via the lookup in the field article number. Then the country of origin for the cumulative remark is entered.

If the customer has now purchased the item in question in the selected period, an accumulation note will be entered for this. Marketing

Extension profile questionnaire

When categorizing contacts, it may not be sufficient to use the fields or profile questionnaire functionalities provided by the Microsoft Dynamics Business Central™ standard.

For example, if the number of possible answers to a question of the profile questionnaire is too large (E.g. year numbers or not only a number of employees range, but the exact number of employees), the usability is no longer given. In KUMAVISION trade365 the profiles of the CRM are extended in such a way that not only an answer can be selected, but also values can be recorded when answering.

In addition, once selected answers can be saved in a history table so that it is always possible to see which answers were given and when. The current value must always be displayed in the profile questionnaire and in the display of answers in the contact's rows.

When setting up the profile questionnaires, two additional columns have now been added. The column "Answer type" defines how the user's input should look like. Until now, only a yes or no answer was possible. Now answers can also be entered as a numerical value (with/without decimal places) and as free text.

The selection option for this is:

- Integer
- Decimal number
- Text

An entry of, for example, "3.5" is not yet meaningful. By means of the "Response unit code" column, the entered number also receives additional significance, e.g. 3.5m³. This unit can be used for preconfiguration. The unit codes set up in the system are available.

The operation of the questionnaire is the same as before. For "Yes/No" answers, the corresponding column can simply be clicked. For free text answers and/or the recording of numbers, the value is entered in the "Answer" column.

If a user places a check mark in the "Selected" column to select this answer, he or she will receive a message that a text or number answer must be entered in this row.

The responses made will then be displayed in the contact management - map in the lines as an overview.

When creating a segment, the values entered in this way can be filtered. The user selects his addresses according to the criterion Profile questionnaire and can specify the desired answer text of a line.

Archiving the answers of a profile questionnaire

If the information in the profile responses for a contact changes, the user can archive the "old data". The archiving of the answers is done manually. The user opens the desired profile questionnaire. There in the menu ribbon "Belonging" he can call this menu item and archive the answers.

When archiving, the work date is also written.

> Note

Changing a once archived answer in the profile questionnaire is only possible if the question for "Multiple answers possible" is activated.

Once archived answers can be viewed again via "View archived answers". The last version is automatically called up. It is possible to access all versions of the answers at any time via the "Version number" field.

Create segments with reference to service information

The segments in the Marketing section are used to create address lists. In segments contacts can be added and removed. In addition to the standard criteria areas such as Contact, Profile, Value Items, etc., in KUMAVISION trade365 it is also possible to tap information from the Service area to create segments with contacts. This can be used to generate address lists of customers who own service items whose warranty date is about to expire, in order to be able to offer you follow-up contracts. Or alternatively, customers can be targeted based on service contract information.

Procedure

Create a new segment. Add new contacts. If information from the service item or service contract is to be accessed, the respective switch must be activated in the options of the request page. If segments are created based on contacts, the switch in Consider contacts must be enabled.

> Note

For the Consider service items option, only contacts of the Company type are added (Customer contact). The Extend company etc. options work only for the Consider contacts option. For the Consider service contracts option, the contacts that are listed in the Contact no. field in the service contract header are listed. These can be persons or companies.

Warehouse and Logistics

Delete goods issue / goods receipt for partial delivery

In the logistics modules goods issue and goods receipt there are always documents that have been partially delivered. For a better overview for the warehouse management or the warehouse staff, KUMAVISION trade365 offers the possibility to delete these partially delivered documents in the goods issue as well as in the goods receipt.

Delete goods issue function for 2-step outbound logistics

If you work with 2-step logistics in goods issue and you want to clean up the goods issue document already when creating or registering the picking, you can use the Delete goods issue function.

This is used when a pick is created from goods issue and no pick lines are created for one or more lines of the goods issue (e.g. because there is no availability) then the corresponding goods issue line is deleted.

The setup for this is done in the logistics setup. Call it up via the user search and activate the "Delete goods issue (comm.)" field on the "General" info tab.

The goods issue line is only deleted if there is no quantity in the pick and no quantity is confirmed by a registered pick.

If a goods issue has been posted and after this posting process lines remain in this goods issue and there are no pick lines for these lines and no quantities have been confirmed from picking that have not yet been posted as goods issue, then these lines are deleted from the goods issue.

For this purpose, there is the field "Delete goods issue (book.)" in the logistics setup with the following options:

- empty -> no effect on the posting of a goods issue
- Delete rows -> Rows that meet the above conditions will be deleted.
- Delete lines + header -> Lines that meet the above conditions are deleted and if there are no more lines in the goods issue, then the entire goods issue is also deleted.

Clean up goods issue or goods receipt reports

As an alternative to the above procedure, which only affects the goods issue, the respective report for clearing the documents can be used instead, both for the goods issue and for the goods receipt. These reports have to be included per task queue and delete e.g. at the end of the day all existing goods issue or goods receipt lines incl. header, if they contain lines with remaining quantities.

ID	Report Name
5157185	Adjustment goods issues
5157186	Adjustment goods receipts

Note

In the case of 2-step logistics, picks with remaining quantities may have to be deleted manually; these are not taken into account by the report.

Storage location lock

Storage locations can be blocked for bookings if they are no longer to be used. To do this, first call up the "Storage locations" via the user search.

Open the desired storage location card. Activate the "Locked" button on the "General" info tab to lock the storage location for bookings.

Storage location determination per article and user

For articles which, for example, are exclusively available in a dangerous goods warehouse or for certain employees in another warehouse, only this storage location will be proposed for these articles during sales document entry.

For this purpose, a storage location can be defined per item or per item and user. By default, a customer is assigned a storage location from which it is normally supplied. By defining a storage location per article or article and user in combination, there is the possibility to always deliver certain articles only from a certain warehouse regardless of the customer's settings. In the article card, the user setup as well as the storage location card, a storage location can be assigned to each article and user via the menu item "Article-user-storage location assignment".

If an article is assigned a storage location without a user, this assignment is valid for all users and therefore always when the article is used in a sales document.

To permanently assign an article to a storage location, the article-user-storage location assignment is opened on the article card via the call:

Item-User-Storage Location Assignment. Only one storage location is then entered without user assignment.

When setting up via the user, the items are entered with a storage location, the assignment to the user is filtered in advance

To assign an article from the storage location, only the article number is entered in the article-user-storage location assignment. If an article is to be assigned to a storage location and a user, the user is also entered. The assignment to the storage location is pre-filtered here. The storage locations assigned in this way are taken into account in sales documents during storage location determination.

Note

However, this storage location is only taken into account when entering sales lines manually.

The storage location determination per document line is carried out with the following prioritization:

- Storage location assignment for items and users
- Storage location assignment for articles
- Storage location assignment for users
- Warehouse assignment from the standard (customer/unit of responsibility)

Pressure control per storage location

In order to be able to automatically create and print warehouse documents on the respective warehouse printers, it is possible in KUMAVISION trade365 to assign a fixed printer to a warehouse location, which is controlled by the system when warehouse documents are printed.

The following warehouse documents are then printed on this printer:

- Storage bin relocation
- Pick list
- Storage list
- Goods receipt
- geb. goods receipt
- Outgoing goods
- born goods issue

The setup is done via the storage locations. On the information tab "KUMAVISION" on the respective storage location card, the standard printer to be controlled can be selected for this storage location.

Colored display of articles with article tracking in logistics documents

In a company's item master, there are items with and without serial or batch number tracking. For the employees in the warehouse it is not always easy to recognize from a list of goods receipt or goods issue lines for which line a corresponding article tracking item has to be created, especially if scanners are not used.

Therefore, in KUMAVISION trade365 it is possible to set up that in the logistics documents:

- Goods receipt
- Storage
- Warehouse storage
- Outgoing goods
- Picking
- Warehouse picking

the rows with articles that require a serial or batch number input are displayed in color.

Not all fields are displayed in color, but only the origin document type, no., document line type, no., article number and description.

The setup is done in the logistics setup. To do this, call it up via the user search. On the "General" info tab, you can use the "Color for items with SN & CN" field to control how they are displayed.

The following colors are possible:

Standard	Bestellung
StandardAccent	Bestellung
Strong	**Bestellung**
StrongAccent	**Bestellung**
Attention	*Bestellung*
AttentionAccent	*Bestellung*
Favorable	**Bestellung**
Unfavorable	**Bestellung**
Ambigous	Bestellung
Subordinate	Bestellung

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Posting block for articles or storage bins in inventory

In Microsoft Dynamics Business Central™ Standard, it is possible in certain logistics constellations to post items that are in an inventory ledger sheet or inventory order.

Since this leads to complications in the warehouse management when bookings are made during inventory, a corresponding booking block for storage bins can be set up in KUMAVISION trade365. Items are generally not postable when they are in inventory, not even with 2-step logistics.

In the logistics setup it is possible to control how to proceed when posting an item that is in inventory.

The options are:

- **" " (empty):** Bookings are possible (default)
- **Message:** The user is warned that an item is in inventory and can optionally cancel the posting.
- **Error:** As soon as an item that is in an inventory and postings take place, the posting aborts with an error.

Inventory : Indicator counted

In the inventory ledger sheets there is a counted identifier. This is set by the system as soon as an entry has been made in this book sheet line in the counted quantity field.

This makes it easier for the user to process inventory lists in the inventory ledger sheet.

External Production With Provision

General

A work process that is outsourced (also called extended workbench) occurs particularly frequently in contract finishing processes and also in the assembly of subassemblies. Outsourcing is also a possible alternative to in-house processing when capacity bottlenecks occur in the company's own operations. Often, components are provided that are required for the processing of the material. In some cases, an already processed product is also provided.

In the case of external production with provision, the standard functionality of external production has been extended by a provision. The materials to be sent for external production can be defined by the provision. For logistical processing, a stock transfer order can be created from the external production order. The corresponding documents can be printed out for the posted stock transfers.

When the external production order is posted, the corresponding quantity is debited from the external production warehouse.

Establishment

The following sections discuss the setup of external production with provision. As a prerequisite for setting up external production with provision, the facilities for manufacturing/production apply. For further information, please refer to the [Microsoft Dynamics Business Central™ Helpsite (F1)](#).

Production bill of material, version

In the following, only the special features of external production with provision are discussed. As a prerequisite for setting up external production with provision, the facilities for manufacturing/production apply. For further information, please refer to the [Microsoft Dynamics Business Central™ Helpsite (F1)](#).

Inforegister lines

In the production BOM (version), the fields "Connection code" (this field identifies the component as a raw material provision relevant to logistics) and "Provision type" must be set.

- Parts are always sent to the external processor only if an order exists

Provision type option	Description	Note
Empty	No provision (Business Central Standard)	
Order-related	the goods are always sent to the external processor only if an order (FA) exists	Connection code must be maintained
Neutral	the external processor receives a certain quantity of goods in advance. When a production order is created, the external processor only receives the order for external processing. The parts to be provided are already with the supplier The issue storage location is set to the external processor (is entered at the work center group under origin storage locations)	Connection code must be maintained
Supplier	here the component is only for information ("info part") in the parts list. The supplier (external processor) takes over the procurement himself. This setting is also used if the customer provides parts. Here no stock or issue posting takes place.	No transfer to the FA

Note

A component defined on a parts list of an item can be linked to an operation by means of connection codes. In this way, it is possible to define which operation requires or consumes an item.

The connection code must first be stored in the operation before the setting for the component can be made in the production BOM. Otherwise, an error message will be displayed when trying to certify the BOM.

Work plan, versions

In the following, only the special features of external production with provision are discussed. As a prerequisite for setting up external production with provision, the facilities for manufacturing/production apply. For further information, please refer to the [Microsoft Dynamics Business Central™ Helpsite (F1)](#).

Information register: lines

Field	Description
Standard catalog code	The standard catalog code is used for external labor pricing
Connection code	Connection code selection

In the following, only the special features of external production with provision are discussed. As a prerequisite for setting up external production with provision, the facilities for manufacturing/production apply. For further information, please refer to the [Microsoft Dynamics Business Central™ Helpsite (F1)](#).

Usually, the following settings are made when creating a workstation group for external work:

Inforegister General

In the "Department code" field, the workstation group is assigned to the External work department.

Information register booking

On the workstation group, the vendor must be stored in the "Vendor no." field that performs the external work.

> Note

The product posting group defines G/L accounts which are posted during sales and purchase postings. For a better distinction it is recommended to define a different product posting group.

If you have agreed with the vendor on a different price for each process for external work, select the Special cost price check box.

Inforegister Planning

The "Unit code" field is usually set to days, since external processing is usually calculated in days.

As a rule, a separate company calendar is created for external processing.

Navigate menu tab

In addition, the external work prices and the origin storage location can be stored via "Belonging" > "Workplace group".

Determination of prices for external work

In Microsoft Dynamics Business Central™ Standard, a price for external labor (i.e. the price that is later used in the purchase order) can only be stored on the work center group card. Different prices per vendor, per scale quantity, per activity (standard catalog code) or time period dependent prices cannot be maintained.

In KUMAVISION trade365 you have your own price table for the external work orders. The prices for the external labor can be stored in different places. Thereby the entries of the external labor prices override the prices of the work center group card.

Work center group per time:

see Basic data - Production - Work center groups

Workstation group per piece:

see Basic data - Production - Workstation groups

Work center group special cost price:

see Basic data - Production - Work center groups

Third-party work prices

Prices (with the option of graduated prices) can be stored for the following combinations via the external work prices:

- Workstation group (MUST)
- Article (MUST)
- Vendor (MUST)
- Standard catalog (external work activity)
- Start and end date
- Minimum quantities (graduated quantities)
- Price units (conversion factor weight share)

The external work prices can be called from the following masks with appropriate filtering:

- Article card/list
- Workplace group card / list
- Accounts payable card / list

Origin camp location

With the origin storage locations it can be controlled which storage locations should be used for the provided goods. Either a specific article is stored per work center group or the option all articles is selected. The call of the origin storage locations is made from the workstation group map/list.

- **Type of origin:** workplace group
- **Origin code:** which specific workstation group
- **Type:** All items or a specific item
- **Code:** for specific article: Item number
- **Storage location code:** which storage location is to be controlled

Relocation routes

With the help of the stock transfer routes you have the possibility to create the link between the vendor warehouse (i.e. the warehouse of the external processor) and your own warehouse.

To set up the stock transfer routes, call them up via the user search.

The stock transfer routes overview opens. In the info tab "Stock transfer route matrix" you can now make the assignment for your own warehouse (stock transfer from code = own warehouse (e.g. BLUE)) and the vendor warehouse (e.g. external).

By clicking on the Assist button you get to the transfer route specification on which you enter in the field "Transit Code = Own-LOG". This field must be filled with an appropriate code, the other fields can remain empty if no fixed deliverer is defined.

You can then close the Stock Transfer Route Specification and Stock Transfer Route Matrix windows.

Process of external production with provision

Initial situation: Production is planned and a released FA has been created. For articles with article tracking, this should be stored with the components and in the production order

Third-party work proposal

Calculate external labor

In the external worksheets it is possible to calculate which released production orders should be sent to the vendor. Here, it is possible to filter on the workstation group, the vendor or the FA number, among other things.

The external work sheet then lists the pending external work calculated according to the filtering.

The vendor is taken from the work center group, the price depending on the stored prices. If there is already an external work for a FA, it will not be charged twice.

Work in the external work proposal

Change of the creditor:

The vendor can be changed per line (order), thus the external labor price stored in the new vendor is also used.

Perform event reporting

With the function "Execute event message" and the activated hook "Accept event message" the suggestion line can be transferred into an order. The stock transfer order can be created here with the hook activated. Lines in which the check mark is not activated remain in the external work proposal without an order being generated.

Released production order

Pursuit of the foreign work

The tracking of external labor is done at the line level in the production order. To do this, select the corresponding line and call up the "External work tracking" via Line.

The linked documents can be viewed and called up via the window called up by this function.

Order

The order is placed through the service of external production, as the necessary components for the article to be manufactured are provided to the order by stock transfer. Accordingly, the description of the item line in the purchase order does not contain the name of the item, but of the service.

The columns Third-party items, Quantity of third-party items, FA no., FA line no., Work center group no. and Work center operation no. should be displayed, since they represent the reference to production.

The article tracking of the production order is printed on the order.

The order type FREMD is automatically preset for orders from the external work proposal, but can be changed manually. This can be used to preset certain data, such as payment terms and other fields.

If the purchase order is delivered, the operation is confirmed at the same time.

Note

If this is the last operation of a production routing, it may end the production order.

Reference of a provision on the document

If an external production with provision is carried out, the stock transfer lines (provision) of the articles from the production order are indicated when the purchase order is printed.

The price of external work is printed here per piece (according to the setting in point Determination of prices for external work). If this is a tiered price of the workgroup, it will be automatically applied here and updated when changes are made.

Post delivery in the order

The purchase order is posted according to the document. As a result, the goods receipt is now posted via the manufactured goods. The stock of the provided components in the foreign storage location must now be debited (consumed). This can be done either manually or automatically (explained in Process of external production with provision and automatic posting). The article tracking of the manufactured articles must be deposited here.

When the order has been delivered, it can be seen in the released FA. With complete delivery, the released production order is now at 100%

Stock transfer

In the stock transfer header, the field Stock transfer order type indicates that this is a stock transfer of external labor.

If you do not receive a separate goods receipt message from your external processor, you should check the box Outbound automatically posts inbound*, otherwise the goods would be in transit and you would have to post the putaway to the vendor again.

If the product (semi-finished product) is also sent, the quantity is not displayed in the "Quantity" field, but in the "Quantity manufactured by third party" field.

Reason: The article has no stock yet and the stock transfer can only be simulated.

The provided items, in turn, must - in the case of the provision type Order-related - be debited from the warehouse and the provided quantity is therefore also found in the Quantity field.

The components to be added can now be sent to the paver via the stock transfer order.

Note

Check the box "Outbound automatically posts inbound" if you do not expect a separate inbound message from your external processor. Reason: When the stock transfer order is posted, the quantities are first posted to the transit warehouse via the defined stock transfer route. If you do not check the box, the receipt must be posted to the supplier subsequently. For the items to be provided, you can create the logistics documents from the stock transfer order (e.g. goods issue, goods receipt).

Process of external production with provision and automatic posting

In order to be able to use the automatic booking of consumption, the facilities and prerequisites described below are necessary. Alternatively, the consumption can also be booked manually via the consumption book. sheet, see chapter "Manual booking of consumption" below.

Establishment

Posting method in the production BOM and thus also the FA component is set to Backward.

Prerequisite

If the item has item tracking, it must be stored in the FA components.

Process

When the goods are delivered, the consumption is automatically booked.

Manual booking of the consumption

In the production book sheet, all consumption lines are displayed and can be posted manually. The actual message line of the external labor is not displayed here, since this must be posted via the purchase order.

The consumption ledger sheet can be calculated as well as entered manually.

Service

Other fields in delivery addresses

In order to override various fields in the service document depending on the delivery address, the delivery address card of the customers has been extended.

The following fields are transferred to service documents if they are maintained:

- VAT Business posting group
- Business posting group
- VAT No.

If nothing is specified in these fields on the delivery address, the corresponding fields of the customer will be used in the service document.

By specifying the VAT. Business Posting Group, VAT ID and Business Posting Group at shipping address level, it is possible to pre-populate the appropriate VAT for deliveries abroad for otherwise domestic customers without having to do this manually each time in the order.

This increases the data quality in the order entry.

Document texts in service

Basically, a standard service invoice text can be stored in service invoices created for service contracts. However, this is not sufficient if a company basically works with the functionality "Document texts" of KUMAVISION.

Text modules for customers have been extended with regard to printing on service documents. If a text module for a customer is also to be printed in the service, the corresponding checkboxes must be set.

This means that the text module for this customer can also be called up in the service.

> Note

The retrieval of article text modules in the service offer / order is not provided.

Display service item number and serial number in booked service invoices

To simplify research in booked service invoices, the service item number used in the service order and its serial number are displayed in booked service invoices.

The Service Items table can be accessed via a DrillDown.

Infobox service item receipts at the service item

For easy research on the service item for documents in which the service item is currently used, an info box "Service item documents" has been implemented. This can be viewed both in the service article list and on the -card.

The DrillDown branches to the service item lines, each filtered by service orders or quotations. The drilldown of the delivery branches to the booked service delivery lines.

Zero position in service lines

The zero position functionality described in section "Zero position" is also available in the service area.

If lines without a line amount are entered in service documents, the "Zero position" field must be set to an option that is not blank or No. The "Zero position" field must be set to an option that is not empty. Otherwise, the posting of the document will abort with a corresponding message.

Archived documents in the service

In the Service area, the documents Quotation and Order are not archived in Microsoft Dynamics Business Central™ Standard. However, since archived documents are available as standard in the sales area and are always helpful for users in their daily work, an archive was also created in the industry solution for the service documents.

Analogous to the function in the Sales area, it is basically possible to specify in the Service setup whether quotations and orders are always to be archived or only manually.

If always archived, then offer / order is always archived when the respective document is printed, deleted or posted.

In addition to automatic archiving, a document can also be archived manually using the "Archive document" function.

The service document itself shows how many archived versions of the document exist. On the one hand, the number of archived versions can be found on the "General" info tab via the "No. of archived versions" field and, on the other hand, in the "Debtor service history" info box.

The archived documents can be displayed via DrillDown.

In addition to the actual service document, the comments on the document as well as the document pre- and post-texts are also archived.

If an archived service order exists for a still existing open service order, this archived version can be restored with the "Restore" function, analogous to the same function in the Sales area.

Copy function in service

If transactions are repeated in the service, the "Copy document" function known from sales or purchasing is advantageous. This is not available in Microsoft Dynamics Business Central™ Standard in Service. The industry solution has been extended so that both documents and service items can be copied in the same way as the "Copy item" function. The function Copy document can be called up in the respective cards of the documents.

Can be copied:

- Service offers
- Service orders
- Service invoices
- Service credits
- Booked service deliveries
- Booked service invoice
- Booked service credit

Archived documents are not currently included.

As in sales, the document can be copied including the selected document header or alternatively the lines can be recalculated with current prices.

Copying a service item can be done in the service item master data. For this purpose, the service item card is opened and the "Copy service item" function is called up in the menu ribbon.

The following options can be copied:

- General service item information
- Component
- Features
- Resource qualifications
- Comments
- Warranty start / end

Create service orders from a sales complaint

If a customer returns an item based on a complaint, and upon closer inspection it is determined that the item can be repaired, a service order can be created directly from the sales complaint.

To do this, select one or more lines of the article type and choose the "Create service order" function on the "Lines" info tab.

After the function has been executed, the user is asked whether the document should be opened directly.

When confirmed with "Yes", the service order is displayed for further processing.

It should be noted that the service order does not post a delivery of the service item as such. If the claimed item is actually to be booked in and later shipped back to the customer, it must be booked in without stock valuation and likewise booked out again via an order. This is a Microsoft Dynamics Business Central™ standard functionality.

Create EK complaint from service order

If during the repair in the service it is determined that the service item should be sent back to the supplier as such, a purchase complaint can be created via the service order per function.

To do this, select the desired row and execute the "Create purchase complaint for selected row" function via the "Rows" > "Functions" info tab.

It should be noted that the function with the matching articles must be called up once for each vendor. First, a window opens to select the matching vendor, then the EK reclamation on query can be opened directly.

Note

In order to send an article to the supplier via a purchase complaint, it must be in stock. In the process, the customer item must therefore already be posted via the sales complaint in order to complain to the supplier.

The function Create purchase complaint for selected lines can also be called in the service work ticket for components to be installed.

Here, too, it should be noted that only goods in stock can be claimed.

1.2.7 medTech365

KUMAVISION medTech365

KUMAVISION medTech365 provides you with the necessary functionalities such as batch-pure production or dedicated access and rights management. In addition, the medTech365 industry solution supports you in successfully asserting yourself against the competition. Some highlights at a glance:

- Serial number and batch management
- Traceability
- Validation support
- Management of certifications
- Batch-clean production
- Demand source tracking

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Basic Setup

Additional Fields

Individual fields can be created in KUMAVISION MEDtech365 for various master data. These fields can then be used either only as information in the master data or can also be carried and changed by the processes in purchasing and sales. In the sales and purchasing documents, you can decide whether these values should be displayed or not. The additional fields thus allow you to create your own values, such as your own article number or other required information, and to output them in the documents without having to make any adjustments in the system. You can decide whether the field should have a fixed selection of values stored, or whether only certain values can be specified (e.g. decimal values or texts, which can then also be checked for fixed lengths and contents). For the output, you can then specify different output formats for the various documents and processes.

KUMAVISION med Setup

Before setting up the additional fields, a standard language code has to be defined in the "KUMAVISION med Setup". When creating or modifying additional fields, the content of the "Description" field is automatically written into the "Additional field translations" for the standard language code. These additional field translations are needed for the multilingual output of reports.

If an additional field is created, the description with the standard language code is automatically added to the translations.

Additional language codes can then be added manually.

Additional Fields

All additional fields that are required are created in the "Additional fields" table. Individual fields are then assigned to the master data tables later.

When creating additional fields, the following fields can be filled:

field	description
Code	Free definable abbreviation
Description	Descriptive text
Additional text	Additional information text to description
Field type	Options are "Text", "Date", "Option", "Checkbox", "Extended checkbox", "Decimal"
Field Input Validation	only if field type = "Text": force an input format, available are A=Alphanumeric, N=Numeric, B=Letters. **Example:** If the input validation is to be done on 9-digit numbers, NNNNNNN is entered in this field.
Grouping	Thematic grouping of the additional fields, is taken into account when sorting the output in the master data. Setup see master data groupings .
Transfer in VK-document, Changes in VK-document possible, Transfer in lines, Transfer in EK-document, Changes in EK-document possible, transfer in info cards, Print description with	These fields can be used to define in which processes and on which documents the additional fields should also be output. With the call "Output format" in the menu ribbon, can be specified then again more finely, how individual additional fields are to be printed on different documents.
Active	Indicates that the field can be used in the master data.

For additional fields with the field type "Option", the values offered for selection can be stored via the call "Option values" located in the menu ribbon.

The values that are to be available for selection are entered in the "Additional fields option values" table.

Master Data Groupings

The master data groupings are used for sorted output in the master data records and to organize related additional information thematically.

Additional fields can be assigned grouping codes during setup. When displayed in the master data card, the sorted output then takes the grouping into account.

Additional Fields Levels

The additional field levels allow you to make a dependent grouping of your master data on up to 3 levels. For example, you can use them to make a two-level classification of customers into main statistical group and subgroup, or to classify an article into statistical article group, group and subgroup. Thus, any other classifications/groupings are possible.

To set this up, first call up the "Additional fields levels" via the user search and define the additional fields levels.

By calling up "Levels values" in the menu ribbon, you have the option of further restricting the previously defined option values of the additional field entered for the respective level via additional entries.

Example :
In the following example, level 1 represents "Statistical Group 1". If "Statistical Group 1" = "10" is selected when entering the master data, then only the values "10" and "20" should be selectable for "Statistical Group 2" in the following.

Value level 1	Value level 2	Value level 3
10	**10**	10
10	**10**	20
10	**10**	30
10	**20**	99
20	10	20

If now the value "20" is selected for the "Statistical Group 2", then only the selection "99" should appear as a possible option.

Value Level 1	Value Level 2	Value Level 3
10	10	10
10	10	20
10	10	30
10	**20**	**99**
20	10	20

Output Formats

For the field types "Text", "Decimal" and "Date", output formats can be defined (call via the menu ribbon of the additional fields), by which it is determined how individual additional fields are printed on different documents / in different processes.

For example, the different formats may be necessary for the Invoice and Delivery processes.

If no specific output format is defined, e.g. for output on a report, then the format marked as standard is used. If no standard format is specified, then the value is output according to the input without additional formatting.

Creation of Output Formats

To define output formats, call them up via the user search.

For the creation of output formats the following defaults are valid for each field type:

**Field type "Date

output	placeholder character	description	output example 03.08.21
Tag	T (or D)	if necessary, single-digit output of the tag	3
day	T (or DD)	two-digit output of the tag	03
month	M	month as digit, if necessary single-digit	8
month	MM	month as digit	08
Month	MM	Month abbreviated	Aug
Month	MM	Month completely written out	August
Year	YY (or YY)	Year two digits	21
Year	YYY (or YYY)	Year four digits 2021	

Field type "Decimal"
Only # is recognized as a wildcard character. When setting up decimal formats, the output of decimal values (with or without decimal places), as well as the number of decimal places and the output of a thousands separator can be controlled.

Field type "Text "
The output pattern for text values can also be specified with the # wildcard character. Placeholders are processed from left to right, superfluous placeholders are truncated. If the length of the value to be processed exceeds the length of the pattern or the number of placeholders, the output value is truncated.

Examples of output pattern conversion:

additional field code	value	output	pattern
DOCTORNR	A1212	A 1212	#####
GEB.DATE	06.08.55	August 06, 1955	DD. MMMM YYYY
IK NO	223344556	IK 22-33-44-55-6	IK ##-##-##-##-

Master Data Tables

In the master data tables you can assign the previously created additional fields to the desired tables.

If the desired table has not yet been entered in the list, it can be added using the "New" function. The prerequisite for this is that the table has been set up with one of the following primary key field type combinations:
Code20
Code20, Code20
Code20, Code20, Integer

These primary key combinations are checked when adding a table. If none of the combinations match the primary key, a note will appear. The assignment of the additional fields to a table is possible via the ribbon > "Associated" > "Additional fields".

The previously created additional fields can now be assigned to the master data table. New additional fields must be initialized via the menu ribbon > "Actions" > "Update additional fields/search indices...".

This makes additional fields available in the corresponding master data cards for specifying further information.

Master Data Standard Field

For each additional master data field, you can define whether the additional field is to be entered automatically when a new data record is created. In addition, it is possible to enter a default value here, which will then be adopted.

Import / Export of additional Fields

Additional fields can be imported or exported via XML. To do this, call up the "Actions" > "Import/export data" function via the menu ribbon of the additional fields overview.

Mandatory Field check

The mandatory field check allows to define customer-specific mandatory fields to support the creation of master or document data. Certain values are given, which are checked after the input is completed. Here a mandatory field can be defined in dependence to other fields with the result:

Cancel: The fields must be filled
. Note: The fields can be filled

You can set up the mandatory field check for the following data:

Master data:

- Contact short entry
- Contacts
- Debtors
- Creditors
- Item
- Serial / batch number cards

Documents:

- For all sales documents based on tables 36 Sales Header and 37 Sales Line.
- For all purchasing documents based on tables 38 Purchasing Header and 39 Purchasing Line.

A "Variable mandatory field check" can be activated for the master data, e.g. of the articles. I.e. fields can be defined individually, which have to be entered by the user when creating or changing master data. Only when all the information is complete can the master data record be marked "Maintenance completed" or the document be "Released" and used in the system (e.g. when posting a delivery).

The check for completeness of the information is performed as soon as users set the "Maintenance" field in the respective master data card to the value "Maintenance completed", or via the "End article maintenance" function.

If not all mandatory fields have been filled in, an error message or a note appears, depending on the configuration of the individual mandatory field. After "Maintenance completed" has been entered, the fields of the master data record can no longer be changed. However, linked tables (e.g. remarks) can still be changed.

To be able to edit the master data record again, select the function - "Edit article".

Setup

Set up of processing parameters for mandatory field check

The processing parameters are set up in the "KUMAVISION med Setup" on the "Data check" info tab.

The setup fields are explained in detail below:

field	description
Data check short entry	This field can be used to activate the data check for the contact short entry. The following options are available: **empty** With this option, the data check for the contact short capture is not active. **On release** With this option, the data check is executed when the contact short capture is released. **On start & release** With this option, the data check can be triggered directly when the contact short capture is started via the New contact from short capture function. The data check then also takes effect when the contact short entry is released.
Data check contact	This switch can be used to activate the data check for contacts.
Data check customer	With this switch the data check for customers can be activated.
Data check vendor	With this switch the data check for vendors can be activated.
Data check article	With this switch the data check for articles can be activated.
Data check serial no. information	With this switch the data check for serial cards can be activated.
Data check sales documents	With this switch the data check for sales documents can be activated.
Data check purchasing documents	With this switch the data check for purchasing documents can be activated.
Data check workstation	With this switch the data check for workstations can be activated.

field	description
Wizard repetitions	This field controls how often the wizard can be called one after the other in a processing process. This means that KUMAVISION Heathcare will automatically ask if the wizard should be called if the maintenance is not complete. If "5" is entered, the user could close the wizard 5 times and would receive a request from the system whether the processing should be continued. If the wizard is closed for the 6th mail, the corresponding record would be set to the maintenance status "In progress". Then the user would have to start the mandatory field check again from the corresponding card (e.g. customer card). **Note** If this field has the value "0", the wizard processing will be performed only once. If it is not completed in full, no further system query will be made. The user must then manually invoke the mandatory field check again in the respective card.
Action Repetitions	This field defines on how many levels actions will be executed. Actions are understood as the automatic filling of fields based on certain conditions. For example, if a "5" is entered in this field, the system would repeat the check process for actions after the first execution of actions. This would then be repeated either 5 times, or until it is determined by the system that there are no more valid actions (action conditions) for this record. **Note** This field plays a large role in the performance of mandatory field validation. Therefore, the number of levels in which actions build on each other should be kept flat. Likewise, an exit condition should also always be defined in the condition lines for actions.

Setting up the table checks

To define the table checks, use the user search to call up the "Mandatory fields setup. Table MED".

When called, the mandatory fields setup tables are opened. In this list, the corresponding checks can be viewed for each table. The list with the corresponding checks per table can be called up via "Checks" or "Ctrl+P".

From the list of exams, the existing exams can be edited or new exams can be added.

Create checks

This section explains how to create checks for a table and the parameters required for a check.

Via "New" a new check card is opened.

The check card consists of three areas: General, Conditions and Defaults. These areas and their meaning are explained below.

Inforegister General

On the "General" info tab, the type of check is entered ("Note", "Cancel", "Action") and the check is named. Furthermore, the status of the check is set here, because only checks with the status "Certified" are taken into account when executing the mandatory field check. Checks can only be edited with the status "New" and "In development".

The corresponding status is set via the functions In development, Certified and Closed.

There is no action for the "New" status; this is assigned automatically when a new check is created.

The individual fields are explained in more detail below:

Field	Description
Table	This field contains the number of the table for which this check is intended and is automatically preassigned. This field is a key field.
Check code	The Check code field assigns a unique code that identifies the check. This field is a key field.
Check description	A description of the check can be entered in this field. A descriptive text gives a direct overview of the purpose of the check.
Sequence	The Sequence field can be used to control the sequence in which the individual checks are executed. This also allows you to define the order in which the checks are processed in the wizard.
Action	The Action field is used to control the type of check. There are the three action types "Note", "Cancel" and "Action": **Note** If the check is defined as "Note", the user will receive a note message when processing the mandatory field check. However, this hint message does not influence the release of master data or documents. It is to be seen rather as information, with whose assistance the user can supplement still data, which are perhaps informative, but not compellingly necessary for processes. **Cancel** If a check is defined as "Cancel", then with the processing of the obligation field check a cancellation message follows. This means that the release of master data or documents cannot be completed because process-relevant information is missing. **Action** Checks defined as "Action" are not displayed to the user. Rather, they are used to automatically pre-populate fields with specific values. This allows fields to be populated based on set criteria, which the user does not have to worry about anymore.
Action Description	The action description represents the message that is output to the user during the processing of the mandatory field check. This should be formulated as eloquently as possible.
Conditions	This field indicates whether conditions have already been defined for the check.
Default values	This field shows whether default values have already been defined for the check.
Status	The Status field is used to determine whether a check can be taken into account when processing the mandatory field check. Only checks with the status "Certified" are taken into account.

Inforegister Conditions

Conditions are used to specify which criteria must be met for the check to be valid and the action (note / cancel / action) to be executed.

A condition is composed of the following fields:

field	description
Line no.	This field shows the number of the condition line. It is a key field.
Check type	The check type field determines whether it is an introductory (IF) or a supplementary (AND) condition line. A IF line always serves as an entry check. An AND line supplements the preceding IF check. Only if the whole condition expression consisting of an introductory IF-line and possibly several supplementary AND-lines is fulfilled, the check is considered valid. Multiple IF-lines can also be defined in one check. The individual IF-lines with their supplementary AND-lines are handled according to the "OR" logic. If the condition of one of several IF-lines was fulfilled, the entire check is considered valid.
Field Origin	The Field Origin field specifies the origin of the field to be checked. The possible options are "Table" and "Additional field".
Field ID	The field ID determines which field should be checked according to the field origin.
Field Name	This field displays the name of the field to be checked.
Condition type	The condition type serves as a comparison operator with which the value of the field in the data set is checked with the value from the condition. The following comparison operators are available "=", "<>", "<", ">", "<=" and ">=". Depending on the data type of the field, however, the selection of the comparison operator may be limited.
Condition value	The condition value determines the value with which the contents of the field in the record will be compared. If the condition value is empty, KUMAVISION starts from the initial value of the field and compares the content of the record with the initial value of the selected field. If the field in the condition has the type "Date" or "Time", formulas can also be used to query the current time or a date. For fields of the type "Date" the following formulas can be stored - Determines the current system date - Determines the current work date - Determines a date related to the system date considering the entered DateFormula. - Get a date related to the system date considering the entered DateFormula. **Example:** <-10J>: This formula would return a date that is 10 years before the system date. For fields of type "Time", the formula can be used to retrieve the current system time.
Linked to row no.	Establishes a connection to another condition. This is usually the case with an AND-condition.

Note

Conditions should be created so that they are only valid in the intended cases and not every time the record is called. This avoids unnecessary checks and contributes significantly to the performance of the mandatory field check.

Inforegister Default values

On the "Default values" info tab, you can define which fields are to be edited by users in the wizard. Default values can be defined that can be used in the wizard. This functionality can be used for the action types "Note" and "Cancel", where the individual messages from the checks are processed by users. For the action type "Action", fields and values are defined here that are automatically written to the data record without users having to edit them.##### Inforegister Default values On the "Default values" info tab, you can define which fields are to be edited by users in the wizard. Default values can be defined that can be used in the wizard. This functionality can be used for the action types "Note" and "Cancel", where the individual messages from the checks are processed by users. For the action type "Action", fields and values are defined here that are automatically written to the data record without users having to edit them.

The line for a default value is composed of the following fields:

field	description
Line No.	This field indicates the number of the default line. and is a key field.
FieldOrigin	The FieldOrigin field indicates where the field to be filled comes from. The possible options are "table" and "additional field".
Field ID	The field ID determines which field should be filled according to the field origin.
Field Name	This field displays the name of the field that is to be filled.
Field value	The field value determines the content with which the selected field is to be filled. For the "Note" and "Cancel" action types, the field value is defined as a default value that the user must confirm in the wizard. With the action type "Action", the value is entered directly in the data record. **Note:** If the field value remains empty, the selected field is displayed in the wizard for the action types "Note" and "Cancel", but no default value is preassigned. The user must then decide individually what value this field is given. If the action type is "Action" and the field is empty, the field is cleared in the data record. It is also possible to enter formulas like on the info tab "Conditions"
Overwrite existing value	This check mark controls whether an existing value for this field in the data record should be overwritten. If this check mark is set, the field will be displayed in the wizard for the action types "Note" and "Cancel", even if it already has a value. Here, the user must confirm this value again or enter a new value. For the "Action" action type, the value of the field is automatically overwritten as soon as the check mark is set. If the check mark is not set and the field already has a value, the old value will be retained.
Validate Value	A check mark here confirms that the selected field will be validated when the wizard is executed and when the edited data is entered back into the record, and then run through the checks in the field's "OnValidate" trigger if necessary.
LookUp Table No.	This displays the table number of the table from the validation header.
LookUp Field ID	The field ID of the field from the default row is displayed here.

Certify check

In order for a created check to be taken into account during processing by the mandatory field check, it must be certified. To do this, the status is set to the value "Certified" with the call "Certified".

Note

In the "Certified" status, the check can no longer be changed. For changes, it must be set to the "In development" status again.

Working with the Wizard (message processing)

This section describes the processing of the set up and certified tests in the Wizard. This includes calling and operating the Wizard, as well as actions performed by KUMAVISION MEDtech365 after exiting the Wizard. These points are described below.

Calling the Wizard

The wizard is called up when users call up the function for ending the maintenance of master data or the release of documents. If certified checks exist for the respective master data or documents whose conditions apply in the case, the wizard is started.

Structure of the Wizard

In the wizard users have the possibility to see the determined exams and to correct them immediately. The wizard consists of two main areas: the exam message and the field Exam / Input.

The Exam Message area lists all exams of the type "Note" and "Abort" that were found for the corresponding record (Exam Items). The current message that is pending processing is highlighted in italics in red font color.

The Field Check / Input area displays in a list the fields associated with the check that were defined as default values in the check (field items). A field group is displayed on the right side. Here the content for the current field can be entered at New value. The current field to be edited is highlighted in italics in red font color and displayed on the right side in the Field name field.

Navigation in the Wizard

You can navigate through the individual messages using the "Previous" and "Next" buttons.

When navigating, the marker first jumps within the fields of the test to be processed, then, after the fields have been scrolled through, to the next or previous test.

Note

After a new value has been entered for the current field, processing automatically jumps to the next field / message.

Entering field values in the Wizard

The only field in the wizard that allows an entry is the "New value" field in the Field check / Entry area.

If a default value was defined in the check, this is displayed in the Default value field and can be adopted as the new value next to the manual entry using the Adopt default value button.

If the data record contains a value for the current field, this value is displayed in the Current value field and can be adopted as the new value next to the manual entry using the Adopt current value button.

After a new value has been entered for the current field, the field is marked as "Processed" and hidden from the field list. The processing then automatically jumps to a new field. Once all fields of a message have been processed, the message is also marked as "Processed" and hidden from the check list in the wizard. Processing then automatically jumps to a new message.

The messages and fields that have already been processed can be called up again in the wizard and corrected if necessary. The filter for processed messages and fields can be removed using the Remove filter "Processed" button. These will then be displayed in the wizard again.

To set the view of the wizard back to the open messages, the button Use filter "Processed" must be clicked. This action hides the already processed messages and fields from the lists in the wizard.

End processing in the Wizard

The processing of messages in the Wizard can be ended at any time by clicking the "End processing" button.

When all messages have been completed, the wizard is closed automatically.

When closing the Wizard, the system checks again whether valid checks (notes and terminations) still exist for the data record. If this is the case, a query appears asking whether these should now be processed.

If this is confirmed with Yes, the wizard is started again and the list with the corresponding messages is displayed, which the user can now edit.

If this is answered with No, further processing is cancelled and the original master data or document card is displayed. In the process, the information already entered in the wizard is written back to the data record.

If there are still open termination messages for the data record to be processed, the status of the mandatory field check remains "Incomplete" and the maintenance of the data record has the status "In progress".

If all messages have been processed and no further checks (notes or terminations) are found when the wizard is closed, the status of the mandatory field check in the corresponding data record is set to "Complete" and maintenance is set to the status "Maintenance completed".

After that, the corresponding data record is ready for use in processes.

Booking codes / delivery hierarchy

KUMAVISION MEDtech365 uses posting codes to distinguish different ownership and valuation ratios for goods in stock. These can be fixed assets, inventory goods (goods of current assets), consignment goods (goods provided by suppliers) or third-party property. Furthermore, posting codes are used to identify devices from current assets that are intended for asset capitalization, or to deactivate asset goods. Thus, posting codes are essential for all stock movements (receipts / issues / stock transfers) and must be balanced accordingly among each other.

In the following, the setup of the posting codes is described as well as the handling of the corresponding posting codes for the different stock movements.

Facility

Booking codes

To define the booking codes, call up the "Booking codes" via the user search. Use "New" in the ribbon to define a new booking code using the table below.

Field	Description
Code	This field is a key field. The unique code for the booking code is assigned here.
Description	A description of the booking code can be entered in this field.
Valuation type	This field is used to specify how the goods posted to stock with this posting code are to be valued. Possible options are: **Valued** This is the current assets of the company. Goods that are purchased and sold. **Mixed Valuation** These are consignment goods that a supplier has provided for withdrawal and consumption. The corresponding item items are not valued until they are issued. **Unvalued** These are goods from fixed assets or goods provided by third parties (for repair or reuse). They do not belong to the property of the company
Fixed assets posting type	Indicates the posting type for fixed assets. You can choose between the options "Empty" and "Capitalized"
Acquisition Default Code	Allows you to define a posting code as the default code for acquisition postings. If a booking code is then entered from within the process as part of a receipt transaction, this code will be used when the receipt is booked. **Note** The default code for receipts must contain the option "Valuated" as the valuation type.
Delivery Hierarchy	This field is automatically calculated by the system and indicates whether a delivery hierarchy has been defined for this booking code. The delivery hierarchy can be accessed and edited for a booking code via the action "Delivery hierarchy"
Access only possible via system activation	Activate the switch if access is only possible in connection with an activation.
Prevent booking code change	Once the switch is activated, a booking code change is prevented.

Delivery hierarchy

The delivery hierarchy can be set up for each posting code and contains information on how the stock for this order is to be taken within the framework of a sales order and whether a conversion of the posting code is to take place after delivery.

The delivery hierarchy can be called up via the action "Delivery hierarchy" for the respective selected posting code.

Field	Description
Posting code	This field is a key field. This field displays the booking code for which the delivery hierarchy was created.
Hierarchy Code	The Hierarchy Code is a key field and together with the Posting Code field uniquely identifies a record in the delivery hierarchy. **Note** A "speaking" code should be assigned to a record in the delivery hierarchy so that the user can tell which transaction it is just by looking at the code.
Description	A description for the delivery hierarchy can be stored in this field.
Hierarchy No.	If there are several delivery hierarchies for a booking code, a priority sequence can be defined here. The number stored here is used in the goods issue process with picking to check which stocks (which stock clearing code) are to be taken. For this purpose, the stocks for the stock balancing code are checked using this hierarchy number.
Delivery Type	This field controls whether the inventory is sold as part of a sales order or transferred to a customer warehouse. Therefore, the following options are available for this field: - Sale - Stock transfer
No automatic consideration in goods issue	Activate the check box if no automatic consideration is to be made in goods issue
Stock clearing code	Here you can define a booking code which will be used for the stock clearing. This defines the posting code used to make the stock withdrawal for the sales order. **Note** This field is a required field.

Field	Description
New Posting Code	**Delivery Type "Stock Transfer "** The item will be withdrawn from the warehouse with the inventory balancing code and posted directly to the customer warehouse with the new posting code. Stock transfer items are formed in the process. **Important** For delivery type "Stock transfer", the new posting code in the valuation type must correspond to the stock balancing code. This means that for code with valuation type "Valuated" or "Mixed", no New code with type "Unvalued" can be set. This is due to the fact that a change of ownership cannot be carried out by a stock transfer transaction. **Delivery type "Sale "** The item is sold from the warehouse with the stock balancing code (issue item with type "Sale"). Subsequently, a receipt item is added to the customer warehouse with the new posting code (receipt item with type "Receipt"). **Important** If no new posting code is to be used as part of the transaction, this field must be left blank.

Note

The delivery hierarchy only applies to the document type "Sales order". For all other documents and processes the delivery hierarchy does not apply. In these places the "pure" posting code is used by the system.

Setting up booking codes in sales order types

If you work with sales order types in the Sales area, which divide the sales orders into different types, you can also define a posting code for the sales order type. This posting code is then used as a template for the lines of the order.

To do this, call up the sales order types via the user search and make the desired setup in the fields below:

Field	Description
Posting Code	This field can be used to specify a posting code for the corresponding sales order type.
Prevent booking code change	A check mark in this field controls whether the booking code in the order may be changed or not. If this check mark is set, the booking code may not be changed in the sales lines.

Setting up booking codes in purchase order types

If you work with purchase order types in the Purchasing area, which divide the purchase orders into different types, you can also define a posting code for the purchase order type. This posting code is then used as a template for the lines of the purchase order.

To do this, call up the purchase order types via the user search and make the desired setup in the fields below:

field	description
Posting code	In this field, a posting code can be specified for the corresponding purchase order type.
Prevent booking code change	A checkmark in this field controls whether the booking code in the purchase order may be changed or not. If this checkmark is set, the booking code may not be changed in the order lines.

Booking codes for access bookings

For transactions of the "access" type, the booking code is required as mandatory information. If no booking code is entered as part of the transaction and a default code has been defined for accesses, this code will be used for the transaction. Otherwise, an error message will appear stating that the booking code must be entered.

Transactions of the "Receipts" type are:

- Receipts from purchase orders
- Sales returns
- Production orders
- Receipts from the article ledger sheet

Posting codes for retirement postings

For transactions of the "retirement" type, the posting code is required as a mandatory entry. If no posting code is entered as part of the transaction, an error message will appear stating that the posting code must be set for the transaction.

Transactions of the "Disposal" type are:

- Retirements from sales orders
- Purchasing returns
- Consumption in production and assembly
- Retirements from the article ledger

Posting codes for stock transfer postings

For transactions of the "Stock transfer" type, the posting code is required as a mandatory entry. If no posting code is entered as part of the transaction, an error message will appear stating that the posting code must be set for the transaction.

Transactions of the type "Stock transfer" are:

- Stock movements from stock transfer orders.
- Stock transfers in the stock transfer ledger sheet

Posting codes with delivery hierarchy in sales order

When processing sales orders, the delivery hierarchy can be used in addition to the posting code to determine the stock level for the goods withdrawal for an order.

If a posting code is entered in a sales line and this has a delivery hierarchy, the delivery hierarchy code with the highest hierarchy number is automatically set in the sales line.

However, the delivery hierarchy code can be changed. All codes that have been set up for the posting code are available as possible delivery hierarchy codes.

The delivery hierarchy code can also be deleted for a sales line. This has the consequence that the delivery hierarchy is not considered in the context of the warehouse withdrawal, but only the posting code of the sales line is used.

Note

When picking items for a sales order line, only the levels of the delivery hierarchy that have the same delivery type as the sales order line itself are considered. So if the delivery type "Stock transfer" was set in the sales order line, only the levels of the delivery hierarchy that have the delivery type "Stock transfer" will be considered.

Note

If the sales order type has been set up in such a way that it is not possible to change the posting code and if the posting code has a delivery hierarchy, it is also mandatory that the delivery hierarchy code in the sales line is filled.

Stock withdrawal with/without logistics

Depending on whether a sales order is withdrawn from stock without logistics or with logistics, the delivery hierarchy code in the sales line has different meanings. These are described below.

Stock pick without logistics

If the delivery for a sales order is made from a storage location for which no goods issue or picking has been set up, users must check the available stock in the sales line itself and set the appropriate delivery hierarchy code with available stock in the sales line.

To check the available stock, the function "Item stock overview" in the sales line can be used.

Stock pick with logistics

In contrast to a stock pick without logistics, the availability of the goods is checked automatically when creating a goods issue with picking for a sales order. Here, users do not have to manually change the delivery hierarchy code in the sales line.

Delivery with posting code change

If a delivery hierarchy was used in a sales delivery where a new posting code is set, this is also recorded in the article items and storage bin items for this delivery. The article items are created according to the delivery type of the sales line. This is explained using the following examples.

Example 1: Stock transfer with posting code change

This example shows the transfer of goods to customer warehouse.

A delivery hierarchy was used in the delivery, where the goods are transferred to customer warehouses and are to be managed with a new posting code in the customer warehouse.

In the article items for the sales delivery, the history can be viewed accordingly.

The stock transfer from the inventory warehouse is done according to the stock balancing code in the delivery hierarchy. However, the stock transfer item as a receipt in the customer warehouse is already provided with the new posting code from the delivery hierarchy.

Example 2: Sale with booking code change

. In this example, the sale of the goods to a customer is shown, where subsequently the sold goods are recorded as third party property on the customer warehouse.

A delivery hierarchy has been used in the delivery, where the goods are sold to the customer and then recorded as third party property in the customer warehouse.

The history can be seen in the item items for the sales delivery.

The first item represents the sales transaction to the customer, where valued current assets were withdrawn from the warehouse and sold to the customer.

The second item represents the addition of the third-party property to the customer's warehouse. The second item is not valued and only provides the information on which customer warehouse the sold equipment is located.

Posting codes when cancelling sales deliveries

The following describes how to determine the posting codes when reversing sales deliveries. For this purpose, the two cancellation options "Cancellation via sales returns" and "Cancellation directly from sales delivery" are presented. Subsequently, the general system procedure for determining the posting codes for cancellation lines of a sales delivery is described.

Reversal via sales returns

When reversing delivery documents via sales returns, it must be ensured that the posting codes in the reversal document (sales return) are also set accordingly to the delivery document. For this purpose, the delivery hierarchy must be observed and the posting codes set by the delivery hierarchy must also be reversed.

In order to set the posting codes correctly in the cancellation document, the cancellation document lines must be linked to the delivery lines. KUMAVISION Healthcare creates this link automatically when the action "Retrieve posted document lines to be cancelled" is executed in the sales return (as cancellation document).

After selecting the delivery lines to be cancelled and confirming, KUMAVISION Healthcare creates corresponding lines in the sales return. In doing so, the system sets a link to the article item from the delivery that is to be cleared either for the cancellation line itself or for the article tracking of the cancellation line. Based on the linked item, the system checks which posting code should be used in the reversal document.

The determination of the posting codes for the reversal lines is described in the section "Determination of posting codes for reversal lines".

Cancellation directly from sales delivery

A reversal posting can also be made directly from the sales delivery. To do this, you can enter the relevant cancellation quantities for each delivery line using the "Edit cancellation quantities" function.

After the desired reversal quantities have been entered, the reversal document can be posted using the "Post reversal" function.

When posting the reversal, KUMAVISION Healthcare automatically references the items from the delivery as clearing items for the reversal. These clearing items are used to determine the posting codes for the corresponding cancellation lines. (See section "Determination of posting codes for cancellation lines").

Cancellation lines with delivery type "empty" (sales)

The following checks are performed to determine the posting codes:

Direct linking of the reversal line to a clearing item:
. A cancellation line is directly linked to a clearing item if the item in the cancellation line does not use item tracking. In this case, the posting code from the linked item (balancing item) is entered directly into the reversal line as the posting code and inventory balancing code.

Note

If the delivery hierarchy was used for the delivery line of the original document and in the course of this a receipt item with a new posting code has been created in the customer warehouse, the receipt item in the customer warehouse will also be cancelled. See also section Delivery hierarchy ".

Link the article tracking to a clearing item:
. If the cancellation line contains an item that uses item tracking, the item tracking lines for the cancellation line are checked for a link to the balancing item (item line). If this link is present in the item tracking line, the posting code of the linked item is used as the posting code and inventory clearing code for the item tracking line.

If no balancing item has been defined for the item tracking line, the default posting code for receipts will be entered as the posting code and inventory balancing code for the item tracking line.

!!!note "Note If the delivery hierarchy was used for the delivery line of the original document and in the course of this a receipt item with a new posting code has been created in the customer warehouse, the receipt item in the customer warehouse will also be cancelled. See also section "Delivery hierarchy".

No link exists:
If there is no link to the balancing item in the reversal line (neither in the line itself nor via item tracking), the default posting code for receipts is entered as the posting code and inventory balancing code.

Cancellation lines with delivery type "Stock transfer"

The following checks are carried out to determine the posting codes:

Direct linking of the cancellation line to a balancing item:

. A cancellation line is directly linked to a clearing item if the item in the cancellation line does not use item tracking. In this case, the linked item will be used for the posting code determination for delivery type "Stock transfer". First, the posting code of the item ("Stock transfer to" item) is entered in the reversal line as posting code and inventory clearing code.

In addition, the system checks whether the delivery hierarchy was used when posting the corresponding delivery and whether the posting codes in the "Stock transfer from" and "Stock transfer to" items are different. If this is the case and the different posting codes are of the same valuation type, the posting code of the "Stock transfer from" item is set as "New posting code" in the reversal line.

This new posting code ensures that, for example, goods that were transferred to a customer warehouse as current assets and thereby assigned the posting code for "Stock for capitalization" will again be assigned the posting code for current assets when reversed.

>   Note

Fixed assets that have already been capitalized to customer warehouse will be transferred with the corresponding posting code of fixed assets at the time of reversal.

Link the article tracking to a clearing item:

. If the cancellation line contains an article that uses article tracking, the article tracking lines for the cancellation line are checked for a link to the clearing item (article item). If this link is present in the article tracking line, the posting code determination for the article tracking line is carried out on the basis of the article item. The posting code determination for an article tracking line is carried out in the same way as the posting code determination for a reversal line with a direct link to the clearing item.

No link exists:

If there is no link to the balancing item in the reversal line (neither in the line itself nor via item tracking), the default posting code for receipts is entered as the posting code and inventory balancing code. 2.10 Booking codes in the article tracking selection When selecting the item tracking, it is also checked if the selected item tracking matches the posting code from the document line.

If this is not the case, KUMAVISION Healthcare will issue a corresponding error message already when entering the article tracking.

Also, when selecting the item tracking via the "Assist button" in the Serial No. and Batch No. fields, the posting code is taken into account by displaying only lines from the inventory overview that are available and match the respective posting code.

Posting codes on info cards (serial number, batch number)

When posting goods movements for items requiring batch or serial numbers, the posting code of the last transaction can be viewed on the corresponding batch or serial number info card.

When posting transactions involving stock movements (receipt, issue, stock transfer, purchase, sale, etc.), a posting code must be specified as a mandatory entry.

After posting the transaction, the posting code of the transaction is then noted as the last posting code in the corresponding batch or serial number info card.

Article tracking Navigate

With this customization it is possible to subsequently change incorrectly created article tracings. The starting point for this functionality is the "Article Tracking Navigate" window.

The function can be called up either via the user search or via the serial/batch number information card. from the following locations:

If the window was opened from the "Serial No. Information Card" or from the "Batch No. Information Card", the origin data will be preset.

Via the action "Search" all data records are determined which refer to this article tracking.

Via the "Change" action, a new entry is created in the "Article tracking change items" window and the new values are adopted.

In the "Article tracking change items" window, the planned change is initially still visible in the "Open" status as a planned change.

Via the "Release" action, the change is executed and the data is written back to all relevant data records. If the change is successful, the status "Released" is set. The status cannot be reset.

Using the "Reject" action, no change is executed and the "Rejected" status is set directly. No further changes can then be made to this data record.

Compliance

The "Item tracking change items" table can be configured as a compliance table. If this is the case, the "Release" action initially only creates a new compliance document. Only when the compliance document is released is the change executed and the data written back to all relevant data records. Further information on the topic of "Compliance" can be found here .

Basics

Resubmission

By means of the resubmissions in KUMAVISION medTech365, reminders for open tasks can be created easily and comfortably and assigned to a user and / or team. The resubmission processing in KUMAVISION medTech365 can be called from different places.

Establishment

Teams

If you want to work with teams, each employee (user) must be assigned to at least one team. To do this, first create the desired teams in the "Teams" table and then assign the desired employees via the "[...]" > "Associated" > "Team" > "User" ribbon.

The team user card opens on which you can make the assignment by entering the corresponding user ID in the rows.

Note

If a user is assigned to multiple teams, the automatic preassignment of the team assignment will only work if one team is marked as the primary team for the user.

Resubmission tasks

In the resubmissions you can work with predefined tasks. For this purpose, the required tasks are created in the "Resubmission tasks".

Field	Description
Code	Allocation of an "abbreviation" of the task.
Description	Gives the description of the task.

Resubmission groups

In the resubmission group list several resubmission tasks can be combined to task groups. To do this, first create a resubmission group using the table below.

Field	Description
Code	Allocation of an "abbreviation" of the task group.
Description	Gives the description of the task group.

The tasks of the group are then added to the resubmission task lines. If a certain team is responsible for the processing, this can already be preassigned here in the resubmission group.

Usage

Creating resubmissions

Resubmissions can be created from many documents and master data using the "Create resubmission" function located in the menu ribbon.

The resubmission is created and preset with the own user ID and the primary team.

Under "Short information" a simple info text can be stored. A longer task text can be entered in the lines under Resubmissions Tasks.

Alternatively, individual tasks can be selected in the lines using the task code or a task group can be stored in the resubmission header.

After confirming the selection, the individual tasks of the group are inserted into the resubmission.

The text of the next open task is always displayed in the resubmission header.

Assign tasks to a team

If the task is to be assigned to another team, the Team task button is activated in the resubmission. The user is then automatically deleted and the tasks can be assigned to another team. If the task is to be processed at a later date, the resubmission date must be changed accordingly.

Create resulting tasks

Resulting resubmissions can be created in general or for a single task of a resubmission.

For this purpose, the corresponding function is called in the document header or in the line.

If selected in the line, the task is taken over directly and - if already specified - the new team of the task is preset.

In the previous resubmission, the task is automatically set to completed and the number of the resulting resubmission is displayed.

Processing the resubmission from the role center

Own resubmissions can be opened and edited in the role center via the "Own resubmissions" stack.

With "Edit" the marked resubmission is opened and can then be set to the status "In process".

Warnings

You can store warnings for a contact or customer that will be displayed in the Marketing Cockpit when you open the contact. These can be, for example, warnings about infectious diseases or similar. Depending on the setup, these messages are displayed in the header area in ticker text and, if necessary, also as a separate warning.

Via the "Associated" > Contact MC Cockpit" > "Warnings" button of the menu ribbon, you can assign a warning from a list to a contact and set whether a stand-alone warning (via the Hazard warning field) or only the ticker should be displayed.

Priotexts

With this functionality, remarks can be marked in a simple way so that they appear as a note in various documents.

Priotexts are important information that is displayed directly when a transaction (e.g. order) is entered. To mark a remark for a customer, vendor, article or contact as a priotext, a remark code must be stored in the respective remark.

These codes must be defined beforehand in the setup.

Priotexts are displayed in:

- Information about the contact, customer, vendor.
- Information about the article
- Sales documents: for sale to customer
- Purchase documents: for purchase from vendor

Facility

Remark codes

First of all, remark codes must be created for priotexts. To do this, call up the "Remark codes" via the user search. In addition to a unique code, a description can be stored. The codes created can then be assigned to remarks so that they are displayed in the relevant areas.

Accounts Receivable & Sales Setup or Accounts Payable & Purchasing Setup

In the Accounts Receivable & Sales Setup or in the Accounts Payable & Purchasing Setup, the standard code for sales or purchasing notes can be stored in the "Code for special notes" field. This allows the later assignment of several notes to one code.

Functionality

Remarks are stored on the item, contact, customer or vendor. Each remark can be given a code that assigns the remark as a priotext. Start and end dates can be assigned as validity information and are taken into account in the remark texts. Depending on the assignment, the remark (limited to a maximum of two lines) is then displayed in different contexts (e.g. info boxes for articles, sales orders, etc.).

Short entry with wizard (short entry card KE)

The contact short entry represents a separate master record from which master data such as contact, customer and vendor can be created. Thus, a contact short entry record is always created first, before the actual contact is created. This has the advantage that the short entry can be interrupted and resumed at a later point in time. Accordingly, contact short entry is also used when creating customers or vendors, and a contact is always created with it.

With the contact short entry, contacts, as well as other master data linked to the respective contact, such as customers or vendors, can be created more quickly. Here, the contact short entry can be reduced to essential entries by preassigning fields from configuration templates for the creation of contacts, vendors and customers.

Example:

When creating a customer from a contact using configuration templates, fields that do not exist in the contact can be created automatically (e.g. booking codes).

KUMAVISION med Setup

The general setup of the contact short recording is done in the "KUMAVISION med Setup" on the info tab "Contact Management".

The following fields have to be set up accordingly:

field	description
Contact Short Entry Numbers	In this field the number series for the contact short entry is defined.
Address start date formula	This formula is used to calculate the start date for the address of the contact when creating contacts from the contact short capture. This is useful when assigning documents to a new contact whose document dates are in the past. This ensures that the correct address is displayed in the corresponding documents.

Configuration template setup

In order to effectively generate master data from contact short entry, the configuration templates should be used. With the help of the configuration templates, process-relevant fields such as business posting groups can be predefined so that users no longer have to maintain this data manually.

The configuration templates are run through in a specific hierarchy when creating master data (contact / customer / vendor) from contact short entry. This hierarchy is shown in the following diagram.

Contact summ

Vendor Contact

Customer template

Debtor

ONLY table fields
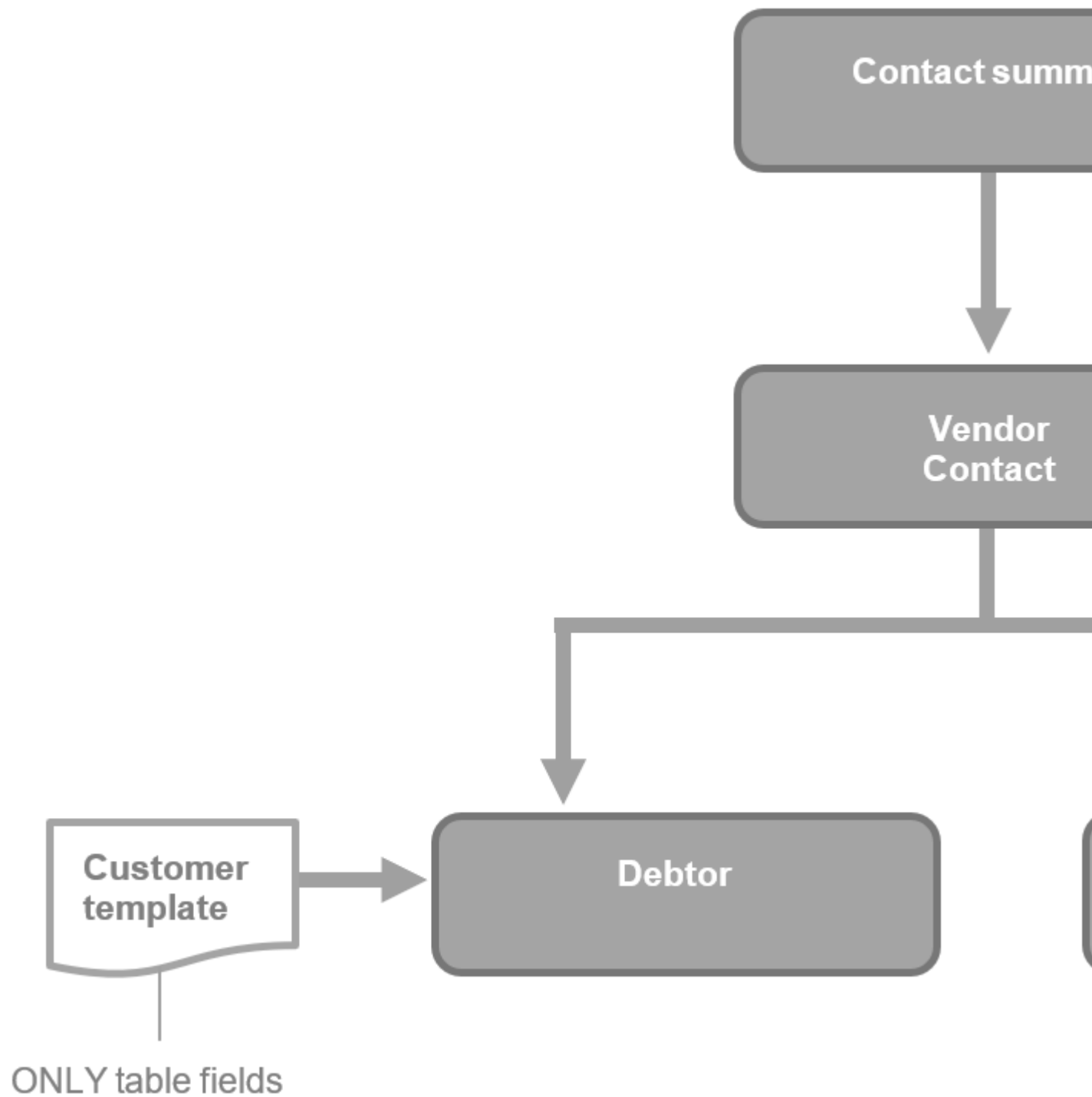
According to the diagram, the following functions result for the individual templates:

Template for contact short entry:

Through the master data template for contact short entry, not only fields in the short entry can be preset, but also additional fields can be preset. The additional fields set here will be used when creating the contact and other master data (customer / vendor). Furthermore, the template for contact summaries defines which additional data is to be created and which templates are to be used for this purpose. For example, you can use the Create customer template = "Yes" to specify that a customer is also to be created from the contact short entry. The Customer template code field can be used to specify which master data template is to be used to create the customer.

Template for contacts:

From the master data template for contacts, only the table fields are used in the creation of the contact as part of the contact short entry functionality. Additional fields that have been linked to a contact template are not included in this process. Here, the additional fields from the contact short entry are inherited by the contact.

Template for debtors:

From the master data template for customers, only the table fields are used in the creation of the customer as part of the contact short entry functionality. Additional fields that have been linked to an Accounts Receivable template are not included in this process. Here, the additional fields from the created contact are inherited by the customer. **Vendor template:**

From the master data template for vendors, only the table fields are used in the creation of the vendor as part of the contact short entry functionality. Additional fields that have been linked to an Accounts Payable template are not included in this process. Here, the additional fields from the created contact are inherited by the vendor.

Note

Additional fields are only inherited if they have been set up for the respective tables. If an additional field is to be inherited from the template into the contact short entry and from there into the contact and from the contact into the customer, this additional field must be set up for the tables master data template, contact short entry, contact and customer.

The following is an example of how to set up the configuration templates for contact short entry.

First call up the configuration templates via the user search. In this overview, all configuration templates for all tables are displayed.

Inforegister General

Field	Description
Code	Indicates the "abbreviation" of the configuration template.
Description	Gives a description of the configuration template.
Table-ID	The field "Table-ID" is used to link the template to the table that is to be filled from this template. e.g. Contact Short Entry Table-ID "5007265"
Table Name	Specifies the name of the table in the "Table-ID" field.
Activated	Activate the switch, if the configuration template can be used in the processes.

Inforegister Rows

After the table has been selected, the table fields are defined on the "Rows" info tab, which should be automatically written to the table by the template.

Inforegister KUMAVISION MED

Additional fields can be attached to the template via the info tab. These fields will also be used in the contact summary.

> Note

Additional fields are only inherited if they have been set up for the respective tables. So if an additional field is to be inherited from the template into the contact short entry, from there into the contact and from the contact into the customer, this additional field must be set up for the tables Master data template, Contact short entry, Contact and Customer.

Create contact short entry

The contact short entry is always called up when a contact, vendor or customer is to be created.

To do this, go to the Marketing Cockpit and select the item "New contact from short entry".

When this function is called up, a selection of templates for contact short entry appears. Here you can select the template on the basis of which the contact short entry is to be preset with table fields and additional fields.

After selecting the appropriate template, the contact short entry card is opened and a number is assigned. Likewise the information, which master data with which templates are to be created, was drawn.

Now the capture of further data like name, address and communication data can take place.

After all necessary data has been entered, the data maintenance in the contact short entry can be ended via the action "End short entry maintenance". This starts the mandatory field check and then creates master data such as contact, customer or vendor (depending on the setting in the Create data tab. When exiting the short data entry, the created data record is then marked in the list and can be opened directly.

Note

The mandatory field check is run through per created data record.

Release contact short entry

If the mandatory field check has been activated for contact short entry, master data such as contact, customer or vendor can only be created if contact short entry has been released.

The release of the contact short entry refers to the status of its data maintenance.

The following status options are possible:

No mandatory field check:
. With this option, the mandatory field check for contact short entry has not been activated. This means that data maintenance in contact short entry does not have to be explicitly completed. Additional master data can be created directly.

In progress:
This option means that the mandatory field check for contact short entry has been activated and data maintenance has not yet been completed. In this maintenance status, no further master data can be created from the contact short entry.

Maintenance completed:
This option is set when the mandatory field check has been activated for contact short entry and data maintenance has been completed in contact short entry. In this status, further master data such as contact, customer or vendor can be created from the contact short entry.   To complete the data maintenance in the contact short entry and to release it, the action "End short entry maintenance" is executed.

If at this point not all data has been maintained according to the mandatory field check, the wizard card of the mandatory field check opens. In the wizard card, users can make the appropriate corrections.

If all the necessary data has been maintained, the status in the Maintenance field is set to "Maintenance completed". Now further actions can be performed to create the master data.

After the maintenance of the contact short entry has been completed, the contact short entry card is set to a non-editable state.

In order to be able to edit the data, the short entry must be set to the "In progress" maintenance status again. This is achieved using the "Edit short entry" action.

After executing this action, the data can be edited again.

After the data has been revised, the contact short entry must be released again via the "End short entry maintenance" action.

Overview of existing contact short entries

The contact short entry represents another master data record in KUMAVISION medTech365, which can be used to create process relevant master data like contact, customer or vendor. The already created records in the contact short entry can be viewed via the "Contact Short Entry List".

From the contact short entry list, new short entries can be created or the existing ones can be edited.

Creating the short record manually

A new record in the contact short entry can also be created manually. This is done from the "Contact Short Entry List".

To create a data record manually, the action "New" is executed in the menu ribbon, which opens the contact short entry card. This card is empty, because no data from a template has been assigned to the short entry.

In the next step, click in any field to create a new record for the contact short entry. A number from the number series stored in the KUMAVISION med system will be assigned.

Now all further fields in the contact short entry can be filled manually. It should also be considered which master data should be generated from the short entry and which templates should be used for this.

Alternatively, a configuration template can also be used here to fill certain data in the contact short entry. The action "Apply template" in the menu ribbon is used for this purpose.

When this action is executed, the user is offered the selection of possible templates for contact short entry and the fields defined in the template are filled.

User ID in remarks of the master data

The user ID is automatically entered in the remarks of the master data. Thus, it is possible to trace who, when created or modified the remark. The following fields have been added:

- Created by
- Created on
- Changed by
- Changed on

Article tracking

KUMAVISION medTech365 provides a number of industry standard article trackings upon delivery of the system which can be assigned accordingly when creating a new article.

> Note

Please note, the default article tracking is provided by KUMAVISION and must not be changed.

Color display

The "Quantity" field is displayed in a different color in the open sales/purchase document lines, goods issue lines, goods receipt lines and in the article book sheet, UML book sheet, INV book sheet, production, assembly if it is a line with an article for which article tracking has been set up. In addition, the article tracking can be called directly via the lookup of the field.

The following color distinctions are made:

- Red, if batch or serial numbers are present but no assignment has been made.
- Blue, if batch or serial numbers are present, but have not been completely assigned
- Green, if batch or serial numbers are present and have been completely assigned

Date of manufacture Warranty date, ext. batch

If an article has a manufacturing date, you can define this with the article tracking code. You can define the warranty date on the "KUMAVISION med" tab on the fields "Warranty period customer" / "Warranty period supplier". In addition, various settings for the technical service can be made on this tab.

Serial number information card

The serial number information card has been extended with the following fields in KUMAVISION medTech365:

Inforegister General

Field	Description
Description 2	Presets the description 2 of the article or article variant.
Register number	Maintains the register number assigned by the health insurance company for the aid.
Status mandatory field check	This field displays whether the mandatory field check was not performed (no check), completely checked or incompletely checked.
Locked by	This field displays whether the record is locked by the mandatory field check or the user.

Inforegister Vendor

This info register is necessary for the technical service. When a device is purchased or reused from a market competitor via a purchase order, the creditor is recorded here.

Inforegister Customer

This information register is necessary for the technical service. The user who gave the instruction to the device is recorded in this info register.

Inforegister KUMA-Platform

Field	Description
Previous owner / Previous owner search term	Contact who previously owned the device. / contact search term of previous owner
Date of last stock entry	Calculated field, updated with each goods movement of the device
Storage location	Last storage entry Calculated field, is updated each time the device is moved. This field shows where the device is currently located.
Variant code of last stock entry	Calculated field, updated with every goods movement, shows the current variant code of the device.
Status	Free parameterizable field to show the status of the device
Guarantee period customer	Indicates the date formula as well as the duration, calculated on delivery of the device based on the booking date.
Guarantee Customer until	Calculated automatically based on the delivery date and the warranty period.
Device class	Field for classification option of SN cards. Can be freely defined by users with their own codes.
CE Responsibility	Deposit of the CE mark
Commissioning date	Calculated when a device is delivered for the first time.
Contract no./ Contract version no./ Contract line no.	Indicates the contract with which the device was delivered. These fields must be filled so that the automatic contract determination in the call can take effect.
Process no.	Indicates the process with which the device was delivered.

Inforegister Ownership / Possession Relationship

The ownership of the device is shown here.

Field	Description
Last booking code	Indicates the ownership ratio of the device and is recalculated for each goods movement. If the field is empty, the device was sold without keeping track of where the device is located.
Owner	Indicates the owner of the device. If the field is empty, the device is owned by us.
Owner	Indicates the customer who currently owns and uses the device.
Device usage	is not used

As long as it is necessary to keep track of where the device is located, the booking code and the fields for the storage location and storage bin of the last warehouse booking are filled. If a device is sold to only one customer, the fields are empty and only the owner and owner are entered. The booking code is correctly entered in the respective process.

Ribbon Vogang

|Description| | --- | --- | |Contract assignment|Assignment of health insurance contracts to the SN card. Has no use in the processes described here."| | |Set up resubmission|Send a resubmission based on the serial number card| |Edit serial no. info card/
Exit serial no. info maintenance|Activation of the mandatory field check of the SN card as well as the editing mode of the card| |Article/device assignment items|If the additional module "Serial no. in serial no." is used in production, the components assigned to the device are displayed here. In addition, all expenditures and spare parts incurred in the course of the service are displayed here. |Navigate|Display of all items, purchase and sales documents related to the serial number| |Reset Owner Info|This function removes contract and owner information from the serial number card and item records, allowing a device to be transferred directly from one owner to another. |Feature Classes|Display device parameters for the device| |Article items|Display of the goods movements of the device|

Print ribbon

|Description| | --- | --- | |Device history|Print out the information and goods movements for the device|

Customer Service Ribbon

|Description| | --- | --- | |New Call |Create a new call for the device| |Calls |Display of all open calls to the device| |Completed Calls |Display of all completed calls to a device|

Device Serviece Ribbon

|Description| | --- | --- | |Create maintenance plan |If no maintenance plan exists for a serial number, a maintenance plan can be created for the individual card based on the maintenance plan of the item.| | Maintenance plan |Display the maintenance plan for the device, here concrete due dates for maintenance are displayed and calculated. The Planning no. field indicates the maintenance cockpit number via which this maintenance is currently being performed. If the entry is 0, this line is not in any maintenance or in planning of an upcoming maintenance.| |Equipment items |In the equipment items, the items and resources consumed within the scope of a technical order are displayed and recorded. In addition, a simple cost accounting based on the cost prices of the articles and resources takes place here.

Actions ribbon

Field	Description
Edit serial no. info card/ End serial no. info maintenance	Activation of the mandatory field check of the SN card as well as the editing mode of the SN card as well as the respective termination
Contract assignment	Assignment of health insurance contracts to the SN card. Has no use in the processes described here
Create Item Contract Lines B2B	Function for the subsequent assignment of a device to a repair or maintenance contract in the retail sector.
Feature Search	Search for device parameters via serial numbers
Navigate	Display all items, purchase and sales documents related to the serial number
Barcode Flag	Place a barcode, documents to which this barcode has been assigned are stored here in the Document Management System (DMS for short)
Return to eBox	Documents that have been stored in the DMS can be sent back to the eBox via this function if the document has been stored incorrectly and needs to be reassigned
Device history	Printout of the information and goods movements for the device

Ribbon Related

Field	Description
Article tracking item	Documentation of the goods movement of the device
Remarks	Possibility to record remarks for the specific serial number
Article Tracking Item	Required only in manufacturing and is used to document the history of the serial number or components where they have all been included
Stock overview	Views the stock for the serial number
Feature Classes	Display of the device parameters for the device
Article/device assignment items	If the "Serial no. in serial no." add-on module is used in production, the components assigned to the device are displayed here. In addition, all expenditures and spare parts incurred in the course of the service are displayed here.
Article items	Display of the goods movements of the device
New Call	Creation of a new call for the device
Calls	Display of all open calls for the device
Finished Calls	Display of all finished calls for a device
Create Maintenance Plan	If no maintenance plan exists for a serial number, a maintenance plan can be created for the individual card based on the maintenance plan of the item
Maintenance Plan	Display the maintenance plan for the device, here concrete due dates for maintenance are displayed and calculated.
Operating hours list	View the already read operating hours, as well as the calculation of the hours of use.

Operating hours obligation

If a device is subject to operating hours, this is also controlled via the article tracking code. An article tracking code (SN_BSTD) has been created specifically for this purpose, which has the operating hours obligation in the device, so that the operating hours can be maintained and viewed on the serial number card.

Purchasing

Incoming/outgoing minimum terms (expiration date)

In the warehouse setup, storage locations, item card, item categories and references, and inventory data, the "Outgoing Minimum Expiration Date" and "Incoming Minimum Expiration Date" fields prevent items with too short expiration dates from being purchased or sold.

Field	Description
Outbound Minimum transit time Expiration date	Delivery is only possible if the minimum transit time is after today plus this date formula.
Inbound Minimum transit time Expiration date	A putaway is only possible if the minimum transit time is after today plus this date formula.

Check hierarchy

When posting, the system checks whether the corresponding field is filled in the following order: 1. article references 2. article master (article card) 3. article category stored in the article 4. stock data 5. warehouse setup

> Note

If the fields are stored in the article category, their values are automatically taken over when creating an article.

Calculation of the expiration date

The calculated expiration date is the result of the current date plus the date specified in the item card (or item category or warehouse setup).

Exception per user

In the "User setup", the checkbox "Minimum expiration date for override" can be set, which allows the corresponding user to also book articles whose expiration date is less than the calculated minimum expiration date.

If the check box is set, a message will appear during the booking that the minimum expiration date has not been reached, with a query as to whether the booking should still be made. If this query is answered in the negative, the booking process is aborted.

Exception per storage location

In order to be able to add stock to certain storage locations (e.g. blocked storage) even though the minimum expiration date has been exceeded, a storage location can be marked accordingly in the storage location map using the "Add. if expiration date exceeded" field.

Expiration

If an item is posted (incoming or outgoing) that falls below the calculated expiration date, a corresponding error message is issued.

Time limitation of blanket orders

In addition to the standard limitation of the quantity by KUMAVISION medTech365, blanket orders can also be limited in time. A time limit has been added so that after the expiration of the validity, the conditions of the blanket order can no longer be used.

In the blanket purchase order card the validity of the blanket purchase order can be entered in the new field "Valid until". If the field is not filled, the blanket purchase order is considered to be valid for an unlimited period of time.

Extended purchase history

The purchase history from the standard system is extended by this service area with additional document types. extended. These are the Archived Documents for Purchase Requests, Purchase Order, blanket purchase order and purchasing returns. These documents can be transferred line by line.

Delivery date reliability

The delivery date reliability of suppliers is automatically determined based on the requested or confirmed delivery date and can be displayed in a window. The display provides information about how many deliveries were delivered too late or too early and how large the deviations were.

Setup

Before you can use the on-time delivery feature, you must maintain the "Default on-time delivery date field" in the Accounts Payable & Purchasing setup accordingly.

Depending on the setting of the default on-time delivery date in the Accounts Payable & Purchasing setup, the system will check if the corresponding date is set in a purchase order. If not, a corresponding error message will be issued.

Evaluation of adherence to delivery dates

For this purpose, the "On-time delivery performance" statistic is available in the vendor list and in the vendor card.

In the upper part of the screen, you have the option to set various filter options, which serve as the basis for determining the lines.

Field	Description
Vendor No.	The field is already prefilled with the vendor number from which you called the function.
Article number	You can use this field to filter for a specific article.
Display by	This field allows you to select how the rows should be displayed. You can choose from: - Day - Week - Month - Quarter - Year - Posting Period
Display as	This field allows you to specify the line display per time unit. You can choose from: **Motion** Displays total per time unit **Balance to date** Sums up per time unit
Evaluation of	Specifies the number to be considered retrospectively. This field is dependent on the "Period type evaluation" field.
Evaluation up to	Indicates the number of days that should be considered. This field is dependent on the "Evaluation period type" field.
Period type evaluation	Specifies the period type that will be displayed in the columns of the row display. You can choose between "Day" and "Week"

Optimized order

The optimized order offers the possibility to increase the quantities on basis of the data of the order worksheet in such a way that e.g. a minimum value or a volume or weight is reached. For this purpose, all products of the supplier are listed with their stocks and receipts and issues in the last months. Users can make an optimization by this functionality and write it back into the order worksheet.

Furnishings

Article / Supplier Catalog

In the "Article Supplier Catalog" articles must have been stored for a specific vendor.

KUMAVISION med Setup

The period to be considered for the calculation of the stock optimization can be determined in the KUMAVISON med setup on the info tab "Stock" via the field "Period stock range".

If the setup has not been done, users will receive a corresponding message.

Article units

To calculate volume and weight in the Optimized Order, the volume and weight must be stored in the item units.

Optimized order in the order worksheets

Opening the optimized purchase order

The Optimized order can be opened from the order worksheets. Only articles that are not marked as "blocked" and that have the same vendor in the article / supplier catalog are displayed.

Statistical fields

In order to facilitate the selection of items to be added, the following statistical fields have been added:

- Quantity in order
- Stock in storage location
- Stock
- Procurement time
- Stock range in weeks
- Average receipt per week
- Average issue per week

Adding items

By entering a quantity, the footer fields of the optimized order are updated (prerequisite: weight and volume in the item unit, as well as the prices). In addition, the pricing takes place.

Foot of the optimized order

For better planning or overview, the footer contains total fields for amount, volume and weight.

Thus, the buyer has the possibility to add more items or quantity for a vendor to reach the volume for a container or amount for the next invoice discount.

Management of certificates and declarations

Deposit of certificates and declarations

You have the possibility to deposit and monitor certificates and declarations of a creditor.

In the "Certificates and declarations" facility, you can deposit the required certificates and declarations that are needed in the process.

Under the "Code" and the "Description" you can enter the certificate no. and the corresponding description.

The existing certificates and declarations are displayed in the info tab "KUMAVISION med".

Via "New" in the menu ribbon you can add new certificates.

Field	Description
Code	Selection of stored certificates
Start date	Certificate validity start date
End date	Certificate validity end date
Inquiry validity certificates and declarations	Notification of certificates when to inquire with creditors
Asset link	Link to a file in the file system

Query of valid certificates

Since the certificates are only valid for a limited time, the validity must be checked regularly.

For this purpose, there is the report "Supplier QM data notification", which can be filtered, for example, to the "Date for notification".

Additional fields in purchasing

For additional fields already stored in the master data, it can be defined that these are carried through the purchasing process to the posted document. In addition, it can be defined whether a manual change in the document should be possible or not.

Additional fields for articles and resources can be carried along in the lines in business documents, information about creditors is taken over in business documents on document header level.

Header related information from the Eink. of Name: When a document is created, the additional fields are carried along at header level.

Line related information: When selecting an item in a business document, the additional fields are taken over as a line. The following applies to additional fields in the header and line: All fields that are transferred to a purchasing document can be manually overwritten there if this is set up accordingly in the additional fields table setup. For each field then a marker "manually changed" is set and it is stored by whom the information was changed and when.

>   Note

For actions like "Copy voucher", posting, etc. all additional fields will be pulled again from the master data that have not been changed manually.

Copy article comfort

This service area extends the standard functionality for copying articles by the following copying options in KUMAVISION medTech365:

- Stock data
- packaging types
- Replacement articles
- Associated articles
- Article label information
- Alternative prices
- Additional fields article
- Additional fields Variant
- Additional field Unit
- Attributes

Note

For further information see "Copy article comfort"

Minimum order value and freight limit in purchasing

For wholesalers it is mandatory to optimize the order costs. In KUMAVISION medTech365 it is possible to consider minimum order values and freight charges of suppliers in the ordering process.

To define a minimum order value or freight allowance for your supplier, call up the desired vendor card.

On the "Delivery" info tab, enter the desired amounts in the "Minimum order value" or "Freight allowance" fields. The specification of the two fields at the vendor always refer in the currency of the vendor.

The values entered here are displayed in the order statistics and in the order worksheets.

Order statistics

In an order, you can view the order statistics in the ribbon > "Order" > "Statistics".

In the "Vendor" info tab, the two fields "Minimum order value" and "Freight allowance" are included. Thus, this information can be viewed directly in the order creation process. The display of the two fields "Minimum order value" and "Freight limit" in the order statistics in the info tab "Vendor" is always done in the currency of the vendor, regardless of which currency the purchasing document currently has.

Order worksheet

In the order worksheet, the minimum order values and freight limits (if any) of the vendor are also displayed below the proposal sheet.

In addition, the amount already planned in this order worksheet and by the respective vendor is displayed in the Vendor order value field.

When an entered order is released, the values are checked against the freight allowance and the minimum order value. If the values fall below these limits, a corresponding message is displayed.

When releasing an order, a check of the order value against the minimum order value only occurs if the currency of the order is the same as the currency of the vendor.

Users can decide at this point whether or not to release the order anyway.

The minimum order value, which is deposited with the supplier, is compared depending upon attitude of the switch "EK prices inclusive VAT" with the net or gross value of the order lines in the test run. If this switch is set, it is compared with the value incl. VAT of the order line and it is determined whether the minimum order value is reached. With the release of the order therefore also only then a check takes place, if this switch with the order to be released is equal to the switch of the supplier. In the purchase order worksheet, the purchase prices are recorded accordingly. In the order worksheet line there is no field line amount. Here the "line amount" is simply added, which would result from the fields quantity, purchase price and line discount%. In the case of EK price incl. VAT = Yes, the VAT amount to be expected in an order is added per line.

Note

Any existing invoice discount will not be taken into account during the check.

If the purchase from vendor and the payment to vendor differ, the settings of the purchase from vendor will be taken into account for the check run.

Commission article

The "order quantity" replenishment procedure is usually based on a commission article logic.

It is advisable to create configuration templates for local and central comm. articles. For this purpose, the field in the template is preset accordingly.

In the following, the necessary setups and procedures within the processes are explained in more detail.

Establishment

Item

On the respective item card on the "Stock" info tab, the "Logistics type" field can be used to define the behavior of the item as a commission item:

field	description
Logistics type	Option values: Empty, Comm. item central, Comm. item local. The field defines the behavior of the item as a commission item. Depending on whether local or central, stock data will also be automatically generated when a template is applied.

KUMAVISION MED Setup

Field	Description
Comm. -Article main storage location code	Used when applying an article template. Indicates the storage location for central procurement of comm. items.
Comm. -Other service providers	Used when applying an article template. Indicates the storage locations for central and local procurement of comm. items for which inventory data is created. If the field is empty, storage data is created for all storage locations.

Storage bins

At the respective storage location, a corresponding storage bin must be set up for the commission items. The setup is done analog to the conventional setup of storage bins additionally the field "Comm.-article logistics type" has to be maintained.

field	description
	Comm. -Option values: Empty, Default, Allowed. The field allows to specify a separate storage bin for Comm. items.

Use in the processes

Article creation

If a new item is created using a template or the template is applied to an existing item, the inventory data is created as follows. Generally, the "Replenishment Method" field is set to "Order Quantity" for all inventory data.

Comm.-Article with local procurement

For all storage locations in the filter "Comm.-Article Other Storage Locations Filter" from the KUMAVISION MED setup, storage data with "Procurement Method" = "Purchasing" will be generated.

Comm. articles with central procurement

For all storage locations in the filter "Comm.-Article Other Storage Location Filter" from the KUMAVISION MED institution, storage data with "Procurement Method" = "Stock Transfer" are generated. For the storage location from the field "Comm. item main storage location code" from the KUMAVISION MED institution, stockkeeping data with "Procurement method" = "Purchasing" are generated.

Procurement

If a Comm. article is entered into a sales order, in the order worksheets depending upon storage location and stockkeeping data directly a purchase order or a transfer together with a purchase order is suggested. Thereby the chain purchase order to sales order is always held together by a reservation.

If a comm. article is entered, there is normally no stock for this article. In this case a corresponding message appears.

If, however, there is unreserved stock, a message appears informing the user that this stock may have to be reserved manually.

Order confirmation

A confirmation number and date can be entered in the purchase order using the "Create order confirmation" function. The confirmation number is visible in the purchase order lines in the "Current order confirmation no." field. For Comm. items, the field has also been added to the sales order lines under the same name. Clicking on the field opens the order confirmation window.

The functionality of the order confirmation has been extended as follows:

- In the window itself, the order can be displayed directly via the action "Display voucher".
- The fields "Document type" and "Document no." have been added to display the order number.
- The table Order confirmation line has been extended by the fields "Sales order no." and "Sales order line no.".

The fields are automatically filled when creating an order confirmation line if a reservation exists for a sales line. (This can also exist indirectly via a stock transfer line).

- The "Origin" field has been added to the Order Confirmation Line table. The field is filled with the default value "Manual" when an order confirmation is entered manually. In addition, an automatic entry is now created in the Order confirmation line table with the origin "Goods receipt" upon delivery. This creates a link between the purchase line and the sales line triggering the requirement if a reservation exists, and this link remains even after delivery if the reservation no longer exists.

Quantity change

In the case of orders and orders with reservations, it is not possible to change the quantity in the standard system. For comm. articles this is possible as long as no delivery has been made. I.e. the quantity can be adjusted in the order as well as in the order at any time. In this case, both the reservation and the document lines within the reservation chain are adjusted in quantity.

It is not possible to

- change the quantity in the middle of the chain, i.e. in the stock transfer.
- to make a quantity change after a partial delivery.

Default storage bin at goods receipt

In the respective storage locations, the storage bin "KOMM" is defined as the default storage bin. When the goods receipt is created, the storage bin "KOMM" is automatically suggested if it is not already predefined by the user or by the two-stage goods receipt with GR storage bin.

Changing the article no. or the variant code in the goods receipt

In the goods receipt window there is the action "Change Comm. article" on row level. The window "Select article and variant" appears in which the article no. and/or if necessary the variant code can be changed.

Resolving backlogs

In order to generate the corresponding goods issues after posting the goods receipt, the existing function "MED Backlog Clearance" can be used.

For this purpose it is necessary that in the user setup, users in the field "Berecht. Backorder clearing" have been activated. In addition, the standard purchase order type must be configured for backorder resolution.

Item label with reservation info

It is possible to print a label for an article at goods receipt. For this purpose, the action Label information must be called up in the article card under Article data and an entry must be created.

When the goods receipt is posted, a label is printed out. If an article is reserved from a sales order, the customer no., the customer name and the sales order no. are now also printed on the label.

Creation of a purchase return

If a Comm. item is entered manually in the Sales Returns window, a corresponding note appears.

Using the "Create sales return related documents..." action it is possible to create a purchase return in the Sales Returns window.

In this case, a reservation is now created from the purchase order line to the sales order line for comm. articles.

Discount reasons

To be able to use the line discounts in combination with discount reasons in the later processes, it is first necessary to define them. To do this, call up the "Discount reasons" via the user search.

You can define a new discount reason via "New" in the ribbon.

field	description
Code	Unique Code
Description	Free description to use this code. Will not be included in the item text.

To make the assignment, open the corresponding purchase document and select a discount reason on the desired line.

The discount reasons can also be used to map "discounts in kind". To do this, create a corresponding discount reason = 100% and assign it to the corresponding document line.

After selecting a discount reason, the corresponding line discount is automatically filled.

The line discounts are only directed to the respective line and automatically calculates the line amount minus the desired discount.

Comfort functions order worksheet

It has been made possible to jump directly from the order proposal line to the article or to the stockkeeping data. To do this, select the line and call up "Belonging" > "Line" > "Card" or "Inventory data card" via the menu ribbon.

Furthermore, the inventory turnover statistics have been added, which you can view via the menu ribbon "Belonging" > "Row" > "Item/ inventory turnover". The inventory turnover shows you the past movements of the article.

In addition, possible priority texts and references to scale conditions, as well as minimum order values and freight limits are displayed.

Stock data

In order to simplify the management of inventory data, an option has been created for minimum stock levels to be calculated and suggested based on historical data. Users then have the option to transfer this data directly to the inventory data. In addition, a convenience function has been created that allows the inventory data to be created in batch. The inventory data of an item can only be entered or changed if the item is in the "Processing" status. The inventory data also contains the dimension "posting code", so that inventory data can also be maintained for different posting codes.

"MED requisition" replenishment procedure

In addition to the procedures of Microsoft Dynamics Business Central™, there is a replenishment procedure "Requisition MED", with which a pure quantity consideration is carried out, there is no date consideration. You can enter the replenishment procedure on the same inventory card where you define the procurement method, under the "Planning" info tab. Replenishment procedure Description Requisition MED If the reorder level is fallen short of, the stock is replenished up to the reorder level, taking into account the order quantity. Only quantities are taken into account without reference to the date.

Dispositive data

Depending on the replenishment procedure, various data must be maintained that have an effect on the order worksheets.

In the best practice process of KUMAVISION medTech365, "Requisition MED" is selected as the replenishment procedure. In this procedure, only the fields "Reorder level" and "Order quantity" are relevant. As soon as the reorder level is fallen short of, the reorder level is replenished taking into account the order quantity. For information on the replenishment procedures already implemented in Microsoft Dynamics Business Central™, please use the Microsoft Dynamics Business Central™ online help (F1).

Unreal stocks

In the "Accounts Payable & Purchasing Settings", it is possible to set whether unreal stocks are to be ignored. This means that orders with a goods receipt date in the past will not be considered as available stock.

Create inventory data autom.

Setup Standard assortment

In order to filter the creation of inventory data to specific items, the field "Standard assortment" has been added to the item master.

Autom. stockkeeping data

An "Autom. stockkeeping data" indicator can be set at the storage location so that stockkeeping data can be created for all storage locations with this indicator.

Weighting scheme

To create a weighting scheme or edit an existing one, enter "Weighting scheme overview" in the search function. The weighting scheme can be used to define for which period and with which weighting the historical data should be considered and thus also calculated. In addition to a date formula, a fixed date can also be entered. The weighting scheme can be stored in the following places, which also corresponds to the hierarchy:

- KUMAVISION med facility (Inforegister: Purchasing).
- Article categories (column: Consumption weighting scheme code)
- Article card (Inforegister: Procurement)
- Stock data (Inforegister Procurement)

If the STANDARD weighting scheme has been entered for the item and WEIGHTED for the inventory data, the weighting scheme of the inventory data will be used for the calculation.

Process Create stock data

On the item under Actions or under via Quick Search, there is a function "Create Stock Data" to create multiple stock data in the batch.

There are some fields that support to create stock data.

Field	Description
Created by	Select if the inventory data should be created by storage location only, by variant or by storage location & variant.
Only for items in stock	Definition if the inventory data will be created only if the item has a stock or also if the item has no stock.
Delete previous stock data	If selected, the previously created stock data will be deleted by the new creation.
Procurement method	Specifies how the value "Procurement method" is to be filled in the inventory data. Either by transfer from the article or as a default. Selection options: - From article - Purchase - Production order - Stock transfer - Assembly
Reprocurement Procedure	Specify the replenishment procedure for the inventory data. Selection Options: - Empty - Fixed Order Quantity - Replenish to Maximum Stock - Order Quantity - Lot-by-Lot - Requisition MED
Storage Location Code Transfer	If the "Transfer" option has been selected in the procurement method, a storage location (from which to transfer) can be entered here. Prerequisite is that the stock transfer route is stored
Consumption weighting scheme	Specification of the weighting scheme for the stockholding data.
Info register article	**Filter on fields of the article** Filter on the fields of the article master, among other things on the new field "Standard assortment". **Filter on sum fields** Filter on the sum fields, such as booking code, but also on the new field "Autom.stockholding data".

When the function is executed with the filters, the inventory data will be created.

Article Planning Parameters Proposal

You can monitor the inventory data from the "Article Planning Parameters Proposal" page.

Calculation planning parameters

To have the planning parameters calculated, the function "Calculation planning parameters" must be executed in the menu ribbon. The following parameters can be set:

field	description
Storage location filter	Entry of a storage location If no storage location is entered, the calculation is carried out for all storage locations. Per storage location one line.
Article variant filter	Entry of a variant If no variant is entered, the calculation is done for all variants.
Create 1 line per article variants	With this option one line will be created and calculated for each variant.
Posting code filter	Preset with posting code UV If no posting code is entered, the calculation is done for all posting codes.
Weighting scheme filter	Entry of a weighting scheme If no weighting scheme is entered, the calculation is made for all weighting schemes.
Reference date	The data is calculated on the basis of this date.
Display rows without changes	When filling the book sheet, there is also the possibility to take over only those rows into the book sheet at all, whose values in the proposed New Parameters differ from the values in the Old Parameters. This is done with the help of the button "Display rows without changes" in the option part of the filling run, that the user leaves unchecked in this case.
Period	Based on the option the static fields should be calculated. Options: Day, Week, Month, Quarter, Year
Info Register "Article"	According to the set filter the data will be calculated.

In addition to the range calculation for the current stock and weighted consumption, the article parameter proposal also suggests new planning parameters based on these values. These can be edited in order to manually enter deviating data, if necessary. For this purpose, the read-only old planning parameters that have

been transferred from the master data are displayed. The logic of how the new parameters result is as follows. The replenishment procedure must be taken into account here:

- The New Minimum Stock is equal to the consumption resulting from the calcul. Consumption per day in the time span procurement time + safety margin procurement time would result.
- The new maximum stock is equal to the new minimum stock plus the consumption, which would result from the kalk. Consumption per day in the time span order cycle would result.

Editing proposal

After the proposal has been calculated, the result can be checked and adjusted if necessary. The following columns, among others, are available for this purpose.

Field	Description
Article number	Article number
Description / Description 2	Item description
Posting code	Posting code of the planning line and basis of calculations
storage location	storage location of the calculation line
consumption weighting scheme usage	
Date of reference	Date of reference for calculation
Calcul. Consumption per day Calculated	Consumption per day based on consumption weighting scheme. Here is the lookup possibility to view the calculation basis.
Inventory	Stock of items, storage location combination
Range (Date)	Range as the date of the stock based on the calcul. Consumption per day.
Range of coverage (days)	Range of coverage as number of days of stock on hand based on calculated consumption per day. Range as number of days of inventory based on calculated consumption per day.
Procurement method	Procurement method stored in the inventory data.
Replenishment procedure	Replenishment procedure stored in the inventory data.
New replenishment procedure	A new replenishment procedure can optionally be selected here.
Procurement time	Procurement time due to the NAV hierarchy 1. inventory data 2. supplier article catalog 3. article 4. vendor
Old minimum stock	Minimum stock of inventory data .
New minimum stock	A new minimum stock can be optionally stored here .
New minimum stock range of coverage (date)	Specifies the range of coverage as date for the new minimum stock

Field	Description
New minimum stock Range of coverage (days)	Indicates the range of coverage in days for the new minimum stock
Purchasing unit	Purchasing unit
Old order quantity	Order quantity of inventory data
New order quantity	Optionally, a new order quantity can be entered here. The system checks if the order quantity is a multiple of the purchasing unit, so that whole units are always suggested in the order proposal
New planning parameters different	Information whether the new parameters are different from the old ones
Calculated on	Date when the calculation was performed
Calculated by	By whom the calculation was performed
Corrected on	When the line was changed
Corrected by	By whom the line was changed
Stock data updated on	When the stock data was updated

Statistics

Statistics can be used to better understand the calculation. In addition, statistics can help in decision making for new data.

Infobox "Article Dispo. parameters"

The infobox "Article dispo. parameters" shows the stock data of the current row.

Infobox "Article consumption lime.details

The infobox "Item Consumption Cost. Details" displays the data of each movement based on the consumption weighting scheme of the current row.

Field	Description
Sales per period	According to "Consumption weighting scheme" the item type "Sales per set period" is calculated
Consumption per period	According to "Consumption weighting scheme" the item type "Consumption per set period" is calculated
Consumption assembly per period	According to the "Consumption weighting scheme" the item type "Assembly per set period" is calculated.
UML Output per period	According to "Consumption weighting scheme" the item type "UML Output per set period" is calculated.
Purchase order per period	According to "Consumption weighting scheme" the item type "Purchase order per set period" is calculated.
UML Receipt per period	According to "Consumption weighting scheme" the item type "UML Receipt per set period" is calculated.
Actual message per period	According to "Consumption weighting scheme" the item type "Actual message per set period" is calculated.
Actual message assembly per period	According to "Consumption weighting scheme" the item type "Actual message assembly per set period" is calculated.
Receipt per period	According to "Consumption weighting scheme" the "Item type receipt per set period" is calculated.
Outflow per period	According to "Consumption weighting scheme" the item type "Outflow per set period" is calculated.

Inventory turnover

To open the item statistics matrix, click on "Item/ inventory turnover" and then on Display matrix. The inventory turnover shows the past movements of the item. ITEM AVAILABILITY BY EVENT#. The item availability by event shows all the recorded documents of the item.

Apply changes

When the check and revision of the parameters are completed, this can be transferred to the inventory data. To do this, the lines that are to be transferred must be selected and then the function "Transfer changes to inventory data" must be executed.

Users will be prompted once again whether the transfer should actually take place. If this query is confirmed with "YES", the data is transferred to the inventory data.

Sales and Marketing

Tax lot size

By specifying a tax lot size in the item master or item variants, it can be achieved that in sales documents users are forced to enter a multiple of the tax lot size as quantity in the lines.

Setup

Sales order types

In the sales order types, the "Ignore delivery lot size" field is used per code to define whether the delivery lot size is active or inactive.

Article card

On the article card, on the info tab "KUMAVISION med", the corresponding output lot size is stored for the stored sales unit in the field "Output lot size".

Note

If the article consists of several sales units, the delivery lot size in the document will be adjusted accordingly.

Example:
Sales unit piece = delivery lot size 15
Sales unit PCK10 = delivery lot size 1.5

Article variants

Per article variant code an own delivery lot size can be deposited over the field of the same name.

!!!note "Note If a delivery lot size is stored in the article variant, the delivery lot size on the article card is not taken into account.

Procedure

If an article is entered in a sales order that has a delivery lot size stored, the following is checked:

1. quantity is less than the issue lot size. If the quantity is set lower than the issue lot size, a window opens with the option to select the "smaller valid quantity" or the "larger valid quantity". Depending on the selection, the quantity will be updated accordingly.
2. quantity is higher than the output lot size If the quantity is set higher than the output lot size, the window opens again with the option to select the "smaller valid quantity" or the "larger valid quantity". Depending on the selection, the quantity will be updated accordingly.
3. change of the unit code When the unit code is changed, the corresponding delivery lot size is automatically calculated and suggested.
4. article variant with delivery lot size If a variant is stored, the output lot size from the article variant is taken into account.

Different billing address offer

The "Offer address control " field has been added to the offer header. When printing the quotation, depending on the option selected in the "Quotation address control" field, the sales, delivery or billing address will be printed in the quotation header. If the "Delivery address" or "Sales address" option is selected, the output of the delivery address at the end of the document will also be suppressed.

The "Offer address control" field is also passed to the archived offer header and displayed there.

Convert selected lines to an order

With this conversion it is possible to convert selected lines into an order.

A new field "Convert to order" has been added to the offer lines. The default value of the field is = YES. Users can manually override the field with No. With the "Create order" function, only lines that have the "Transfer to order" = YES check mark are transferred to the order. The prices and discounts are already transferred from the quotation to the order.

Sales credit note without invoice link

It is possible to create a sales credit note without an invoice link. This authorization depends on the users, to give this right to a user, the switch "Allow credit note without link to invoice" must be activated in the user setup on the info tab "KUMAVISION".

Extended sales history

The sales history from the standard system is extended by this service area with additional document types. These are the archived documents for sales quotation, sales order, blanket order and sales returns These documents can be transferred line by line.

Traffic light display

A traffic light display in the info box "Sales header status" in the sales order, shows a quick overview of the document situation. The information about all lines concerning availability, goods issue, booked deliveries and, if applicable, invoices are visually displayed by a color indicator.

In the company data on the "Documents" info tab, the images for the red, yellow and green traffic lights must be stored beforehand.

Negative list

Negative lists can be created per customer, invoice recipient or country of delivery. In doing so, freely configurable codes are used to either assign articles (inclusive) or exclude them (exclusive). The negative list created in this way is then evaluated in the sales documents when an article is selected and, if applicable, an error message is displayed.

Creating an article negative list

To create an article negative list, call up the "Article negative list overview" via the user search. You can define a new article negative list via "New" in the menu ribbon.

An empty article positive/negative list opens. A unique code must be entered in the "List Code" field, which can be further detailed in the "Description" field.

In the "Condition line article list" info tab, the corresponding articles are determined by specifying different field origins and field filters.

The "Create article list" button in the menu ribbon is then used to generate the article list, and the articles determined in this way are then displayed in the Article negative list article info tab.

Assign negative article lists

If a customer is not to be supplied with one or more items, a corresponding negative item list can be assigned in the "Delivery" info tab of the relevant customer by selecting it using the list code.

A negative list that has already been assigned can be called up via the menu item "Related" > "Sales" > "Negative list item" of the menu ribbon.

If the delivery is to be restricted to a country, the list can be assigned to the relevant country in the countries/ regions overview.

Use of a negative list item

If a negative list item is used in a sales order with a customer to which this negative list has been assigned, or if the delivery is made to a country which should not be supplied with this item, the system automatically generates an error message indicating that the item is blocked in combination with the customer used.

Extension of profile questionnaires

The CRM profiles have been enhanced so that not only can an answer be selected, but values can also be recorded as the answer is given. In addition, once selected answers are stored in a history table.

Batch recall at component level

Recall actions can be performed using item tracking. You can create segments and easily create serial letters for the recalls.

Sale articles

Sales articles are articles that are being discontinued from the product range. They can either be articles that are no longer reordered by the company or articles that are no longer supplied by the supplier. In order for the sales department to be aware of this when entering orders for these articles, there is a sales notification by the system with the availability check. A sales item can be either an item itself or variants of the item.

To mark an article or an article variant as a sales article, first call up the desired article card.

On the "Article" info tab, you can mark the article accordingly by activating the "For sale" button.

Alternatively, you can mark each variant by ticking the "For sale" checkbox for the corresponding variant. Article variants can thus be marked individually "For sale".

Note

If an article that has article variants is itself marked "For sale", this automatically applies to all its variants, regardless of whether they have been marked as "For sale" in the article variants table.

When an article marked for sale is entered in a sales order, the availability message informs the user that this is the case.

Any existing orders for this item are not displayed for items marked for sale in the availability check. Planned receipt is always set to 0, as it cannot be guaranteed that this order will still be delivered.

Note

If an order exists for this item, it will not be included in the availability message if the delivery date of the order is later than the delivery date of the order.

If the desired delivery date of the order is earlier than the planned goods receipt, an "Earliest availability date" is displayed.

Time limitation of blanket orders

For blanket orders, not only the quantity limitation but also the time limitation is available in order to prevent that the conditions of the blanket order can still be used after the validity has expired.

For time limitation of blanket orders, an additional field "Valid until" is inserted in the blanket orders and provided with function.

Additional fields in sales

For additional fields that have already been defined in the master data of a customer, it is possible to define that these are available in the sales process and are carried forward to the posted document. Additional customer fields are included in the document header, and additional fields for articles and resources are included at line level. In the additional field setup, it must be defined whether manual changes may be made to these fields in the document. These changes are then logged with user and time information.

Value credit entry

If the sales credit note does not contain any items and therefore does not cause any goods movement in the warehouse, the "Value posting" switch must be activated in the "General" info tab.

If the switch is not set, when a credit memo is posted in the background, a sales return and thus article items are automatically credited.

Delivery types

The receipt and issue of goods can be posted in Microsoft Dynamics Business Central™ Standard via the sales documents. To transfer goods, the transfer order must be used here. However, since the case may arise that the goods are transferred to the customer for viewing, for example, and are also retrieved again, this procedure with two different document types is too time-consuming. Using the field "Delivery type" of the sales line, a stock transfer can be posted within a sales document together with normal sales transactions.

Sales order type

The delivery type is initially defined in the sales order types in the field of the same name. If new item lines are created in a sales document with a sales order type, the "Delivery type" field of the same name is automatically preassigned in the sales line.

Storage location

At the respective storage location, the counter storage location and storage bin can be defined globally for the stock transfer. To do this, call up the respective storage location map and set up the fields below accordingly:

field	description
	If the "counter storage location code" is entered for a storage location, this is automatically preassigned in the field of the same name in the sales line if the delivery type "stock transfer" is entered.
	This field is set in the counter storage location of a stock transfer if this is subject to storage and a storage bin is to be generated automatically on the basis of the customer number.

Customer

If the setup for the counter storage location in the storage location is not sufficient, this can also be set up per customer. To do this, call up the corresponding customer card and define the fields of the table below on the "Delivery" info tab:

field	description
Counter bearing location	If the "counter storage location code" is entered for a customer, this will automatically be preset in the sales line in the field of the same name if the delivery type "stock transfer" is entered.
Counter storage bin	If the "counter storage bin code" is entered for a customer, this is automatically preassigned in the field of the same name in the sales line if the delivery type "stock transfer" is entered.

In the sales orders and sales returns, a stock transfer can be posted in the item lines. To do this, the value "Stock transfer" must first be selected in the "Delivery type" field. The field can be automatically preassigned via the sales order type.

The target storage location must be entered in the "Counter storage location" field. If the destination storage location is subject to storage bin requirements, the "Counter storage bin" field must also be filled. Via the setup, the fields "Counter storage location" and "Counter storage bin" can be preset automatically. For stock transfer lines, the price is automatically set to the value "zero", since the goods remain property and no invoice can be posted.

The minimum DB check is not performed for stock transfer lines. When the goods are delivered, they are automatically marked as invoiced and do not leave a "quantity delivered but not invoiced".

It is possible that a sales order is completed only by delivery.

However, the sales order is not automatically deleted. This can be done manually or by batch.

Posted documents

In the posted documents the delivery type as well as the destination storage location and bin are visible. Balancing item items of the type "stock transfer" are created on delivery. For each side requiring a storage bin, an associated storage bin item is also posted.

Reversal

A reversal of a stock transfer automatically reverses the stock transfer.

Sales return

In the sales reset, the lines should be generated using the "Get posted document lines to be cancelled" function. This function displays, for example, the posted sales delivery lines from which the appropriate lines can be selected. The window also displays the Cancellation Quantities and Delivery Type fields.

In the return, the storage location and the counter-storage location are reversed compared to the order. A return of stock transfer from the main warehouse (storage bin 001) to customer 20000 corresponds to a stock transfer from customer 20000 to the main warehouse (storage bin 001).

Logistics

Basically, even with a stock transfer, a posting from the sales document should have the same result as a posting from the logistics document (goods issue / goods receipt).

For the sales order, there are no special features regarding the delivery type.

With the sales return there is the special feature with the stock transfer that not the storage location but the counter storage location is the goods receipt storage location, because as in the order first an issue from the storage location and then a receipt on the counter storage location is posted. This is taken into account accordingly in the goods receipt.

Discount reasons

The discount reason can be used to additionally specify for the delivery types whether this line can be an item without price or whether the clerk can give a discount within a defined range.

In the case of zero items, the amount is not checked in the billing document, e.g. in goodwill cases. This also prevents items from being inadvertently billed without an amount. Whether the discount is for goodwill, warranty or other freely definable discount reasons can be specified in the individual document lines.

In order to be able to use the discount reasons in the subsequent processes, it is first necessary to define them. To do this, call up the "Discount reasons" via the user search.

You can define a new discount reason via "New" in the ribbon.

Field	Description
Code	Unique code
Description	Free description to use this code. Will not be included in the item text.

To make the assignment, open the corresponding sales document and select a discount reason on the desired line.

The discount reasons can also be used to map "discounts in kind". To do this, create a corresponding discount reason = 100% and assign it to the corresponding document line.

After selecting a discount reason, the corresponding line discount is automatically filled.

The line discount is only directed to the respective line and calculates the line amount automatically minus the desired discount.

Warehouse and Logistics

Logistics parameters

General

With the help of the logistics parameters it can be determined for articles, according to which method these should be picked, whether a batch-pure picking is necessary at the exit and which minimum duration the expiration date must have at the entrance or exit of the goods.

Since depending on the storage or agreement with customers / suppliers these parameters can be different from case to case, KUMAVISION medTech365 offers the possibility to set up the parameters at different places to represent a hierarchy that ranges from the individual agreement with the customer / supplier to a general default from the warehouse facility.

Setup Description of logistics parameters

This section describes the individual logistics parameters and where they can be set up.

Parameter	Meaning
	This field is an option field with the following options:
	blank The picking method has not been set up at this point.
	FIFO The goods will be picked using the "FIFO" method (First In First Out).
	LIFO The goods will be picked using the "LIFO" method (Last In First Out).
Picking Method	FEFO The goods will be picked using the "FEFO" method (First Expire First Out).
	Note If the picking method "FEFO" was selected, but the item does not work with expiration date tracking, the picking method "FEFO" will be automatically replaced by FIFO".
	Manual With the picking method "Manual", the warehouse employees decide themselves in the goods issue which items (if necessary. Batches / serial numbers) are picked for a goods issue.
	Note Please note that with the picking method "Manual" no availability check takes place on the system side in the goods issue.
Chargin picking	The switch in this field controls whether the picking of the goods should be done in batches. Note This parameter is only used when picking goods that work with batch tracking.
Outlet Minimum expiration date runtime	This parameter is used to specify the minimum expiration date runtime that must be observed when goods are issued. A date formula is stored as a parameter in this field. Note If an item does not work with expiration date tracking, this parameter is ignored.

Parameter	Meaning
Receipt Minimum Expiration Date Term	This parameter is used to specify the minimum expiration date term that must be met when the item is received.
A date formula is stored in this field as a parameter.	
Note If an item does not work with expiration date tracking, this parameter is ignored.	

Note

The "Specific Logistics Parameters" field controls whether logistics parameters should be considered at all when checking a master date. This means that this field can be seen as a switch that determines whether e.g. for a storage location the logistics parameters on the storage location card should be checked or not. The parameters will be checked only in the case when the switch "Specific logistics parameters" is activated.

Setup options Logistics parameters

The logistics parameters can be set up in several places in order to be able to map the chain from individual agreements with customers / suppliers to a general warehouse setup. In the following the possible setup points are presented according to their priority in the determination of the logistics parameters.

1. article reference In the article references the logistic parameters can be defined according to individual agreements with customers or suppliers per article and variant.

2. stockkeeping data In the storage data the logistics parameters can be defined specifically for a storage location and article / variant / booking code - combination.

3. article card In the article card the logistics parameters can be defined generally for an article, all the same to which camp this enters or from which camp this goes out and from which supplier this article comes or for which customer this article is intended.

4. article category In the article category the logistics parameters for a category of articles can be set up. This setup has no relation to the individual article or storage location, nor to customers or suppliers.

5. storage location The setup of the logistics parameters on the storage location card refers to the respective storage location, regardless of which article is received or issued at the storage location and from which supplier or for which customer the goods are moved.

6. warehouse setup The setup of the logistics parameters in the warehouse setup represents the lowest hierarchy level of the logistics parameters. Here the parameters are set in general, no matter which storage location or article it is.

Determination

The logistics parameters are checked in the order of the master data listed below. This ensures that individual agreements with customers or suppliers, are given preference over general setups, e.g. in the warehouse facility.

The logistics parameters are determined in the following order of the setup data:

1. article references
2. warehousing data
3. article card
4. article category
5. storage location
6. storage facility

When checking the logistics parameters in the setup data, it is checked whether the logistics parameters are active at all (switch "Specific logistics parameters" on the respective data card e.g. storage location card). Further it is checked whether the appropriate parameter is filled. (e.g. field "Outbound minimum runtime expiration date" has a value) If both are true, the parameter is used. If this is not the case, the system checks the logistics parameters in the following setup data according to the check sequence.

The individual logistics parameters are checked independently of each other. For example, it may be the case that the batch range picking is taken from the article references, but since the minimum runtime expiration date was not specified there, the minimum runtime is determined from the data in the article card.

The logistics parameters can also be set up in master data that have no direct reference to the article or article tracking (e.g. article category, storage location, storage facility). The parameters Picking method = "FEFO", Batch production = "YES", Outbound min. runtime expiration date and Inbound min. runtime expiration date can then still be set here.

These parameters are then only applied to items with corresponding item tracking. I.e. if these parameters are checked for an article for which batch tracking and expiration date tracking have been set up, these parameters will be applied.

If, on the other hand, an article is used that does not have corresponding article tracking, the "FEFO" picking method is automatically considered as "FIFO". In this case, the logistics parameters "Batch clean production", "Outbound min. expiration date" and "Inbound min. expiration date" do not apply.

Backorder clearing in goods receipt

The backorder clearing function offers the possibility to clear sales backorders directly when posting the goods receipt. Sales backlogs are overdue deliveries or stock transfer issues. Setup parameters can be used to configure the backorder clearing function in such a way that manual intervention is basically no longer necessary. In addition, it is possible to display a backorder window so that users can intervene if, for example, fewer goods are received than are in the backorder.

In this case, users are shown the backlogged and deliverable order/stock transfer lines in a clear form and can manually distribute the goods receipt to the corresponding documents.

This option is intended to shorten logistics processes (no putaway if goods can be shipped directly), building on the functionality of the ramp rotator (cross-document) already available in the standard system.

Automated assignment when posting the goods receipt automatically fulfills the orders (requirements). Depending on the selection (reservation, creation of goods issue, posting of sales delivery bill), the goods are

reserved in the order, a goods issue is created or the sales delivery bill is already posted and printed when the goods receipt is posted. In addition, these options can be controlled via an authorization per user.

!!!note "Note Prerequisite for the backorder resolution functionality is the use of goods receipt and goods issue in the storage location.

Establishment

User setup

In the "User setup", it is first defined for the corresponding users whether they are allowed to carry out a backorder clearing with or without a reservation. This setup can be defined via the field "Berecht. Rückstandsauflösung" on the info tab "KUMAVISION". The following selections are available:

No Residue Resolution
. The backorder clearing window will not be displayed. The goods receipt is posted without any additional functionality.

Backorder clearing with reservation
The backorder clearing window is not displayed. A backorder clearing is done with the already reserved quantities.

Resolving backlogs with and without reservation
The backorder resolution window is displayed. Users can change the allocation of quantities. A backlog clearing is done with the already reserved quantities as well as with the quantities distributed by the user.

Purchase order types

Whether a backorder clearing is possible in the goods receipt is controlled on the one hand by the field "Backorder clearing" in the purchase order types. The following selection options are available here:

Reservation
The assigned quantities are reserved for the requirement line.

Creating the (outgoing) logistics documents
. The quantities to be distributed are first reserved as previously described. A goods issue is generated for each of the orders concerned and the reserved quantities are entered. If picking is required for the storage location, the picking document is generated and, if necessary, the reserved quantities and the storage bins are entered. (not for controlled picking).

!!!note "Note Only goods issues are generated, if the dispatch instruction is partial delivery, or with the dispatch instruction "complete delivery" all remaining quantities can be delivered. In addition, it is checked that, the credit limit with the reserved quantities is not exceeded.

Posting the (outgoing) deliveries
. The procedure is the same as for a) and b). Then, if necessary, the picking is registered and the goods issue is posted. If the storage location uses the option Putaway required, the generated putaway will be registered automatically.

None
No backorder resolution

Depending on the particular option and the order type in the purchase order, when the goods receipt is posted, a window is displayed where users can select the type of backorder resolution.

The type of backorder resolution in this window is preset from the type of backorder resolution from the purchase order type of the purchase order and can be changed again individually by the user *(if he/she has the necessary authorizations)* per goods receipt posting transaction.

Procedure

When a goods receipt is posted, the following is executed:

It is determined whether there are relevant requirements lines for the goods receipt lines. The requirements are determined for the following documents:

- Sales order lines
- Stock transfer lines
- FA components
- purchasing complaints
- Service lines

In addition, the date formula for the calculation of the date can be stored in the Accounts Payable & Purchasing setup on the info tab "KUMAVISION" in the field "Days Backlog Clearance".

Based on this date formula, the determination of the requirements lines will be limited by date, starting from today's system date.

If at least one requirement line is determined, then the window with the query about the type of the backlog explosion is opened.

If the delivery is too small, a message is displayed that the distribution cannot be done automatically, but only manually.

If not a single demand line was determined, the window with the query for the type of backorder resolution is not opened and the backorder resolution is not executed.

Note

If None is selected in the window with the query for the type of backorder resolution, the backorder resolution will not be executed. In case of all other options, a window will be opened displaying the demand lines (i.e. order lines, FA orders, stock transfer orders, EK complaints, service orders) that have not been completely served yet.

Depending on the goods issue date of the requirement line, the goods receipt quantity not yet reserved is entered as a proposal in "Quantity for allocation" or "Quantity for allocation (base)". The line with the earliest delivery date/due date has the highest priority for the quantity proposal. Users have the possibility to change the entry, distributing it among the individual requirement lines. Finally, they can confirm the entries. The quantities entered in the Quantity for allocation (base) field are reserved for the requirements lines.

Exchange of commission article

In the goods receipt window there is an action "Change comm. article" on row level. The window "Select article and variant" appears in which the article no. and/or if necessary the variant code can be changed.

Article stock transfer book sheet "Get stock bin contents

The article transfer book sheet is used for the transfer posting within a storage location from storage bin to storage bin. The function "Get storage bin contents" (found in the menu ribbon of the stock transfer book.sheet) considers in the stock transfer book.sheet the different posting codes needed to separate the different ownerships.

!!!note "Note The function "Get bin contents" is only available in the Stock transfer ledger sheet.

This makes it possible to fill the stock transfer ledger sheet with the entire contents of one or more storage bins. When calculating the rows, the article tracking is also taken into account and entered in this process.

In the selection mask appropriate filters must be set. Based on this, the system calculates and fills the stock transfer ledger sheet. The system behavior is significantly influenced by the "Quantity type" field. The following options are available for selection:

Total quantity
All picking lines that have not yet been registered as well as allocation items that affect the corresponding storage bin contents are deleted.

Moving quantity
Existing allocation items to the corresponding storage bin content will be deleted. Quantities that are in picking or blocked are not included in the calculation and remain.

Available quantity
Only available quantities are considered for the calculation. Assigned, blocked, or quantities that are in picking are not considered and remain. After selecting the quantity type, a meaningful note is displayed directly below the selection field. The individual parameters are also described there. The "User setup" controls if the user is allowed to use all three options (switch set), or if only the "available quantities" may be calculated (switch not set).

!!!note "Note In the created stock transfer lines the fields "New storage location code" and "New storage bin code" were not filled automatically. Here users have to define to which storage location and which storage bin the respective stocks should be transferred. Only after entering the new storage location can the item tracking be viewed.

After users have entered the destination storage location and the destination storage bin for the lines created, they can transfer the stock transfer book.sheet using the "Post" or "Post & Print" actions. This will post the goods in the system to the defined destination storage locations and destination storage bins.

Stock Overview

With the "Stock overview" the stock can be displayed and filtered with the corresponding item tracking. The stock overview can be called up via the user search as well as on the item overview and on a corresponding item card. The filter criteria are defined in the header. Mandatory to be entered are:

- Storage location
- article
- Booking code

Via the function "Stock" > "Calculate" the stocks are calculated and displayed according to the filter. The display of the info boxes can be selected via the menu item "Show info box". There is the possibility to call the following infoboxes:

- Row details (info about a specific row of the listing).
- Total according to calculation parameters (info refers to filtering in the header)
- Total (info per storage location, article, booking code & variant if applicable)

In the info box the availabilities and other information are displayed. If quantities of an item are in a storage bin like "QS", they are not available for picking. These storage bins are specially marked and can be viewed via the storage location, branching to the storage bin overview. The "Total quantity" field reflects the quantity that is in the warehouse regardless of its availability. The "Quantity in stock" tells you which quantities are currently still in the warehouse. So it can also be that the quantities are already in picking. The "Quantity in stock" minus the "Quantity in picking" then results in the value from the "Available quantity" field.

Tolerance (time) in Both Directions

In the standard Microsoft Dynamics Business Central™, a tolerance time can be set for the procurement run to avoid too many change notifications. This refers to the amount of time that a demand creator (e.g., a purchase order) can arrive earlier than a demand originator (e.g., an order) requires.

The setup is done in Microsoft Dynamics Business Central™ Standard first centrally in the production setup via the field "Standard tolerance period" and can be overridden article-specific in the article or inventory data with the field "Tolerance period".

In KUMAVISION MEDtech365 the production setup has been extended by the "Standard tolerance period too late" and the article or stock data by "Tolerance period too late". Thus, in KUMAVISION MEDTech365 tolerances can be defined in both directions in the replenishment procedure "lot-by-lot".

Note

Basically, the lot accumulation period must be defined, if the tolerance period is to be used. Here the rule applies that the lot accumulation period must be larger than the tolerance period.

Establishment of Tolerance

Global

Enter the term "Production Setup" via the user search and select the appropriate link.

Using the "Planning" info tab, you have the option of entering tolerance periods in the "Standard tolerance period too early" and "Standard tolerance period too late" fields.

Specific

To set and define specific tolerances, open the desired item or inventory data card. On the "Planning" info tab, you can define the tolerances in the "Tolerance period Too early" and "Tolerance period Too late" fields.

Control authorization per Storage Location

General

When a new client is set up, no pre-settings are made, i.e. at this point no user has the possibility to use or post storage locations in documents.

For this reason, when setting up a new client, the necessary setup / authorization control must be carried out for the desired purpose.

The following setup must be made for all users for whom no storage locations have been made under warehouse employees. I.e. if a user is set up as a warehouse employee for one or more storage locations, this user can select and post these storage locations.

Establishment

Authorization Storage locations

To set up the storage location and storage bin, access the "Authorization Storage Locations" via the user search.

On the authorization storage-locations overview you can assign authorizations on storage-location level via "New" for roles or for users.

Note

- Please note that an authorization can be assigned either per role or per user. A simultaneous assignment by role and user is not possible.
- If you define the authorization structure via the "Role ID", it is mandatory that the "Role authorizations" checkbox is set at the respective storage location.

Field	Description
Role ID	Specify the role ID (permission set) to which the permission record should apply.
User ID	Specify the user ID to which the permission record should apply.
Storage location	Specify the storage location for which the authorization record should be restricted.
Purchase; Sale; Inflow; Outflow; Relocation; Outflow, Consumption;	Select between: Yes = authorizes the user/role to perform the respective function. No= prohibits the user/role from performing the respective function. **Note** If you set "All" = "Yes"/"No" in the field, all authorizations (purchase / sale / receipt / issue / transfer / issue / consumption will be set to the corresponding value.
Only the user's own storage bin	Restricts the user to the storage bin with his/her own customer number (determined via the salesperson and the contact defined for this purpose). For more information, see "Set up user's own bin only").
Customer no. storage bin	Restricts the user to a storage bin with a fixed customer number **Note** Please note that the storage bin must be stored at the respective storage location with the corresponding customer no..
All storage bins	causes the setting for the storage location to apply to all storage bins The column "All storage bins" is only evaluated if "Only user's own storage bin" and "Customer no. storage bin" are empty. Existing storage bin authorization is displayed if storage bin authorizations have already been maintained for the line.

"User's own storage space only" setup

To allow users to make bookings only to their own storage space, set up the following:

Warehouse employee

The user must not be stored as a warehouse employee for the storage location in question. This setup would override the individual setup "User's own storage bin only" in the "Storage locations setup".

User setup

In the respective user setup, the "Authorization for all storage locations" checkbox in the "General" info tab must not be set. This setup would override the individual setup "User's own storage location only" in the "Storage locations setup".

In addition, the "Sales/Purchaser code" field must be maintained with the seller/buyer. If the user has not yet been created as a seller/buyer, this must be done as a priority.

Seller / Buyer table

In the "Seller/Buyer" table, the corresponding contact created must be selected in the "Contact no." field for the corresponding users. If no contact has been created beforehand, this must be done as a priority.

Contact

The contact assigned to the user in the Seller / Buyer table must have a customer assigned to it.

Storage Location

A storage location must be created at the respective storage location with the respective customer no. assigned to the contact.

Setup "Restriction to existing storage bins"

To restrict users / a role from posting only to an existing storage bin that is not its own or assigned to a customer, call up the "Storage Bins" call via the "Navigate" menu tab. Via this call you have the possibility to specify the authorizations on storage bin level.

!!!note "Note If something is entered in one of the columns "Only own bin", "Customer no. bin" or "All bins", the "Authorization bins" described below will be ignored, so nothing has to be maintained for individual bins.

Functionality

Lookup on storage location

In most relevant windows, the "Storage Location Code" or "New Storage Location Code" field will only display storage locations that the user is allowed to use. This affects the following windows:

- Sales documents (header and row)
- Purchasing documents (header and row)
- Stock transfer (header)
- All item book sheets
- Order and plan proposal
- Inspection orders
- Production orders

Realization-of-the-test-in-3-stages:

a) Posting
Each warehouse posting is checked exactly for the authorization settings and, if necessary, canceled with an

appropriate message. This applies to all warehouse postings, regardless of whether via document posting, a book sheet or other warehouse postings.

b) Release

As a level before serves the release of documents. Also here is checked. But only the posting of the document line itself. Theoretically could arise in the document posting further sequence - warehouse postings, which can not be checked in advance. In the case of a release, a check is only made if at least one line still triggers a stock movement, i.e. a remaining quantity has not been delivered. The release check is performed on purchasing, sales and production documents.

c) Lookup

Once again upstream in documents and ledger sheets, lookups are restricted to storage locations depending on authorization. The view on the storage locations results from the current setting of the document line / book sheet line (e.g. stock transfer). This is designed as a comfort - function, i.e. when typing in all storage locations are allowed. When maintaining master data and filtering for evaluations, there is no restriction of the view. Ownership is also not taken into account.

Excluded-from-testing }

- Value invoices and value credits.
- The 5008626 report for creating fixed assets.

role/user

A user can have higher rights than a role assigned to him/her. He/she can also have fewer rights if the right is explicitly set to "No". All roles of the user are checked for permissions one after the other. If there is no storage location authorization either for the user or for one of his/her roles, he/she has no booking authorization.

Posting codes, delivery hierarchy

Posting codes control the ownership relationship and are automatically controlled in the process. With the delivery hierarchy, the system automatically selects fixed assets, current assets, and third-party property for goods issue in a specified order, depending on availability and setup. The posting codes and their delivery hierarchy are already pre-parameterized. This setup can be modified under the "Posting codes" call. Thus, it can be ensured that, as in the above example, used goods (= current assets) are always delivered first. If the system does not find any available stock, it searches for available stock of the next booking codes.

Label printing for articles

On the article card in the menu ribbon over the call "article data" there is the "label information". Here it can be set up for any article that a label is printed automatically when posting the goods receipt. For the label can be determined whether it is to be printed in the goods receipt. Also the size of the outer packaging can be deposited. If,a for example, "5" were entered here, three labels would be printed for a delivery of "15". Since this is a simple logistic label, only the article number and the article tracking (e.g. batch/serial number) are printed as barcode. In addition, there is the option to store a text that should always be included on the label.

Inventory confirmation letter

An inventory confirmation letter can be created to request inventory confirmations from customers for goods that are stored at the customer's site. The basis for the goods to be confirmed are the posted deliveries with the delivery type Stock transfer. The required data is determined in the inventory book sheet using the function "Carry out inventory of customer stores" and then written to the inventory book sheet.

Convenience functions in the inventory

In addition to the key date inventory, other convenience functions have been implemented for perpetual inventory. For example, the count data for a specific area is recorded in the storage bin contents, at the storage bin, etc., in order to better identify areas that have not yet been counted. The inventory calculation has been extended so that counted areas can be excluded.

In the following, the necessary facilities as well as the processes of the different inventory forms will be explained to you in more detail.

Setup

In principle, the following preparatory measures must be taken for the inventory:

- The business processes in which goods are moved must be completed. This means that
- Goods that have been physically delivered must also have been posted for accounting purposes.
- Stock transfer orders must not be in the storage location "TRANSIT", but must be completely closed.
- Goods that have been delivered must also be withdrawn from the storage bins.
- Warehouse settlement must have been performed and posted. As a result, all items should be on "regulated".

Inventory storage location setup

Using the "Inventory storage location setup", individual inventory areas can be predefined in advance and it can be set up into which inventory ledger sheets they are to be divided. In the setup, it is defined which area should be divided into which inventory ledger sheet, e.g. to divide a storage location in advance according to certain areas (rows, aisles). This saves lengthy stock calculations, especially when there are a large number of items. The corresponding inventory ledger sheets must have been created in advance. In the "Inventory storage location setup" the storage location and the from or to storage location codes are set up.

Posting block during inventory

In the KUMAVISION MED setup it is possible to define in the info tab "Inventory",

- if all storage locations should be blocked as soon as an inventory book sheet has been filled
- if only those storage locations should be blocked, which are in all existing inventory book sheets
- or whether no posting block should be raised at all

Key date inventory

Calculation of the inventory

After the corresponding inventory book sheet has been selected by double-clicking, the book sheet is filled in the next step. For this purpose, various parameters must be entered under "Calculate stock". Particularly important are the fields "Posting date", "Document no." and "Calculation per serial no. / batch / expiration

date". The posting date and the document number are written in the respective items. Thus, it can be easily traced in retrospect what was counted in which inventory for each item. Just like the date of the inventory.

!!!note "Note If the checkbox "Calculation per serial no. / batch / expiration date" is activated, then a separate line is calculated for each batch with stock, for example. This checkbox must be set for a proper inventory.

Another possibility is offered by the filter of the storage location and the storage bin. This filter is used to define the area over which the book sheet should extend. Once all the settings for the inventory book sheet have been made, the calculation can be executed with "OK".

The field "Quantity (calculated)" contains the stock calculated by the system. Since the option "Calculation per serial no. / batch / expiration date" was activated, one line was calculated per serial number. The "Inventory quantity" is pre-populated with the expected value along with the item tracking.

Count list

The count list is printed out via the "Print..." function in the menu ribbon. In the selection menu it can be controlled whether the calculated quantities and/or the article tracking is to be printed. Furthermore, a print and count date can be added to the list.

Entering the inventory

After the employees have completed the physical inventory and filled in the "Inventory Quantity" column on the list, the list is manually transferred to the Inventory Book. sheet. If a discrepancy is found on an item without item tracking or an item with batch number requirement, it can be recorded normally in the "Inventory Quantity" field, but the item tracking must be removed before the counted quantity is recorded and reassigned after it is recorded. If an item with serial number obligation is found, a new row must be added manually. In addition, the associated item tracking must be entered manually in the item tracking line for this item.

Recount

The recount can also be documented with an inventory list. If the filter is set accordingly, e.g. "Deviations <15" or "Quantity <> 0".

Permanent inventory

Calculation of the inventory

In perpetual inventory, usually only a limited number of storage bins are counted. That is why it is useful to calculate smaller sections of storage bins in an inventory ledger sheet. This filtering is done under the item "Restrict total calculation to:". It is also important to define which stocks are to be calculated via the inventory type. The following options are available for this:

- All (annual inventory).
- Without perpetual inventory (only takes into account stocks without the characteristic ("counted on/counting document no.") for the perm. inventory). Inventory)
- Only continuous inventory (only stocks with the characteristic "counted on/counting document no.") are taken into account for the continuous inventory). Inventory)

Then the "Permanent inventory Y/N" switch is activated. Automatically the system activates then also the switch "Block stock location" and "Article not in stock". Thus it is guaranteed on the one hand that on the defined storage bins no bookings take place and on the other hand that also empty storage bins are inventoried.

Count list

A count list must also be created for perpetual inventory. For further information, please refer to the section "Process perpetual inventory > Count list".

Entering the inventory

The inventory is entered in the same way as described in the section "Process for annual inventory > Entering the inventory". In addition, however, the characteristics for the perpetual inventory must be set immediately before the inventory lines are posted. The required call "Enter perpetual inventory" can be found in the "Actions" area of the menu ribbon.

A window opens in which you can enter the "Count document number" and the "Count date".

The entered data will then be transferred to all the inventory lines calculated in this book sheet. Likewise, the characteristics are written to the inventory items and displayed in the bin contents:

If now a new article is added to the already counted storage bins and these are recalled with above parameters, then only the newly added items (= quantities) are calculated. All already counted items are delimited by the inventory type "without perpetual inventory".

Recounting of the recorded inventory lines

The recounting process for the perpetual inventory is identical to the procedure for an annual inventory. For more information, see the section "Process for annual inventory > Recounting".

Special features of the inventory

Ownership and owner

In the case of third-party property, the owner and/or proprietor must be recorded for processing. For this purpose, the "Ownership/occupancy" field must be filled accordingly.

Recording fixed assets

Fixed assets should be entered either with the posting code UV-AKT or a separate posting code.

If a separate booking code is used, it must be agreed between the customer and the specialist consultancy whether this is "valued" or "unvalued".

If the posting code UV-AKT is used, the item must be capitalized by the capitalization run following the acquisition posting.

In case of a retirement posting of fixed assets, the asset number will be recorded in the background, so that the fixed asset history sheet can be checked afterwards.

!!!note "Note There should never be an acquisition posting by inventory, item ledger sheet, etc. with posting code AV.

Stock-movements-without-valuation

In many companies it is common to have item inventories that are not owned in addition to item inventories that are owned by the company. Examples include:

- Items that come in for repair, sometimes then are forwarded all the way to the supplier and go back to the customer repaired.
- Items that belong to someone else but are managed by the company and "rented" to customers.
- Items that a supplier stores at the company as consignment goods.
- Items that are rented out and therefore count as fixed assets. Nevertheless, when they are repaired or refurbished, they are again treated as an item.

All these examples have in common that they must not appear in the inventory value of the inventory management or in the inventory of the financial accounting. In addition, they must not have any influence on the average cost price of the article. Thus, the articles are moved through the warehouse and logistics in different ways, but must always (or at least temporarily in the case of vendor consignment) be excluded from the valuation.

Through this service area it becomes possible to move article movements normally in the warehouse and through logistics without influencing the valuation. Nevertheless, it is possible in the purchasing process to determine the actual target costs from the consignment delivery when ownership is transferred.

The following posting processes are affected:

- Third-party property from consignment delivery becomes property through withdrawal.
- Item in ownership is sold. In the event of a subsequent withdrawal for management, it is taken back as third-party property.
- Items sold for repair are managed or accounted for as third-party property.
- Property becomes fixed assets when the item is rented.
- Rental equipment in fixed assets is sold.
- Item taken back for management is purchased back into ownership.
- Cancellation of the booking processes listed here.

Users can manually set the valuation type depending on the posting process by using posting codes.

In addition, booking codes with the appropriate valuation type can now be set up for the different booking processes. During the posting process, the valuation type is then determined internally from the posting code. In the posted items, this is displayed accordingly in the Valuation type field.

During quantity posting, the valuation type is taken into account accordingly. In the billing document, on the other hand, an error message is issued if the same valuation type as stored on the item is no longer used.

In the purchasing documents (except blanket purchase order, inquiry, and article book.sheet), the "Posting code" field can be displayed and defined.

For the global assignment of the posting codes for a document and as a default for the lines, the posting code can already be predefined in the order types. Further information on the topic of global assignment of posting codes can be found in the "Purchasing" section.

!!!Note "Note Please note that in the settings in the booking process, the field "Valuation type" is used in each booking process to define how this booking is included in the valuation. In the resulting item item, the field with the same name will then have the same value.

This field will also be set to "Yes" when a clearing is made with an item line where the field is set. The effects of the three options (Valued / Mixed Valuation / Unvalued) are described below.

Note

An actual message is always a valuated entry

Mixed-assessment

If purchase consignment goods are delivered, then the posting is made as a purchase delivery. In the posting process, the "Valuation Type" field is set to the value "Mixed Valuation". As a result, the target costs of the delivery are not written to the "Cost amount (expected)" field, but to the "Cost amount (unvalued)" field. The quantity is also transferred to the "Unvalued quantity" field and the "Valuation type" field in the item item is also set to "Mixed valuation".

In the case of an outgoing posting such as sale, retirement or consumption, the system checks whether the "Valuation type" field in the cleared item item contains the value "Mixed valuation". If this is the case, the system uses the clearing chain to determine the beginning incoming item entries. Sorted according to the oldest, these article items each receive a new value item for target costs as in the standard system. For this value item, the "Unvalued quantity" field is filled with the clearing quantity.

The "Cost amount (unvalued)" is now calculated from the Unvalued quantity * Unvalued stock value per unit of the first value item. Cost amount (expected) is then the reverse value from Cost amount (unvalued).

In the case of a reversal, this situation is posted in reverse by another value item.

Posting example:
. With the example exists for the article already a valued purchase delivery over 20 pieces to the debit costs of 200, -€. This results in a cost price of 10,-€ on the article card.

Now a purchase consignment delivery takes place, which is valuated mixed over 10 pieces to 110, -€. The cost price is not affected by this delivery.

Process	Post	Post type	Quantity	Invoice Quantity	Cost amount (expected)	Cost amount (actual)	Sto pe
			30		200	0	
Normal	Article post	Purchasing	20		200,00 €		
Consignment	Article post	Purchasing	10	0	- €	- €	
	Value items	*Purchase pric*	*10*		- €	- €	

Now the quantity from the consignment delivery is transferred from one storage location to another. This booking also has no effect on the cost price.

)

Now 6 pieces of this transferred quantity are consumed. As a result, 6 pieces are now changed from unvalued quantity to valuated quantity on the original purchase by another value item and the target cost is produced.

Process	Post	Post type	Quantity	Invoice Quantity	Cost amount (expected)	Cost amount (actual)	Sto per
			24		200	0	
Normal	Article post	Purchasing	20		200,00 €		
Consignment	Article post	Purchasing	10	0	66,00 €	- €	
	Value items	Purchase pric	10		- €	- €	
	Value items	Purchase price			66,00 €		
Stock transfer	Article post	Stock transfe	-10	-10		- €	
	Value items	Purchase price				- €	
	Article post	Stock transfe	10	10		- €	
	Value items	Purchase price					
Consumption	Article post	Consumptior	-6		- 66,00 €		
	Value items	Purchase pric	-6		- 66,00 €		

When the remaining 4 pieces are sold, again on the original purchase by another value item 4 pieces are converted from unvalued quantity to valuated and the target cost is restored.

Process	Post	Post type	Quantity	Invoice Quantity	Cost amount (expected)	Cost amount (actual)	Sto per
			20		244	-44	
Normal	Article post	Purchasing	20		200,00 €		
Consignment	Article post	Purchasing	10	0	110,00 €	- €	
	Value items	Purchase pric	10		- €	- €	
	Value items	Purchase price			66,00 €		
	Value items	Purchase price			44,00 €		
Stock transfer	Article post	Stock transfe	-10	-10		- €	
	Value items	Purchase price				- €	
	Article post	Stock transfe	10	10		- €	
	Value items	Purchase price					
Consumption	Article post	Consumptior	-6		- 66,00 €		
	Value items	Purchase pric	-6		- 66,00 €		
Sale	Article post	Sale	-4	-4		- 44,00 €	

The consumption booking for 6 pieces is reversed. By the valuation type = mixed valuated the system recognizes that now also the 6 pieces on the original receipt must be turned back to unvaluated.

Process	Post	Post type	Quantity	Invoice Quantity	Cost amount (expected)	Cost amount (actual)	Sto per
			26		244	-44	
Normal	Article post	Purchasing	20		200,00 €		
Consignment	Article post	Purchasing	10	0	44,00 €	- €	
	Value items	*Purchase pric*	*10*		- €	- €	
	Value items	*Purchase price*			66,00 €		
	Value items	*Purchase price*			44,00 €		
	Value items	*Purchase price*			66,00 €		
Stock transfer	Article post	Stock transfe	-10	-10		- €	
	Value items	*Purchase price*				- €	
	Article post	Stock transfe	10	10		- €	
	Value items	*Purchase price*				- €	
Consumption	Article post	Consumptior	-6		- 66,00 €		
	Value items	*Purchase pric*	-6		- 66,00 €		
Sale	Article post	Sale	-4	-4		- 44,00 €	
Cancellation cc	Article post	Consumptior	6		66,00 €		
	Value items	*Purchase pric*	6		66,00 €		

Finally, 3 pieces are now consumed again and thus 3 pieces are flipped to valuated quantity.

Process	Post	Post type	Quantity	Invoice Quantity	Cost amount (expected)	Cost amount (actual)	Sto per
			23		244	-44	
Normal	Article post	Purchasing	20		200,00 €		
Consignment	Article post	Purchasing	10	0	77,00 €	- €	
	Value items	Purchase pric	10		- €	- €	
	Value items	Purchase price			66,00 €		
	Value items	Purchase price			44,00 €		
	Value items	Purchase price			66,00 €		
	Value items	Purchase price			33,00 €		
	Value items	Purchase price					
Stock transfer	Article post	Stock transfe	-10	-10		- €	
	Value items	Purchase price				- €	
	Article post	Stock transfe	10	10		- €	
	Value items	Purchase price				- €	
Consumption	Article post	Consumptior	-6	-	66,00 €		
	Value items	Purchase pric	-6	-	66,00 €		
Sale	Article post	Sale	-4	-4		- 44,00 €	
Cancellation cc	Article post	Consumptior	6		66,00 €		
	Value items	Purchase pric	6		66,00 €		
Consumption	Article post	Consumptior	-3	-	33,00 €		

Unrated

In the repair case, items are posted back to the warehouse via a sales complaint for management. However, the items are still owned by a third party and represent an unrated quantity. Therefore, the "posting type" is set to "unvalued" in the posting process. As a result, any cost amounts are not written to the two standard fields "Cost amount (expected)" and "Cost amount (actual)", but to the field "Cost amount (unvalued)".

If this article item is cleared again (e.g. by a purchase complaint in case of repair by the supplier or via a sales order in case of delivery to the customer again) the posting type is inherited further.

In addition here with posting type = unvalued the quantity is always entered also in unvalued quantity, so that these items have no influence on the cost price calculation.

If the supplier returns the repaired article, the "posting type" must also be set to "unvalued" here in the posting process, whereby the same behavior occurs as above with the sales complaint.

Cancellations are to be handled in the same way here. It is only important that the "booking type" is set to "unvalued" and thus the Unvalued quantity is also filled.

Booking example:

With the example exists for the article already a valuated purchase delivery over 20 pieces to the debit costs of 200,-€. Of it 10 pieces are sold to 100.-€ evaluated. This results in a cost price of 10,-€ on the article card.

Now the repair acceptance takes place, which has the valuation type on the article item set to unvalued in the posting process. As a result, any costs (even in the case of a later warehouse adjustment using the cost price tracing) are written neither to the cost amount (expected) nor to the cost amount (actual), but to the cost amount (unvalued). Thus, this posting case does not affect the cost price on the item card.

Process	Post	Post type	Quantity	Invoice Quantity	Cost amount (expected)	Cost amount (actual)	Sto per
			10		200	-100	
Normal	Article post	Purchasing	20		200,00 €		
Sale	Article post	Purchasing	-10	-10	- €	- 100,00 €	
	Value items	*Purchase pric*	*-10*	*-10*	*- €*	*- 100,00 €*	
Repair accepta	Article post	*Sale*	5		- €	- €	
	Value items	*Purchase pric*	5		- €	- €	

For repair, the article must be forwarded to the vendor via a purchasing complaint. During article clearing, the valuation type = unvalued is passed on. In addition, the value unvalued indicates that in this case no change is required to the original sales item as in the case of purchase consignment goods.

Process	Post	Post type	Quantity	Invoice Quantity	Cost amount (expected)	Cost amount (actual)	Sto per
			10		200	-100	
Normal	Article post	Purchasing	20		200,00 €		
Sale	Article post	Sale	-10	-10	- €	- 100,00 €	
	Value items	*Purchase pric*	*-10*	*-10*	*- €*	*- 100,00 €*	
Repair accepta	Article post	*Sale*	5		- €	- €	
	Value items	*Purchase pric*	5		- €	- €	
Purchasing Cor	Article post	*Purchasing*	-5		- €	- €	
	Value items	*Purchase pric*	*-5*		*- €*	*- €*	

The repaired item comes back from the vendor and is put away per purchase order. The booking is marked as an unvalued booking type.

Process	Post	Post type	Quantity	Invoice Quantity	Cost amount (expected)	Cost amount (actual)	Sto per
			15		200	-100	
Normal	Article post	Purchasing	20		200,00 €		
Sale	Article post	Sale	-10	-10	- €	- 100,00 €	
	Value items	Purchase pric	-10	-10	- €	- 100,00 €	
Repair accepta	Article post	Sale	5		- €	- €	
	Value items	Purchase pric	5		- €	- €	
Purchasing Cor	Article post	Purchasing	-5		- €	- €	
	Value items	Purchase pric	-5		- €	- €	
Repair delivery	Article post	Purchasing	5		- €	- €	
	Value items	Purchase pric	5		- €	- €	

Finally, the repaired item is shipped back to the customer.

Process	Post	Post type	Quantity	Invoice Quantity	Cost amount (expected)	Cost amount (actual)	Sto per
			10		200	-100	
Normal	Article post	Purchasing	20		200,00 €		
Sale	Article post	Sale	-10	-10	- €	- 100,00 €	
	Value items	Purchase pric	-10	-10	- €	- 100,00 €	
Repair accepta	Article post	Sale	5		- €	- €	
	Value items	Purchase pric	5		- €	- €	
Purchasing Cor	Article post	Purchasing	-5		- €	- €	
	Value items	Purchase pric	-5		- €	- €	
Repair delivery	Article post	Purchasing	5		- €	- €	
	Value items	Purchase pric	5		- €	- €	
Repair delivery	Article post	Sale	-5		- €	- €	
	Value items	Purchase pric	-5		- €	- €	

Management of third party property If goods that are owned by third parties are managed in inventory management, this is the same posting transaction as in the repair procedure.

Converting ownership to third-party ownership In some industry solutions, items are not sold directly to customers. Rather, this is mapped as a stock transfer, since, for example, a third party subsequently pays for the goods and therefore becomes their property. From this point on, the articles continue to be managed in the ERP system as if they were the property of a third party. Therefore, this situation is taken into account here even if no additional implementation takes place.

Posting Processes Conversion of Ownership into Third-Party Ownership.

In the example, a valuated purchase delivery of 20 pieces already exists for the article at the target costs of 200.-€. Of these, 10 pieces are delivered at a valuation of 100.-€ as stock transfer. This results in a cost price of 10,-€ on the article card.

Process	Post	Post type	Quantity	Invoice Quantity	Cost amount (expected)	Cost amount (actual)	Sto per
			20		200	0	
Normal	Article post	Purchasing	20		200,00 €		
Sale	Article post	Stock transfe	-10	-10	- €	- 100,00 €	
	Value items	*Purchase pric*	*-10*	*-10*	*- €*	*- 100,00 €*	
	Article post	Stock transfe	10	10		100,00 €	
	Value items	*Purchase pric*	*10*	*10*		*100,00 €*	

After the third party has agreed to the cost transfer, the conversion from ownership to third-party ownership takes place. However, since the item is still managed - i.e. transferred - an issue and subsequent receipt posting is made to end the warehouse settlement here.

Process	Post	Post type	Quantity	Invoice Quantity	Cost amount (expected)	Cost amount (actual)	Sto per
			20		200	0	
Normal	Article post	Purchasing	20		200,00 €		
Sale	Article post	Stock transfe	-10	-10	- €	- 100,00 €	
	Value items	*Purchase pric*	*-10*	*-10*	*- €*	*- 100,00 €*	
	Article post	Stock transfe	10	10		100,00 €	
	Value items	*Purchase pric*	*10*	*10*		*100,00 €*	
Conversion to	Article post	Departure	-10			- 100,00 €	
	Value items	*Purchase pric*	*-10*			*- 100,00 €*	
	Article post	Access	10		- €	- €	
	Value items	*Purchase pric*	*10*		*- €*	*- €*	

From now on the article can be managed and booked again as external property as unvalued quantity.

Process	Post	Post type	Quantity	Invoice Quantity	Cost amount (expected)	Cost amount (actual)	Sto per
			20		200	-100	
Normal	Article post	Purchasing	20		200,00 €		
Sale	Article post	Stock transfe	-10	-10	- €	- 100,00 €	
	Value items	*Purchase pric*	*-10*	*-10*	- €	- *100,00 €*	
	Article post	Stock transfe	10	10		100,00 €	
	Value items	*Purchase pric*	10	10		100,00 €	
Conversion to	Article post	Departure	-10			- 100,00 €	
	Value items	*Purchase pric*	-10			- 100,00 €	
	Article post	Access	10		- €	- €	
	Value items	*Purchase pric*	10		- €	- €	
Take back	Article post	Stock transfe	-10	-10	- €	- €	
	Value items	*Purchase pric*	-10	-10	- €	- €	
	Article post	Stock transfe	10	10	- €	- €	
	Value items	*Purchase pric*	10	10	- €	- €	

Purchase of foreign property.

When third-party property is to be returned to ownership, this is actually the classic sales complaint case. However, if the items were previously managed as third-party property, an additional disposal must be posted here manually.

Mixed assessment

In case of a mixed assessment, only the assessed quantity may be revalued. Since in the standard system revaluation of target costs is already only possible in a very restrictive way, it is excluded in a mixed assessment to reduce complexity. Therefore, an item may only be revalued if the Valuation type field shows the value Valued.

Controls storage location, storage bin

Counter storage location / automatic counter storage location customer

By default, the counter storage location is called "AH" ("Off-site"). Based on the storage bins in this storage location, which is automatically named after the number of the respective customer, it is possible to quickly trace which customer has the goods in his possession. The storage bin is created automatically as soon as the delivery type is set to "stock transfer" in a sales order or scheduling agreement. The "counter storage location" and the "automatic counter storage location customer" are set up on the respective storage location card on the info register "KUMAVISION med". It makes sense to set this up on storage locations from which patients are supplied.

Automatic incoming posting for outgoing stock transfer

If the checkbox "Transfer order output posts automatic input" is activated for a storage location, an input posting for a transfer order will be posted automatically as soon as the output of the transfer order has been posted at the origin storage location.

This makes sense especially when there is no staff at the destination storage location to confirm the arrival of the goods with an inbound posting.

Storage bin type logistics

The "Storage bin type logistics" is a separate column in the storage bin table at the respective storage location. In logistics, there are different storage bin types to identify a storage bin accordingly:

- Inventory
- Inbound
- Outbound
- Production
- QA

A storage bin type must be assigned to each storage bin when a new bin is created. Picking only accesses goods that are in a storage bin with the storage bin type "Stock".

Comfort functions goods issue and picking

A combined window for goods issue and picking has been created, in which only the picking lines are displayed. In addition to the standard, the pick and putaway lines are kept synchronized.

Print picking list

In the menu ribbon of the goods issue document, as soon as goods issue lines have been fetched into the document, there is the option to print a picking list by calling up "Print picking list".

Delete goods issue

It may happen that a goods issue needs to be deleted because the customer no longer needs the goods or, for example, the picking code was forgotten to be removed before the goods issue was posted.

The picking is automatically registered when the goods issue is posted. Even if an error occurs when posting the goods issue. Such an abort message can be caused, for example, by the picking code.

When the picking was registered, the goods were posted from the original storage bin to the standard goods issue storage bin "WA".

In the constellation below, the picking has been registered, therefore there are no picking lines in the view.

Before the goods issue can be deleted, the status of the goods issue must be reset in the ribbon.

After that, the message appears that the items have been picked and at the same time it asks if the items should be transferred back to their original storage bins. This message must be answered with "Yes".

In the following message it is pointed out that stock transfer book sheet lines have been created in a book sheet and whether this should be opened immediately. The prerequisite for this is that the field "Own book sheet name" is maintained in the "User setup".

If this query is also answered with "Yes", the above-mentioned book sheet will open with the created book sheet line and another query.

In the last query, the user is informed that the articles will remain in the storage bin "WA", i.e. the shipping area, if they are not transferred and whether the goods issue should really be deleted.

If you confirm with "Yes", the goods issue will be deleted and you only have to transfer the goods.

Manage shopkeepers

To determine and manage the shopkeepers, first call up the "Shopkeeper management" via the user search.

The following calls are available in the menu ribbon:

call	description
Calculate	All entries are rebuilt.
Action	Call up the action window for the current line
Filter - All - Problem items - Endangered items - Problem items - Resubmission	Quick filter according to description

Call "Calculate"

The "Calculate" action is used to analyze all open item items, i.e. item items with remaining quantity. An entry is created for each open item. If an entry already exists, it will be updated. If the article item is closed in the meantime, the entry will be deleted.

The following fields are calculated:

field	description
Lfd. Nr.	Lfd. No. of the item
Item No., Variant Code, Storage Location Code, Posting Code	Unique identification. These fields are used to calculate stock and consumption.
Description Description 2	Description from item card
Posting date	From item card
Consumption weighting scheme	Weighting scheme according to the facility for calculating consumption
Stock	Stock according to unique identification
Remaining quantity	From article item
Serial No., Batch No., Warranty Date, Expiry Date, Date of Manufacture, Ext. Batch No.	From Item List
Sales until	Extrapolation based on stock of the item and "Sales per day".
Minimum expiration date	Determined value according to setup
Problem item	If expiration date on "Sold by" date does not show the minimum term
Problem item	Set if at least one problem item exists for the item
Sale per day	Calculated value according to weighting scheme.
Value	Remaining quantity multiplied by cost price
Remark stock	Fields for user remarks
Number of buying customers	Indicates how many customers have bought the item. Using the lookup, these are displayed.
Corrected by/at	User and time of last change to record
Resubmission set by/at	The fields are set in the store keeper row action window.
Shelf life on sale (months)	The remaining shelf life in months is calculated from the difference between "Sold by" and the "Expiration date".
Recommended minimum term	Determined value according to setup

field	description
If the expiration date on the "Sold by" date does not indicate the recommended minimum term.	
Statistical main group, group, subgroup	Values from item card
Stat. DG main group, subgroup	Values from customer

Coloring: If no problem has occurred, the line will be green, for risk items black, for risk items blue and for problem items red.

Call "Action"

The "Shop guard line action" window is called up for the current line.

In the Action window, details about the item are displayed in the upper area. Actions can be logged here and the resubmission can be set comfortably. It can be decided whether the resubmission should apply only to the item or to all problem items of the item.

By selecting the various actions, the "Resubmission date" field is set in the Shopkeeper Management window. For example, if the resubmission date was set, the record will no longer be displayed in the Problem Item view.

The "Verf-HB-2M" action means: resubmission date, 2 months before the item expires. The action "Set all" means: The action should apply to all items for this article. The action "Set" means: The action should apply to this item only.

You can enter descriptive texts in the Reason/ Action field.

Field Solution is an option field. For example, select "Return" here if you want to return the item.

The entries in the Remark and Remark Stock fields are displayed in the Stock Management window. Example of remark warehouse: "Please transfer to blocked stock".

Resubmission on: This does not refer to the normal resubmission in the system (e.g. resubmission at the documents), but only within the storekeeper management.

Multi Order Picking

Multi Order Picking is called from the picking proposal and enables way-optimized, time-saving picking. With Multi Order Picking several picks from different goods issues are combined or depending on the filtering, separated and combined with other pick lines.

Basically, all picking lines are retrieved whose picking document has not yet been printed. In the overview, after retrieving Multi Order Picking, one or more lines can be explicitly excluded from consideration. This is done by activating the checkbox "Include in MOP".

!!!note "Note If one row of a sell order is excluded from Multi Order Picking, the other rows of the sell order are automatically excluded as well.

To be able to call Multi Order Picking, first several goods issues + picking are created as a basis.

Then the call "Retrieve Multi Order Picking" is started in the menu ribbon. The window "Picking selection" opens, in which a preselection can be made, how many goods issue lines at most may be contained in a goods issue, in order to be considered with the Multi Order Picking. This can be used, for example, to ensure that goods issues are not separated once a certain number of lines has been reached.

Picking selection can be done individually on the basis of goods issues. In addition, it is also possible to include production and/or assembly orders.

After retrieval and depending on the filter criteria, you will get a list view of all goods issue lines where the "Number printed" = 0.

The list view contains some useful information like the "movement quantity", the "available quantity" or the "number of item lines in the order". If there are lines in the picking proposal overview that should not be considered in Multi Order Picking, they can be excluded via the checkbox in the "Consider in MOP" column, in which case the checkbox must be deactivated.

After the preselection has been completed, the function "Create Multi Order Picking..." is called up in the menu ribbon.

A window opens in which the parameters with which the system is to create the picking documents can be defined very flexibly and just as precisely on the basis of numerous options:

Option	Function
According to logistics document	Creates picks within the respective goods issue
By debit/credit/storage location	Creates picks only per customer, vendor or storage location
By item	Creates one pick per item
By zone	Supported only with "controlled logistics"
By bin number	Creates one pick per bin
By due date	Creates one pick per due date
Max. Number of pick lines	Determines the maximum number of pick lines that can be included in a new pick
Max. Number of Comm. origin documents	Defines how many different goods issues the pick lines for the new pick can be composed of
Assigned User ID	Assigns the specified user ID for the newly created picks. These are then visible and filterable in the list of picking documents
Sort method for pick lines	Specifies how the newly created pick or pick document should be sorted.
Print pick list	If the checkbox is activated, the so created pick lists will be printed directly when creating new picks using Multi Order Picking

!!!note "Note The pick lines for which the "Include in MOP" checkbox has been removed must be further processed manually in the pick proposal.

After the picks have been created and their documents have been printed, picking, packing and posting the delivery bill can be done as usual.

Manufacturing

Reports and documents

Optimized documents such as run cards and barcodes can be used to work comfortably in manufacturing. Therefore, the run card has been adapted in KUMAVISION medTech365 for comfortable working. To be able to use it, the report must be stored in the report selection. To do this, call up the "Report selection - Production order" via the user search. Then select "Project card" via the "Use" field. Via the lines you can now store the customized report "5007239" (run card).

You can then use the run card within production. When you call up the report, the selection mask appears where you can optionally print further information:

Option	Description
With Barcode	Prints a barcode on the ticket for possible scanning.
With material	Prints the required material accordingly.
Number of copies	Indicates the required number of copies.

In addition, remark texts of the respective operation are printed as well, so they can be used as a kind of work instruction.

financial-accounting

floating goods evaluation

The evaluation "Floating goods" shows at any time, but especially at month-end and year-end closing, the overview of the delivered, not invoiced movements from the documents.

The basis for the evaluation are the value items, enriched by various fields from the article, article items, material items.

With the call "floating goods" over the user search, you reach directly the evaluation mask. In the "Options" area, you have filter criteria that you can set as you wish and display the analysis value items accordingly. By executing the "Fill analysis value items" function, the table is updated.

Afterwards, the data can be exported to Excel and filtered according to the different values (pivot table).

reversal of asset capitalization

With the cancellation function in KUMAVISION medTech365 an accidentally performed activation on the individual asset can be reversed.

cancellation of activation with the option to delete the system card

The activation can be cancelled by activating the "Cancel" function of the respective system card.

By activating the "Delete asset" button, the asset card created will be deleted after the cancellation has been executed. In addition, the associated items *(article items, value items, material items)* will be cancelled.

cancellation of an activation without the delete asset card option

If the "Delete asset" button is not activated, the asset card will be kept in this case. Irrespective of this, the associated items *(article items, value items, material items)* will be canceled.

If a new activation is then carried out, the already created asset card will be found via the serial number.

!!!note "Note If the serial number is activated again, the asset activation will find the already existing asset card.

tax free voucher texts in sale

According to § 14 Abs. 4 Nr. 8 UStG the note must be noted on the corresponding invoice that this delivery is tax-exempt as an intra-community delivery according to § 4 Nr. 1 b), § 6 a UStG. The setup depending on the combination of business posting group, VAT posting group and product posting group as well as language code is done in the footer text setup.

To do this, first call up the "Footer text setup" via the user search. The mask is divided into two areas. In the upper area, the individual combinations between business posting group, VAT posting group and product posting group as well as language code are defined according to the table below.

Field	Description
Lfd. No.	A sequential number is automatically assigned by the system.
VAT Transaction Group	Specify a VAT transaction group to which the footer text should apply.
VAT Product Entry Group	Specify a VAT product entry group to which the footer text will apply.
Business Posting Group	Specify a business posting group to which the footer text should apply.
Product Posting Group	Specify a product posting group to which the footer text should apply.
Language Codes	Specify a language code for which the footer text should apply.
Text module code	Assign a text module code for the footer text.
Footnote	Enter the corresponding footnote here.

After the foot text setup, you can enter the corresponding foot text for the created foot text under the info tab "Foot texts".

!!!note "Note The footer texts will only appear on a CC document if it contains the set up combination of business/product posting groups, VAT business posting groups/VAT product posting groups and language codes.

enhancement of the collective invoice numbers in the customer items

The collective invoice numbers and collective invoice detail numbers have been transferred to the customer items, where they are available via the fields "Sett. Sammelrech.-Nr." and "Det. Abrech. Collective invoice no." for the OPPLUS clearing.

Batch Clean Production

General

Sometimes it is important in production processes that a final product is produced by only one batch of a raw material and that several batches of a raw material are not used in a production order. With the "Batch-pure production" module, you can assign the batches to the components in the production orders in a batch-pure manner, divide up or reduce the production order so that batch-pure production is guaranteed for the production parts. You also save time compared to manual batch-pure assignment per component

Batch clean production - setup

Batch clean production is an enabling module, the use of which is only possible with a license and activation.

Setup module

Only if both switches (Batch clean production in license and Activate batch clean production) are activated in the "KUMAVISION med Module Setup", the functions of batch clean production are available. The module offers the possibility to plan the components in batches in the fixed planned production order (FA) and to split the production order or reduce quantities if required. Quantity changes can be made on demand (stock transfer) or by assigning pure batches, as it is better to consume components in pure batches per production order (FA) due to simplified traceability and possible recalls.

Production

Create fixed planned production order

First of all, a firmly planned production order must be created in production. To do this, the production employee calls up the Fixed planned production orders menu item in his role center and creates a new fixed planned production order by pressing the "New" function key in the menu ribbon.

Edit fixed planned production order

In the new firmly planned production order, the "Origin No. " is first used to determine the article to be produced, then the quantity to be produced is entered and the production order is updated. The system then determines the production components stored in a production BOM (active version) on the article and the routing (active version) with its operations.

Edit manufacturing components

The function key "Line" and "Components" can be used to call up the production order components of the previously created production order line. The red coloring of the expected quantities of the manufacturing components signals that item tracking is required for these items.

Search batches

To determine a batch taking into account the expiration date, the following functions are possible in the FA components of a firmly planned production order:

Function	Meaning
Search batch clean FeFo	Item traces are assigned for all rows whose expiration date is reached first. Availability is checked and taken into account. It is possible that a production order will not be 100% fulfilled as a result and will have to be split (see "Split quantity" in section "Process quantities").
Search batch clean quantity	The article traces for all lines that could not yet be 100% fulfilled are assigned. Already assigned article tracings of other lines remain thereby. Here, too, it is possible that a production order cannot be 100% fulfilled and the quantity to be produced must be reduced.

The "Search batch clean quantity" function can also be executed after an initial proposal by the "Search batch clean FeFo" function without changes being made in the respective other proposal lines for components with batches that can be 100% fulfilled. However, for lines of components with batches and expiration dates, a recalculation is performed and corrections are made if necessary. If a production order is always to be produced in batches if possible, the function "Search batch clean FeFo" must be used instead of the function "Search batch clean quantity". This first searches for a sufficient stock quantity of components of a batch and ignores expiring batches whose stock quantity is smaller than the production quantity. In this way, only batches that meet the quantity to be finished are assigned and not those that expire first.

Process quantities

In order to be able to adjust the quantities to be produced in batches if necessary, the following functions are possible in the FA components of a firmly planned production order:

Function	Meaning
Split quantity	This allows the FA to be split to ensure batch purity per production order. A second, firmly planned production order is created for the difference quantity when this function is executed.
Adjust quantity	This can be used to reduce the FA quantity so that the FA is produced in a batch. If necessary, another production order is then required to produce the remaining quantity with a new batch.

Corrections

The system checks the availability of the components subject to batch management and - if available - their expiration date during the functions described in section "Searching for batches". As a result, individual components may not be available in the quantity resulting from the production order. The "Search batch clean FeFo" function assigns the first expiring batch to each component with corresponding item tracking and calculates which smallest common quantity of components can be produced with the available stock in this production order. If this results in the quantity from the production order not being able to be produced completely in this way, the system issues a corresponding message. After confirming the message with "OK", the system displays for which batch components 100% is not fulfilled. In order to produce in batches, the

system calculates the quantity to be produced using the "Split quantity" function in the menu ribbon. After confirming with "OK", the component quantities, their percentage fulfillment and the quantity on the finished article are corrected. For the difference quantity, the "Split quantity" function always creates a new, firmly planned FA. After executing the "Adjust quantity" function, a new fixed planned FA must be entered manually for any remaining quantities. In the new production orders created in this way, there is again the option of using the functions "Search batch clean FeFo" and "Search batch clean quantity". Here, too, it is possible that the quantity resulting from the production order cannot be produced completely. In this case, the quantity can be reduced to the quantity still available using the "Adjust quantity" function and reordered using the MRP data. The FA components and FA routings, as well as the FA line are recalculated to the adjusted quantity.

Release production order - change status

When changing the status of a firmly planned production order with the function "Change status..." in the menu ribbon (alternatively key combination Ctrl + F9) you can choose whether the picking should be created and printed immediately. If the picking is created here and registered unchanged, the batches proposed for the components are finally firmly assigned to the production order as batches to be consumed. After creation and registration of the picking, the firmly planned production order is now in the system as a released FA and can be processed as usual until it is completed with the status "Finished".

External Production With Provision

General

A work process that is outsourced (also called extended workbench) occurs particularly frequently in contract finishing processes and also in the assembly of subassemblies. Outsourcing is also a possible alternative to in-house processing when capacity bottlenecks occur in the company's own operations. Often, components are provided that are required for the processing of the material. In some cases, an already processed product is also provided.

In the case of external production with provision, the standard functionality of external production has been extended by a provision. The materials to be sent for external production can be defined by the provision. For logistical processing, a stock transfer order can be created from the external production order. The corresponding documents can be printed out for the posted stock transfers.

When the external production order is posted, the corresponding quantity is debited from the external production warehouse.

Establishment

The following sections discuss the setup of external production with provision. As a prerequisite for setting up external production with provision, the facilities for manufacturing/production apply. For further information, please refer to the [Microsoft Dynamics Business Central™ Helpsite (F1)](#).

Production bill of material, version

In the following, only the special features of external production with provision are discussed. As a prerequisite for setting up external production with provision, the facilities for manufacturing/production apply. For further information, please refer to the [Microsoft Dynamics Business Central™ Helpsite (F1)](#).

Inforegister lines

In the production BOM (version), the fields "Connection code" (this field identifies the component as a raw material provision relevant to logistics) and "Provision type" must be set. Parts are always sent to the external processor only if an order exists.

Provision type option	Description	Note
Empty	No provision (Business Central Standard)	
Order-related	the goods are always sent to the external processor only if an order (FA) exists	Connection code must be maintained
Neutral	the external processor receives a certain quantity of goods in advance. When a production order is created, the external processor only receives the order for external processing. The parts to be provided are already with the supplier The issue storage location is set to the external processor (is entered at the work center group under origin storage locations)	Connection code must be maintained
Supplier	here the component is only for information ("info part") in the parts list. The supplier (external processor) takes over the procurement himself. This setting is also used if the customer provides parts. Here no stock or issue posting takes place.	No transfer to the FA

Note

A component defined on a parts list of an item can be linked to an operation by means of connection codes. In this way, it is possible to define which operation requires or consumes an item.

The connection code must first be stored in the operation before the setting for the component can be made in the production BOM. Otherwise, an error message will be displayed when trying to certify the BOM.

Work plan, versions

In the following, only the special features of external production with provision are discussed. As a prerequisite for setting up external production with provision, the facilities for manufacturing/production apply. For further information, please refer to the [Microsoft Dynamics Business Central™ Helpsite (F1)](#).

Information register: lines

Field	Description
Standard catalog code	The standard catalog code is used for external labor pricing
Connection code	Connection code selection

Workstation group

In the following, only the special features of external production with provision are discussed. As a prerequisite for setting up external production with provision, the facilities for manufacturing/production apply. For further information, please refer to the [Microsoft Dynamics Business Central™ Helpsite (F1)](#).

Usually, the following settings are made when creating a workstation group for external work:

Inforegister General

In the "Department code" field, the workstation group is assigned to the External work department.

Information register booking

On the workstation group, the vendor must be stored in the "Vendor no." field that performs the external work.

> Note

The product posting group defines G/L accounts which are posted during sales and purchase postings. For a better distinction it is recommended to define a different product posting group.

If you have agreed with the vendor on a different price for each process for external work, select the Special cost price check box.

Inforegister Planning

The "Unit code" field is usually set to days, since external processing is usually calculated in days.

As a rule, a separate company calendar is created for external processing.

Navigate menu tab

In addition, the external work prices and the origin storage location can be stored via "Belonging" > "Workplace group".

Determination of prices for external work

In Microsoft Dynamics Business Central™ Standard, a price for external labor (i.e. the price that is later used in the purchase order) can only be stored on the work center group card. Different prices per vendor, per scale quantity, per activity (standard catalog code) or time period dependent prices cannot be maintained.

In KUMAVISION healthcare365 you have your own price table for the external work orders. The prices for the external labor can be stored in different places. Thereby the entries of the external labor prices override the prices of the work center group card.

Work center group per time: see Basic data - Production - Work center groups

Workstation group per piece: see Basic data - Production - Workstation groups

Work center group special cost price: see Basic data - Production - Work center groups

Third-party work prices Prices (with the option of graduated prices) can be stored for the following combinations via the external work prices:

- Workstation group (MUST)
- Article (MUST)
- Vendor (MUST)
- Standard catalog (external work activity)
- Start and end date
- Minimum quantities (graduated quantities)
- Price units (conversion factor weight share)

The external work prices can be called from the following masks with appropriate filtering:

- Article card/list
- Workplace group card / list
- Accounts payable card / list

Origin camp location

With the origin storage locations it can be controlled which storage locations should be used for the provided goods. Either a specific article is stored per work center group or the option all articles is selected. The call of the origin storage locations is made from the workstation group map/list.

- Type of origin: workplace group
- Origin code: which specific workstation group
- Type: All items or a specific item
- Code: for specific article: Item number
- Storage location code: which storage location is to be controlled

Relocation routes

With the help of the stock transfer routes you have the possibility to create the link between the vendor warehouse (i.e. the warehouse of the external processor) and your own warehouse.

To set up the stock transfer routes, call them up via the user search.

The stock transfer routes overview opens. In the info tab "Stock transfer route matrix" you can now make the assignment for your own warehouse (stock transfer from code = own warehouse (e.g. BLUE)) and the vendor warehouse (e.g. external).

By clicking on the Assist button you get to the transfer route specification on which you enter in the field "Transit Code = Own-LOG". This field must be filled with an appropriate code, the other fields can remain empty if no fixed deliverer is defined.

You can then close the Stock Transfer Route Specification and Stock Transfer Route Matrix windows.

Process of external production with provision

Initial situation: Production is planned and a released FA has been created. For articles with article tracking, this should be stored with the components and in the production order

Third-party work proposal

Calculate external labor

In the external worksheets it is possible to calculate which released production orders should be sent to the vendor. Here, it is possible to filter on the workstation group, the vendor or the FA number, among other things.

The external work sheet then lists the pending external work calculated according to the filtering.

The vendor is taken from the work center group, the price depending on the stored prices. If there is already an external work for a FA, it will not be charged twice.

Work in the external work proposal

Change of the creditor: The vendor can be changed per line (order), thus the external labor price stored in the new vendor is also used.

Perform event reporting

With the function "Execute event message" and the activated hook "Accept event message" the suggestion line can be transferred into an order. The stock transfer order can be created here with the hook activated. Lines in which the check mark is not activated remain in the external work proposal without an order being generated.

Released production order

Pursuit of the foreign work

The tracking of external labor is done at the line level in the production order. To do this, select the corresponding line and call up the "External work tracking" via Line.

The linked documents can be viewed and called up via the window called up by this function.

Order

The order is placed through the service of external production, as the necessary components for the article to be manufactured are provided to the order by stock transfer. Accordingly, the description of the item line in the purchase order does not contain the name of the item, but of the service.

The columns Third-party items, Quantity of third-party items, FA no., FA line no., Work center group no. and Work center operation no. should be displayed, since they represent the reference to production.

The article tracking of the production order is printed on the order.

The order type FREMD is automatically preset for orders from the external work proposal, but can be changed manually. This can be used to preset certain data, such as payment terms and other fields.

If the purchase order is delivered, the operation is confirmed at the same time.

> Note

If this is the last operation of a production routing, it may end the production order.

Reference of a provision on the document

If an external production with provision is carried out, the stock transfer lines (provision) of the articles from the production order are indicated when the purchase order is printed.

The price of external work is printed here per piece (according to the setting in point Determination of prices for external work). If this is a tiered price of the workgroup, it will be automatically applied here and updated when changes are made.

Post delivery in the order

The purchase order is posted according to the document. As a result, the goods receipt is now posted via the manufactured goods. The stock of the provided components in the foreign storage location must now be debited (consumed). This can be done either manually or automatically (explained in Process of external production with provision and automatic posting). The article tracking of the manufactured articles must be deposited here.

When the order has been delivered, it can be seen in the released FA. With complete delivery, the released production order is now at 100%

Stock transfer

In the stock transfer header, the field Stock transfer order type indicates that this is a stock transfer of external labor.

If you do not receive a separate goods receipt message from your external processor, you should check the box Outbound automatically posts inbound*, otherwise the goods would be in transit and you would have to post the putaway to the vendor again.

If the product (semi-finished product) is also sent, the quantity is not displayed in the "Quantity" field, but in the "Quantity manufactured by third party" field.

Reason: The article has no stock yet and the stock transfer can only be simulated.

The provided items, in turn, must - in the case of the provision type Order-related - be debited from the warehouse and the provided quantity is therefore also found in the Quantity field.

The components to be added can now be sent to the paver via the stock transfer order.

Note

Check the box "Outbound automatically posts inbound" if you do not expect a separate inbound message from your external processor.

Reason: When the stock transfer order is posted, the quantities are first posted to the transit warehouse via the defined stock transfer route. If you do not check the box, the receipt must be posted to the supplier subsequently. For the items to be provided, you can create the logistics documents from the stock transfer order (e.g. goods issue, goods receipt).

Process of external production with provision and automatic posting

In order to be able to use the automatic booking of consumption, the facilities and prerequisites described below are necessary. Alternatively, the consumption can also be booked manually via the consumption book. sheet, see chapter "Manual booking of consumption" below.

Establishment

Posting method in the production BOM and thus also the FA component is set to Backward.

Prerequisite

If the item has item tracking, it must be stored in the FA components.

Process

When the goods are delivered, the consumption is automatically booked.

Manual booking of the consumption

In the production book sheet, all consumption lines are displayed and can be posted manually. The actual message line of the external labor is not displayed here, since this must be posted via the purchase order.

The consumption ledger sheet can be calculated as well as entered manually.

Collective External Production

General

In the external work process, different production orders can be combined on one or more storage carriers. These load carriers are assigned to a collective external production, from which an external work order is created. The invoices for this can then be posted per load carrier or to the individual production order.

Example:

In the sterilization process, different load carriers (pallets) can contain different, but also identical production orders. Via this module, the production orders are provided with the load carrier bracket and transferred cumulatively to the external work order. Invoicing is done on the basis of a load carrier or the costs of an operation.

Establishment

License KUMAVISION med Module Setup

In order to be able to use the module "Collective external production", the corresponding license must be available and activated in KUMAVISION healthcare365. Whether this is the case can be checked via the "KUMAVISION med Module Setup". On the setup card, the switches "Collective external production in license" and "Collective external production active" must be activated.

Production facility

The number series for the collective external production orders and the load carriers must be stored in the production setup. To do this, call up the "Production setup" via the user search.

The production setup opens, where you can define the number series for collective external production, as well as the number series for the load carriers under the "Numbering" info tab.

In addition, you can define the "Load carrier price calculation" on the "General" info tab of the setup card. You can select "Load carrier unit" or "Cost of operation". For more information, see the "Prices in the order" section.

Load carrier price unit

If the price calculation is set according to load carrier in the setup, the load carrier code or the load carrier price unit must be maintained. To do this, call up the "Load carrier price units" via the user search.

The Load unit price card opens. Click the "Edit list" button to edit or add a selected load carrier price unit.

Select the "New" function in the ribbon to add a new load carrier price unit.

Now you can create a new load carrier price unit by entering a meaningful code, the description and the price for the respective load carrier.

Process

In order to be able to carry out the "collective external production" process, released production orders must exist in the system.

Create load carriers

To create a new load carrier, call up the "Load carrier" via the user search.

The load carrier card opens, in which the "Load carrier no." is automatically preassigned. You can then enter the load carrier code, the corresponding released production order in the "FA-No." field and the quantity, then confirm your entry with "OK".

Note

• When adding a production order, the remaining quantity and, if available, the batch are preset. If a quantity greater than the remaining quantity is entered, the user receives a corresponding note. • Only production orders with the status "Released" and a corresponding work center group can be added. A production order, in turn, can be located on several load carriers.

Load carrier label printing

Using the "Print" function in the ribbon, you can create the corresponding document with the label for the load carrier.

The signature fields "Compiled" and "Checked" are used for internal documentation.

Create collective external production

To create a new external collective production order, call it up via the user search. Via "New" in the menu ribbon you can create a new collective external production order.

An empty collective external production order then opens. The "Workstation group no." or the vendor number of the external manufacturer must be entered on the "General" info tab.

By entering the "Workstation group no.", the other necessary information fields are automatically filled with the data from the vendors stored in the workstation group.

Assign and remove load carriers

Load carriers can be added to a collective external production order using the "Select load carrier" function in the menu ribbon.

The load carrier overview opens where you can select a load carrier and then confirm your selection with "OK".

Note

• The system only suggests load carriers that have not yet been assigned to another collective external production order. • An assignment is made individually per load carrier. • Only load carriers that also have an operation corresponding to the work center group of collective production can be assigned.

After the load carrier has been successfully added, it receives a corresponding indicator.

Using the "Remove load carrier" function, you can remove the load carriers individually from collective external production. To do this, select the corresponding load carrier and confirm your selection with "OK".

Note

When selecting load carriers, only assigned load carriers are displayed.

If the "Price calculation per load carrier" function is set up in the production facility, the "General" info tab of the collective external production order contains three additional fields:

- Quantity
- Price / Unit
- Amount

Note

The fields are automatically filled and calculated when assigning the load carriers.

Printing collective external production

Load carrier pressure

To print the load carrier for the third-party manufacturer, select the "Load carrier print" function in the menu ribbon.

Afterwards the routing slip load carrier card opens, in which you can activate the switch "With FA lines" to print the routing slip of the load carrier with or without lines. The advantage of printing without lines is that no unnecessary information is sent to the third-party manufacturer.

Article pressure

Furthermore, it is possible to print the routing slip of the collective external production order sorted by article. To do this, select the "Print article" function in the menu ribbon.

Ordering, release of collective external production

Once you have finished assigning the load carriers, you can execute the "Create purchase order" function in the ribbon to create the external work order related to the collective external production.

After the order has been generated, the collective external production order is automatically released. The information of the load carriers is still available in the lines. In addition, a link to the purchase order belonging to the collective external production order is displayed via the "Purchase order exists" field.

The user can continue processing the order by selecting "Yes" in the dialog box.

Subsequently, the corresponding order is opened and can be edited. The purchasing status is automatically set to "FREMD". The quantity of the purchase order lines is added per production order/article combination.

Print order

To print the order, select the "Print" function in the ribbon.

Alternatively, you have the option of automatically printing the receipt in the course of posting using the "Post and print..." function.

Prices in the order

Cost load carrier unit

With the "Price per load carrier unit" setup, the total price of the order is composed of the individual prices of the assigned load carriers.

Cost of the operation

With the "Price per operation" facility, the costs are calculated from the operation. Thus, in the order, the price is calculated based on the operation and not on the load carriers.

Deliver order

To deliver the order, execute the "Book" function in the ribbon. Alternatively, you can perform the posting with the goods receipt.

Another dialog box opens, in which the "Deliver" checkbox is already activated. Confirm your entry with "OK".

After delivery, in the purchase order, in the column "Already delivered. Quantity" column in the purchase order.

Two additional references have been automatically set in the associated collective external production order, one to the complete delivery of the order and the other to the existing delivery bill.

Note

The article tracking can be called with the call "FA- Arrticle tracking".

Invoice order

To invoice the order, execute the "Book" function in the ribbon.

Another dialog box opens, activate the "Invoice" checkbox there. Then confirm your entry with "OK".

After complete invoicing, the purchase order will be moved to the posted documents. Additionally, you will receive this note with the option to open the posted purchase invoice.

Otherwise, you can call up the posted purchase invoice again afterwards.

In addition, the associated third-party production order automatically contains a reference to the fully invoiced order.

Archive

A collective external production order is automatically archived when it is released. Nevertheless, before a collective external production order is deleted, it should be archived manually to ensure that the current version of the collective external production order has been archived. To archive a collective external production order manually, execute the "Archive" function in the menu ribbon.

You will then be asked again whether the collective external production header should be archived, confirm this with "Yes".

To call up the archived collective external production order again, call up the "Archived collective external productions" via the user search.

After successfully archiving the collective external production order, the collective external production order must be deleted manually from the collective external production overview. To do this, call up the "Delete" function in the menu ribbon.

The deletion can also be done in the course of "delete completed orders", if the order has not already been deleted.

Background:
If the purchase invoice is not generated from the purchase order with the "Post" function, but via purchase invoices "New", the purchase order is not deleted immediately. The deletion of the order takes place subsequently via "Delete completed orders".

If an order is deleted in the "Delete completed orders" report, the system checks whether the order is linked to a collective external production order before deleting it. If so, this collective external production order is also deleted.

If an order is deleted manually or deleted directly during posting, the deletion of the "linked collective external production order" must still be done manually.

Note

A collective external production order can only be deleted if it has been fully invoiced.

device management

resume of devices

A report has been designed to show the movements of a device in the system, listing all the necessary information as well as all the movement.

Example: If the item with its serial number has been delivered several times and has also been invoiced, this results in a device life history. The device history can be printed. Depending on stock transfers and deliveries, the data is written to the resume.

The report can be viewed and printed by calling up "Device life history" via the serial number information card.

assignment to the device

Item, resource and G/L account postings can be assigned to devices in sales and purchasing documents via the "Item/Device Assignment" call. When posting, the corresponding information is then assigned to the device card (serial no. info card) in the Device Assignment Items table.

When posting the document, the generated article items are checked for the following criteria:

- Is the origin of the posting from a sales order or purchase order.
- Does the item item have a serial number
- The item type has either the value "sales" or "purchase

If any of these criteria are not met, this will trigger an abort.

> Note

If the item item with the item type "Sale" or "Purchase" has the indicator Positive=YES, this also triggers a termination. In this case, it is a cancellation that must be posted using a separate function (Cancel delivery bill).

If none of the abort criteria are fulfilled, it is checked whether there are article/device assignments to the document (VK order or EK order). If yes, then these are written in the article/device items to the serial number information card.

There are no consumption postings or similar such as from the production order. In the sales order and purchase order it is only a matter of "carrying" and later visualizing the information which items (with or without serial number) were assigned to the booked sales or purchase item including its serial number.

That means, if a serial number obligatory article with a quantity larger than 1 - for example 10 - is delivered or received, this means that the system cannot distinguish at this point which serial number now contains which assigned article device assignment. A split cannot take place, because the article - device allocation takes place on document line level and not on serial number level. The article - / device allocation items can therefore only be allocated to the first posted serial number.

Thus also no checks on availabilities of the assigned serial numbers and quantity checks can be accomplished with partial deliveries. Since there is also no bill of material, it is also not possible to check whether the selected items are actually consistent with the target product.

Note

The functionality is only based on serial numbers not on batch numbers.

After posting a document line (no matter if partial quantity or complete) the article- device assignment will be deleted.

display of origin, whereabouts and use of devices

This service point allows you to display the manufacturer, supplier and current location of a device. This information can be viewed in the serial number info card on the fields seen for this purpose.

So that you can see this information, the info card obligation must be activated for the article on the article card by the switch "Info card obligation". A serial number info card will be created automatically upon booking.

compliance

introduction

The Compliance module allows you to define conditions via table numbers and field filters. If a data record that meets one of these conditions is to be released again after a change, a compliance document is generated. The final release of the original data record is then only possible after the compliance document has been released by all relevant persons.

Note

The Compliance module is an activation module that can only be used with additional licensing and activation.

Note

If you are using KUMAVISION medTech365 in combination with the workflow and notification manager module, an application combination with both modules is possible. For further information please refer to the section "ABM Workflow and Notification Manager".

Note

At this point of the online help only the additional functionality of the module "Compliance" in KUMVISION medTech365 will be explained to you in more detail. The general setup options and processes are explained to you [here](#).

setup

compliance user setup

attachment compliance user

In the Compliance User Setup, you can set up the approved users who are authorized for the compliance process.

Name	Description
Assignment Resubmission	Displays the field with the same name from the standard user setup.
If the user belongs to a resubmission team, this team can be specified here.	
Filter Team Resubmission	If the user belongs to more than one resubmission team, they can be specified here as a filter.

Note

At this point of the online help only the additional functionality of the module "Compliance" in KUMVISION medTech365 will be explained to you in more detail. The general setup options are explained to you here.

Later in the compliance process, you will have the option to inform someone about a rejection.

compliance tables

In the so-called "Compliance Tables", you can define the data records for which compliance approval is required.

Name	Description
Version management	For the Article table, enables the continued use of the article during the change process see also under "Trigger compliance document for versioning on article data record"
Process template code	Only relevant for use in connection with the ABM module.
Process template version code	Only relevant for use in connection with the ABM module.

Conditions can be defined for each compliance table. You can either specify a filter on a field or on an additional field. To do this, select the desired compliance table and then select the "Field filter" menu item in the ribbon.

The Compliance fields tab opens. To define the compliance fields, fill in the necessary fields according to the table below:

Name	Description
Additional field Field code	Field code of an additional field of the current table
Additional field Field value	Filter value on additional field

If no special compliance field is entered, as described above, the complete data set is monitored, which means that compliance is always triggered by a change.

If individual fields or additional fields are entered in the compliance fields, the system first checks whether the data record contains the specified entry in the field specified in the table, and only then is compliance triggered or the compliance data record created.

Note

At this point of the online help, only the additional functionality of the "Compliance" module in KUMVISION medTech365 will be explained to you in more detail. The general setup options of the "Compliance Tables" are explained to you here.

compliance

For a better overview, users in KUMAVISION MEDTech365 have access to an adapted role center for their daily work. From there, users can call up all relevant documents directly.

compliance document trigger

After a record has been edited and "released" by a user or "maintenance completed", as soon as the condition of the entry in the "Compliance Tables" for the record matches, the compliance process is triggered.

> Note

At this point of the online help, only the additional functionality of the "Compliance" module in KUMVISION MEDTech365 is explained to you in more detail. The general process is explained to you [here](#).

trigger compliance document in case of versioning on article record

If a compliance facility is set up for articles with "version management", the article to be changed can continue to be used during the change process. In this case, the compliance document is triggered for a copy of the article. Thus, the change must be made to the versioned article record for a compliance document to start there. When the compliance document is released, the article data is transferred to the origin article.

complaint and grievance management

introduction

With the help of the Complaints and Grievance Management (RuB), it is possible to map the entire complaints and grievance process. Errors and measures are stored with codes and thus enable an evaluation. The module is based on DIN EN ISO 9001:2015 and DIN EN ISO 13485:2016, and the terms complaint and reclamation are deliberately distinguished from one another as follows:

Complaint
generally has a direct reference to a product or service and includes a legal claim for redress if the product does not meet the specifications.

Complaint
Expression of a customer about his displeasure or not fulfilled requirements to a product or a service. When a complaint or complaint is accepted, involved persons, goods and services are recorded. It is also possible to access documents from purchasing, sales, service or production that already exist in the system. Each complaint and/or reclamation can be evaluated and processed by means of corrective and preventive actions. Risk analysis, evaluation and effectiveness testing of the measures implemented can be carried out using FMEA procedures.

Note

The complaint and grievance management as well as FMEA are each unlock modules, whose use is only possible with additional licensing and activation.

Note

At this point of the online help only the additional functionality of the module "Complaint and Grievance Management incl. FMEA" in KUMVISION medTech365 will be explained to you in more detail. The general setup options and processes are explained to you here.

setup

necessary facilities for rub

complaint & grievance management setup

The RuB facility is where the basic setup for complaint and grievance management is done. It is divided into different info registers.

inforegister general

In the "General" info tab, settings for contacts and for the digital signature are stored:

field	Meaning
Default posting code	Preset the posting code to be used for the disputed items of a complaint or reclamation if the system cannot determine the correct ownership relationship independently from the posting items.

Note

At this point of the online help only the additional functionality of the module "Complaint-Grievance-Management incl. FMEA" in KUMVISION medTech365 will be explained to you in more detail. The general setup options are explained here.

call types and subtypes

Call types and call subtypes are defined for complaints and grievances. These can be used, for example, to differentiate complaints within their document type.

Note

Basic information about call types and subtypes can be found here. At this point of the online help only the additional functionality of the module "Complaint and Grievance Management incl. FMEA"" in KUMVISION medTech365 will be explained to you in more detail.

Depending on the call type & call subtype selected in the call, process templates can be assigned to them filtered.

Note

Please note that this functionality is only possible with the licensing of the Workflow and Notification Manager module.

Prerequisites for the selection are that the process is a main process for a complaint/complaint and has the entries call type & call subtype matching those in the call in the process template map.

If no call type/call subtype is specified in the complaint/complaint, all process templates will be displayed.

There is no validation check if a process template with different call type/call subtype is selected. The Call type and Call subtype fields are integrated in the archived complaints and complaints, processing is not possible in these.

necessary facilities for measures

Tasks can be managed in the system on their own, as well as within a complaint, reclamation, and FMEA. Therefore, the necessary setups must be made independently of the RuB setups. When creating measures in an FMEA, note that they must then be accessed via the measures overview.

Note

Basic information about call types and subtypes can be found [here](#). At this point of the online help only the additional functionality of the module "ComplaintGrievanceManagement incl. FMEA"" in KUMVISION medTech365 will be explained to you in more detail.

measures mandatory field check

The table 5488142 "Measure" can be set up for the mandatory field check in the "Mandatory field check setup" window.

Mandatory field check for measure cards can be globally enabled or disabled in the "Measures Setup" window.

complaint card

A complaint is recorded via its own card, which contains all the necessary information such as contact, article, etc., but also contains the further procedure for processing the complaint.

The call of the open and archived complaints can be found via the search.

Note

Basic information about the complaint card can be found [here](#). At this point of the online help only the additional functionality of the module "Complaint and Grievance Management incl. FMEA"" in KUMVISION medTech365 will be explained to you in more detail.

inforegister general

The General information tab contains general data about the complaint:

Field	Meaning
Process Template Code	If the additional module Workflow and Notification Manager is also activated in the system, the process template code containing the automation of the processes is displayed here.
If the Workflow and Notification Manager add-on module is also activated in the system, the version number of the process template code that contains the automation of the processes is displayed here.	

process steps info tab

The processes selected for complaint are displayed. The prerequisite for this is that the Workflow and Notification Manager add-on module is active in the system. The Process steps info tab is part of the add-on module and is explained in more detail in the section provided for it.

The button "Select process" in the ribbon allows to select/start main processes from the Workflow and Notification Manager, which have been assigned to the complaint there. It is required that this additional module is activated.

complaint card

A complaint, similar to a complaint, is recorded via its own card, which contains all the necessary information such as contact, article, etc., but also contains the further procedure for processing the complaint.

The call of the open and archived complaints can be found via the search.

> Note

Basic information about the claims card can be found [here](). At this point of the online help only the additional functionality of the module "Complaint and Grievance Management incl. FMEA" in KUMVISION medTech365 will be explained to you in more detail.

inforegister general

The information tab "General" contains general data about the created complaint.

Field	Meaning
Process Template Code	If the additional module Workflow and Notification Manager is also activated in the system, the process template code that contains the automation of the processes will be displayed here.
If the additional module Workflow and Notification Manager is also activated in the system, the version number of the process template code that contains the automation of the processes is displayed here.	

process steps info tab

The processes selected for reclamation are displayed. The prerequisite for this is that the Workflow and Notification Manager add-on module is active in the system. The Process steps info tab is part of the add-on module and is explained in more detail in the section provided for it.

The button "Select process" enables the selection/start of main processes from the workflow and notification manager, which have been assigned to the complaint there. It is required that this additional module is activated.

measures

A measure is entered via its own card, which contains all necessary information such as contact, article, etc., but also contains the further procedure for processing the complaint.

In the measures card a FMEA can be created. Within the FMEA a risk graph can be created - see further in the section "FMEA Risk Graph".

The open and closed measures are called up via the user search by the term "Measures". A new creation can already be created from the overview or from a measure map - see also section "Create measure".

> Note

Basic information about measures can be found [here](). At this point of the online help only the additional functionality of the module "Complaint and Grievance Management incl. FMEA" in KUMVISION medTech365 will be explained to you in more detail.

measures map

menu ribbon measure

Function	Meaning
Create resubmission	Create a resubmission for the current action card.

creation of complaints and reclamations

Complaints and reclamations cannot be created on their own, their starting point must always be a master data record such as a contact, customer or vendor.

> Note

Basic information about the creation of complaints and grievances can be found [here](). At this point of the online help only the additional functionality of the module "Complaints and Grievance Management incl. FMEA"" in KUMVISION medTech365 will be explained to you in more detail.

serial number card

Serial number cards are used to record devices, machines or plants with serial numbers. Also in the serial number overview as well as on the individual serial number cards a complaint or claim can be created via the button "Create Call" in the menu ribbon.

Prerequisite:
. A corresponding serial number already exists for which a complaint or claim is to be created.

Call up the serial number information list via the user search.

Select the desired serial number. Then click on the "New Call" button in the ribbon.

The call classification opens.

Select the corresponding call classification. For a complaint, activate the Complaint checkbox, for a reclamation, activate the Reclamation checkbox. Then confirm your selection with "Ok".

The system automatically creates a new complaint (Call) according to the previously selected Call classification (Complaint). The data stored for the serial number is automatically transferred to the complaint (call). This can then be processed further or closed by clicking OK.

A new complaint or claim has been created based on a serial number.

The creation of a new complaint or claim from the batch number information is currently not supported. If articles with article tracking "Batch" are to be included in a complaint or reclamation, these documents are opened via the Marketing Cockpit, Accounts Receivable or Accounts Payable. The article(s) is/are manually entered in the "Complained items" info tab.

1.3 Apps

1.3.1 KUMAVISION Applications

KUMAVISION provides numerous applications that can be implemented in addition to the individual industry solutions via the [Microsoft App Source](#).

> Note

The use of the following applications is only possible with corresponding purchased licenses and their activation.

- [Additional Items](#)
- [Advance Payment](#)
- [Change Log Quick Access](#)
- [Compliance Check](#)
- [Credit-Check App powered by Creditsafe](#)
- [Electronic Data eXchange (EDX)](#)
- [Electronic Data eXchange (EDX) AddOn Warehouse Management System (WMS)](#)
- [GAEB Interface & Calculation](#)
- [KUMAconnect](#)
- [Power BI Sales Activator](#)
- [Quality Management Extension (QME)](#)
- [Replenishment Kanban Bin](#)
- [Sales Order Status](#)
- [Split by Picking Area](#)
- [Vendor Rating Management](#)

1.3.2 Additional Items

General

The app additional items (cross-selling) allows you to easily assign additional items, spare parts and services in your item master. Various parameters are considered and defined during the assignment:

- When creating documents, the additional item or service can be displayed, for example, as a mandatory addition or as an option
- Define the quantity calculation as a fixed quantity or store an automatic quantity output as a factor on the selection of the "main article" (incl. setting of the quantity rounding)
- Automatic generation of cross-selling references incl. deposit of a minimum number of items

Introduction Additional Items

[Additional Items | KUMAVISION App](#) from [KUMAVISION](#) on [Vimeo](#).

[Link to Microsoft App Source "KUMAVISION Additional Items"](#)

Establishment

Related articles device

First, some basic setup must be done for the associated articles. The setup for this is done in the "Associated item setup". The individual fields of the setup card are explained in more detail below:

Inforegister Related articles

Field	Description
Max. Number of cross-reference hits	Specifies the maximum number of related articles to be created by the automatic generation.
Min. number of cross-reference hits	Specifies the minimum number of connections required for automatic generation.
Automatically open page for related articles	Specifies whether the list of related items should be opened automatically.
Automatically insert required related articles	Specifies whether related items that have been marked as necessary will be inserted automatically.

Inforegister Support Information

Field	Description
App ID	Specifies the ID of the current app.
Registered	Indicates whether the app is registered.
App name	Specifies the name of the app.
App version	Indicates the current version of this app.
UID	Specifies the UID.
HTTP request allowed	Specifies the permissibility of the http request from the extension setting.
AAD Client ID	Specifies the Azure Active Directory ID.
Environment name	Specifies the name of the current environment.

Deposit of associated articles

The associated articles are stored in the article card of the base article. If desired, this configuration can also be made per variant.

To do this, first call up the article overview via the user search and then the required basic article.

Using the Navigate>Articles>Additional articles ribbon, you can add the related articles to the base article using the table below.

Field	Description
Type	You can use the "Type" field to specify the type of additional line. You can choose from the following: • General Ledger Account, • Article, • Resource, • WG/ plant • Allowance/Discount (Article)
No.	Depending on the "Type" field, the number of the corresponding line can be selected here (article number, resource number, …).
Variant code	Represents the variant of the corresponding line, depending on the "Type" and "No." field.
Description	The description is automatically filled by the system after selecting a no. and is not editable.
Sale	This field allows you to specify that the corresponding row is used in the sales documents. If a line is only used on the purchase page, this field must be deactivated. When the overview map is displayed later within the document entry, the lines will be filtered accordingly.
Sales sequence no.	You can define a sequence for the related item in the sale.
Purchasing	With this field you can specify that the corresponding row will be used in the purchasing documents. If a line is to be used only for the sales page, then this field must be deactivated. When the overview map is displayed later within the document entry, the lines are filtered accordingly.
Purchase sequence no.	You can define a sequence for the related item in Purchasing.
Required (sale)	This field allows you to control whether the cross-selling item is selectable or automatically used in the sales documents.
Required (Purchasing)	This field allows you to control whether the cross-selling item is selectable or automatically used in the purchasing documents.
Quantity calculation	This field defines whether the quantity is a factor of the quantity from the document or a constant quantity.
Quantity / factor	Depending on the field quantity calculation, you can enter a factor or a constant quantity.
Quantity rounding	Specifies whether the quantity should be rounded.

Field	Description
Quantity rounding type	Specifies how the quantity is to be rounded.
Sales unit code	Differing from the sales unit and the unit of the item, you can define other sales units.
Purchasing unit code	Differing from the purchasing unit and the unit of the item, you can define other purchasing units.
Automatically created	This field allows you to control whether the associated article is created manually by the user or automatically.

If the base article is inserted into a document (e.g. quotation or order), an overview card with the configured extras is displayed. Depending on the configuration, these can still be adjusted and then transferred to the document.

Use in process

You can now use the configured base article in your processes. To do this, you must create a Create new sales/ purchase document.

In the following example, a sales order is used:

First, a new sales order is created with the necessary information in the "General" info tab. Then an item line with the configured base item is entered. After checking the desired quantity, the overview card opens with the configured additional items.

>   Note

If you change the quantity of the base item, the overview card with the configured additional items will be displayed again, updated.

If you decide to remove the base item from the document, there will be a prompt asking if you want to delete the linked rows as well.

Associated articles can also be retrieved subsequently by selecting "Line> Function>Select associated articles".

Automatic generation of associated articles

With the help of the report "Generation of related items" the assignment of the corresponding additional items to an item is done automatically.

The prerequisite for this is that the fields "Max. number of cross-reference hits" and "Min. number of cross-reference hits" are maintained in the "Related item setup".

To use the functionality, first call up the report "Generation of associated articles" via the user search.

The filtering mask opens, where you can make the following filtering options:

Field	Description
From date / To date	Set a consideration period for considering combination purchases/sales.
Direction	Specify the direction for which the system should check the combinations. You can choose from the following: • Sales • Purchasing • Purchase and sale
Item no.	Specify a (base) item number for which, the system should check further combination purchases / sales.

When the report is run, all additional item entries with "Automatically created = yes" are deleted and are recreated as follows:

The system evaluates the sales/purchase history by the number of common item sales/purchases. If the number of hits exceeds the value stored in the "Related items setup", an entry is created in the "Related items" table. The number of created entries can be limited by another setting value ("Max. number of cross-reference hits").

What happens after the free trial

What happens after the free trial? from KUMAVISION on Vimeo.

1.3.3 Advance Payment

General

The "Advance Payment" application is a special ISV solution based on Microsoft Dynamics 365 Business Central®. This is a special function extension of the standard solution Microsoft Dynamics 365 Business Central®. It enables you to manage down payments in sales and purchasing correctly and reliably in accordance with legal requirements.

[Link to Microsoft App Source "KUMAVISION Advance Payment"](#)

Application areas

The Advance Payment application enables the planning, creation and management of down payment invoices in the sales and purchasing area. Based on orders or purchase orders, all relevant documents and postings can be created and tracked via so-called down payment strings. Down payment accounting is completely integrated into standard processes, e.g. down payment invoices can flow into the dunning process and payment transactions. Data is entered and managed using the standard interfaces and documents. Down payment strings can be managed and analyzed centrally via new menu items.

Overview

The Advance Payment application can be used in both sales and purchasing.

The down payment string forms the basis for the down payments. It specifies the business transaction for which down payments are to be made and posted. In sales, the basis for a down payment string is either the order, an individual order line or even a project; in purchasing, it is the purchase order or an individual order line.

A down payment plan can be stored for each down payment strand, in which it is defined at which time and in which amount down payments and final invoices are to be made.

Requested down payments are posted as down payment invoices. As no sales tax / input tax may be reported at this point in time, down payment invoices are posted with unrealized tax. Only when the payment is received is the tax realized and the requested down payments transferred to down payments received / made.

Receivables or payables from advance payments made are also shown in separate accounts so that they can be presented separately from actual receivables and payables.

Corrections to requested down payments can be posted using down payment credit memos.

With the invoice of the order / purchase order requested and made / received down payments can be cleared. A final invoice deduction can be created and posted automatically.

The current status of the transactions can be viewed at any time via the down payment strings. Detailed down payment statistics provide information on all related postings. Special views on the customer / vendor items allow to view the open or not final invoiced amounts for each down payment.

Establishment

To use the application, some setups must be made. In this section you will learn what they are and how to configure them.

Down payment facility

If the Advance Payment application is to be used, it must first be activated for the sales and purchasing areas. Only then will all relevant fields and buttons be displayed in the existing interfaces, and new menu items will be offered for selection. Activation is made in the down payment facility.

In addition, it shows which installations have already been completed or are still to be carried out.

Inforegister General

Field Description Sale active Indicates whether the down payment functionalities are enabled for the sales documents. Purchasing active Indicates whether the down payment functionalities are enabled for the purchasing documents.

Inforegister settings

Field	Description
Allow directly realized tax	Specifies whether down payment invoices can be posted with directly realized VAT, depending on the setting in the VAT posting matrix setup. Without this setting, all down payment invoices must be posted with unrealized VAT.

Inforegister facilities completed

This info tab gives you an overview of which relevant areas have already been set up or have not yet been set up.

Support information

On this info tab you will be presented with information about the app.

Menu call "Manual setup

The Manual setup button can be used to branch to the relevant setup tables. These are described in more detail in the following sections.

G/L accounts and posting groups

Financial accounting facility

Down payment invoice must be posted with unrealized tax. This means that the tax is not due until the payment is received.

In order for this situation to be taken into account, the fields "Unrealized VAT" and "Unrealized VAT Prepayment" must be activated in the financial accounting setup. Prepayment" fields must be activated on the "General" information tab.

Accounts Receivable / Accounts Payable Groups

The collective accounts for down payments and the accounts for unrealized down payments must be defined in the customer / vendor posting groups:

Customer posting groups

Field	Description
Deb. Collective account down payments	Specifies the G/L account to be used when posting receivables from customer down payment documents in this posting group. Corresponds to the customer collective account for receivables from standard documents.
Deb. Unrealized prepayments	Specifies the G/L account to be used for postings in down payment documents for requested down payments from customers in this posting group. This account is automatically proposed when creating down payment documents. Since the account is used in the down payment documents in the line items, the account must be directly postable (Direct to G/L account field). In addition, the G/L account must show a VAT product posting group with unrealized VAT. When posting the payment clearing for a down payment document, unrealized down payments and tax are transferred to the accounts for realized down payments and tax. The account for Real. Down payments is stored in the VAT posting matrix. For more information on how to set up the VAT posting matrix and the real. Accounts can be found in the section "VAT product posting groups and VAT posting matrix".

Vendor posting groups

Field	Description
Kred. Collective account down payments	Specifies the G/L account to be used when posting payables from down payment documents from vendors in this posting group. Corresponds to the vendor general ledger account for payables from standard documents.
Credit. Unrealized prepayments	Specifies the G/L account to be used when posting to down payment documents for requested down payments from vendors in this posting group. This account is automatically proposed when creating down payment documents. Since the account is used in the down payment documents in the line items, the account must be directly postable (Direct to G/L account field). In addition, the G/L account must show a VAT product posting group with unrealized VAT. When posting the payment clearing for a down payment document, unrealized down payments and tax are transferred to the accounts for realized down payments and tax. The account for Real. Down payments is stored in the VAT posting matrix. For more information on how to set up the VAT posting matrix and the real. Accounts can be found in the section "VAT product posting groups and VAT posting matrix".

VAT product posting groups and VAT posting matrix

For the correct tax treatment of down payment documents, new VAT product posting groups must be created, with which new rows for unrealized VAT treatment will be added to the VAT posting matrix.

A separate VAT product posting group should also be created for the transfer of unrealized down payments to down payments received / paid.

Example of new VAT product posting groups:

Code	Description
AZ19	Unr. down payments 19%
REAL_AZ19	Real. Down payments 19%

The VAT product posting group AZ19 is used for postings with the Unreal. Down payment account (see Accounts Receivable/Vendor Posting Group). The REAL_AZ19 posting group is used for down payment transfer postings.

Example of VAT posting matrix setup:

VAT Business booking group	VAT Product booking group	VAT Des	VAT Indicator	VAT	VAT Calculation type	Unreal. VAT Art	Corre	Sales t	Unrea	Input	Unrea	Acqui	Unrea
THIRD COUN	AZ19		MWST.19	0	Normal VAT	Percentage	Yes	1792	1792	1589	AZ15..		
EU	AZ19		MWST.19	19	Acquisition t	Percentage	Yes	1792	AZ17.	1573	AZ15..	1773	AZ17..
INLAND	AZ19		MWST.19	19	Normal VAT	Percentage	Yes	1776	AZ17.	1576	AZ15..		
THIRD COUN	REAL_AZ19		MWST.19	0	Normal VAT		Yes	1792		1589			
EU	REAL_AZ19		MWST.19	19	Acquisition taxation		Yes	1792		1573		1773	
INLAND	REAL_AZ19		MWST.19	19	Normal VAT		Yes	1776		1576			

Field	Description
Deb. Real. Down payment account	Specifies the G/L account that is addressed when posting the payment of a down payment invoice in sales. When clearing a down payment invoice, the unrealized down payment amount is transferred to the realized down payment account. In the case of partial payments, this is done accordingly on a pro rata basis. The account is found via the VAT combination of the down payment invoice line. This account is also needed to create the final invoice deduction lines.
Kred. Real. Down payment account	Specifies the G/L account that is addressed when posting the payment of a down payment invoice in Purchasing. When clearing a down payment invoice, the unrealized down payment amount is transferred to the realized down payment account. In the case of partial payments, this is done proportionally. The account is found via the VAT combination of the down payment invoice line. This account is also needed to create the final invoice deduction lines.
VAT product posting group down payment realizations	Specifies the VAT product posting group that will be used for the realized down payment account when the payment is received and when the final invoice is deducted. If this field is empty, the VAT product posting group of the Real. Down payment account is entered.

Note

In the VAT statement, the New Combinations for unrealized tax from the VAT posting matrix must be included.

Debit facilities

Accounts Receivable & Sales Facility

In the Accounts Receivable & Sales setup the basic settings for down payments in sales are made. All necessary parameters and defaults are set on the "Down payment" info tab. These are explained in more detail in the table below:

Field	Description
Geb. Down Payment Invoice Numbers	Specifies the number series used when posting down payment invoices for the posted documents.
Geb. Down payment credit memo numbers	Specifies the number series used when posting down payment credits for the posted documents.
Geb. final invoice deduction numbers	Specifies the number series used when posting final invoice deductions for the posted documents.
Document No. Allocation Final Invoice Deduction Reversal	Specifies whether either the document number of the posted final invoice deduction supplemented by a suffix (Suffix option) or a separate document number series (Number series option) should be used as the document number when reversing final invoice deductions.
Reversal of final invoice deduction Document no. supplement	Specifies the suffix to be added to the document no. of the posted final invoice deduction during reversal.
Reversal final invoice deduction number series	Specifies the number series of the unposted invoice document for the cancellation of the final invoice deduction.
Geb. final invoice deduction cancellation numbers	Specifies the number series for the posted invoice document for the cancellation of the final invoice deduction.
Down payment document description	Specifies the name that will be displayed on printed down payment invoices and credit memos.
Automatic creation of AZ strings for orders	Specifies whether to automatically create down payment strings for the documents when creating orders.
Message No. amount greater than base amount	Specifies whether a message should be issued when creating down payment invoices if the sum of the down payments made exceeds the order total.

Field	Description
Field	**Description**
Final invoice for down payment invoices	Use this parameter to specify whether only the down payment invoices already paid by the customer (Paid option) or all down payment invoices (All option) should be taken into account for clearing during a final invoice deduction. If the option "All" is set, then not only the down payment invoices already paid by the customer, but all down payment invoices will be taken into account in the final invoice deduction. In this case, the down payment invoices that have not been paid yet will not be cleared via a credit note, but with a later incoming payment that clears open down payment invoices and final invoice. If the "Paid" option is selected, only down payment invoices that have already been paid will be included in the final invoice deduction.
Automated posting of final invoices	This parameter sets the automatic posting of the final invoice deduction. When a final invoice with order reference is posted, the system checks if there are any down payment invoices that have not been settled yet. Depending on the parameter setting, the system can create a final invoice deduction (Create option) or create and post it directly (Create+Post option). If no automatic creation (and posting) of a final invoice deduction is to take place, this field remains empty.
Final invoice for several AZ strands	This parameter is used to control how to proceed if the parameter Autom. posting of final invoices is set to Create or Create+Post and several down payment strings are included in the final invoice. If no final invoice deduction is to be created, the "No final invoice" option must be selected. The "Error message" option means that the normal invoice posting will stop with a corresponding error message. The "Post final invoice" option specifies that the final invoice deduction will be handled as defined via the Autom. posting of final invoices parameter.

Field	Description
	This parameter defines how to proceed with the down payment invoices that have not been paid. The prerequisite for this parameter is that Autom. posting of final invoices has been set to Create or Create+Post.
Automatic posting of remaining amount credits	The Create or Create+Post options define whether down payment credit memos will be created for the unpaid or only partially paid down payment invoices and eventually posted automatically.
	If it has been defined in Final Invoice for Down Payment Invoices that all down payment invoices will be retrieved to the final invoice deduction, the creation of realized invoices may still be triggered when posting the down payment credit memo (see Autom. Posting of Realization Invoices).
Final invoice deduction max. in the amount of the invoice	Specifies whether the final invoice deduction should be limited to the amount of the final invoice. If the received down payments exceed the final invoice amount, this setting makes it possible to create credit notes later for overpayments.
Voucher No. Allocation Realization Invoices	Specifies whether to use either the document number of the posted down payment invoice supplemented by a suffix (Suffix option) or a separate document number series (Number series option) as the document number when posting realization invoices.
Real. Invoice document no. suffix	Specifies the suffix to be added to the document no. of the posted down payment invoice during the realization posting.
Real. Invoice numbers	Specifies the number series of the unposted invoice document for the realization posting.
Geb. realization invoice numbers	Specifies the number series for the posted invoice document for the realization posting.
Max. Credit amount of overpayments	Specifies the maximum amount for which credit memos can be automatically created for overpayments.
Document No. Allocation of Overpayment Credits	Specifies whether to use either the document no. of the posted down payment invoice supplemented by a suffix (Suffix option) or a separate document no. series (Number series option) when posting credit memos for overpayments.
Overpayment credit memo document no.	suffix Specifies the suffix to be added to the document no. of the posted down payment invoice during the realization posting.
Overpayment credit memo numbers	Specifies the number series of the unposted credit memo for the overpayment.

Field	Description
Geb. Overpayment credit memo numbers	Specifies the number series for the posted credit voucher for the overpayment.
Post exchange rate differences for final invoice deduction	With this parameter you determine whether, when posting final invoices and the subsequent posted final invoice deduction in foreign currency, any exchange rate differences that may occur between the final invoice deduction and the payments received should be automatically booked out. If this field is not checked, the difference will be determined and stored in items, but not posted. These can be booked out manually later.

Debtor

Further additional settings can be made on the customer card on the "Invoicing" info tab. These then apply specifically to this one customer.

Field	Description
Cumulative prepayments	Specifies whether to create down payments as cumulative invoices for this customer. In case of cumulative down payment invoices, down payments already made will be included in new invoices.
Down payments at document line level	Specifies whether down payments are to be created for this customer on the basis of the entire order or individual order items. If this parameter is set, down payments and final invoices with final invoice deduction can be created for individual document lines.

Credit facilities

Accounts Payable & Purchasing Setup

In the Accounts Payable & Purchasing setup the basic settings for down payments in purchasing are made. All necessary parameters and defaults are set on the "Down payment" info tab. These are explained in more detail in the table below:

Field	Description
Geb. Down Payment Invoice Numbers	Specifies the number series used when posting down payment invoices for the posted documents.
Geb. Down payment credit memo numbers	Specifies the number series used when posting down payment credits for the posted documents.
Geb. final invoice deduction numbers	Specifies the number series used when posting final invoice deductions for the posted documents.
Document No. Allocation Final Invoice Deduction Reversal	Specifies whether either the document number of the posted final invoice deduction supplemented by a suffix (Suffix option) or a separate document number series (Number series option) should be used as the document number when reversing final invoice deductions.
Reversal of final invoice deduction Document no. supplement	Specifies the suffix to be added to the document no. of the posted final invoice deduction during reversal.
Reversal final invoice deduction number series	Specifies the number series of the unposted invoice document for the cancellation of the final invoice deduction.
Geb. final invoice deduction cancellation numbers	Specifies the number series for the posted invoice document for the cancellation of the final invoice deduction.
Down payment document description	Specifies the name that will be displayed on printed down payment invoices and credit memos.
Automatic creation of AZ strings for orders	Specifies whether to automatically create down payment strings for the documents when creating purchase orders.
Message No. amount greater than base amount	Specifies whether a message should be issued when creating down payment invoices if the sum of the down payments made exceeds the order total.

Field	Description
	Use this parameter to specify whether only the down payment invoices already paid to the vendor (Paid option) or all down payment invoices (All option) should be taken into account for clearing during a final invoice deduction.
Final invoice for down payment invoices	If the option "All" is set, then not only the down payment invoices already paid to the vendor, but all down payment invoices will be taken into account in the final invoice deduction. In this case, the down payment invoices that have not been paid yet will not be cleared via a credit note, but with a later incoming payment that clears open down payment invoices and final invoice.
	If the "Paid" option is selected, only down payment invoices that have already been paid will be included in the final invoice deduction.
Automated posting of final invoices	This parameter sets the automatic posting of the final invoice deduction. When a final invoice with order reference is posted, the system checks if there are any down payment invoices that have not been settled yet. Depending on the parameter setting, the system can create a final invoice deduction (Create option) or create and post it directly (Create+Post option). If no automatic creation (and posting) of a final invoice deduction is to take place, this field remains empty.
	This parameter is used to control how to proceed if the parameter Autom. posting of final invoices is set to Create or Create+Post and several down payment strings are included in the final invoice.
Final invoice for several AZ strands	If no final invoice deduction is to be created, the No final invoice option must be selected. The Error message option means that the normal invoice posting will stop with a corresponding error message. The Post final invoice option specifies that the final invoice deduction will be handled as defined via the Autom. posting of final invoices parameter.
	This parameter defines how to proceed with the down payment invoices that have not been paid. The prerequisite for this parameter is that Autom. posting of final invoices has been set to Create or Create+Post.
Automatic posting of remaining amount credits	The Create or Create+Post options define whether down payment credit memos will be created for the unpaid or only partially paid down payment invoices and eventually posted automatically.
	If it has been defined in Final Invoice for Down Payment Invoices that all down payment invoices will be retrieved to the final invoice deduction, the creation of realized invoices may still be triggered when posting the down payment credit memo (see Autom. Posting of Realization Invoices).

Field	Description
Final invoice deduction max. in the amount of the invoice	Specifies whether the final invoice deduction should be limited to the amount of the final invoice. If the down payments made exceed the final invoice amount, this setting makes it possible to create credit notes later for overpayments.
Voucher No. Allocation Realization Invoices	Specifies whether to use either the document number of the posted down payment invoice supplemented by a suffix (Suffix option) or a separate document number series (Number series option) as the document number when posting realization invoices.
Real. Invoice document no. suffix	Specifies the suffix to be added to the document no. of the posted down payment invoice during the realization posting.
Real. Invoice numbers	Specifies the number series of the unposted invoice document for the realization posting.
Geb. realization invoice numbers	Specifies the number series for the posted invoice document for the realization posting.
Max. Credit amount of overpayments	Specifies the maximum amount for which credit memos can be automatically created for overpayments.
Document No.	Allocation of Overpayment Credits Specifies whether to use either the document no. of the posted down payment invoice supplemented by a suffix (Suffix option) or a separate document no. series (Number series option) when posting credit memos for overpayments.
Overpayment credit memo document no. suffix	Specifies the suffix to be added to the document no. of the posted down payment invoice during the realization posting.
Overpayment credit memo numbers	Specifies the number series of the unposted credit memo for the overpayment.
Geb. Overpayment credit memo numbers	Specifies the number series for the posted credit voucher for the overpayment.
Post exchange rate differences for final invoice deduction	With this parameter you determine whether, when posting final invoices and the subsequent posted final invoice deduction in foreign currency, any exchange rate differences that may occur between the final invoice deduction and the payments received should be automatically booked out. If this field is not checked, the difference will be determined and stored in items, but not posted. These can be booked out manually later.

Vendor

Further additional settings can be made on the vendor card on the "Invoicing" info tab. These then apply specifically to this one vendor.

Field	Description
Cumulative prepayments	Specifies whether to create down payments as cumulative invoices for this vendor. In case of cumulative down payment invoices, down payments already made will be included in new invoices.
Down payments at document line level	Specifies whether down payments are to be created for this vendor based on the entire purchase order or individual purchase order items. If this parameter is set, down payments and final invoices with final invoice deduction can be created for individual document lines.

Origin codes

Separate origin codes can be set up for down payment accounting documents in the "Origin code setup".

Field	Description
Sales down payments	Specifies the code associated with items posted in connection with down payment invoices and down payment credit memos in sales.
Purchasing down payments	Specifies the code associated with items posted in connection with down payment invoices and down payment credit memos in Purchasing.

Report selection

For down payment accounting, you can use your own documents, which must be entered accordingly in the report selection for sales and purchasing.

The following reports can be used for sales:

Usage	Report ID	Report name
Down payment invoice	1306	Sale - Invoice
Down payment credit	1307	Sale - credit note
Final invoice deduction	5487540	Sale - Final Invoice

The following reports can be used for purchasing:

Usage	Report ID	Report name
Down payment invoice	406	Purchase - Invoice
Down payment credit	407	Purchase - credit note
Final invoice deduction	5487580	Purchasing - final invoice

Foreign currencies / exchange rate gains and losses

If the parameter "Post exchange rate differences at final invoice deduction" is set in the Accounts Receivable & Sales setup or the Accounts Payable & Purchasing setup, G/L accounts must be defined in the currencies for posting realized exchange rate gains and losses.

In the fields provided for this purpose "Deposit account for real. Exchange Rate Gains" and "Down Payment Account for Real. G/L accounts must be defined in the fields "Down payment account for real exchange rate gains" and "Down payment account for real exchange rate losses", to which the determined exchange rate differences will be posted when posting the final invoice deduction.

Down payment strands

The down payment string forms the basis of down payment accounting. In the standard system, down payment strings can be created for the following sources:

- Sell orders
- Sales order lines
- Projects (sales side)
- Purchase orders
- Purchase order lines

As described in the setup, down payment strings can be generated automatically with the new creation of documents. If the parameter "Automatic creation of AZ strings for orders" is set in the Accounts Receivable & Sales setup (or "Automatic creation of AZ strings for orders" in the Accounts Payable & Purchasing setup), a down payment string will be created when creating a new document (or a new document line - setting per customer or vendor in the field "Down payments on document line level").

You can call up the down payment strings via the user search using the search term of the same name.

In the following, the fields from the overview are explained in more detail:

Field	Description
Lfd. No.	Specifies the unique number of the down payment string.
Description	Specifies a freely definable description for the down payment line. The description is initially specified with the corresponding document type and document number of the document, but can be changed individually.
Completed	Indicates whether this down payment string has been closed. Down payment strings are marked as closed when all linked down payment documents have been closed and final cleared. Even after closing, down payment documents can be posted again for the down payment string, the flag is then automatically removed again.
Source account type	Indicates whether the down payment string belongs to a customer or a vendor.
Source account no.	Specifies the number of the customer or vendor to which this down payment string belongs.
Source account name	Specifies the name of the customer or vendor to which this down payment line belongs.
Source table name	Specifies the name of the table to which this down payment string belongs. Options are: Sales header, Sales line, purchase header, purchase line
Currency code	Specifies the currency in which the source document for this down payment string was created.
Cumulative down payment	Specifies whether to create down payment invoices for this down payment string as cumulative down payment invoices. Cumulative down payments include the down payment invoices that have already been posted.
Prices incl. VAT.	Indicates whether the prices of the source document are specified including VAT. If this is the case, the prices in the down payment plan of the down payment string must also be specified gross.
Zlg. condition code	Specifies the payment terms for the source document. In the down payment plan, other payment terms can be specified for individual plan lines.
Project no.	Specifies the No. of the default project to which this down payment string is linked. Depending on the type of source document, this project number can be changed per down payment document.
Project description	Specifies the name of the default project to which this down payment string is associated.
Responsible	Indicates the person responsible for the project to which this down payment string belongs.

Field	Description
Project task no.	Specifies the project task to which this down payment string belongs. Depending on the type of source document, this can be overridden per down payment document.

Use the buttons in the menu bar to maintain or retrieve additional information:

Button	Description
Dimensions	Here you can define dimensions for the down payment string. When creating the down payment string, the dimensions of the source document are taken over. If the dimensions of the source document are changed, they will also be updated subsequently for the down payment string.
Source document	This button allows you to branch directly to the source document (sales order or purchase order) on which this down payment string is based.
Down payment plan	Here you can call up the down payment plan for this down payment line. There you can plan down payments and generate the corresponding invoices.
Display debit/ credit items	The customer or vendor line items for the down payment line show additional information about the status of the down payments.
Display unposted documents	Here you can display the unposted documents for this down payment line.
Down payment statistics	Via this button you can call up the down payment statistics. This shows a detailed overview of all business transactions posted in connection with this down payment strand (see chapter 6.1).

The down payment plan stored for the down payment line is displayed in the info box area of the window.

Create down payment strings manually

If down payment strings are not created automatically when creating documents, they can be created manually from within the documents.

In the "Down payment string" field of the sales order or purchase order (or one of its lines) you can click "Link to down payment string".

The subsequent query must then be confirmed with the option "Create down payment string for this document".

If the document is to be linked to an existing down payment string, the option "Link to down payment string" can be selected.

If the document is already linked to a down payment line (a line number is displayed in the Down payment line field of the document), further actions can be performed via the link in this field.

Down payment plans

The down payment plan defines which down payment invoices have to be issued and when. Final invoices can also be planned in down payment plans. Down payment plans are stored per down payment line.

This section describes how to create a down payment plan.

A down payment plan can be mapped based on a down payment string. The down payment plans can be accessed either from the source document (via the Down Payment String field) or from the Down Payment String window.

In the header of the down payment plan, information about the down payment string is shown. The following fields can be changed:

Field	Description
Cumulative prepayments	Specifies whether to create down payment invoices for this down payment string as cumulative down payment invoices. Cumulative down payments include the down payment invoices that have already been posted.
Description	Specifies a freely definable description for the down payment line. The description is initially specified with the corresponding document type and document number of the document, but can be changed individually.

The rows in the down payment schedule map the individual planned down payment invoices and the final invoice. The fields must be filled as follows:

Field	Description
Planning type	Indicates what type of down payment plan line it is. Down payments and final invoices can be planned.
Invoice date	Specifies the date of the scheduled billing.
Share Amount %	Specifies the percentage of the base amount to be settled with this down payment plan line. The base amount is equal to the value of the source document.
Down payment amount	Specifies the amount to be invoiced with this down payment plan line. Notice: If the sum of all lines of the planning type down payment exceeds the base amount, a message appears, if this has been defined in the institution.
Zlg. condition code	Specifies the payment term code to be used to create the scheduled invoice. It is initially pre-populated with the source document code, but can be modified.
Description	Specifies an optional, freely definable description for this down payment plan line. The description will be taken over as posting description in the document line of the generated document.
Unposted invoice no.	Indicates the document number of the unposted sales or purchase invoice created for this down payment plan row. If a document was created for the down payment plan row, this row cannot be retrieved into a document again.
Down payment invoice no.	Indicates the document number of the posted sales or purchase invoice created for this down payment plan row. If a document was posted for the down payment plan row, this row cannot be retrieved into a document again.
Booking status	Indicates the posting status for this down payment plan line. Options are: Open, Booked, Paid, Credited, Final Cleared
Warning	Warnings are displayed here if information is missing. There must be no warnings if a document is to be generated.

The following actions can be performed using the buttons in the ribbon:

Button	Description
Create AZ invoices (f. marked lines)	This function can be used to create an unposted down payment invoice for selected down payment plan lines of the down payment planning type.
Display generated invoice	Here you can call up the generated, unposted invoice for this down payment plan line. This is only possible if a document number is specified in the "Unposted invoice no. " field.
Dimensions	Shows the dimensions for the down payment plan line. The dimensions can be revised again here.
Delete down payment string	Here the current down payment string including down payment plan can be deleted. This is only possible if no documents have been posted for this down payment line yet.
Down payment statistics	Via this button you can call up the down payment statistics. This shows a detailed overview of all business transactions posted in connection with this down payment line.

Advance payments in sales

This section shows a typical posting history of down payments in the Sales area. The basis for the down payment string is a sales order. A down payment plan has already been defined. The procedure for down payments at order line level or based on projects is analogous - the starting point is always a down payment string.

Create and post a down payment invoice

The individual down payment plan lines that have not yet been retrieved can be retrieved in down payment invoices. This can be done in two different ways:

- Creating a down payment invoice from the down payment plan
- Create a sales invoice and call off the plan lines From the down payment plan, a sales invoice can be created automatically for one or more down payment plan lines of the planning type "Down payment". To do this, the desired lines must be selected, then the function "Create AZ invoice (f. selected lines)" is executed.

The created document will be opened directly afterwards.

In addition to the already known fields, the following fields are important for documents with reference to down payment strings:

Field	Description
Down payment	Specifies whether this document should be posted as a down payment document. This has an influence on the handling of the posted document in the further posting process.
Post final invoice	This field can be used only for final invoice documents (documents without down payment indicator).
Down payment string	Indicates to which down payment line this document is linked. The specification is necessary for down payment documents as well as for final invoices, so that the posting can be assigned accordingly.

Customer and posting date are taken from the down payment plan line. The down payment indicators are also set and the document is linked to the down payment line.

The down payment plan lines are copied to the lines of the document. The G/L account from the field "Deb. Unrealized Down Payments" field from the customer's posting group. It is important that this G/L account has a VAT product posting group with unrealized tax. Otherwise an error message will appear.

The sales price without VAT is filled with the down payment amount of the down payment plan line. If the "Prices incl. VAT" field is activated in the down payment line, the amount from the down payment plan is transferred to the "Sales price incl. VAT" field instead.

In the down payment plan, the "Unposted invoice no." field is filled after the invoice is created. The "Display created invoice" button can be used to return to the created A/R down payment invoice.

When posting, the next sequential number of the number series from the field Dept. down payment invoice numbers of the Accounts Receivable & Sales setup is used as the document number. Corresponding G/L items are created.

The receivable for this invoice is posted to the G/L account "Deb. Collective account down payments" from the customer's customer posting group.

The VAT items show the facts of the unrealized tax.

Additional information about the down payment is shown on the customer item.

If an A/R down payment invoice is created directly, the fields for the down payments must be set manually in the document header. If a down payment line was selected for which a down payment plan was also maintained, a function can be used to copy the plan lines that have not yet been called into the document.

Via the menu item "Prepare" > "Get down payment plan lines" in the ribbon, the down payment plan can be opened.

There, the relevant lines can be marked and the selection confirmed. The lines will then be inserted into the sales invoice.

In documents marked as down payment, only texts and G/L accounts can be used in the lines.

If an A/R down payment invoice is to be created for which no down payment plan has been defined, the document lines can also be entered manually. If a line with the type "G/L account" is created, the no. with the G/L account "Deb. Unrealized down payments" from the customer posting group.

Payment of a down payment invoice

When paying a down payment invoice, the same options exist as when paying a normal sales invoice:

- Posting of a payment via a ledger sheet with specification of a clearing
- Posting a subsequent clearing in the accounts receivable item

When clearing a down payment invoice with a payment, the following transfer postings are made:

- Unrealized tax to sales tax
- Unrealized down payment to down payment received

The account for down payments received is drawn from the VAT posting matrix (Deb. Real. Down Payment Account field).

- Normal receivables account to receivables account for down payments

These accounts are determined from the customer posting group. Clearing for down payment invoices can also be canceled again. The transfers posted with the clearing are then reversed again, so that the down payment is again managed as posted but not paid.

Note

If down payment invoices are issued in foreign currency, there may be discrepancies between the requested down payment amount and the amount actually received due to exchange rate differences during payment.

These exchange rate differences are posted to the realized prepayment account when payment is made, so that the prepayments received correspond to the amount actually received.

Advance payment credits

The following section shows how to credit an incorrect or overstated down payment invoice.

A credit memo is necessary if a down payment invoice was posted incorrectly. A down payment credit memo can also be created in the event that the down payment invoice is no longer required because a final invoice has been issued in the meantime.

An A/R down payment credit memo is initially recorded as a normal A/R credit memo, for which additional down payment information is then set:

Field	Description
Down payment document type	Indicates whether this document is a down payment credit memo.
Down payment string	Specifies the down payment string to which this down payment refers.
Clearing with voucher no.	Specifies the document number of the posted down payment invoice to be reversed with the credit memo.

If a down payment string is selected, the open down payment invoices for this down payment string are automatically proposed for selection. The "Customer item clearing" window opens. After selecting an invoice document, the "Clear with document no." field is filled and the document lines from the posted invoice are copied to the down payment credit memo.

Alternatively, the function "Call up AZ invoice for credit memo" can be executed under the menu item "Prepare" in the menu ribbon. Here, too, the list of open down payment invoices is displayed, which can be canceled with the credit memo.

> Note

The procedure for down payment credit memos differs from that for normal credit memo documents_ in the following respects.

- Only exactly one down payment invoice can be cleared with an A down payment credit.
- It is not possible to subsequently clear down payment invoice and credit note, the credit note must be cleared directly with the invoice when posting.
- Clearing between down payment credits and invoices cannot be canceled.

Posting the final invoice

When the final invoice is posted, the down payments must be cleared or reversed. The clearing of the down payment takes place in the form of a credit note as a so-called final invoice deduction. Requested down payments can either be cleared with the final invoice deduction or credited. This is regulated by the setting "Final invoice for down payment invoices" in Accounts Receivable & Sales Setup. The other settings here control the creation of the necessary follow-on documents (Auto Post Final Invoices, Auto Post Remaining Amount Credits, Auto Post Realization Invoices fields). These documents can be automatically created and, if necessary, posted when the final invoice is posted. If this is not the case, the down payments must be cleared manually via documents.

If the final invoice is posted and the fields for automatic creation of follow-on documents are set, corresponding messages (or corresponding messages for creating and posting the follow-on documents) will appear.

Final invoice deduction

With the final invoice deduction the down payments are cleared with the final invoice. The final invoice deduction refers to a down payment string, which means that only down payments for this down payment string can be cleared, even if other down payments may exist for the customer.

The final invoice deduction reduces the receivables from the final invoice issued by the cleared down payments and writes them off.

In order for this to be mapped, the following fields are relevant in the document:

Field	Description
Down payment document type	Indicates whether this document is a final invoice deduction.
Down payment string	Indicates the down payment line to which this document refers.
Clearing with voucher no.	Specifies the document number of the posted final invoice with which the down payments are to be cleared.

For the final invoice deduction, after the "Down payment document type", the field "Clearing with voucher no. " must be filled first, if the document is created manually. The document number of the final invoice is specified here. In the "Down payment string" field, you can then select from which down payment string down payments are to be cleared. After selection, the down payments that have not yet been cleared appear automatically.

The selected lines are then transferred to the credit memo as document lines. As G/L account the account "Deb. Real. Down payment account" is taken from the VAT posting matrix. This is the case even if the cleared down payment is one that has not yet been paid. Deposits that have been made but not received are then credited and re-entered as a received down payment (see the following section).

Final invoice deductions can also be created manually in this way.

When the final invoice and the final invoice deduction are posted, customer items are created, and the invoice and the final invoice deduction are cleared with each other.

Via the interface "Down payment string" this fact can be traced in further interfaces.

The down payment debit items show in detail the transactions posted to the down payment line item and indicate which amount was invoiced, whether the invoice was paid or credited, and whether it has already been finally cleared.

The down payment statistics also provide information on the current status of the down payment string.

Treatment of unpaid down payment invoices

Unpaid down payment invoice must be credited with the final invoice. There are two cases, depending on the setting of the "Final invoice for down payment invoices" parameter in the Accounts Receivable & Sales setup:

- Unpaid down payment invoices are not cleared against the final invoice deduction (option: Paid): a down payment credit must be posted.
- Unpaid down payment invoices are cleared with the final invoice deduction (option: all): a down payment credit must be posted as well as a realized invoice for the down payments received.

The down payment credit memo is created in the same way as the reversal procedure (section "Down payment credit memo"). When the down payment credit memo is posted, the requested down payments are cleared again.

This also occurs when the unpaid down payment invoices have been offset against the final invoice deduction. However, as this has already reduced the down payments received, they must be reposted as realized.

This document is a normal sales invoice made with the account for down payments received from the VAT posting matrix (Deb. Real. Down Payment Account field). This clears the final cleared down payment of the final invoice deduction.

Exchange rate differences on final invoice

In the case of postings in foreign currency, exchange rate differences may occur in the posting process of the down payment line due to fluctuating exchange rates.

In the Accounts Receivable & Sales setup or the Accounts Payable & Purchasing setup, the parameter "Post exchange rate differences for final invoice deduction" can be used to specify that exchange rate gains and losses realized with the final invoice deduction are posted for the down payments.

The realized down payment account is thereby cleared for this down payment string and exchange rate differences are transferred to the accounts "Down Payment Account for Real. Exchange Rate Gains Account and Down Payment Account for Real. Exchange Rate Losses" of the respective currency.

Cancellation options

Cancellation of a down payment invoice

Down payment invoices that have not yet been paid can be cancelled via down payment credit notes (see section "Down payment credit note").

Cancellation of a down payment

If a down payment invoice has already been cleared with a down payment, the reversal of the posted down payment is done via the cancellation of the clearing and a subsequent write-off via a ledger sheet or the reversal of the payment transaction.

When clearing is cancelled, the transfer of down payments, receivables and VAT from unrealized to realized is reversed again (see also section "Payment of a down payment invoice").

Reversal of a final invoice deduction

Cancellation of posted final invoice deductions is done by cancelling the clearing of final invoice and final invoice deduction. Thereby the opened final invoice deduction is automatically charged off via an invoice (with down payment document type final invoice deduction). The document number assignment for this reversal is defined in the Accounts Receivable & Sales setup (field Document number assignment final invoice deduction reversal and following).

When the clearing is cancelled, the reversal document is created automatically, a message about the created document appears.

The following picture then appears in the customer items: the final invoice was reopened in full, the final invoice deduction was reversed and cleared with the reversal.

> Note

If the final invoice deduction was also used to clear unpaid down payment invoices and create realized invoices, it is necessary to

- the realized invoice is manually charged off (=cancelled) via a credit note.
- The original unpaid down payment invoice that was reversed with a down payment credit memo to be manually re-posted via a new down payment invoice.

Overpayments

It may happen that the amount of the deposit received exceeds the amount of the final invoice. Thus, more than 100% of the final invoice has been paid.

In the down payment debit items, such a case can be recognized by a negative open down payment amount after final clearing.

This amount can be automatically charged off via an overpayment credit note. Relevant for this are the settings in the Accounts Receivable & Sales setup (Max. credit amount of overpayments field and following).

To do this, select the item with the overpayment and call the "Overpayment credit memo" function. A credit note will be created and opened.

The credit note shows a reference to the down payment line. The G/L account for realized down payments is entered in the lines as well as the open, overpaid amount.

When the credit memo is posted, the overpaid down payment is cleared and an open item is created for the customer. This can now be used for a refund or for clearing with another invoice.

If an error occurred when creating a credit note, the credit note can be transferred to an invoice using the Copy document function ("Including header" must be activated in the options) and then posted.

Evaluations

The following interfaces can be used for evaluations or an overview of the current status for a down payment string:

- Down payment statistics
- Down payment debit item / down payment credit item

Down payment statistics

The down payment statistics show a detailed overview of all business transactions posted in connection with this down payment line.

In the header, the Display amounts as field can be used to select whether net or gross amounts are to be displayed.

In the matrix, all planned and posted vouchers are listed on the left. The columns to the right of it show the individual vouchers and amounts per posting date.

Down payment item

The customer or vendor items for the down payment line show additional information on the status of the down payments. In addition to the amount and remaining amount, separate columns show whether an amount has been paid or credited or whether it has been cleared via a final invoice deduction. The column "Open down payment amount (paid, not cleared for closing)" provides information about outstanding postings.

The buttons can be used to perform the following actions:

Button Item	Description
Set/remove filter for open AZ	Selects whether this list should show only items with open down payment amounts.
Down payment statistics	Shows a detailed overview of all posted transactions linked to the down payment line of the current item (see section "Down payment statistics").
Navigate	Searches all items and documents that exist for the posting date and document number of the current item.
Detailed items	Time all posted items and corrections to the current customer item.
Show receipt	Opens the posted document for the current item.
Overpayment	
Overpayment credit	Creates a credit memo document for a down payment item with an overpayment (see the "Overpayments" section).
Realization calculations	
Real. Invoices	Opens the posted realization invoices linked to this item (see the section "Treatment of unpaid down payment invoices").
Real. Credits	Opens the posted realization credits associated with this item (see the "Overpayments" section).

Down payments in purchasing

For down payments in purchasing, down payment strings can be created based on purchase orders or purchase order lines.

The posting procedure and the corresponding documents are analogous to the procedure in the Sales area (see section "Down payments in Sales").

What happens after the free trial

What happens after the free trial? from KUMAVISION on Vimeo.

1.3.4 Change Log Quick Access

General

The "Change Log" function in Business Central Standard can only be called up in the "Administration" main menu and displays all data in an unfiltered and unclear manner.

The app "Change Log Quick Access" from KUMAVISION 365 extends this function: You can open the change log directly from any master data card. Using preset filters, you will then be shown exactly the log items of the data record that you need - without having to make any further settings.

All views can be filtered multiple times. The existing signal lights can also be replaced by icons of your choice.

Thereby, the change log access offers you the following advantages:

- Maximum transparency through visual representation
- Short response time in case of bottlenecks in warehouse and logistics
- Prompt invoicing for booked delivery
- High level of customer satisfaction thanks to the ability to quickly provide information on the availability of articles
- Short-term information provision for management

Introduction Change Log Qucik Access

[Change Log Quick Access | KUMAVISION App](#) from [KUMAVISION](#) on [Vimeo](#).

[Link to Microsoft App Source "KUMAVISION Change Log Quick Access"](#)

Change log setup

Activation change log

After successfully installing the app, the change log must first be activated. To do this, call up the change log setup via the user search.

The change log setup opens. Now activate the "Activate change log" check box.

Logging tables and table fields

Via Setup >Tables in the ribbon you can define the tables with the corresponding table fields for logging.

To do this, first select the desired table. Using the "Insert / Edit / Delete logging" fields, you can select whether and if so, which changes are to be logged by the system.

Field	Description
Log insertion	Specifies that inserts of new data are logged. You can choose from the following options: **Empty:** No insertions are logged in any field. **Some fields:** Insertions are logged for selected fields. You can define the selection of the fields by opening the field overview via the Assist button [...]. Set a check mark in the column "Log insertions" if logging is desired for the respective field. **All fields:** Insertions are logged for all fields.
Log editing	Specifies that changes to the data are logged. You can choose from the following options: **Empty:** No changes are logged in any field. **Some fields:** Changes are logged for selected fields. You can define the selection of the fields by opening the field overview via the Assist button [...]. Set a check mark in the column "Log editing" if logging is desired for the respective field. **All fields:** Changes are logged for all fields.
Log deletion	Specifies that deletions of data are logged. You can choose from the following options: **Empty:** No deletions are logged in any field. **Some fields:** Deletions are logged for selected fields. You can define the selection of the fields by opening the field overview via the Assist button [...]. Place a check mark in the "Log deletion" column if logging is desired for the respective field. **All fields:** Deletions are logged for all fields.

Change log item usage

Change log Access

For the following pages you can now use the " access" via the change log:

- Customer Card
- Customer List
- Vendor Card
- Vendor List
- Item Card
- Item List
- Insurance Card
- Insurance List
- Routing Version List
- Machine Center Card
- Machine Center List
- Fixed Asset Card
- Fixed Asset List
- Bank Account Card
- Bank Account List
- Stockkeeping Unit Card
- Stockkeeping Unit List
- Job Card
- Job List
- Contact Card
- Contact List
- Comment Sheet
- Service Item Card
- Service Item List
- Service Items
- Rlshp. Mgt. Comment Sheet
- Stock. Unit Comment Sheet
- Production BOM
- Production BOM List
- Production BOM Version
- Routing
- Routing List
- Routing Version
- Work Center Card
- Work Center List
- Manufacturing Comment Sheet
- Prod. BOM Version List
- Prod. Order BOM Cmt. Sheet
- Routing Comment Sheet
- Prod. Order Comment Sheet
- Prod. Order Rtng. Cmt. Sh.
- Prod. Order Comp. Cmt. Sheet
- Chart of Accounts
- G/L Account Card
- G/L Account List
- Resource Card
- Resource List

- Sales Price and Line Discounts
- Item Cross Reference Entries
- Blanket Sales Order
- Blanket Sales Order List
- Sales Credit Memo
- Sales Credit Memo List
- Sales Invoice
- Sales Invoice List
- Sales Order
- Sales Order List
- Sales Quote
- Sales Quote List
- Sales Return Order
- Sales Return Order List

The change log can be accessed from the respective master data cards via "Navigate"> "History"> "Change log".

Note

If you cannot see the changes in the history, please close the system once and log in again. This process may occur during the very first use of the functionality after installing the app. After that, the changes will be written automatically.

Change log item

Alternatively, you can view the change log items in the overview of the same name provided for this purpose. To do this, call up the "Change log items" via the user search.

What happens after the free trial

[What happens after the free trial?](#) from [KUMAVISION](#) on [Vimeo](#).

1.3.5 Compliance Check

General

Companies with international business contacts must ensure that there are no relationships with sanctioned individuals, associations or organizations. The compliance check app turns this complex task into a fully automated process.

Review your contacts for compliance with export control laws, U.S. interdiction and early warning lists, and European anti-terror regulations (EC 881/2002 and 2580/2001). This will ensure that your company complies with legal requirements.

In doing so, the sanction check offers you the following advantages:

- All contacts are checked against a variety of different sanctions lists
- Legally compliant logging
- Manual verification of individual addresses or persons possible
- Ad hoc checks when creating a new contact
- Periodic master data check
- Automatic checks, e.g. when creating quotations, purchase orders, deliveries or contracts
- Locked contacts are displayed directly in the process or when creating master data
- Reliable security that no delivery can be made to blocked contacts
- Consistent processes and always compliant action
- Full integration with Business Central

Compliance Check Setup

ComplianceCheck Setup from KUMAVISION on Vimeo.

Link to Microsoft App Source "KUMAVISION Compliance Check"

Lists for the sanction check

- Common Foreign & Security Policy [EU-CFSP]
- Japan METI - The Foreign End User List [JP-METI].
- Consolidated list of financial sanctions targets [HM-List]
- UN ISIL (Da'esh) & Al-Qaeda Sanctions List [UN-AQSL].
- Specially Designated Nationals List [US-SDN]
- Iran Watch List Suppliers [IW-SUP].
- Denied Persons List [US-DPL]
- Iran Watch List Entities [IW-SUS].
- Unverified Parties List [US-UVL].
- Sanctions against Russia and Ukraine [EU-RUUA]
- Entity List [US-EL]
- UN Consolidated United Nations Security Council List [UN-CSL]
- US Statutorily Debarred Parties List [US-DTC].
- State Secretariat for Economic Affairs SECO [SECO-List].

- Nonproliferation Sanction List [US-ISN].
- Foreign Sanctions Evaders List [US-FSE]
- Sectoral Sanctions Identifications List [US-SSI].
- US-List of Persons Identified as Blocked Solely Pursuant to
- Executive Order 13599 [13599-list]

Establishment

Wizard compliance check

After the successful installation of the action testing app, the setup wizard is started. Within the wizard, you can set up all the necessary information for the action check. Alternatively, you can call up the wizard from the start page via the "Supported setup" > "Compliance Check" ribbon.

The wizard is started. The individual steps are explained in more detail below:

Wizard step	Description
Welcome screen	A welcome message appears at the beginning. Click on "Next" to continue.
Additional settings	Set the validity period for checks (default: 10 days). Additionally, you can specify whether request and response data should be stored in BLOB fields (default). Click on "Next" to continue.
Define automatic checks in sales processing	Use the default settings (all checkmarks set) and Click on "Next" to continue.
Define automatic checks in purchasing processing	Use the default settings (all checkmarks set) and Click on "Next" to continue.
Define job queue settings	Use the "Open job queue entries" action. Close the window and click "Next" to continue.
Define workflow settings	Click on "Next" to continue.
Setup completed	Close the mask

Buy additional queries

If you want to purchase additional queries, access the compliance check setup via the user search. You can purchase additional queries via the "Action> Purchase Query Packages" ribbon. Please refer to our landingpage for current pricing.

Use sanction check

Customer review

To carry out the sanction check for a customer, call up the customer overview via the user search. Via "New" in the menu ribbon, you then create a new customer as usual with all the necessary information.

Then perform the "Force update compliance check" action in the "compliance check" infobox.

If your customer is on a sanctions list, the result is "Blocked". Otherwise, the result will be "Ok".

A lookup on the result will take you to the compliance check Entities page, where you can view detailed information about the customer.

Supplier verification

To carry out the compliance check for a supplier, call up the supplier overview via the user search. Via "New" in the menu ribbon, you then create a new vendor with all the necessary information as usual.

Then perform the "Force update compliance check " action in the "compliance check" infobox.

If your supplier is on a sanctions list, the result is "Blocked". Otherwise, the result will be "Ok".

A lookup on the result will take you to the compliance check Entities page, where you can view detailed information about the supplier.

Contact verification

To perform the compliance check for a contact, call up the contact overview via the user search. Via "New" in the menu ribbon, you then create a new contact with all the necessary information as usual.

Then perform the "Force update compliance check" action in the "compliance check" infobox.

If your contact is on a sanctions list, the result is "Blocked". Otherwise, the result will be "Ok".

A lookup on the result, will take you to the compliance check Entities page, where you can view detailed information about the contact.

Employee Review

To carry out the compliance check for an employee, call up the contact overview via the user search. Via "New" in the menu ribbon, you then create a new employee as usual with all the necessary information.

Then perform the "Force update compliance check" action in the "compliance check" infobox.

If your employee is on a sanctions list, the result is "Blocked". Otherwise, the result will be "Ok".

A lookup on the result will take you to the compliance check Entities page, where you can view detailed information about the employee.

Automatic check on release of sales/purchase documents

In the compliance check setup you can define which documents should be checked before release. In addition, you can set which addresses should also be checked.

Customer/supplier was not checked

If you forgot to check your customer/supplier, you must not release a sales/purchase document. It is necessary to check your customer/supplier on the customer/supplier card before you can release the sales/purchase document.

Customer/supplier was previously checked

If your customer/supplier is on a compliance check list and has been previously checked, the system will issue a notification message about the last failed sanctions check for this customer/supplier. You must not release the sales quotation.

Provided your customer/supplier has been previously audited and is not on a sanctions list, you can work with your additional checks via the corresponding info boxes.

For each activated check, the result must be "OK". Otherwise, you must not release the document.

What happens after the free trial

[What happens after the free trial?](#) from [KUMAVISION](#) on [Vimeo](#).

1.3.6 Credit-Check App powered by Creditsafe

General

With the Credit-Check App powered by Creditsafe you can check the solvency of your (future) customers, partners or service providers, reduce your credit risk and thus build long-term successful business relationships. KUMAVISION 365 Credit-Check App powered by Creditsafe gives you easy access to the world's most widely used credit report "Creditsafe", directly from Microsoft Dynamics 365 Business Central.

The Credit-Check App powered by Creditsafe offers you the following advantages:

- Daily updated creditworthiness reports incl. inquiry logging
- Queries from Business Central incl. direct contact creation
- Company monitoring
- Automatic data update cycle
- Address validation for matching and updating of company & address data in Business Central
- Pre-built workflows for setting credit limits or blocking a contact based on the credit rating
- Cost control and budget security through fixed price model

You reduce your processing times and identify risks at an early stage to avoid bad debt losses. Outdated data and double entries are a thing of the past - always work with validated debtor/creditor and contact data with correct company name and address.

Introduction Credit-Check App powered by Creditsafe

Credit-Check App powered by Creditsafe | KUMAVISION App (EN) from KUMAVISION on Vimeo.

Link to Microsoft App Source "KUMAVISION Credit-Check App powered by Creditsafe"

Establishment

In order to use the Credit-Check App powered by Creditsafe, some setups have to be made in advance. On the one hand, this concerns the setup and assignment of users and authorization sets and the basic setup of the "Creditsafe Global Gateway Service" for the credit report. The individual setup steps for the connection are listed below.

Registration

After successful installation, the app must be registered for use free of charge. Please return to the Business Central Role Center and confirm the pop-up prompt for registration.

User authorization

Via the installation of the Credit-Check App powered by Creditsafe automatically three different authorization sets integrated into your Business Central application. Assigning these authorization sets to your users or user

groups ensures that the respective Users can access the connection and, depending on the assigned record, see credit reports or may request.

Authorization record	Description
CRS Setup	This authorization set grants the respective user full access rights to the connection. I.e.: • set up the connection • create new queries • View credit reports
CRS Edit	This permission set grants the user the following access rights: • create new queries • View credit reports
CRS View	This permission set grants the user the following access rights: • View credit reports

Wizard Creditsafe Credit Check

In order to make the setup of the connection as comfortable as possible for the users, a wizard has been developed to guide you through the individual steps. This wizard can be accessed via the start page "Supported facilities" / "Facilities to the Creditsafe Global Gateway Service / Creditsafe Connect API". Alternatively, users can also set up the facilities via the individual application areas. The information that can be stored in each case is identical.

The wizard is started. The individual steps are explained in more detail below:

Wizard step	Description
Welcome screen	A welcome message appears at the beginning. Click on "Next" to continue.
Query Creditsafe Account	If you already have a Creditsafe account, click "Next" to continue. You do not have an account yet? Please click on the following link to activate your free trial account with Creditsafe: Link to Creditsafe Belgien Link to Creditsafe Germany Link to Creditsafe France Link to Creditsafe Italy Link to Creditsafe Netherlands Link to Creditsafe Great Britain Link to Creditsafe United States of America
Connection information	Enter the connection information in this window. Click on "Next" to proceed to the next installation step.
Service URL	At this point the URL to the Creditsafe web service is stored. By default, this field is filled with the URL, which is common in Germany: https://connect.creditsafe.com/v1
Set up user	You can create a new user via the "Set up user" button. The corresponding fields are explained below: **Creditsafe Username:** Enter here your personal username for the connection, provided by Creditsafe. This field is mandatory. **Creditsafe Password:** Enter here your personal password for the connection, provided by Creditsafe. The password is stored encrypted in the database. Close the "User Setup" window and click "Next" in the wizard to proceed to the next installation step.

Wizard step	Description
	In Microsoft Dynamics 365 Business Central, country codes are used in the same way as in Creditsafe. Since the codes used in both systems do not necessarily have to match, the Business Central country codes must be assigned to the Creditsafe country codes. By calling the action "Update countries", the country codes of Creditsafe are queried and stored in Microsoft Dynamics 365 Business Central. To be able to query the data, a connection to an external service of Creditsafe is necessary. Allow the app to access the external service once or always, if you have not already granted this permission.
Country update / assignment	Once the countries have been retrieved from the Creditsafe service, the current list of countries is displayed in a Business Central window. In this list you can see all Creditsafe countries for which you are activated. If there is a matching Business Central counterpart for a Creditsafe country code, the assignment in the column "Country code" is already suggested automatically. Please check the automatically made assignments at this point and change them if necessary by selecting a Business Central internal country code. Click on "OK" in the "Creditsafe countries" window to return to the setup wizard. Click "Next" in the current step of the setup wizard to proceed to the next installation step.

Wizard step	Description
	In the "Basic settings" window you can make various settings as well as defaults.
	Default email address for offline report: If a report cannot be requested online, you have the option within the app to request an offline report from Creditsafe. To ensure that this report can be sent to you easily by e-mail and for any queries on the part of Creditsafe, please use the "Default e-mail address for offline report" field to specify which e-mail address should be used for this purpose.
	Standard language: Use the "Default language" field to specify the language in which you would like to receive the creditworthiness reports. If the report is available in the selected language, it will be retrieved accordingly.
	Standard language (alternative): Use the "Default language (alternative)" field to specify the alternative language in which you would like to receive the creditworthiness reports. If the report is not available in the default language, the alternative default language will be used for retrieval. If there is no report in the alternative language either, the available language of the report will be used.
Basic settings	**Default country:** Select as default country the Creditsafe country code through which a company search should be performed by default. In the company search, you can search for companies that are not yet created in your database as contacts, debtors or creditors. In this case, as well as in cases where the "Country code" field of the contacts, debtors or creditors is empty, the country specified here will be suggested for the search, but can be overwritten in the search window.
	Standard search mode: When you search for a company on Creditsafe, specifying the company name, the search is performed for the entire term or partial words. Specify here the search mode you want to use to search for companies by default. You can override this field again in the company search. The value specified here is only a suggestion and to simplify the search. Possible values are:
	MatchBeginning: Searches at the beginning of the company name for the exact term specified Example: "Testfirma GmbH & Co. KG" will be found by "Test", "Testfirma", "Testfirma Gmb" etc.
	MatchBlock: Searches for a partial text within the company name Example: "Testfirma GmbH & Co. KG" is found by "estfirm", "GmbH", "irma" etc.

Wizard step	Description
Basic settings	**MatchAnyPars:** Searches for text blocks in the company name - One block per search term Example: "Alpha Bravo charlie Co. KG" is found by "alph ravo", "lpha harl" etc. **MatchWords:** Searches for whole words regardless of the order Example: "Testfirma GmbH & Co. KG" is found by "gmbH Testfirma", "KG GmbH" etc **MatchBlockOrWords:** ombination of MatchBlock and MatchWords Searches partial texts as well as whole words regardless of the order. **ExactValue** Searches for the entire exact partial text Example: "Testfirma GmbH & Co. KG" is found by "testfirma gmbH & co. kg". **ClosestKeywords** Searches for any keyword using a "fuzzy" logic (similar to fuzzy search) Example: "Alpha Bravo charlie Co. KG" is found by "brava", "brawo" etc. The possible search modes vary depending on the country used. If you have any questions about this, please contact your Creditsafe representative. The default setting for Germany is "MatchWords".
Standard DE cause code	In Germany, it is mandatory that a cause code for the query is transmitted in the course of a creditworthiness query. In this field, specify the default DE cause code to be used by default. You can override the DE cause code within the company search. The code specified here is used only as a default value. Possible values are: • Credit decision • Credit assessment - future business relationship (with default risk) • Credit assessment - Existing business relationship (with default risk) • Realization check for debt collection • Purchase agreement - intention to sign a purchase agreement (with risk of default) • Capital goods credit insurance (with default risk) • Contract - intention to sign a lease or rental agreement (with default risk). • Insurance contract - intention to sign an insurance contract (with risk of default). The default setting is "Credit check - Existing business relationship (with default risk)". Click "Next" in the current step of the setup wizard to proceed to the next installation step.

Wizard step	Description
	In the advanced settings you can define which automation steps should be executed by the connection and how the application should react to changed data.
	Modify name & address Use this field to specify how the application should handle changed company or address data in the course of retrieving creditworthiness reports. The possible options are:
	User query Unless the query is run in the background, if name or address information is changed, a window will open prompting the user to accept individual or all of the changed data.
	Always Changed company name or address information is always automatically transferred to the address master by the application. There is no separate query to the user!
	Never Changes to the company name or address data will not be accepted.
Advanced settings	The default value of the application is: User query.
	Update cycle The application provides a batch run that is used to update the existing creditworthiness reports at a regular interval. This run is executed every day and, depending on the date formula stored here, checks whether the last successfully retrieved creditworthiness report is out of date. If this is the case, a current report is automatically retrieved.
	The default value of the application is: 6M. This will automatically update credit reports every 6 months.
	Query report via task queue Provided that this field is activated, creditworthiness reports for known Creditsafe addresses are queried in the background. The advantage of this method is that the user does not have to wait for the query and the processing of the result, but can continue working in parallel.
	The prerequisite for background processing is that the contact/debtor/creditor to be queried already contains an assigned Creditsafe ID. If this is not the case, the company search is started and the query cannot be performed automatically in the background due to the required selection of the correct company.

Wizard step	Description
Advanced settings	**Task queue - category code** Provided that the task queue is to be used for querying creditworthiness reports in the background, you can specify a category for grouping the queue items here. **Notify if successful** Check this box to be informed about the notifications after a background check has been performed and a new credit report is available. The system automatically generates a notification, the link to which allows you to branch directly to the master record of the contact/customer/vendor. Click "Next" in the current step of the setup wizard to proceed to the next installation step.
Portfolios	Via portfolios, it is possible in Creditsafe to group selected companies and, for example, to enable monitoring of a group. Furthermore, notification settings for individual portfolios can be activated via the Creditsafe website so that, for example, automatic e-mail notifications are generated when monitored companies change. Select the "Update Portfolios" function to retrieve the portfolios already stored in Creditsafe and save them in a Business Central table. Once retrieved, the portfolios will be displayed in a Business Central screen. For more information on managing portfolios, please refer to the chapter "Managing Portfolios". Click "Next" in the current step of the setup wizard to proceed to the next installation step.

Wizard step	Description
Task queue post	Task queue items allow you to manage automations that perform time-based or change-based updates to credit reports in conjunction with the Creditsafe connection. Select the Open Task Queue Item action to open the Task Queue Item page. In this window, two tasks have been integrated by "Credit-Check App powered by Creditsafe", but not activated. Thus, you can decide for yourself whether automatic updates should occur or not. **Codeunit 70259982 - KVSCRSJobUpdatePortfolio** This task is called by default once a day on each weekday and updates the companies named in a portfolio if they have undergone a change by Creditsafe. The batch automatically queries the portfolios and if changed companies are named by the query, the updated creditworthiness reports for these companies are obtained in the background. **Codeunit 70259981 - KVSCRSJobIntervalUpdateReport** This task is called by default once a day on each weekday and updates the companies whose last successfully retrieved creditworthiness report is older than the date specified due to the date formula in chapter "Update cycle" in combination with the current date. The batch checks the date of the last report for all assigned Creditsafe companies in the master data and performs the creditworthiness queries for the corresponding companies in the background. Click "Next" in the current step of the setup wizard to proceed to the next installation step.
Workflows	Workflows can be used to perform actions in Microsoft Dynamics 365 Business Central depending on events or record changes. This logic has been extended by "Credit-Check App powered by Creditsafe" to include the event of a new successful credit report retrieval. Select the "Open workflows" action to get to the list of workflows where you can create new workflows based on workflow templates. Two workflow templates have been created automatically: • Block a debtor/creditor on the basis of a credit report • Set credit limit based on credit report Both workflow templates are assigned to the new category "Creditsafe" and can be used to set the credit limit or block a debtor/creditor based on the values of a new credit report. Click on "Next" in the current step of the setup wizard to proceed to the next installation step.

Wizard step	Description
Assign contacts	The action "Assign contacts" can be used for the first assignment of Creditsafe IDs to already created contacts. Before the creditworthiness reports of a contact/debtor/creditor can be retrieved, an assignment to a Creditsafe ID is mandatory. While this step is done automatically for the selected master record in the course of the individual retrieval of a report from the contact/debtor/creditor card, an assignment can be made at this point for all already created contacts via the action "Assign contacts". If a contact is linked to a customer or vendor, the Creditsafe ID will also be assigned to the linked record. After calling the action, a Creditsafe company search will be executed with the default parameters for the search mode (see chapter "Default search mode") and the DE cause code (see chapter "Default DE cause code"). You can still narrow down the contacts to be searched within the call by setting appropriate filters on the contacts. For example, in the following screen shot, only the contacts with a country/region code "DE" for Germany are retrieved. Likewise, other arbitrary filters are possible for restriction. Since this process makes a query to the Creditsafe system for each record, this process takes a corresponding amount of time. After the search has been completed, a mask is displayed with all contacts that have not yet assigned a Creditsafe ID. In the column "Number of found Creditsafe companies" you can see how many companies were found for the search entry. By clicking on the number, you can view the different companies. Using the action "New" -> "Assign unique IDs", you can automatically include all IDs that could be uniquely assigned ("Number of found Creditsafe companies" = 1) in the assignment.
Assign contacts	For all contacts for which more than one entry was found, you have to make an assignment manually by clicking on the number in the column "Number of found Creditsafe companies" and a subsequent selection of the corresponding company entry. If no company can be assigned to a contact ("Number of found Creditsafe companies" = 0), you can open the company search by clicking on the number and adjust the transferred search parameters for a new individual search. After adjusting the search parameters (e.g. by removing the address and/or the postal code) and calling up the search again (shortcut: Ctrl+F), the company can be found and is assigned by clicking on "OK". Click "Next" in the current step of the setup wizard to proceed to the next installation step.

Wizard step	Description
Finish setup wizard	This completes the setup of the "Credit-Check App powered by Creditsafe". Click the Finish action to exit the Setup Wizard and close the window.

If you subsequently want to change setup parameters, you can restart the setup wizard at any time or alternatively open the "Setup Creditsafe Service" window via the Role Explorer (under "Setup and Extensions" / "Manual Setup") or the search (magnifying glass). In the setup area, the following individual setup steps can also be performed:

- Setup Creditsafe service
- User setup
- Creditsafe countries (update and assign)
- Creditsafe Portfolios
- Task queue post
- Workflows

Use credit check

Query credit report

Two different ways are offered for retrieving the creditworthiness information. The use of the respective step depends, for example, on whether a business relationship already exists with the company to be queried and thus the data record has already been created as a customer, vendor or contact, or whether it is a matter of initiating a new business relationship and thus no master data record exists yet.

While it is possible to retrieve current creditworthiness information from the respective master record for existing data records, the company search is used for new companies.

Credit rating retrieval via the company search

To find a company via the Creditsafe Company Search and retrieve a credit report, open the "Creditsafe Company Search" card via the User Search.

In the Creditsafe company search, search information can be entered and a search based on the Creditsafe company database can be started.

Use the "Name", "Address", "Postcode", "City", "Country", "Creditsafe ID", "Creditsafe Safenummer" and "Tax number" fields to narrow down the results accordingly.

Use the "DE reason code" selection field to specify the reason for the query. In Germany, a legitimate interest in a credit report is legally required. Therefore, please use the selection field to specify the reason for the query.

The "Search type" field is used to define the basis on which entries are searched. The search types are available here:

MatchBeginning
Beginning of text must match Example: "Alpha Bravo Charlie" is found by specifying "alph", "alpha", "alpha bra" etc.

MatchBlock

A text block must match example: "Alpha Bravo Charlie" is found by "ravo" "ha bra", "ha bravo char" etc.

MatchAnyParts

Text blocks must match - one block per "token" Example: "Alpha Bravo Charlie" is found by "alph ravo arl", "lph harl" etc.

MatchWords

Matching whole words regardless of order Example: "Alpha Bravo Charlie" is found by "alpha", "alpha bravo", "bravo alpha" etc.

MatchBlockOrWords

Matching a text blocked or whole words regardless of the order. In some countries an independence from the order is not possible! Example: "Alpha Bravo Charlie" is found by any text from MatchBlock or MatchWords.

ExactValue

All text must match Example: "Alpha Bravo Charlie" is found only by "alpha bravo charlie".

ClosestKeywords

Each word of the query is checked against a list of keywords describing a company. Example: "Alpha Bravo Charlie" is found by any text from MatchWords plus "brava", "brawo" etc.

> Note

Please note that due to restrictions on the part of Creditsafe services, not all search types are available in every country! For detailed information, please contact your local Creditsafe contact person.

After entering the search criteria, you can use the "Actions" / "Search" action or the shortcut "Ctrl+F" to start the company search.

The companies found are displayed in the hit list. Should a company already be in master record (customer, vendor, or sales activity) in your database, the corresponding Hits are displayed highlighted in color.

In addition to the basic company information, you can also see from the list if "Online report possible", "Monitoring possible", "Basic report possible", "Complete report possible" are. This information is based on the country-specific settings as well as your individual Contract information with Creditsafe.

If a master data record already exists for a hit and the entry is highlighted in color, you can open the respective master data card via the "Open" action group.

If the respective entry does not yet exist as a master record, you can use "Create as" to create the corresponding Create master data set.

In the "Actions" action group, you can call up "Retrieve report" to obtain a creditworthiness report on retrieve the respective hit without having to create the data record as a master data record. In this case, however, the credit report cannot yet be "anchored" to a master data record and is therefore offered for download. Parallel to this, the "Creditsafe address matching" is started, from which you can create a new contact, customer or vendor.

In principle, it is recommended to create a master data record from the company search and to subsequently start a creditworthiness call for this master data record.

Creditworthiness retrieval from the master data

Info boxes have been integrated within the contact card, debtor card and creditor card, which directly display the most important creditworthiness information for the respective master record.

If you have opened a master data record for which no credit report has been created yet and to which no Creditsafe-Id has been assigned, this info box is without content.

To retrieve a credit report for this contact, click on the heading "Last credit report" in the info box and select the action "Query creditworthiness".

If no Creditsafe ID has been assigned yet, the "Creditsafe Company Search" will open first. Select the corresponding hit in order to assign the unique ID.

The creditworthiness report is then retrieved. In addition to the creditworthiness data, the complete address data is also included in the Creditsafe report, so that if there are any differences between the data already stored and the results of the creditworthiness report, the "Creditsafe address comparison" is displayed. Here you have the possibility to transfer single or all changed field information into the current master record.

Subsequently, the data record is automatically updated and the infobox "Last credit report" is displayed with the valid data of the credit report.

View credit information

Infobox data

Info boxes have been integrated within the contact card, debtor card and creditor card, which directly display the most important creditworthiness information for the respective master record.

The values displayed are:

- Rating
- Rating Description
- Creditworthiness index
- Creditworthiness index Description
- Proposed credit limit
- Date / time of the last report call-off
- Creditsafe ID
- Creditsafe safe number
- Number of portfolios in which the master record is listed with link to the portfolios
- Reference to changed address data due to the last creditworthiness report with link to the changed address data (see Update address data).

View credit report

Select the action "Last credit report" / "Show credit report" to display the PDF report of the last credit query.

Show XML data file

In addition to the transferred creditworthiness data and the PDF report, by calling the action "Last Credit report" / "Show XML data file" to call up the underlying data file. Here contains all the information about the company that is also displayed in the PDF report. This file ensures that, for example, at a later point in time, further information on the companies can be imported and interpreted in Business Central tables.

In addition to the allocation to industries, current employee figures and balance sheet information, this also concerns Notes on management / shareholder structure and positive/negative changes.

For an exact representation and description of the data included, please contact your Creditsafe contact.

Reset creditsafe assignment

If an incorrect Creditsafe ID has been assigned to a company by mistake, the company must be informed accordingly. To remove the link again. To do this, the incorrectly assigned contact / customer / vendor is called up.

If you call up the "Delete creditworthiness information" action within the "Last creditworthiness report" info box, the assignment is cancelled.

Creditworthiness reports that have already been retrieved are marked as "Invalid" and are no longer used for the display. Consequently, the new company search can be started and the correct company assigned via the "Last credit report" / "Query creditworthiness" call.

> Note

No retrieved reports or log entries are deleted!

Update address data

In addition to the pure creditworthiness data, the connection to the Creditsafe WebService is also able to return the current, validated address data to Microsoft Dynamics 365 Business Central. This ensures that no outdated address data exists in the address master.

Depending on the setup, you can specify whether changed address data should be applied automatically, by user query or not at all.

If this setting has the value "User query", the user is informed of the changed values with a change mask depending on the processing type of the query. If background processing ("Query report via task queue") is disabled or if the query is from the company search, a change of address window is displayed immediately after the report has been retrieved.

If background processing is activated, the "Changed address data" field in the "Last credit report" info box for the contact/debtor/creditor is displayed with the value "Yes". In this case, the identical window opens only after clicking on the value "Yes".

Within the window the existing address from the data master is displayed.

You can transfer any individual value from the master record or the Creditsafe record to the resulting record in the above display by clicking on the value.

If you want to apply all values of a record, you can click the "Apply All" button either in the "Database" or "Creditsafe" column.

Furthermore, the values in the "Resulting record" area can also be edited manually. After data maintenance has been completed, you can transfer the values from the resulting data record to the master record using the "Update customer" or "Update vendor" or "Update contact" action.

Afterwards the selected data will be taken over into the master data record. The window "Creditsafe address matching" closes and the value "Changed address data" within the infobox is reset to the value "No".

If you do not want to perform any update, you can simply close the "Creditsafe Address Matching" window. In this case, no changes will be made to the master record and the value "Changed address data" within the info box will remain with the value "Yes".

Manage portfolios

In portfolios at Creditsafe, companies can be grouped in order to be able to monitor them and to start actions depending on events.

The portfolios are exchanged bi-directionally between the (protected) Creditsafe website and your Business Central system, so that a group created in Business Central is also visible from the website access and the contained companies can be seen and edited from both systems.

To create a portfolio in Microsoft Dynamics 365 Business Central or check the existing portfolios, open the "Creditsafe Portfolios" window from the "Creditsafe Service Setup".

Update portfolios

Since, in principle, portfolios can be created not only via "Credit-Check App powered by Creditsafe", but additionally via the Creditsafe web interface, they must be compared against each other. While portfolios created in Microsoft Dynamics 365 Business Central are automatically transferred to Creditsafe in the background, the Creditsafe website cannot automatically write to the Business Central database.

In order to nevertheless transfer the portfolios created there to Business Central, the action "Update portfolios" has been developed. After calling this function, a connection to the Creditsafe service is established and the portfolios stored there are retrieved and compared with the portfolios already created in Business Central.

Create portfolio

To generate a new portfolio from Microsoft Dynamics 365 Business Central, create a new record in the "Creditsafe Portfolios" window via the "New" action. After you have given the new portfolio a name and the record has been inserted, it is automatically transferred to the Creditsafe service in the background and created there as a new portfolio as well.

Delete portfolio

To delete an existing portfolio from Microsoft Dynamics 365 Business Central, switch to the corresponding record in the "Creditsafe Portfolios" window and start the "Delete" action. The portfolio will be deleted in the Business Central database and the delete command will be passed to the Creditsafe service in the background.

Include companies in portfolio

In order for a company to be monitored within a portfolio, it must be assigned to the portfolio. There are two different ways to do this, which can be used from the respective starting point of the call.

Note

Please note that only companies can be assigned to a portfolio if the property "Monitoring possible" is activated for the corresponding data set. This property depends on the respective data set as well as on your Creditsafe contract. If you have any questions, please contact your Creditsafe advisor.

Portfolio list - add company

Provided that you have called the portfolio list from the "Setup Creditsafe service", you can call the list of companies assigned to this portfolio by selecting a record and calling the action "Companies".

Within the opened list "Creditsafe Portfolio Companies" you can create a new assignment via the action "New" and add the related company to the portfolio by specifying the corresponding Creditsafe ID.

Company card - Add to portfolio

If you have opened the contact / accounts receivable or accounts payable card of a company that you have assigned to a Portfolio, you can add a portfolio to the info box by clicking on the item "Number of Portfolios" to open the "Creditsafe Portfolio Company" window.

Within the opened "Creditsafe Portfolio Companies" list, you can create a new assignment using the "New" action and add the company to the respective portfolio by specifying the corresponding portfolio.

Remove company from portfolio

To remove a company from monitoring within a portfolio, there are two different ways that can be used starting from the respective starting point of the call.

Portfolio list - remove company

Provided that you have called the portfolio list from the "Setup Creditsafe service", you can use Selecting a record and invoking the "Company" action will bring up the list of companies that are are allocated to this portfolio.

Within the opened "Creditsafe Portfolio Company" list, you can use the "Delete" action to delete remove an existing assignment. The change is sent directly after the action to the Creditsafe service forwarded, so that the assignment is also removed on the Creditsafe website.

Company card - Remove from portfolio

If you have opened the contact / accounts receivable or accounts payable card of a company that you want to remove from a portfolio, within the info box you can use the link of the item "Number of Portfolios" to open the "Creditsafe Portfolio Company" window.

Within the opened "Creditsafe Portfolio Company" list, you can use the "Delete" action to delete remove an existing assignment. The change is sent directly after the action to the Creditsafe service forwarded, so that the assignment is also removed on the Creditsafe website.

Check protocol

In the Creditsafe log, every query made against the Creditsafe web service is procollated. You can reach the log via the user search, the role center or the navigation menu as "Creditsafe request log".

In the subsequent list, all performed queries are listed chronologically. The query parameters are displayed as well as the date & time and the user ID of the querier. Furthermore, the response data as well as the response date and time are listed. The status and the status description are also included, so that in the event of an error, the status description can be used for troubleshooting.

Depending on the query type, the actions can be used to display the creditworthiness report or the response XML data structure.

Set up task queue items

Two task queue items have been automatically created via the "Credit-Check App powered by Creditsafe" setup. The list of task type queue items can be opened via the user search or the role center via the term "Task queue items".

Update run due to update cycle

The task queue item "KVSCRSJobIntervalUpdateReport" is based on the code unit 70259981 and can be used to trigger a regular update of the creditworthiness reports depending on the setup parameter "Update cycle" (see Update cycle). The task start time is set to "04:00" by default and can be customized.

> Note

The update run only takes into account companies for which online report retrieval is possible. If only an offline report is available for a company due to company or country restrictions, it will not be automatically re-requested.

Update run due to portfolio update

The item "KVSCRSJobUpdatePortfolio" is based on code unit 70259982 and is used to query the created portfolios at regular intervals and to automatically update the creditworthiness reports for the changed master data in the event of changed data. The start time of the task is set to the value "02:00" by default and can be customized.

Via the creation of the task queue items, both tasks are created as "Recurring tasks" with a "Number of minutes between executions" of 1440, which corresponds to a daily run. If a different rotation is desired, the parameters of the task queue items can be changed here.

> Note

The update run only takes into account companies for which online report retrieval is possible. If only an offline report is available for a company due to company or country restrictions, it will not be automatically re-requested.

Set up workflows

About the setup of "Credit-Check App powered by Creditsafe" two workflow templates have been created, which are can be used to create workflows that react in the background to changes in creditworthiness data. react.

Workflow template KVSCREDITSAFE-BLOCK - "Block a customer/vendor due to a credit report"

The workflow template "KVSCREDITSAFE-BLOCK" / "Create a customer/vendor based on a credit report Block" is set up by default in such a way that when a new creditworthiness report is created for a debtor or creditor, if the valuation of the report shows the value "D" or "E", first the credit limit is set according to the proposed credit limit of the credit report and then the Master record is locked.

Workflow template KVSCREDITSAFE-LIMIT - "Set credit limit based on credit report"

The workflow template "KVSCREDITSAFE-LIMIT" / "Set credit limit based on credit report" sets on the basis of a newly prepared creditworthiness report for a debtor, the credit limit is increased to the level set by Creditsafe proposed value unless the valuation of the debtor corresponds to the value "D" or "E".

What happens after the free trial

What happens after the free trial? from KUMAVISION on Vimeo.

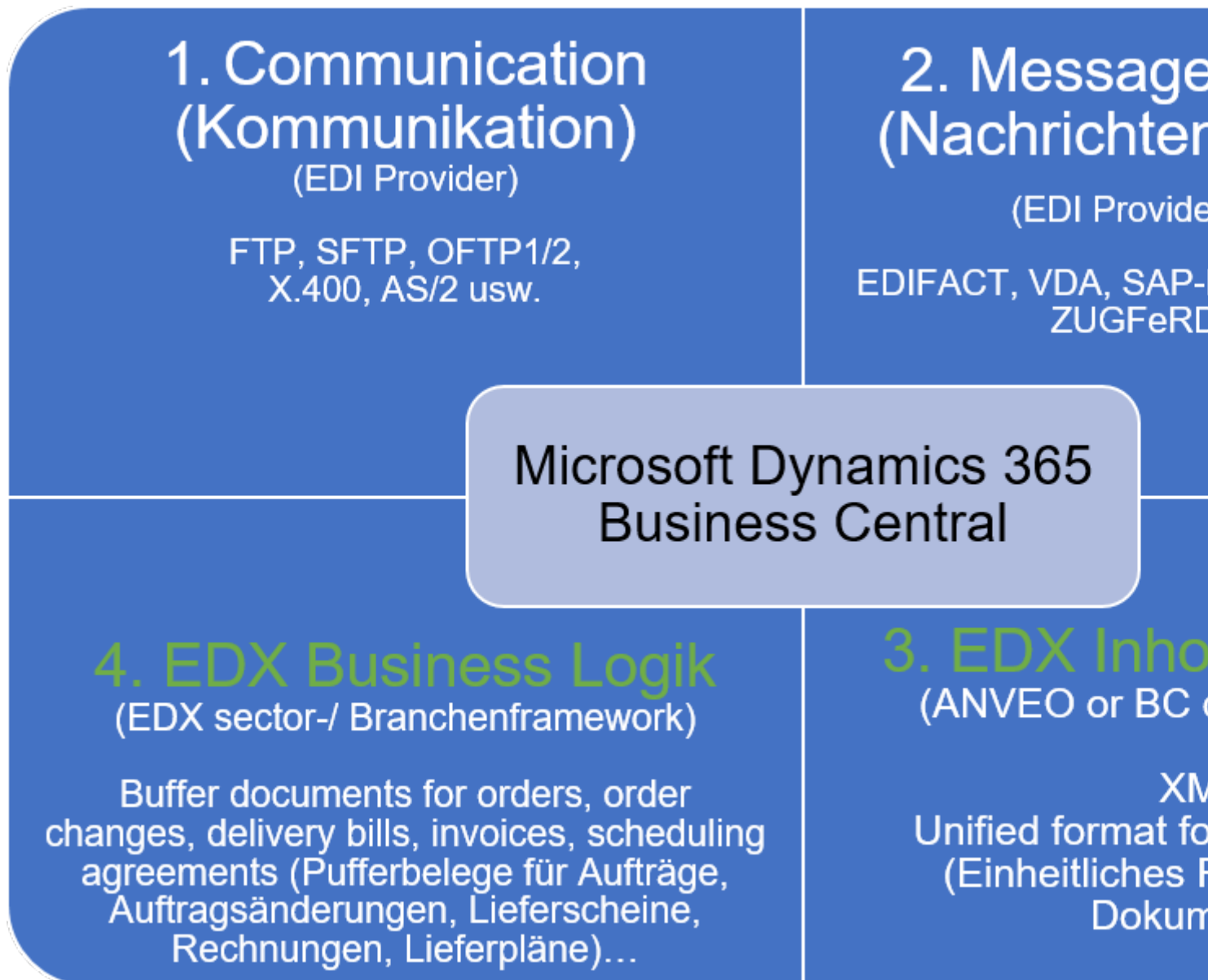## 1.3.7 Electronic Data eXchange (EDX)

General

EDX (Electronic Data Exchange) stands for the document exchange module of KUMAVISION 365. EDI documents are sent in different formats, e.g. EDIFACT, VDA, OpenTrans etc.. A converter takes over the conversion from the external format into the EDX internal XML format.

EDX then processes the converted messages and imports them into Microsoft Business Central. Required message acknowledgements are automatically sent within the internal document exchange. In the case of external EDI (electronic data interchange), the message acknowledgement must be coordinated with the EDI service provider.

The incoming messages are validated by the EDX module. This means that the message content is loaded into the EDX document and checked for accuracy, discrepancies and completeness. The user can manually correct the data in the EDX document and then create the corresponding Business Central document.

For incoming messages, a mapping between the external and the article units stored in Business Central is often required. For this purpose, the EDX module offers corresponding mapping tables.

The following diagram is intended to clarify the task EDX performs in the electronic document exchange:

1. Communication
(Kommunikation)
(EDI Provider)

FTP, SFTP, OFTP1/2,
X.400, AS/2 usw.

2. Message
(Nachrichten
(EDI Provide

EDIFACT, VDA, SAP-
ZUGFeRD

Microsoft Dynamics 365
Business Central

4. EDX Business Logik
(EDX sector-/ Branchenframework)

Buffer documents for orders, order
changes, delivery bills, invoices, scheduling
agreements (Pufferbelege für Aufträge,
Auftragsänderungen, Lieferscheine,
Rechnungen, Lieferpläne)…

3. EDX Inho
(ANVEO or BC

XM
Unified format fo
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Dokum

Area	Description
1. communication	The communication of the data exchange parties takes place in this area. Various protocols are used for the transmission. The transmission protocols are usually specified by the data sender. Automotive, for example, uses the OFTP2 protocol. The trade sector tends to use X.400 or AS2. It is not always necessary to use a service provider for document exchange. For X.400 transmission, for example, FileWork from Telekom can be used. However, if the OFTP½ protocol is required, then it makes sense to transfer the task of document exchange to a service provider.
2. news converter	The incoming messages are converted from the source format to the EDX target format using a converter. For example, EDIFACT messages are converted to EDX in-house format. For outgoing messages, the message is converted from EDX in-house format to the respective target format.
3. EDX Inhouse Format	The in-house format maps the documents of the Business Central business processes in a defined format. EDX uses the XML format for this purpose. The documents are described in the "KUMAVISION EDI Guideline".
4. EDX Business Logic	In this area, the previously converted documents are transferred into intermediate documents. With the "Business Logic" all relevant process steps are served, which are necessary for the examination of the document, creation as well as processing of the Business Central document. If it is possible by the document, an automation of the business process takes place.

Business processes

The EDX module enables internal as well as external document exchange. BC documents can be exchanged within a group of companies as well as with external EDI partners.

Internal document exchange

If there is a hierarchical company structure with several companies, then the document exchange can be implemented with the EDX module. Here, the documents of the individual companies can be exchanged among each other.

Prerequisites for internal document exchange:
* Main company and companies are in one databaseIn this case, the internal document exchange can be set up directly with the wizard.

  • Main company and companies are located in separate databaseIn this case, the document exchange must be set up manually.
  • There is a common network structure and all participants can access a shared network path

The following figure shows the document flow between customer and supplier in connection with the EDX module:

Main company = Customer Company = Supplier
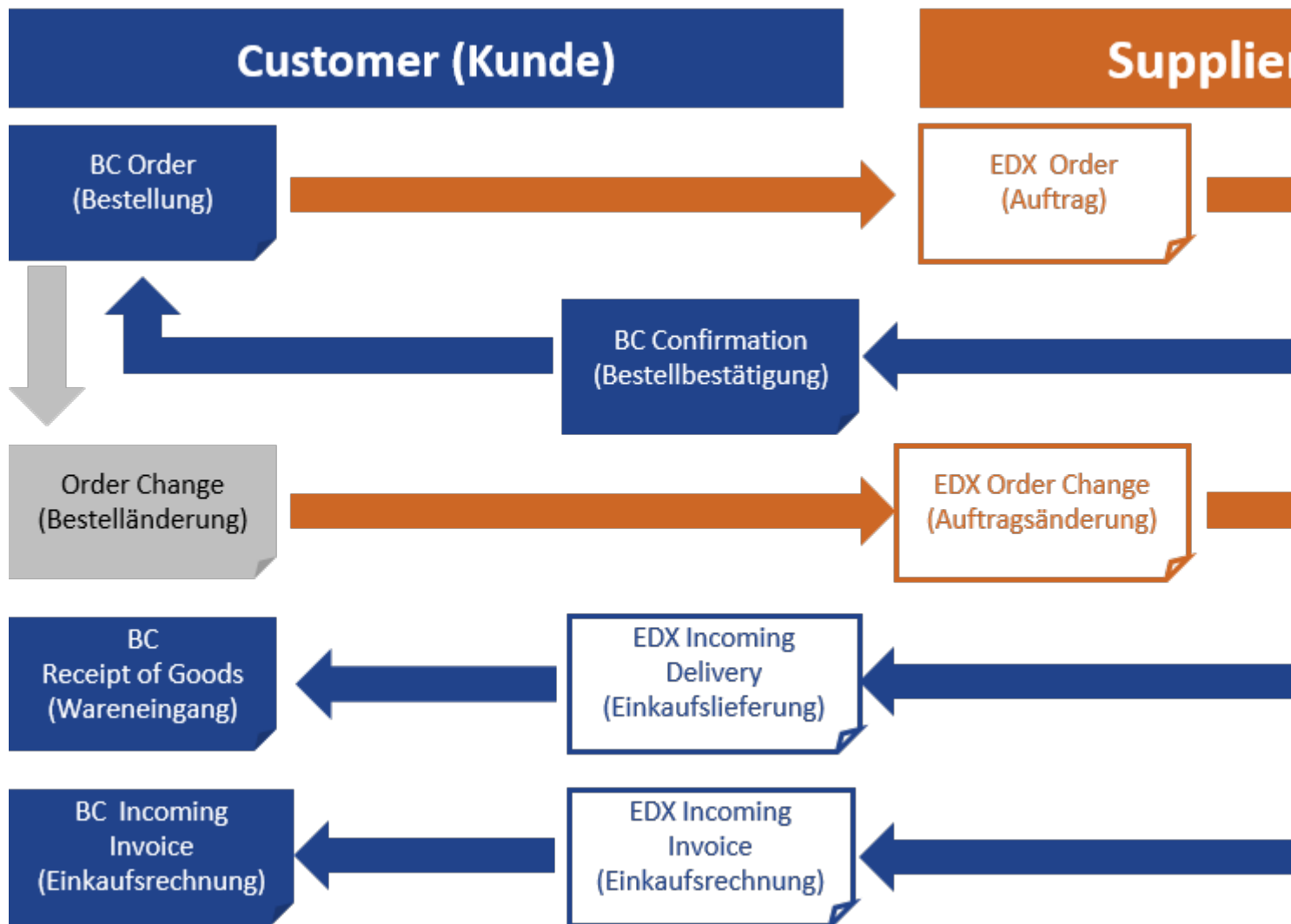
External document exchange

If documents are sent to an external partner (EDI), this is described below as external document exchange.

The external document exchange contains document types developed for use with EDI service providers. The EDI service provider receives the EDX messages, transforms them into the target format and transfers the messages to the recipient.

It is not absolutely necessary to use an EDI service provider. Depending on the requirements, the transformation and transfer can also be implemented as an in-house solution with corresponding modules.

Available vouchers

The following documents are already available in XML format after installation:

Purchasing * Order outgoing * Order change outgoing * Order confirmation received * Purchasing delivery incoming * Purchase invoice incoming * Purchasing complaint outgoing

Sale * Sell order received * Sell order change incoming * Order confirmation outgoing * Sales offer starting * Outgoing delivery bill * Sales invoice starting * Sales credit outgoing * Sales complaint outgoing

Establishment

The module has numerous configuration and customization options, which will be explained in more detail in the following chapters. The first part of the documentation covers all topics concerning administration and configuration. The second part describes the operation of the data exchange.

Entitlement rates

About the installation of the EDX Apps are automatically different authorization sets integrated into your Business Central application. Assigning these authorization sets to your users or user groups ensures that the respective Users can get access to the connection and execute the functions depending on the assigned record.

Authorization record	Description
EDX SETUP	Permissions to read, write, modify as well as delete records for all EDX tables. This permission set allows EDX setup as well as access to all EDX objects. This role must be assigned to the BC Administrator as well as the task queue user.
EDX SALES	Authorizations to read, write and modify data records related to the sales business process. This role must be assigned to users from the Sales area.
EDX PURCHASE	Authorizations to read, write as well as change data records which are related to the purchasing business process. This role must be assigned to users from the purchasing area.
EDX EDI/IC	Authorizations to execute the EDI and Intercompany business processes. This role must be assigned to users from the Sales and Purchasing departments.
EDX OPENTRANS 1.0	Authorizations to run the OPENTRANS business processes. This role must be assigned to users from the sales area.
EDX BASE DATA EXCHANGE	Authorizations to execute the Basic Data Export business process. This role must be assigned to users from the Sales and Purchasing departments.
EDX ONPREM	This role must be assigned to all users if interfaces from the OnPrem domain are used (file transfer, FTP, etc.).
EDX WEBSERVICES	This role must be assigned to the BC Administrator as well as the task queue user.
EDX KBA	This role must be assigned to all users when the KUMAVSION KBA is installed.
EDX FACTORY	This role must be assigned to all users when the KUMAVSION FACTORY is installed.
EDX TRADE	This role must be assigned to all users if the KUMAVSION TRADE is installed.
EDX MED	This role must be assigned to all users when the KUMAVSION MED is installed.

Roll Center

The EDX Role Center represents the central work platform for the entire EDX module. All necessary information regarding documents (incoming/outgoing), items (incoming/outgoing) and configurations are displayed with corresponding stacks in the role center. Incoming and outgoing documents are displayed as links in the Purchasing, Sales and Logistics overviews, indicating the number of each. A click on the link opens the relevant document or an overview of the documents. It is therefore possible to navigate from the role center to all EDX relevant documents.

Furthermore, all settings as well as error entries and system messages are displayed in additional overviews.

EDX Setup

In the EDX Setup, settings can be made that are valid for the entire module. The EDX Setup can be called up via the "Facilities and extensions" > "Service connections" > "KVSEDX Setup" start page.

In the "Interface directory" tab, the directories for documents, test as well as the productive must be defined.

Further entries are not necessary for the time being, as these are made with the "EDX Setup Wizard". Further information can be found in the section with the same name.

For completeness, all fields of the EDX setup are explained in more detail below:

Inforegister General

Field	Description
Test environment	This flag controls whether the messages are processed in the subdirectory for the production or test database. see "Interface directory" info tab
Database name	Name of the current SQL database

Inforegister interface directory

Field	Description
Documents directory (UNC)	Basic directory for electronic document exchange. The path must refer to a network share and be written according to UNC notation. Example: \server_name\EDX|
Test environment subdirectory	Subdirectory for test environment
Subdirectory Productive Environment	Subdirectory for productive environment

Inforegister Azure Storage

Field	Description
Memory account name	Name of the Azure storage account that has been created. See Azure Environment: All Resources-> Storage Account
Shared Access Key	Access key for the storage account After selecting the storage account in the Azure environment, the access key (key1) can be retrieved and copied to the "Shared Access Key" field.
Container	Name of the blob container in the storage account
Azure sub-directory Prod	Subdirectory for productive data
Azure sub-directory test	Subdirectory for test data
Enabled	When enabled, the Azure Storage interface is registered as a service connection and can be used.

The Azure service connection is registered when you close the setup dialog. Before the Azure Connection Test action can be performed, the setup dialog must be closed and reopened.

Afterwards, the action "Azure connection test" can be executed.

The following actions are performed during the test: * Create Readme.txt file in container * List files in container * Read in the "Readme.txt" file * Delete the "Readme.txt" file.

Information register partner

Field	Description
Extension Vendor EDX Partner Code	Extension Debitor EDX Partner Code Within the EDX module EDI partners are created based on a customer or vendor. The partner codes are composed of the respective BC vendor or customer number and the extension specified here. **Example:** Create an EDX partner based on the vendor 1000. The EDX partner is managed as V1000. The extension codes are freely selectable. Both extension codes must be filled in.

Inforegister numbering

All incoming EDX documents are first stored in EDX intermediate tables. For these EDX documents number series are necessary. If the EDX module is used exclusively for outgoing documents, then the specification of number series is not necessary.

Field	Description
EDX order number	Incoming order from the customer.
EDX Order change number	Incoming order change from the customer.
EDX purchase delivery number	Incoming sales delivery from the supplier.
EDX Purchase Invoice Number	Incoming sales invoice from the supplier.
EDX order confirmation number	Incoming order confirmation from the supplier.

Information register web service

Field	Description
Log input data web service	Specifies logging of incoming web service calls. Logging takes place in the EDX inbox.
Log output data web service	Specifies logging of outbound web service calls. Logging takes place in the EDX outbox.

Inforegister error handling

Field	Description
Time span until e-mail is sent	The parameter "Time span until e-mail is sent" can be used to control the period for which the errors are collected. Only after the expiration of this time span the mail dispatch of all occurred errors takes place.
Error mail address	Mail address to which error messages are sent. Only error messages that occur within the server processing are sent. The following list shows a few examples of when error mails are sent automatically: An error occurs when reading an XML file. Possible error causes: • General errors within the XML file (Wellformed) • The XML file does not match the expected schema An error occurred during automatic further processing "Receiving a sales order". Possible error causes: • Within the sales order, a reference is made to a Business Central master data record (e.g. article number, article unit) which does not exist. • When the sales order is created, queries are made which must be confirmed by the user (e.g. credit limit). These queries are not allowed in a background process. An error occurs when sending an XML file. Possible error causes: • No authorization to write the output directory. A link to call up the associated Business Central Page is provided in the error e-mail. For further information, please refer to the section "Sending e-mails einrichten".

Inforegister XML

Field	Description
Disable XML Byte Order Mark	This switch can be used to control whether the XML message to be output should contain the byte Order Mark.

Inforegister Reorganization

Field	Description
Archive outputs / inputs that are older	The date formula in the "Archive outputs/inputs that are older" fields can be used to specify the date from which EDX inputs/outputs are moved to the archive. Only outgoing items will be moved to the archive where no transmission error has occurred. Outgoing items with transmission errors can be manually moved to the archive using the "Archive outgoing items with transmission errors" action. In the case of incoming items, only completed acknowledgement messages are moved to the archive. The archiving of other incoming messages, such as EDX sales orders, is controlled via the respective EDX document.

Inforegister BC Configuration

Field	Description
Use new article references	Specifies whether new article references should be used.
Task maintenance items in seconds interval	Once the switch is active, all EDX task queue items except for the "Reorganization" and "Send Mail" parameters are executed at one-second intervals.

Inforegister Facility Overview

The fields on the "Setup Overview" info tab give an overview of which points are already set up in EDX.

EDX Setup Wizard

To make the setup of the connection as comfortable as possible for the user, a setup wizard has been developed to guide you through the individual steps. This setup wizard can be called up via the EDX Setup menu ribbon ("More options" > "Action" > "Setup" > "EDX setup wizard").

The EDX setup wizard is started.

The "General" selection is used to create the document types as well as number series for incoming messages.

If you want to send purchase orders, delivery bills or invoices to another client, then select the "internal document exchange" function. For more information, see the "Internal document exchange" setup section.

EDX Document types

When installed, the EDX module already has some document types which can be used for internal and external document exchange.

Establishment

The EDX document types are created using the "EDX Setup Wizard" action within the EDX setup.

You can view the "EDX document types" using the call of the same name via the user search. The individual fields are explained in more detail below:

Field	Description
Document	Name of the EDX document
Description	Description of the EDX document
Document direction	Incoming/outgoing document
GS1 Business Message Standard	Indicates whether the message is from the GS1 Business Message Standard.
Intercompany role	Role of the document within the intercompany message exchange Debtor/creditor
Processing sequence	Default value for the processing sequence. This ensures that a purchase order confirmation is processed before the purchase delivery.
Field setting active	Default value for the field setting. If the document supports the field setting, then the field setting can be called up after the document has been assigned to an EDX partner. See Field Settings Document Verification
Collective shipment allowed	Default value for collective consignments. See processing
Embed PDF allowed	Specifies to include the associated Business Central PDF document as a base64 string in the message.
Messages coding	Sets the message encoding.
Web service function	The EDX document can be accessed via SOAP web service.
Web service function name	Name of the associated web service function.

Distribution of EDX document types

All EDX document types have a prefix that can be used to assign an area.

The areas are divided as follows:

Field	Description
IC	Internal document exchange
EXT	External document exchange These documents are used for EDX versions < 10 for external document exchange.
CC	External document exchange Vouchers reconciled with clearing center These documents are used from EDX version >= 10 for external document exchange. See also KUMA EDI Guideline

Document	Description	Document direction
BASE CUSTOMER	Basis debtor export	Based on
BASE ITEM	Base article export	Based on
BASE VENDOR	Base Vendor Export	Based on
CC PURCHASE ORDER	Send purchase order (CC)	Based on
CC PURCHASE ORDER CHANGE	Send purchase order change (CC)	Based on
CC PURCHASE RETURN ORDER	Send purchase complaint (CC)	Based on
CC PURCHASE RETURN ORDER CHG	Send purchase complaint change (CC)	Based on
CC PURCHASE INVOICE	Receive purchase invoice (CC)	In-depth
CC PURCHASE RECEIPT	Receive purchase delivery (CC)	In-depth
CC PURCHASE ORDER CONF	Receive purchase order confirmation (CC)	In-depth
CC SALES INVOICE	Send sales invoice (CC)	Based on
CC SALES ORDER	Receive sell order (CC)	In-depth
CC SALES ORDER CHG	Receive sell order change (CC)	In-depth
CC SALES ORDER CONF	Send order confirmation (CC)	Based on
CC SALES SHIPMENT	Send sales delivery (CC)	Based on
CC DESPATCH ADVICE	Send purchase delivery (CC) This message can only be used in connection with the KUMAVISION dispatch processing The message contains the assigned load carriers and their hierarchy.	Based on
CC SALES CR.MEMO	Send sales credit note (CC)	Based on

Document	Description	Document direction
CC SALES RETURN ORDER	Send sales complaint (CC)	Based on
CC SALES RETURN ORDER CHG	Send sales complaint change (CC)	Based on
CC SERVICE INVOICE	Send service invoice (CC)	Based on
CC SERVICE CR.MEMO	Send service credit note (CC)	Based on
CONFIRMATION RECEIVE	Receive acknowledgement	In-depth
CONFIRMATION SEND	Send acknowledgement of receipt	Based on
GS1 APP REC ACK IMP	Receive acknowledgement	In-depth
GS1 APP REC ACK IMP	Send acknowledgement of receipt	Based on
IC PURCHASE INVOICE	Receive purchase invoice (IC)	In-depth
IC PURCHASE ORDER	Send purchase order to vendor (IC)	Based on
IC PURCHASE ORDER CHG	Send order change (IC)	Based on
IC PURCHASE ORDER CONF	Receive order confirmation (IC)	In-depth
IC PURCHASE SHIPMENT	Receive purchase delivery (IC)	In-depth
IC SALES INVOICE	Send sales invoice (IC)	Based on
IC SALES ORDER	Receive sell order (IC)	In-depth
IC SALES ORDER CHG	Sales change received (IC)	In-depth
IC SALES ORDER CONF	Send order confirmation (IC)	Based on

Document	Description	Document direction
IC SALES SHIPMENT	Send sales delivery (IC)	Based on
IC SALES DELFOR	Receive delivery schedule (FACTORY only)	In-depth

EDX Partner

In order to be able to exchange documents, one or more partners must first be defined in the EDX module. These partners can be created based on existing accounts payable or accounts receivable.

EDX partners are managed under a code consisting of the respective Business Central creditor or debtor number and a prefix.

Before creating the EDX partner, the "Our account number" field must be defined in the vendor/customer.

Example for "Our account number": Role of the supplier: For customer 1000, 61000 is entered in the "Our account number" field. Role of the customer: For vendor 61000, 1000 is entered in the "Our account number" field.

Partner type debtor

A new EDX partner is created directly from the partner overview. To do this, first call up the "EDX partners" via the user search.

The action "Create customer" creates a new EDX partner based on a customer.

For the EDIFACT UNB segment to be created, the fields GLN, data sender as well as recipient ID can be used.

The fields Data sender and Recipient ID are not subject to a format check. Accordingly, an ODETTE-Id, DUNS-No. etc. can be entered.

For the transmission of XInvoices to an EDI service provider, the "Routing Id." is required. see "IT Standards Coordination Office".

Basically all above mentioned fields have to be coordinated with the EDI service provider. The fields are transmitted within the CC messages invoice, credit bill as well as delivery bill in the element "Routing".

G/L account and unit mapping

G/L accounts mapping

In the internal document exchange, for example, it is possible to send purchase orders to an internal partner. Since no lines of the type resource can be entered in purchase orders, a mapping is necessary at this point. The G/L account mapping is opened directly from the "EDX Partner Overview" for the selected EDX partner.

One resource or G/L account no. can be entered per partner.

Example:
Partner V01254796
Resource: Cargo
G/L account no. 3400 (Internal freight)

These inputs lead to the following result: If a purchase order is sent, in which a line with the type G/L account and the no. 3400 exists, then this line is created at the recipient in the sales order as resource "Freight".

Units mapping

A unit mapping is necessary to change the customer's unit code to your own unit code.

Example:
A customer orders 5 PCS, the unit code in BC is Piece. In this case, a mapping must be created for the translation from PCS to Piece.

The unit mapping is called up via the "EDX Partner Overview" via the menu ribbon.

It is not necessary to store a unit mapping for each EDX partner and article. As a rule, the unit "PCS" must be converted to the Business Central unit "piece" for all EDX partners and articles.

The following sequence is used to determine the unit mapping:

1. Mapping with EDX Search partner, article and reference code
2. Search mapping with article and reference code
3. Mapping with EDX Partner and reference code search
4. Search mapping with reference code

The unit mapping is used with the following documents: * Sell orders * Sales order changes * Purchase order confirmations * Purchasing deliveries * Purchase Invoices

For the outgoing documents, the unit mapping is performed only in the "Clearing Center Messages". * born sale delivery * born sales invoice * Order * Order confirmation

Additions/Detractions Mapping

In EDX additions/deductions mapping, additions and deductions can be assigned to articles, resources, G/L accounts and fields in the document header.

Examples: * G/L account for the surcharge advertising costs * Item as freight charges * Amount incl. VAT" field from the sales header as an insurance surcharge.

Only fields from the sales header can be used. Amounts and percentages can be specified. These two fields are disabled for lines surcharges/discounts. The "Position" field is filled automatically and is only information for the user.

The addition and deduction codes are selected from a separate table.
The surcharge/discount mapping is only used for external outgoing document dispatch with Clearing Center. This includes the following documents: * Order confirmation * Booked sales invoice * Booked sales credit

Service GTIN Mapping

With the "EDX Service GTIN Mapping" resources, G/L accounts etc. can be provided with a GTIN. The stored GTIN is sent within the service invoice as well as credit note.

EDX Occupancy device

For each EDX partner different voucher types can be defined. With the "EDX voucher setup" the vouchers are assigned to the EDX partner as well as configured.

With the action "New" an EDX voucher is assigned to a previously created EDX partner. The fields of the EDX voucher setup card are explained in more detail below.

Inforegister General

Field	Description
Partner no.	Selection of the EDX partner. Only active EDX partners can be selected.
EDX Voucher	Selection of the EDX document. The following documents are included by default: • Order outgoing • Order confirmation received • Order change outgoing • Sell order received • Sell order change incoming • Order confirmation outgoing • Outgoing delivery bill • Sales invoice starting
EDX Voucher Description	A freely selectable description can be entered here. This is for information purposes only.
EDX document direction	Specifies the direction of the document exchange (incoming or outgoing).
EDX transmission from	From the date set here BC vouchers will be received or sent.

Field	Description
	The receipt confirmation check can be used to control whether a message confirmation should be requested. **Example:** Sending a purchase order with acknowledgement of receipt check After receipt of the order on the other side, a confirmation of receipt is sent to the message sender. The EDX status within the order automatically changes to "Recipient received". After the Business Centrals sales order has been created at the recipient, another acknowledgement is sent. The EDX status within the order automatically changes to "Recipient accepted".
Receipt confirmation check	If the recipient rejects the EDX sales order, then an acknowledgement is also sent. The EDX status in the sent order changes to "EDX Rejected". The confirmation check should be enabled on the outgoing as well as incoming message. Outgoing confirmation messages e.g. for the receipt of an EDX sell order are now sent via the EDX outbox. The "Source record" field now always refers to the associated document. Acknowledgement check is now supported by all EDX documents, sales deliveries, sales invoices as well as sales credit memos. In the case of external EDI, the acknowledgement messages may have to be coordinated with the EDI service provider.
Test indicator	Marks the incoming or outgoing messages as a test message See chapter Productive/test database

Inforegister transfer

Field	Description
EDX Transmission type	**File transfer** When using a shared network share (UNC), file transfer can be selected here. See section EDX Setup General. **Client transfer** If the sender and receiver are in the same database, then the Client transfer option can be selected here. **FTP TransferUsing** FTP transfer, documents can be transferred to or retrieved from an FTP server. **E-mailWith** this transmission type it is possible to send receipts by e-mail. **Azure StorageAll** messages are stored or retrieved on the specified Azure Storage.

Inforegister Azure / File Transfer

Field	Description
EDX File Path	Input/output path for files. Either an absolute or dynamic path can be entered in this field. The dynamic path is stored with the placeholder %ROOT_DIR%. This placeholder is exchanged at runtime for the base directory from the EDX setup. SeeEDX Setup Thus, when moving a directory share, it is sufficient to change the new directory in the "Documents (UNC) directory" field within the EDX setup. In the above example %ROOT_DIR% is replaced with \kvsdodc01\temp\EDX\Test10\Prod. As soon as the "Test Environment" switch is activated, the following directory applies to %ROOT_DIR% \\kvsdodc01\temp\EDX\Test10\Test\ The same rules apply to the placeholder %AZURE_CONTAINER%. • In this case, the Azure container that has been set up is used.

Inforegister Azure Forwarding

The forwarding parameters are sent to an "Azure Logic App" or "Power Automate". The Azure Logic App is not part of EDX. For processing the parameters below, a corresponding "Azure Logic App" or "Power Automate" must be created in the customer project. For the creation of the "Azure Logic App" the template "EDX_Outbound_Message" can be used.

When using the forwarding parameters, the GS1 messages "GS1 APP REC ACK IMP" as well as "GS1 APP REC ACK EXP" must be assigned to the EDX partner.

Field	Description
Forwarding type	This parameter can be used within the Logic App to decide which Azure Connector is used.
Forwarding ID	Determines the EDI party
Forwarding Destination	Determines the destination of the message

**Example CC Invoice message is to be transmitted to EDI service provider EDI1 via SFTP. The message is to be placed on the destination FTP server in the /inbound directory.

Set the following forwarding parameters:

field	description
Forwarding type	SFTP
Forwarding ID	EDI1

FTP information register

The FTP parameters must be set up when the FTP transfer type is selected.

Field	Description
FTP Server FTP user FTP password FTP file path	Enable FTP SSL These fields are editable if the transfer type is set to FTP. The access data for the FTP server are entered in these fields. The transfer can be established to an FTP server (port 21) as well as an SFTP server (port 22).

Inforegister e-mail

Field	Description
Sender email address	The sender email address must match the mail address in the SMTP setup.
Sender name	Sender name
Recipient e-mail address	E-mail address of the message recipient
Email subject	Specifies the subject of the e-mail.
Email text (HTML)	Specifies the text of the e-mail.

Information register processing

The processing parameters for the incoming as well as outgoing messages are defined in this info register.

Field	Description
Automatic processing	EDX Input Document: The received EDX document is automatically checked. If no errors occur during the check, the Business Central document is created. If an error occurs when checking or creating the Business Central document, an error mail is sent automatically. This function is currently available for EDX sell orders. See section: Automatic processing EDX Output Document: So far, the following outgoing documents can be sent automatically: • Sales delivery • Sales invoice • Sales credit • Order • Order changes See section: Automatic processing
Processing sequence	Sets the processing order of incoming messages.
Do not add a transmission ID	If this option is enabled, the "EDX Transmission ID" element is not transferred to the XML file. The EDX module basically assumes that the element "TransmissionID" is present in the incoming XML document. This element e.g. is used for the document navigation within EDX. If the incoming XML document does not contain the TransmissionID, then it is automatically added as the first element. **Note** The setting of this switch should only be changed if it has been described in the respective application documentation (customer project).
Ignore zero bill	Invoices with a value of 0 € will not be transferred if this option is enabled.
Ignore zero credits	Credits with a value of 0 € will not be transferred if this option is enabled.
Automatic archiving	Specifies that the associated EDX input is archived after EDX document processing.

Field	Description
Direct purchase invoice	Switched off: When processing an incoming purchase invoice, the information of the purchase delivery is expected. Based on the purchase delivery number, the corresponding purchase order is determined. The purchase delivery as well as the purchase order are then used for plausibility checks. Switched on: The data of the EDX purchase invoice are directly transferred into an unposted purchase invoice. Plausibility checks are performed with regard to the "Purchasing from vendor" as well as the articles.
Embedding the associated PDF document	In the case of outgoing messages for the Clearing Center, the associated PDF document can be included directly in the message. The PDF document is transmitted as a base64 encoded string.
Collective consignment	If the created Business Central documents (sales delivery bill, sales invoice as well as sales credit bill) are not to be sent immediately when they are posted, then a document collection can be activated with this option. This option is currently supported by EDX documents Sales Delivery (CC), Sales Invoice (CC), Sales Credit Note (CC). The time for sending the document can be set via the processing time window.
Next list number	When sending collective consignments, a list number is usually required. In the "Next list number" field, you can specify the list number that will be used for the next transmission. **Note** Sales deliveries can be transmitted as collective consignments. The assignment of a list number is not provided for. Normally, a forwarding order number must be transmitted within the delivery note message. This is currently not supported by the EDX CC delivery note message.
BC Release document	This setting controls that a scanned document is automatically released after creation.
BC Post voucher	Determines whether an incoming EDX document should be posted or not.
Use booking date	Specifies which date to use for incoming EDX documents. Options "Posting date, current date, work date, incoming document date".

Field	Description
Use article references	Since in the rarest cases a consolidated article master exists between the partners, it is necessary to ensure a reliable assignment of the article numbers. The setting "Use article references" controls a check of the transmitted article number, as well as the transmitted reference number. The article/reference number check is based on the Business Central article master > References. The following requirements are necessary when using this function: • It is mandatory that the partner transmits the GTIN or reference number. • The article references of the partner must be maintained in the article master. If a GTIN is transmitted, the Business Central article is determined on the basis of the GTIN field in the article master. If no matching article is found, then a search is performed using the article references with type "Barcode". The reported article unit is used for the article reference search. If this search also does not lead to any result, then the search is carried out using the article references with type "Customer" or "Vendor". The reported article reference number from the message is used.
Use article unit mapping	This setting controls an automatic mapping of the article units. **Example:** The EDX partner transmits the article unit "PCS" for any article, which is managed as "Piece" in Business Central. If the corresponding mapping table is maintained and the setting "Article unit mapping" is maintained, the unit is changed accordingly upon receipt. See EDX Document Processing > Item Unit Mapping
EDX Automatic archiving	If an EDX document is processed, this setting can be used to control that the associated incoming item is archived.

Field	Description
Processing time window	For outgoing documents, the processing time window controls the time at which the document is sent. For incoming documents, the processing time window controls the check and creation time. Example of outgoing sales invoices: Sales invoices are to be collected by Saturday and mailed at 10:00 pm. In this case, the "Run Saturday" option will be enabled in the processing time window. All other days will be deactivated. The start time is set to 22:00 and the end time to 23:00. The earliest start date is calculated automatically. Once the specified time window is reached, all invoices that have not yet been sent will be sent. Example of incoming sales order: Sell orders should be processed automatically every day at 22:00. In this case, each day is activated in the processing time window. The start time is set to 22:00 and the end time to 23:00. **Note** Once the specified time window is reached, all unprocessed EDX sales orders are checked and created as BC orders.

Info tab Advanced

Field	Description
Partner type	Indicates whether the displayed EDX partner is a customer or vendor.
Partner BC No.	Displays the BC Customer or Vendor No. depending on the partner type.
Document type	Displays the BC document type associated with the EDX Document Setup.
Doc Tables No	Displays the BC Table No. associated with the EDX Document Setup.
Object type Object ID	Displays the XMLPort or code unit that is responsible for message processing.
Messages coding	Sets the message encoding. This parameter has no effect on EDX standard messages. Within project specific messages this parameter can be used for the encoding of the message.
Web service function	Sets the message for use within the internal web service functions.
Web service function name	Sets the name of the internal web service function.

Function "Field settings document check "

The function "Field settings for document check" in the ribbon defines which fields of the EDX document are checked or transferred to the Business Central document.

Field	Description
Validation order	According to the defined validation sequence, the data is transferred from the EDX intermediate document to the BC document.
Use default values	The option "Use default value" can be used to preassign fields within the EDX document, which are e.g. not included in the message.
Default value	For example, for the due date in the sales header, it can be set that this field is always initialized with the work date. Within the default value, constant values or placeholders can be used. When using a constant, care must be taken that the value is entered according to XML format. A fixed date must therefore be entered in the format YYYY-MM-DD. For decimal values, the period must be used as a separator. The XML format was chosen to avoid translation errors of different languages. If an employee sets the date 15.01.2018 as default value and then an English-speaking employee checks the message, the default date cannot be converted. The default values are initialized when the EDX document is checked. List of placeholders: Placeholder Description %WORKDATE -> Work date %TIME -> Current time %TODAY -> Current date %COMPANYNAME -> Client name @fieldname -> Reference to another field of the current table
Create field content	This indicator controls whether the field contents from the EDX document should be checked and transferred to the BC document.

Set up task queue item

Automated message sending/receiving is done by setting up the task queue items. These are created using the EDX setup wizard. See EDX Setup.

Process distribution within the task queue items

The following task queue items are created using the EDX Wizard:
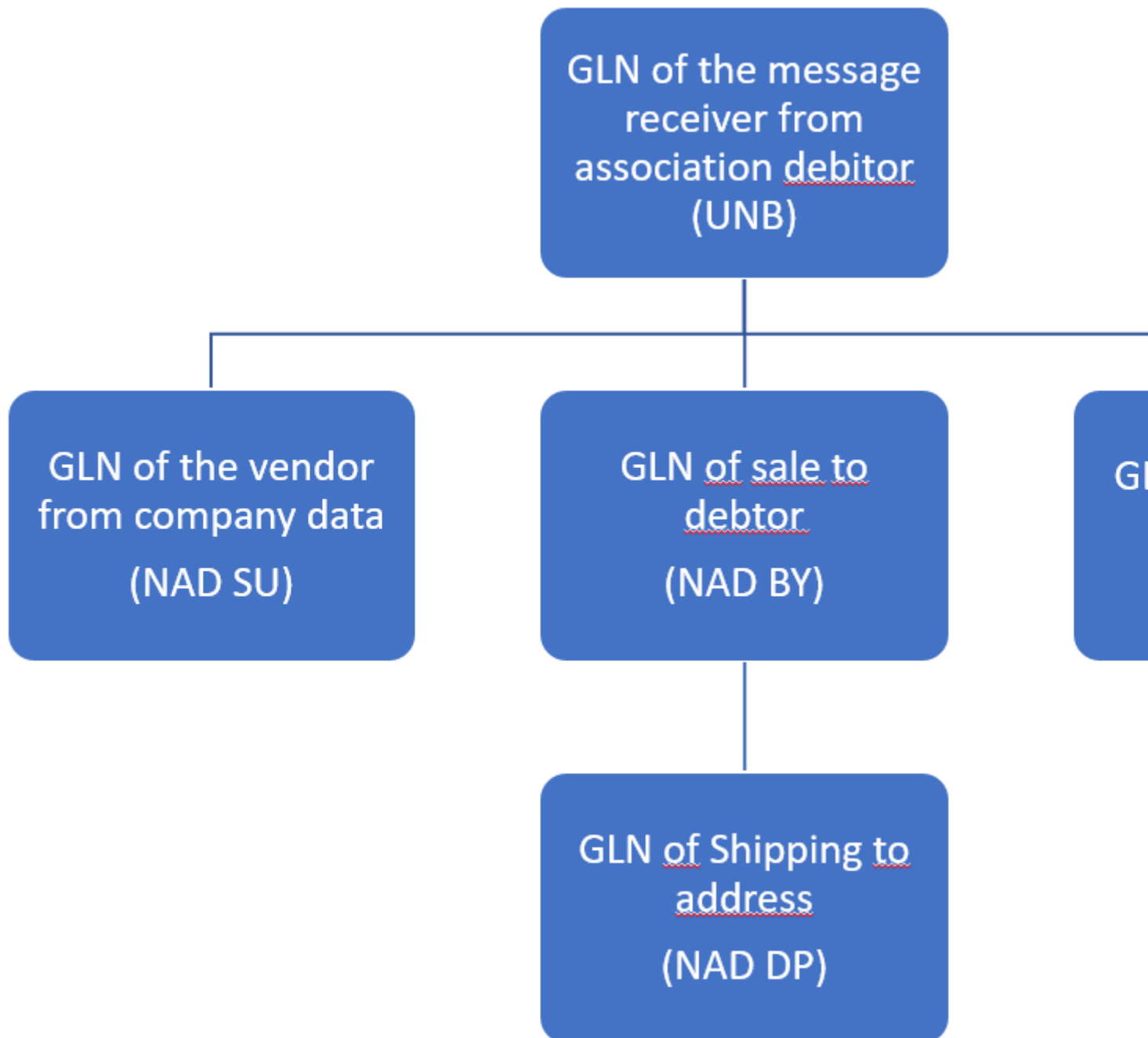CodeUnit: 5487951 EDX Job Queue

Parameter	Description
INBOUND_TRANSMISSION	Read in data according to the specified transfer type (e.g. file transfer) and make it available in "EDX input".
INBOUND_TO_EDX_DOCUMENT	Process all EDX input items with status "Unprocessed".
INBOUND_POST_EDX_DOCUMENT	Check all created EDX documents (sales order, purchase order confirmation, etc.) configured with the "Automatic processing" flag and create the corresponding BC document if necessary.
OUTBOUND_SEND_NAV_DOCUMENT	All created BC documents (sales delivery, sales invoice, etc.) configured with the "Automatic processing" flag are transferred to the "EDX Outbox".
OUTBOUND_TRANSMISSION	Send all EDX outgoing items with status "Unprocessed" according to the specified transmission type.
SEND_MAIL	Send any processing errors that have occurred by mail.
REORGANIZATION	Archives the EDX outputs. Time of archiving is defined in the EDX setup.

GLN facility

In addition to the GLN in the customer, further GLNs are required for the creation of an EDIFACT message. With EDIFACT, the message recipient is transmitted in the UNB segment. The GLN of the message recipient may differ from the GLN of the customer.

According to EDIFACT, GLN's are mapped in the following segments:

GLN of the message receiver from association debitor (UNB)

GLN of the vendor from company data (NAD SU)

GLN of sale to debtor (NAD BY)

G

GLN of Shipping to address (NAD DP)

GLNGlobal Location Number

News Segment	Description	Identifier
	Interchange header (message sender/receiver)	
UNB	If the "Invoice to customer" belongs to a federation, then GLN of the federation customer, otherwise GLN of the "Invoice to customer". Special case: The message recipient requests a GLN which does not belong to the master data mentioned above. In this case the GLN of the EDX partner is used.	
NAD	Name and address data	SU = Supplier BY = Buyer DP = Delivery address IV = Billing address

The GLN's are entered in the following Business Central master data:

Message receiver (UNB)

The GLN for the message recipient/sender (UNB) is entered directly at the EDX partner in the "GLN" field.

Debtor (NAD segment)

The GLN for the customer (NAD segment) is entered directly on the customer card in the "GLN" field in the "Invoicing" info tab.

Delivery to address (NAD segment)

The GLN for the Delivery to Address (NAD segment) is entered directly on the Customer Card > Delivery to Addresses in the "GLN" field in the "General" info tab.

The transmission of the above GLN's is supported by the XMLPorts for EDI service providers (prefix CC).

Set up e-mail dispatch

As described in the previous sections, EDX automatically sends mails if, for example, an error has occurred during processing.

The following items must be set up to send mail:

SMTP mail setup

The SMTP server must be set up via the SMTP mail setup. This setup depends on the technical conditions of the environment and should be done by the company's IT department.

BC Administration (Management Console)

Mail is usually sent using the Business Central instance JOBQUEUE01. Since this is a process without client service, it is necessary that the base URL is entered.

The URL of a Business Central instance with the Enable Client Services option enabled must be entered in the Windows Client Base URL field.

Example:
DynamicsNAV://srvnav:7246/NAVProd01/

This base URL is then used, for example, for the PageLinks within the error mail.

Internal document exchange

Set up with the EDX Setup Wizard

The internal document exchange can be set up completely via the EDX Setup Wizard if both clients are present in one database.

> Note

Before starting the wizard, the EDX setup must be set up in both clients.

For further information, please refer to "EDX Setup".

Afterwards the action "EDX Setup Wizard" can be started in the EDX Setup.

The setup for the internal document exchange can now be started with the action "EDX Setup Wizard".

After starting the wizard, the following parameters must be set: * Set the function of the wizard to "internal document exchange". * Set role of the current client. * Selection of the communication interfaceCurrently, the interfaces "File transfer" and "Azure Storage" are available. * Use purchase price as sales priceThe price from the sent purchase order is transferred to the sales order.
see Field control. * Selection of the client with which messages are to be exchanged. * Assignment of customer and vendor according to the clients.

After executing the action "Finish" the reconciliation of the field "Our account number" between the customer and the vendor takes place. In both clients, the required EDX partners and the related intercompany documents are assigned.

Manual setup

If the clients exist in different databases, then the setup must be done manually.

The following messages are to be set up on the customer side:

Partner no.	EDX Voucher	EDX document direction	EDX Voucher Description	Partner type	Partner BC No.	EDX Trans type
V10000	IC PURCHASE ORDER CHG	Based on	Send order change	Vendor	10000	File t...
V10000	IC PURCHASE ORDER CONF	In-depth	Receipt order confirmation	Vendor	10000	File t...
V10000	IC PURCHASE ORDER	Based on	Send order	Vendor	10000	File t...
V10000	IC PURCHASE SHIPMENT	In-depth	Receive purchase delivery	Vendor	10000	File t...
V10000	IC PURCHASE INVOICE	In-depth	Receipt purchase invoice	Vendor	10000	File t...
V10000	CONFIRMATION RECEIVE	In-depth	Acknowledgement Receive	Vendor	10000	File t...

The following messages are to be set up on the supplier side:

Partner no.	EDX Voucher	EDX document direction	EDX Voucher Description	Partner type	Partner BC No.	EDX Trans type
C10000	IC SALES ORDER CONF	Based on	Sending the order confirmation	Debtor	10000	File t...
C10000	CONFIRMATION SEND	Based on	Acknowledgement of the messages	Debtor	10000	File t...
C10000	IC SALES ORDER	In-depth	Receiving sales orders	Debtor	10000	File t...
C10000	IC SALES ORDER CHG	In-depth	Receive order change	Debtor	10000	File t...
C10000	IC SALES SHIPMENT	Based on	Send sales delivery	Debtor	10000	File t...
C10000	IC SALES INVOICE	Based on	Send sales invoice	Debtor	10000	File t...

When setting up the intercompany documents manually, the EDX file paths must be configured manually.

The output message is configured first. The associated path must be stored temporarily. The input message can then be configured. The path from the previously configured output message must be used here.

The message recipient and sender can thus communicate via the same directory.

The following steps must be carried out using the "IC PURCHASE ORDER" example. The EDX basic setup must already have been carried out and partners must have been created. This process must be performed for all incoming messages: * Open client "Customer". * Create EDX document facility for document "IC PURCHASE ORDER" and buffer path. * Switch to the "Supplier" client. * Create EDX document setup for document "IC SALES ORDER" using the path of the outgoing document.

Shipping order / load carrier

To use the outgoing message "CC DESPATCH ADVISE" (DESADV), it is necessary to set up the shipping orders including the load carriers.

The general information about setting up the shipping orders and load carriers can be found in the corresponding manual "KUMAVISION Shipping Processing". In the following, you will only find notes on the relevant settings for the outbound message mentioned above.

Setup storage location

In order to be able to assign the load carriers/packages in the shipping order, the option "Shipping order" must be selected in the field "Shipping processing" in the storage location or must remain free.

Shipping order setup

Use the Shipping and Load Carrier Setup menu item to set up your shipping orders. If you want to ship load carriers with information about the NVE/SSCC, the fields "Company ID" must be filled with the base number (GLN) of the company, and "Load Carrier ID Numbers" with a number series. Instead of storing the number series here in general, these can also be stored specifically for individual load carriers. In addition, the option "Create check digit for carrier ID" must be activated so that the check digit specified by GS1 can be calculated and added for the NVE/SSCC.

!!! note "Note In the field "Company ID" a reserve digit (see GS1 specification) must be prefixed before the base number, so that a correct NVE/SSCC can be generated.

In order for a NVE/SSCC to be generated automatically, the option "Assign load carrier ID on order release" must also be activated.

The NVE/SSCC has a total length of 18 digits (see GS1 specification). Therefore, the combination of company ID with reserve digit, number series of the load carrier and check digit must be exactly 18 digits long. If this is not the case when releasing a shipping order and the option "Assign load carrier ID when releasing order" is activated, a corresponding note appears.

Load carrier setup

The required load carriers can be set up via the "Load carrier" menu item. If load carriers including NVE/SSCC are to be transferred, the option "ID mandatory" should be set here. If no number series is stored in the "Load carrier ID number" field in the shipping order or if a different number is to be used for the respective load carrier, a previously created number series can be selected here.

Please note the information on the NVE/SSCC from the chapter "Shipping order setup".

Create DESADV

The outgoing message "CC DESPATCH ADVISE" is generated from a booked dispatch order with EDX partner.

In order for a valid DESADV file to be created and, if necessary, further processed by an EDI converter, the following requirements must still be met when creating shipping orders.

The shipping order must refer to a booked sales delivery, otherwise no valid EDX partner can be transferred to the booked shipping order.

Each line with packaging materials/cargo carriers must be assigned to at least one delivery line.

Incoming documents

Incoming documents are first temporarily stored in EDX documents.

Data flow of an incoming document

The incoming message is first read into the EDX inbox. The system creates an EDX inbox item and stores the message in the item.

The EDX intermediate document is then created from the EDX incoming item. Within the EDX intermediate document, the user can intervene and correct data. Furthermore, the user can reject the EDX intermediate document if necessary or create a Business Central document from it.

EDX input items

All incoming documents are first stored in the EDX Inbox table. When the business process for this document is completely finished, then the item will be automatically transferred to the "EDX Inbox Archive".

Field	Description
EDX status	Indicates the current status. **Unprocessed** The document has been transferred to the EDX module and an EDX incoming item has been created. The item has not been sent yet. **Error** An error occurred while processing the item. The "Error" field displays the number of errors that occurred. The look-up of the "Error" field can be used to retrieve the related error items. **EDX document generated** An EDX intermediate document was created from the incoming item. **BC Document created** A BC document has been created from the created EDX intermediate document. The associated EDX inbound item is now completed and will be moved to the "EDX Inbound Archive".
EDX message	If there are system messages for this item, they can be retrieved via the look-up.
EDX error	If there were any processing errors for this item, they can be retrieved by clicking the Look-Up button.
Show file action	This action displays the document contained in the item.
"Manual processing" action	If an error occurred during automatic input processing and this error has been corrected in the meantime, then the input item can be processed again using the "Manual processing" action.
Upload message action	See section "Edit and reprocess EDX incoming items".

EDX Edit and reprocess incoming items

The "View file" function can be used to download the XML message of the selected EDX input item and edit it if necessary. The "Save files" function downloads the XML message from all selected input items and saves it in a selected folder.

Note

Currently this action "Save file" is not available in the WebClient (.NET Framework)

The file must be saved with the action "Show file" and then save.

If an EDX inbound item runs into an error because, for example, a field length in the EDX intermediate document is exceeded or the XML structure is incorrect, the XML message can be downloaded from the EDX inbox, edited, and uploaded again for new processing.

Using the "Upload message" function, the XML message can be uploaded again to the document directory on the server.

After the successful upload, the message will be processed again.

Note

The new EDX input item does not appear immediately after calling the function, but only when the message has been retrieved from the task queue again.

Manual processing of an EDX document

For the processing of EDX documents, a basic distinction is made between two cases.

Incoming EDX document, the BC document has not yet been created.

Example:
A sales order is received. The corresponding BC document has not yet been created.
When the incoming EDX document is created, it results in a new BC sales order.

Incoming EDX document, the BC document already exists.
Example:
An incoming EDX order confirmation refers to an already existing Business Central order.

Before a Business Central document can be created from an incoming EDX intermediate document, the incoming EDX document must first be checked. After a successful check, the EDX document receives the status "Ready for creation". All EDX documents with this status can be transferred to a corresponding Business Central document.

EDX Intermediate document

The EDX intermediate documents contain partly identical fields as the BC documents (see EDX sales order). Special EDX fields and their related functionality are described below.

EDX messages/errors
If there are any system messages or errors specifically for this document, they can be retrieved via the look-up.

EDX status * Unprocessed
The EDX document was created automatically. No further processing steps have been performed yet. * Error: An error occurred while processing the document. * Ready to put on
The EDX document is checked and can be created. * BC Document created

A BC document was created from the EDX document already created. This item is now completed and will be moved to the EDX incoming archive * Inconsistent data

There is already an existing BC document for the incoming EDX document. * Rejected

The incoming document was rejected * Manual processing

If it is not possible to create an incoming EDX document as a BC document, it will receive the status "Manual processing". * Archived

EDX documents that have already been archived. * Deleted

EDX documents that have been deleted by the user.

EDX Voucher Check

During the verification, the system performs a validation of the data. In the process, the field contents are checked. The validation of the field contents is based on the settings made in the document setup.

If errors are detected, the EDX document receives the status "Error". In the field "Error" on the document header or the document lines the number of occurred errors is indicated. You can open related error items using the Look-Up button.

If errors are detected, they can be corrected directly in the EDX document. Each field change in the EDX document is logged. By means of a lookup on the field "EDX Note" these changes can be retrieved.

After manual correction in the EDX voucher, the action "Check" must be executed again. After all errors have been corrected, the BC document can be created using the "Create" action.

Processing of EDX documents with status "Inconsistent data"

During the check, the data of the EDX document is compared with the data of the Business Central document. This is the case, for example, with an incoming order change.

To avoid having to manually compare the existing Business Central sales order with the EDX order change, EDX checks the discrepancies and displays them clearly.

If any discrepancies are found, the EDX status will be set to "Inconsistent Data". With a click on the lookup field "EDX Error" all deviations are displayed.

Example:

An order change for an item with a quantity increase from 20 pieces to 30 pieces was received.

The EDX status is set to "Unequal data".

By clicking on the EDX error number (line), a dialog is displayed in which the deviations are shown.

The "Apply changes" selection determines whether the displayed change is to be transferred to the Busniess Central document. The "Value EDX" column shows the currently transferred value. The "Value BC" column shows the current value of the Business Central document.

After defining which changes are to be accepted, the action "Accept changes" must be executed.

Delete EDX document

Deleting an EDX document depends on the status. If the EDX status contains one of the following values, deletion is not possible:

BC Document created
Rejected
Manual processing
Archived

If the document is not in this status, the EDX document can be deleted with the action "Delete EDX document".

After executing the action "Delete EDX voucher", a dialog box appears with the note that a deletion reason must be specified and whether you actually want to delete the voucher. This query must be confirmed with "Yes".

Subsequently, the reasons that led to the deletion of the message can be recorded.

Create EDX document

The "Create" action transfers the EDX intermediate document to the associated Business Central document.

Reject EDX document

It is possible to reject incoming EDX vouchers.

The rejection is transmitted to the message sender if the "Receipt confirmation check" field has been activated in the EDX document device.

Rejection reasons must be recorded before the action is completed.

EDX document with "Manual processing" status

EDX documents with the status "manual processing" indicate that the EDX document cannot be created or confirmed as a Business Central document. This may be due to the following reasons: * The existing document has already been delivered * Reservations are available * A clear assignment of the document is not possible * A clear assignment of the lines is not possible * There are deviations that cannot be processed automatically

Since these EDX documents cannot be processed by the system, further processing must be performed by the user.

The EDX document is closed by archiving it.

Automatic processing

Automatic processing" can be activated within the "EDX voucher setup". The received voucher will be checked automatically. If no errors occur during the check, the Business Central voucher is created.

Up to now, incoming sales orders have been processed automatically.

Outgoing document

Outgoing EDX documents are not transferred to an EDX intermediate document. When the EDX message is created, an EDX outgoing item is created directly.

EDX information

Each outgoing document contains information that is required for transmission. This information is displayed in the "EDX" info tab.

Below you will find a more detailed explanation of the fields of the info register that are required for the transfer:

Field	Description
EDX document	**Yes** The document has been recognized as an EDX document by the document facility. The transfer of the document is possible **No** No document facility exists for the document. The transfer is not possible.
EDX status	Indicates the current status: **Unprocessed** The document has been transferred to the EDX module and can be sent. **Processed** The EDX output item has already been created. **Dispatched** The EDX outgoing item has been sent. **Recipients receive** With a message acknowledgement, the recipient can signal that the message has arrived in the target system. **Error** An error has occurred during processing. This can be looked up in the EDX system error log. **Ignored** Documents with the status "Ignored" will not be sent. The "Ignored" status is set automatically when the following conditions are met: If a sales invoice that has not yet been sent is cancelled, then both documents (invoice/credit note) are set to the "Ignored" status. If a sales delivery that has not yet been shipped is cancelled by a complaint, then the status of the sales delivery is set to "Ignored". Sales delivery, invoice as well as credit note In the sales order it can be defined that certain documents should not be sent with the next posting. If a posting number for delivery bill or invoice is reserved via the sales order and the sales order is deleted without using this posting number, then a posted document with the note "deleted document" is created according to BC Standard. These documents are not transferred.

Manual processing

Send EDX document manually

Manual document dispatch takes place directly from the associated Business Central document with the action "Send EDX document".

EDX output items

All sent documents are first saved in the "EDX Outbox" overview. When the process is complete, the system automatically transfers the item to the EDX Outbox Archive overview.

EDX status * Unprocessed:
The document has been transferred to the EDX module. This item has not been sent yet. * Error:
An error occurred while processing the item. For more details, see the Error Log field.
If the error occurred due to insufficient file permissions, then the EDX document can be processed again after correcting the permissions. For this purpose, the action "Reprocess" is selected.
If the transfer type is set to FTP, the FTP error is displayed directly. * Dispatched:
The item was transmitted to the partner. With the columns "Messages" as well as "Errors" information about the outgoing item can be retrieved.

Action "Show file"
This action displays the document contained in the item.

Action "BC Voucher Display
This action displays the corresponding BC document.

Display archived BC document" action
Display of the archived document.

Automatic processing

So far, the following outgoing documents can be sent automatically:

> • Sale

deliveryShipping takes place when booking.

> • Sales

InvoiceShipping takes place when booking.

> • OrderShipping will be done upon approval.
> • Order changes

The shipment takes place when the order is released.

If the order is released and has already been sent via EDX, then an order change is automatically sent.
A check for quantity or date changes is currently not provided.

The automatic dispatch of Business Central documents can be controlled within the EDX document facility.

The following conditions apply to the EDX occupancy facility: * The EDX partner must be of type Customer or Vendor. * The EDX "Transfer date from" must be greater than or equal to the work date.

The following conditions apply to the BC documents delivery bill, invoice and purchase order: * The "EDX Partner" field has a value. * The document date is greater than or equal to the "EDX transmission from". * The "EDX Status" is "Unprocessed".

The following condition applies to the BC delivery bill: * The "Sales to customer" field must match the "BC partner no." from the EDX voucher setup.

The following condition applies to the BC bill: * The "Invoice to Customer" field must match the "BC Partner No." from the EDX document setup.

Reset EDX status

With the action "Reset EDX status" documents can be sent again.

Enhancements in "Internal document exchange

Purchasing deliveries without goods receipt

In the case of purchasing deliveries, it was previously always assumed that the storage location used was posted by goods receipt. The processing of purchase deliveries has been changed so that now also storage locations without goods receipt can be used. In this case, the field "Quantity current delivery" in the respective order line is initialized with the reported delivery quantity.

The document must be posted by the user.

Purchase deliveries with batch / serial number

Batch/serial numbers are now supported for purchase deliveries.

The batch/serial number to be delivered is entered in the sales order. The batch is then transferred to the recipient with the posted sales delivery.

The transmitted batches/serial numbers can be retrieved in the "EDX Purchasing Delivery" using the line menu.

After checking / creating the EDX purchase delivery, the item tracking data is transferred to the purchase order.

After posting the order, the item/batch is available on the storage location.

Additions/deductions in "internal document exchange"

Surcharges/discounts can now be used in internal document exchange. The prerequisite is that the "Sales price without VAT" field is activated in the field control for the sales order received. Otherwise, the order line will be created without a sales price.

Article variants in "internal document exchange"

The article variants are now supported in the internal document exchange.

Order date in "internal document exchange

When sending the order, the "planned date of receipt of goods" is transmitted from the order. Further processing looks like this:

Process	Field	Description
Send order	"Planned date of goods receipt".	Send date
Receive sales order	"Requested delivery date"	Validate "Scheduled Goods Receipt Date" from the purchase order in "Requested Delivery Date" field. The validation automatically calculates the fields "planned delivery date", "planned goods issue date" as well as "goods issue date" in the sales order.
Send order confirmation	"Promised delivery date" as well as "Planned delivery date"	Send date
Receipt purchase confirmation	"Committed date of receipt of goods". "Planned date of goods receipt".	Validate "Committed delivery date" from the order confirmation to "Committed goods receipt date" of the purchase order. Validate "Planned delivery date" from the order confirmation to "Planned goods receipt date" of the purchase order.
Send order change	"Planned date of goods receipt".	Send date
Reception order change	"Requested delivery date"	As for "Receive sales order

Remark texts

During internal document exchange, the "remarks" are transferred from the Business Central order, header as well as line. On receipt, the remarks are saved in the EDX sales order. Likewise, comments can be reported back with the EDX order confirmation. In this case, the remarks are stored in the EDX purchase order confirmation.

Received remarks are not transferred to the Business Central sales order or the Business Central purchase order. Otherwise, it would no longer be possible to distinguish between remarks entered by the user and remarks from the other party.

Receive delivery schedules

In the internal document exchange, previously sent purchase orders/framework orders can be received as delivery schedules. The setup for sending purchase orders can be done as described above. On the receiver side the message "IC SALES DELFOR" is set up.

When a delivery schedule is received, a delivery schedule and a scheduling agreement are created for each order/article. This functionality is only available within the KUMAVISION factory365.

Direct delivery

When sending a purchase order with reference to a sales order (direct delivery), the data of the sales order is also transmitted.

Upon receipt, the data of the direct delivery is transferred to the EDX intermediate document for sales orders.

Further processing of this data must be implemented in the customer project.

Master data export

The EDX Framework provides the following documents for the master data export:

| Document	Description	Document direction
BASE CUSTOMER	Basis debtor export	Based on
BASE ITEM	Base article export	Based on
BASE VENDOR	Base Vendor Export	Based on

Example: In the following example, the document "BASE CUSTOMER" is assigned to the EDX Partner C10000.

Subsequently, the configuration for the export fields is made with the action "Field setting for document check". Only the customer fields selected in the "Create field content" column will be exported.

If one of the specified fields is changed in a customer, then the export of the customer is performed automatically.

The output has the following format:
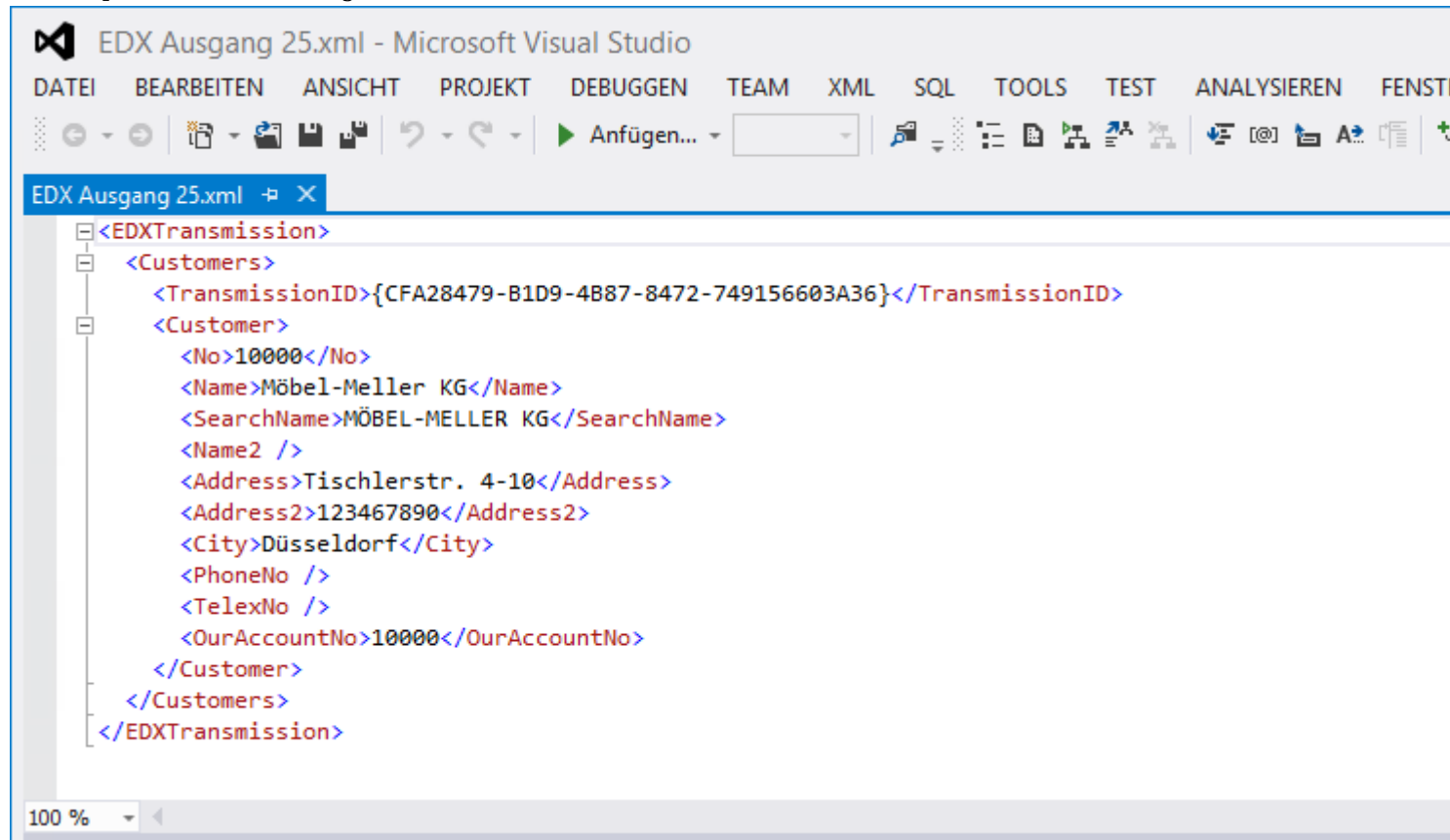
Productive -/Test database

When copying the production database to the test database, overlaps may occur in the interface directory area. Furthermore, it should be ensured that test messages do not get into the productive system.

The steps required to secure the production database are explained in more detail in the following sections.

Before the copy

Before the production database is copied to the test database, all task queue items (all clients) should be set to "Wait".

After copying the production database to the test database

When the production database is copied to the test database, there is usually an overlap of the interface directories. The document directories in the production and test databases are identical. This can lead to the fact that current EDI documents are not imported into the productive but into the test database.

For this case a security query was integrated, which is displayed when opening the test database.

If the query is answered with "Current database is the test database", the option "Test environment" is automatically activated in the EDX setup.

All clients with active EDX setup should be opened once after copying the database. Furthermore, the interface directories must be copied from the "Prod." subdirectory to "Test".

EDX voucher setup (FTP)

If documents with the transfer type FTP are entered in the "EXD document setup" (test database), then these must be changed to "File transfer".

Task queue items

The task queue items can now be reactivated in both databases.

Test indicator

The "Test Indicator" is used to mark incoming as well as outgoing messages during the EDI test phase. For EDIFACT messages, this indicator is contained in the UNB segment (Interchange Header). The message recipient can use this indicator to control whether the message is transferred to the production or test system.

However, this "test indicator" is not available in all message formats (VDA, OpenTrans, etc.).

In the EDX document facility, it is possible to set whether the message (order, delivery bill, invoice, etc.) is a test message.

Effect of the test indicator on processing in Business Central:

Direction	Description
Document received in BC: Sales order	If the test indicator is enabled within the incoming message or in the document facility, then the EDX document will be marked as a test document.
Sales order change	This allows the test to be enabled for messages even if the original message (e.g. VDA) does not support the test indicator.
Purchase order confirmation	EDX receipts with the test indicator enabled will only be processed
Purchase delivery	automatically if the "Test Environment" option is enabled in EDX Setup at the
Purchase invoice	same time. Otherwise, an error will be generated and sent by mail.
Document sent from BC	The test indicator from the document setup is transferred to the outgoing document.

Receipt of a sales order with test indicator
. The test indicator is transferred from the Business Central sales order to the delivery as well as invoice. This means that if a Business Central sales order was received as a test message, then the outbound delivery/invoice messages will also be marked as a test message.

Azure FileSync

Azure FileSync can be used to exchange files between networks. Synchronization between source and destination directories can take up to several minutes.

If time-critical messages need to be exchanged, which is the case, for example, when messages are provided for a label printer, then the switch should be made to FTP file transfer.

EDX MasterDataExport

With the EDX Master Data Export the following master data can be exported:

- Article sub-tables
  Article variants, article units as well as article references
- Customer sub-tables
  Contacts
- Vendor

Establishment

The setup of the AddOn is done with the EDX setup.

EDX Setup

At the beginning, the necessary setups are done via the setup wizard. This setup wizard can be called up via the EDX Setup menu ribbon ("More options" > "Action" > "Setup" > "EDX setup wizard"). The EDX setup wizard is started. Via the selection "General" the required document types as well as number series are created.

EDX Document types

After setup via the setup wizard, the following document types are available:

Document	Description	Document direction
BASE CUSTOMER	Basis debtor export	Based on
BASE ITEM	Base article export	Based on
BASE VENDOR	Base Vendor Export	Based on

Setting up the document types

For each EDX partner different voucher types can be defined. With the "EDX voucher setup" the previously created voucher types are assigned to the EDX partner as well as configured.

Field settings

The "Field settings for document verification" function in the EDX document setup card ribbon allows you to configure which fields are to be exported from the associated master data table.

Field	Description
Table name	Specifies the table name for which the master data is to be transferred. For example, "Article" or a sub-table of the article, such as "Article variant".
Field name	Specifies the respective field name for which the master data is to be transferred.
Validation sequence	The validation order sets the element order in the XML output message.
Default value	This option is not available for the master data export
Create field content	Specify which fields will be exported.

Master data export

The master data export takes place automatically as soon as a change is made to the master data record. Here, only field changes that were specified in the field settings are monitored.

Example:
The article description has been changed for an article. After the data record has been saved, the export takes place.

The output file contains the following elements:

```xml
<EDXTransmission>
    <TransmissionID>{80A9B0F2-2959-472B-9FB3-0A01840A1216}</TransmissionID>
    <ItemList>
        <Item>
            <No>1000</No>
            <No2 />
            <Description>Tourenrad Rot ABC</Description>
            <SearchDescription>TOURENRAD ROT ABC</SearchDescription>
            <Description2 />
            <BaseUnitofMeasure>STÜCK</BaseUnitofMeasure>
            <PriceUnitConversion>0</PriceUnitConversion>
            <Type>0</Type>
            <ItemVariantList>
                <ItemVariant>
                    <ItemNo>1000</ItemNo>
                    <Code>V1</Code>
                    <Description>Variante 1</Description>
                    <Description2 />
                </ItemVariant>
                <ItemVariant>
                    <ItemNo>1000</ItemNo>
                    <Code>V2</Code>
                    <Description>Variante 2</Description>
                    <Description2 />
                </ItemVariant>
            </ItemVariantList>
            <ItemUnitofMeasureList>
                <ItemUnitofMeasure>
                    <ItemNo>1000</ItemNo>
                    <Code>STÜCK</Code>
                    <QtyperUnitofMeasure>1</QtyperUnitofMeasure>
                </ItemUnitofMeasure>
            </ItemUnitofMeasureList>
            <ItemCrossReferenceList>
                <ItemCrossReference>
                    <ItemNo>1000</ItemNo>
                    <VariantCode />
                    <UnitofMeasure>STÜCK</UnitofMeasure>
                    <Cross-ReferenceType>1</Cross-ReferenceType>
                    <Cross-ReferenceTypeNo>10000</Cross-ReferenceTypeNo>
                    <Cross-ReferenceNo>D1000</Cross-ReferenceNo>
                    <Description />
                    <DiscontinueBarCode>false</DiscontinueBarCode>
                </ItemCrossReference>
                <ItemCrossReference>
                    <ItemNo>1000</ItemNo>
                    <VariantCode />
                    <UnitofMeasure>STÜCK</UnitofMeasure>
                    <Cross-ReferenceType>1</Cross-ReferenceType>
                    <Cross-ReferenceTypeNo>20000</Cross-ReferenceTypeNo>
                    <Cross-ReferenceNo>0-0032151-0</Cross-ReferenceNo>
                    <Description />
                    <DiscontinueBarCode>false</DiscontinueBarCode>
                </ItemCrossReference>
                <ItemCrossReference>
                    <ItemNo>1000</ItemNo>
                    <VariantCode />
                    <UnitofMeasure>STÜCK</UnitofMeasure>
                    <Cross-ReferenceType>1</Cross-ReferenceType>
                    <Cross-ReferenceTypeNo>20000</Cross-ReferenceTypeNo>
                    <Cross-ReferenceNo>4811</Cross-ReferenceNo>
                    <Description />
                    <DiscontinueBarCode>false</DiscontinueBarCode>
                </ItemCrossReference>
                <ItemCrossReference>
                    <ItemNo>1000</ItemNo>
                    <VariantCode />
                    <UnitofMeasure>STÜCK</UnitofMeasure>
                    <Cross-ReferenceType>3</Cross-ReferenceType>
                    <Cross-ReferenceTypeNo />
                    <Cross-ReferenceNo>12345678</Cross-ReferenceNo>
                    <Description />
                    <DiscontinueBarCode>false</DiscontinueBarCode>
                </ItemCrossReference>
            </ItemCrossReferenceList>
        </Item>
    </ItemList>
</EDXTransmission>
```

)

Calculated fields

Currently, only the calculated field "Stock" is provided. Calculated fields of the debtor or creditor are not provided by this AddOn, but can be implemented in the project.

Bulk data export

At the beginning of a project, a function is usually needed to export all records of a table.

This can be controlled via the "Collective item" option within the document setup.

As soon as you activate the switch, all records of the table will be exported during the next data export. Afterwards, the "Collective export" option will be deactivated automatically.

EDX OpenTrans 1.0

With the EDX AddOn OpenTrans 1.0 the following OpenTrans messages are provided:

- DISPATCHNOTIFICATION (shipping notification)
- INVOICE (Invoice)
- ORDER (sell order)
- ORDERRESPONSE (order confirmation)

Establishment

The setup is done with the EDX setup.

EDX Setup

At the beginning, the necessary setups are done via the setup wizard. This setup wizard can be called up via the EDX Setup menu ribbon ("More options" > "Action" > "Setup" > "EDX setup wizard"). The EDX setup wizard is started. Via the selection "General" the required document types as well as number series are created.

EDX Document types

After setup, the following document types are available:

Document	Description Document	direction
OT1.0 SALES INVOICE	OpenTrans 1.0 Invoices outgoing	Based on
OT1.0 SALES ORDER	OpenTrans 1.0 Orders incoming	In-depth
OT1.0 SALES ORDER CONFIRMATION	OpenTrans 1.0 Order confirmations outgoing	Based on
OT1.0 SALES SHIPMENT	OpenTrans 1.0 deliveries outgoing	Based on

Setting up the document types

The document types listed above are then assigned to an EDX partner.

Field settings

The field setting is only available for the OpenTrans message "OT1.0 SALES ORDER". See EDX "Field setting for document verification".

Processing

The processing of OpenTrans 1.0 messages is done in EDX standard. Incoming sales orders are provided as "EDX sales order". The order confirmation can be created via the corresponding Business Central sales order. The sales delivery and sales invoice can be sent manually or automatically.

1.3.8 Electronic Data eXchange (EDX) Warehouse Management System (WMS)

General

The EDX AddOn WMS provides a basic WMS (Warehouse Management System) interface.

With the WMS interface, logistics companies can be connected to Microsoft Dynamics Business Central™.

The message exchange is bidirectional. This means that goods receipts/issues can be reported to the logistics company and confirmations processed accordingly in Microsoft Dynamics Business Central™. Inventory reconciliation is possible via the invtur message.

The EDX WMS intermediate documents can be retrieved via the user search with the term "WMS".

Requirements EDX version

EDX19 .0.17051.0
EDX WMS 19..016994.0

> Note

In version EDX WMS Addon V14.1.0.11 the following functions are not available:
• Send / receive GS1 acknowledgement of receipt
• Transfer of PDF files, e.g. Proforma delivery bill, within the instruction messages as Base64 encoded docment

Establishment

EDX Setup Wizard

After the app installation, the setup is performed with the EDX setup wizard. This setup wizard can be called up via the EDX Setup menu ribbon ("More options" > "Action" > "Setup" > "EDX setup wizard"). The EDX setup wizard is started. Via the selection "General" the required document types as well as number series are created. see EDX manual chapter "EDX setup wizard".

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EDX Setup WMS

In the WMS info tab, the following parameters can be set for the interface:

Area	Parameter	Description
Goods issue confirmation from WMS to BC (Outbound Notification)	Take over delivery person in goods issue	**To:** Specifies that the deliverer is to be transferred from the sales order to the goods issue. The transfer of the deliverer takes place before the goods issue is posted. **Off:** When posting the goods issue, the set deliverer of the goods issue header is used.
	Deliver and invoice	**To:** When posting the goods issue, the delivery and invoice are created. **Off:** Only the delivery is posted
Goods issue from BC to WMS (Outbound Instruction)	Send article parts list	**To:** If an assembly order exists for the item, then the components of the assembly order are transmitted in the outbound message. **Off:** The components are not sent with the output message.
Stock from WMS to BC (Inventory Notification)	Overread locked articles	**To:** If the stock report contains a blocked item, then it will not be processed. **From:** The processing is aborted with an error as soon as a blocked article is reported back. **Note** The message processing is completely aborted.This also applies to the following parameters from the "Stock from WMS to BC" area.

Area	Parameter	Description
	Missing articles overread	**To:** If the stock report contains an item that does not exist, then it will not be processed. **From:** The processing is aborted with an error as soon as an article is reported back which does not exist in the BC article master.
	Missing serial number/batch overread	**To:** If the stock report returns a serial number/ batch item without a serial number/batch, then it will not be processed. **From:** Processing will be aborted with an error if a serial number/batch mandatory item is reported back without a serial number/batch.

EDX Partner

An EDX partner must be created for the data exchange between BC and the logistics company. The EDX partner is created e.g. of the type "Contact". Within this documentation the EDX partner "WMS" is used.

EDX Document types

The following EDX documents are assigned to the previously created EDX partner:

KUMAVISION Inhouse Format

Document	Description	Occupancy direction from BC's point of view
WMS INVENTORY IMP	Inventory notification from logistics company to BCs. KUMA WMS Guideline "WMS Inventory Notification	In-depth
WMS WHSE RECEIPT EXP	Goods receipt from BC to logistics company. KUMA WMS Guideline "WMS Inbound Instruction	Based on
WMS WHSE RECEIPT IMP	Goods receipt from logistics companies to BCs. KUMA WMS Guideline "WMS Inbound Notification	In-depth
WMS WHSE SHIPMENT EXP	Outbound instruction from BC to logistics company. KUMA WMS Guideline "WMS Outbound Instruction	Based on
WMS WHSE SHIPMENT IMP	Outbound notification of goods from logistics companies to BCs. KUMA WMS Guideline "WMS Outbound Notification	In-depth
WMS WHSE SHIPMENT STATUS IMP	Goods issue status from logistics companies to BCs. KUMA WMS Guideline "WMS Outbound State Notification	In-depth
GS1 APP REC ACK EXP	GS1 Application Receipt Acknowledgement Export The assignment is only required if an acknowledgement of receipt is to be sent for an incoming message. s. Chapter GS1 Application Receipt Acknowledgement	Based on
GS1 APP REC ACK IMP	GS1 Application Receipt Acknowledgement Export The assignment is only required if an acknowledgement of receipt is to be received for an outgoing message. s. Chapter GS1 Application Receipt Acknowledgement	In-depth

GS1 Warehousing Messages (Subset Raben)

The following GS1 messages may differ from the original GS1 messages, as they contain adaptations for the logistics company RABEN!

Document	Description	Occupancy direction from BC's point of view
GS1V3.2R INVENTORY IMP	Inventory from logistics company to BC see GS1 [Logistics Inventory Report](#)	In-depth
GS1V3.2R WHSE RECEIPT EXP	Goods receipt from BC to logistics company see GS1 [Warehousing Inbound Instruction](#)	Based on
GS1V3.2R WHSE RECEIPT IMP	Goods receipt from logistics companies to BC see GS1 [Warehousing Inbound Notification](#)	In-depth
GS1V3.2R WHSE SHIPMENT EXP	Outbound instruction from BC to logistics company see GS1 [Warehousing Outbound Instruction](#)	Based on
GS1V3.2R WHSE SHIPMENT IMP	Outbound notification of goods from logistics companies to BC see GS1 [Warehousing Outbound Notification](#)	In-depth

After the test phase is completed, all EDX documents should be set to automatic processing.

Storage location

The EDX partner set up must be entered in the associated storage location. Within this documentation, the EDX partner "WMS" is assigned to the storage location "YELLOW". Hereby, goods receipts as well as goods issues for the storage location "YELLOW" are reported to the logistics company "WMS".

The selected storage location should have the following options:

Logistics	State
Goods receipt required	Yes
Goods issue required	Yes
Picking required	No

In the storage location the creditor, which corresponds to the logistics company, can be stored. In the field "Our account number" of the vendor, the customer number assigned by the logistics company must be entered.

Logistics facility

For posting goods receipt/goods issue, it is necessary to change the goods receipt/goods issue posting method in the "Logistics setup" to "Cancel and show first posting error".

If the posting method is set to "Posting errors are not processed" and an error occurs during posting, then it will not be registered by EDX and all related interface records will get the status "NAV document created" even though no posting has taken place.

Goods issue from BC to WMS (Outbound Instruction)

General

Excerpt from [Microsoft Dynamics Business Central™ Helpsite (F1)](#):
[...] *If you ship items from a storage location that has been set up to require goods issue processing, you can only record goods issue based on origin documents that other departments in your company have approved for processing.*

Normally, the employee who is responsible for the delivery creates a goods issue. The following procedure describes how to create the shipment manually in the standard version of Business Central.

- *Select the icon , enter goods issues, and then select the associated link.*
- *Select the New action. Fill in the fields on the General info tab. When retrieving the origin document rows, some of the information is copied to each row.*
- *Select the Get origin documents action. The Origin documents page opens. From a new or open goods issue, you can use the Filter to get origin document lines that define which items are to be delivered.*
  [...]

Procedure User/EDX
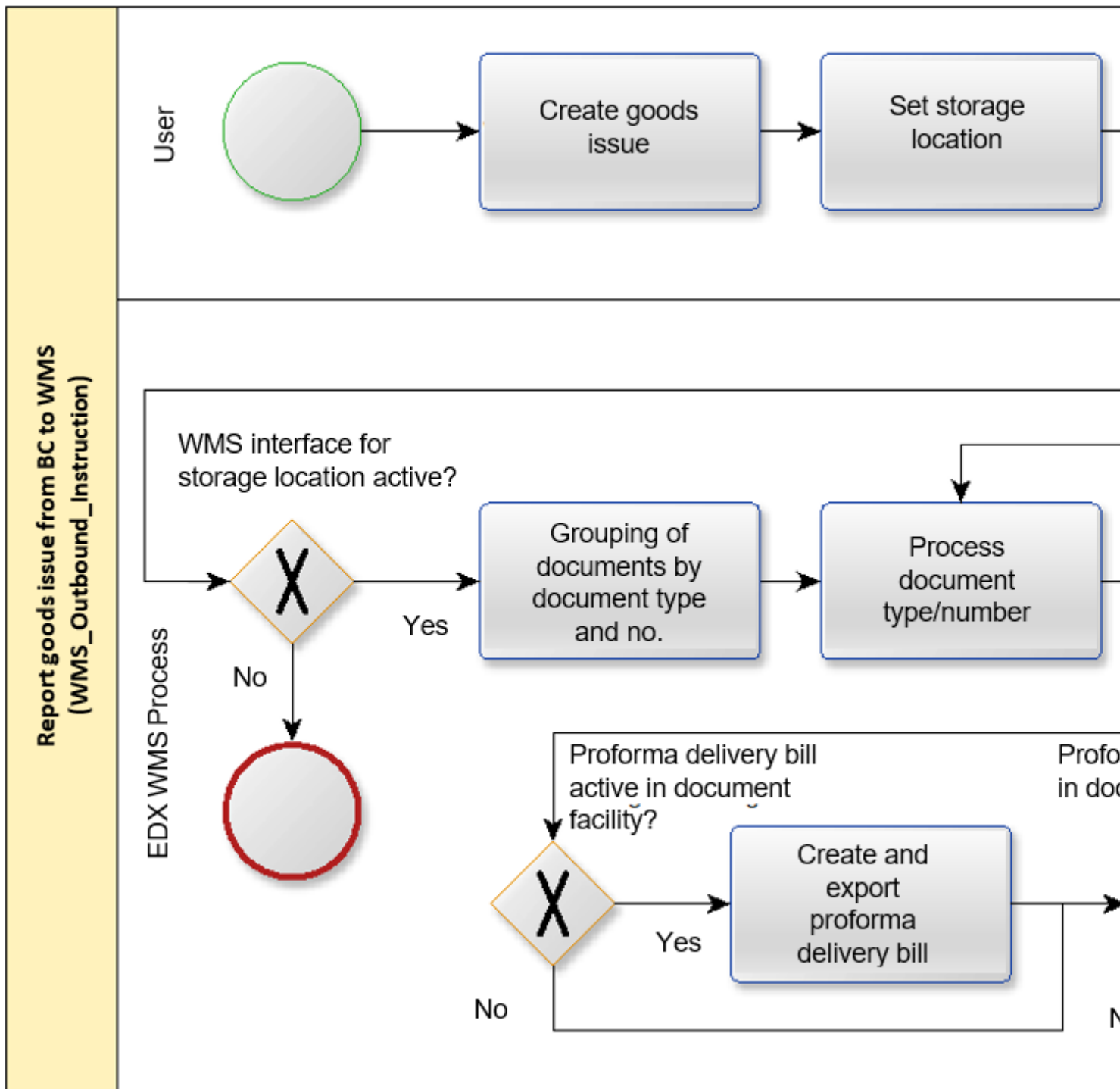
After entering the storage location code "YELLOW" in the General info tab, the fields in the EDX info tab are initialized.

The following conditions must be met for automatic EDX document dispatch:

Field See EDX info register in the goods issue area	Description
External WMS = Yes	Initialization takes place according to the selected storage location
Released = Yes	
EDX Status = Unprocessed	
EDX Partner = Partner no. from storage location facility	

The following origin documents are supported by the EDX WMS interface:

- Sell orders
- Outgoing stock transfers
- Purchasing complaints
- Service orders

After the goods issue has been released, the message is sent to the logistics company. If the document "WMS WHSE SHIPMENT EXP" is not configured for automatic processing, then the goods issue can be sent manually with the action "Send EDX goods issue".

When sending messages, one message is created in the EDX outbox for each origin document/origin number. The created EDX output can be retrieved with the action Line->EDX->Output.

In another transaction, the outgoing item is transferred.

Serial number/batches

The serial numbers/batches are reported back by the logistics company. An entry in the goods issue is generally not required. If serial numbers or batches are recorded in the goods issue, then these are reported to the logistics company.

Assembly of the final article in the logistics company

If the assembly of the final article takes place in the WMS, then the article BOM can be sent to the logistics company using the WMS interface.

The BOM is exported if the "Send article BOM" checkbox is activated in the EDX setup and the current article has an assembly or production BOM.

Proforma delivery bill / invoice

Within the interface PDF files can be transmitted as base64 encoded characters. The transmission is currently only possible for sales orders.

For the transmission, the switch "Include the associated PDF document" must be activated in the EDX document facility (WMS WHSE SHIPMENT EXP). In the "Report selection sales" the reports to be transferred must be marked with the switch "Use for WMS".

Note

The reports "Proforma delivery bill" and "Proforma invoice" are not part of the WMS interface.

Storage location / storage place

When using the KUMAVISION QME, position locations are used. The WMS interface reports the goods issue storage bin to the logistics company.

WMS order number / transport number

The order number and transport number used by the logistics company are displayed in the EDX info register.

Send goods issue from BC to WMS again

If it is necessary to send a goods issue to the WMS again, this can be done with the actions "Reset EDX status". If the document "WMS WHSE SHIPMENT EXP" is not configured for automatic processing, then the goods issue can be sent manually with the action "Send EDX goods issue".

Note

The resending of messages should be coordinated with the WMS in advance. If the WMS has already started picking, changes are usually no longer possible!

Exclude goods issue from transmission

In some cases, the created goods issue may not be sent to the WMS. This is the case, for example, if the goods issue was created for internal processing purposes only.

For this purpose, the status of the goods issue must be set to "Open". Then the switch "External WMS" in the EDX info register can be set to "Off". When switching over, the following query is displayed:

"When releasing the goods issue, there is no transfer to the external WMS. Are you sure?"

Assembly order

If an assembly order exists for the goods issue line, then the components of the assembly order are transferred to the logistics company with the "Outbound Instruction" message. The transfer is made according to the following conditions:

- EDX setupThe "Transfer parts list" configuration switch must be switched on.
- Sales lines

The sales line in the goods issue must be linked to an assembly order.

Goods issue status from WMS to BC (Outbound State Notification)

General

With the message "WMS WHSE SHIPMENT STATUS IMP" the status confirmations are processed by the logistics company.

The message can be processed with the WMS intermediate document "WMS Goods issue status".

Currently, the following status confirmations are available:

Status	Description
0 = Preparation for picking	The goods issue message has been transmitted to the WMS. Picking should take place shortly.
1 = Picking has been started.	
2 = Picking has been completed	Delivery should be made shortly.
3 = Picking was canceled	The WMS has aborted the picking process. Consultation with the WMS required.

WMS Intermediate document

Check action

The following tests are performed:

Status	Description
Goods issue no.	Logistics document must exist
Goods issue line number	Logistics document line must exist
Origin number	If transmitted, the origin number must match the origin number from the logistics document line.

Update action

The confirmed status is transferred to the goods issue line.

Outgoing goods

The reported WMS processing status is displayed in the goods issue line with the "WMS Status" field.

Goods issue from WMS to BC (outbound notification)

General

With the message "WMS WHSE SHIPMENT IMP" the deliveries are processed by the logistics company.

The message can be processed with the WMS intermediate document "WMS Goods issue".

Procedure User/EDX

The following diagram shows the automatic sequence of message processing.

Prerequisite EDX occupancy device:

- Automatic processing is enabled.
- BC Release document is enabled.
- BC Post document is activated. The posting date should be set to "Receipt document date". In this case the posting date will be used by the logistics company.
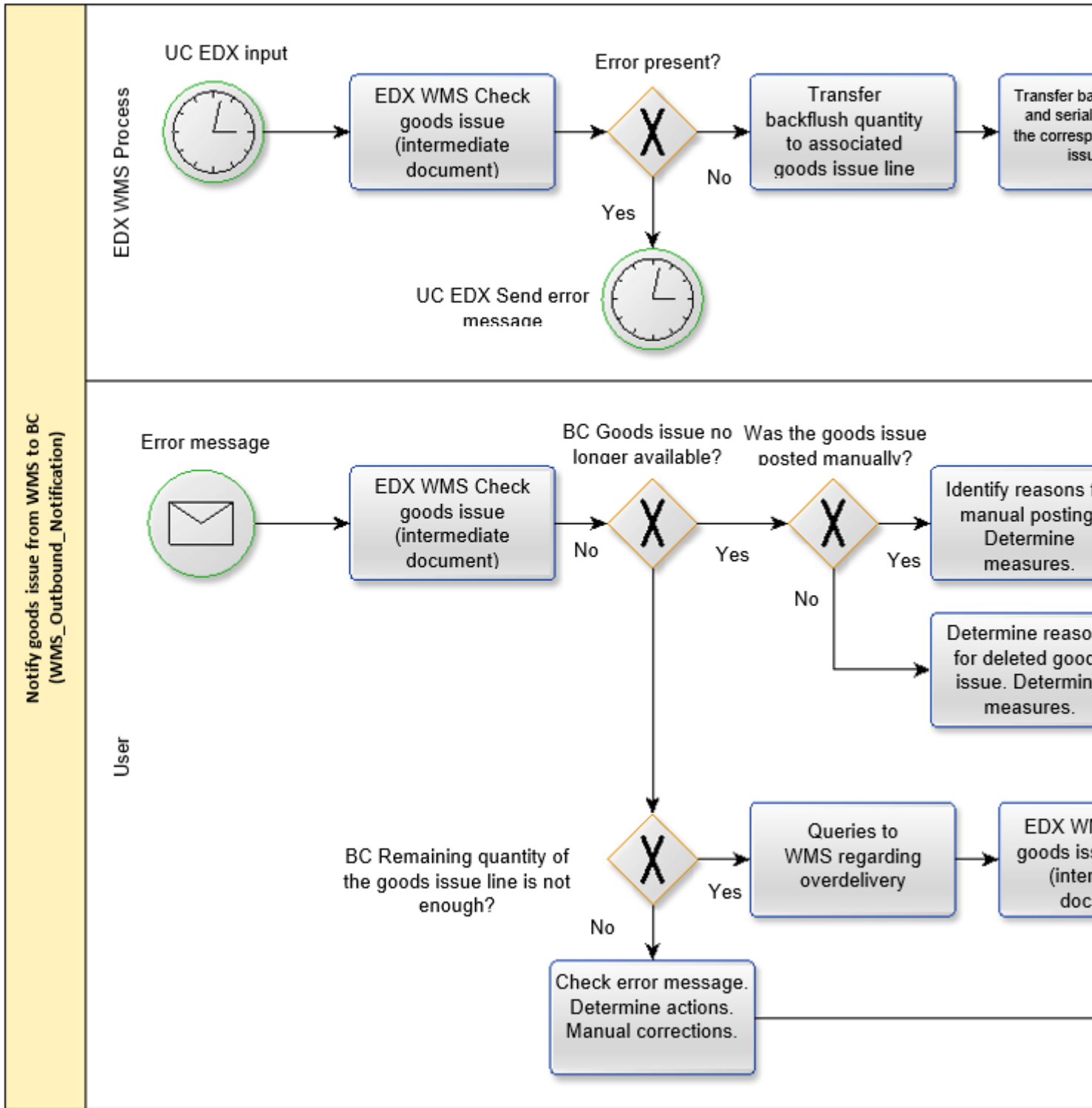
WMS Intermediate document

Serial number/batches

The serial numbers/batches assigned by the logistics company can be retrieved using the "Item tracking" action within the rows.

Assembly order

If the logistics company performs the assembly of the finished article, then the components used by the logistics company can be retrieved with the action "Bill of material" within the lines.

> Note

Currently, the corresponding production order in BC is not automatically posted by the interface.

Packing material

The packing materials used by the logistics company can be retrieved with the action "Packing materials" within the lines. The overview contains the SSCC/NVE and the respective package tracking number.

> Note

The packing materials are transferred to the corresponding sales delivery when posting the goods issue. In the given sales delivery, the packaging materials can be retrieved with the action "EDX packing list".

Packing list

With the packing list, the returned packing materials are displayed in hierarchical form. For this representation, the logistics company must report back which packaging material is contained in which packaging material.

If outer packaging is used for several origin documents, it is sufficient to report the outer packaging when it is first used. For the subsequent origin documents, only the corresponding outer packaging is referred to (Contained in SSCC/NVE).

Example:

Type	Package Tracking No.	SSCC/NVE	Contained in SSCC/NVE	Packag Descrip
Outer		202103090000000001		CONTAI
Outer	DHL12334457563233	202103080000000000	202103090000000001	PALETT
Inner	DHL12334457563234	202103080000000001	202103080000000000	KLT
Inner	DHL12334457563235	202103080000000002	202103080000000000	KLT
Additional			202103080000000002	BLISTEF
Additional			202103080000000002	BLISTEF

Storage location / storage place

When using the KUMAVISION QME, position locations are used.

The storage bin reported back by the logistics company is not processed. Within the interface it is assumed that the storage bin specified in the goods issue corresponds to the delivery storage bin.

Check action

The following tests are performed:

Status	Description
Goods issue no.	Logistics document must exist
Goods issue line number	Logistics document line must exist
Origin number	If transmitted, the origin number must match the origin number from the logistics document line.
Item number	Article number must exist and match logistics document line.
Variant Variant must exist and match logistics document line.	
Quantity to supply	Must be <= remaining quantity of the logistics document line.
Serial number/batches	Must be present if the item is subject to batch or serial number requirements.

Action booking

- The posting date of the logistics document is set according to the document setup.
- WMS order number / transport number is transferred to the logistics document.
- Quantity to be delivered is transferred to logistics document line.
- Serial number/batches are transferred to the origin document.
- Goods issue is posted if this is set in the document facility.
- Packing materials are transferred to the booked sales delivery.

Outgoing goods

WMS order number / transport number

The order number and transport number used by the logistics company are displayed in the EDX info register.

**Goods receipt from BC to WMS (Inbound Instruction)**

General

Excerpt from [Microsoft Dynamics Business Central™ Helpsite (F1)](#):
[...] *When items arrive at a warehouse set up for goods receipt processing, you must retrieve the rows of the released origin document that triggered their goods receipt. If you are using storage bins, you can either accept the default bin entered or, if the item has never been used in this warehouse before, enter the bin into*

which the item is to be placed. You must then enter the quantities of the items you have received and post the goods receipt.

The following explains how items are received with an order. The steps for sales complaints and stock transfer orders are similar.

- *Select the icon , enter goods receipts, and then select the associated link.*
- *Select the New action.*
  Fill in the fields on the General info tab. When retrieving the origin document lines, some of the information is copied to each line.
  For warehouse configurations with controlled putaway and picking: if the storage location has a default zone and a default bin for goods receipts, the Zone code and Bin code fields are filled in automatically, but you can change them if necessary.
- *Select the Get origin documents action. The Origin documents page opens. From a new or open goods receipt, you can use the Filter to get origin document lines that define which items are to be received or delivered.*
  a) Select the Use filters to fetch Herc. documents action.
  b) To set up a new filter, enter a descriptive code in the Code field and click Edit Actions.
  c) Specify the type of origin document rows you want to retrieve by filling in the respective filter fields.
  d) Select the Execute action.[...]
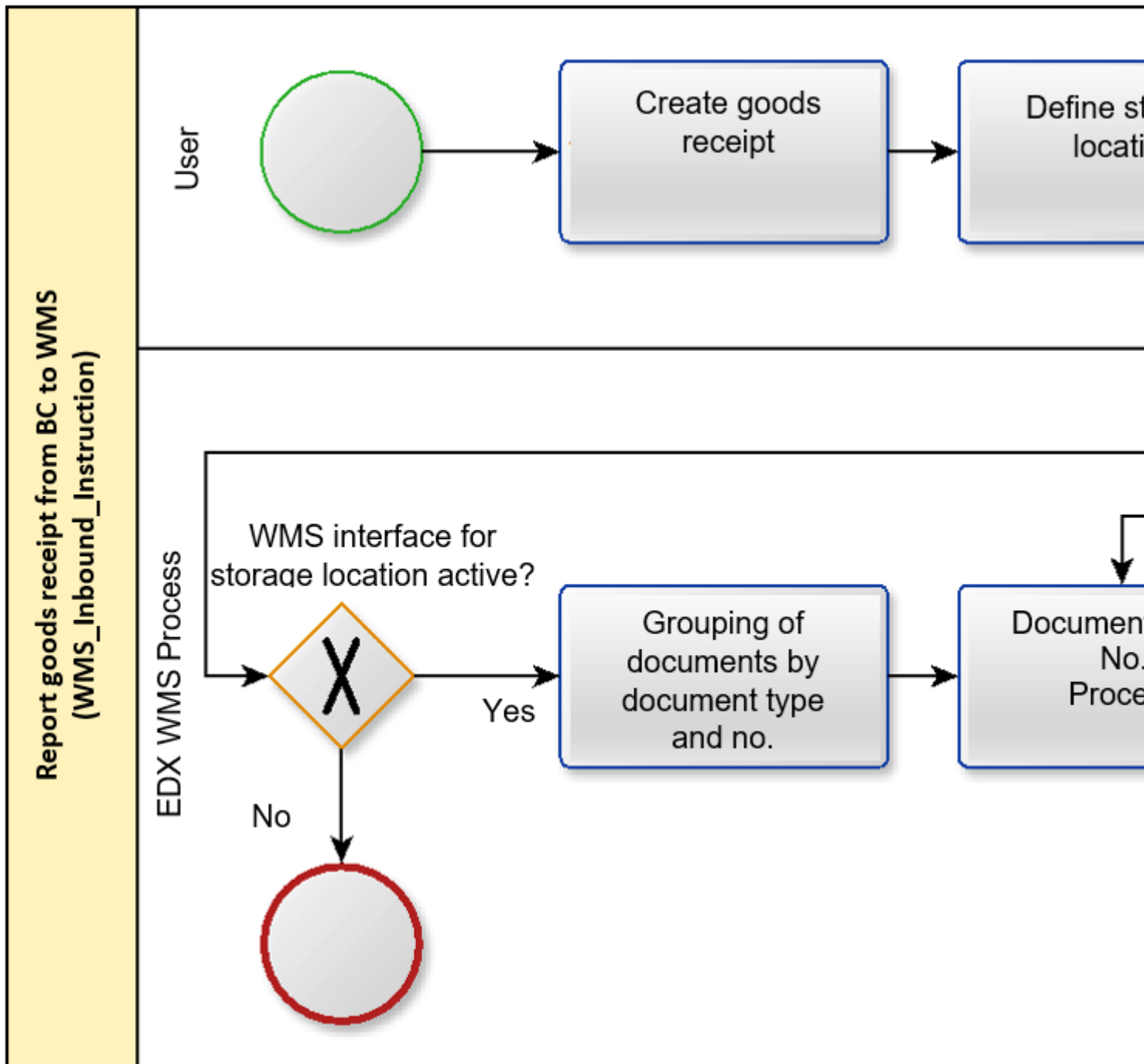
Procedure User/EDX

After entering the storage location code "YELLOW" in the General info tab, the fields in the EDX info tab are initialized.

The following conditions must be met for automatic EDX document dispatch:

Field See EDX information register in the goods receipt area	Description
External WMS = Yes	Initialization takes place according to the selected storage location
Released = Yes	
EDX Status = Unprocessed	
EDX Partner = Partner no. from storage location facility	

The following origin documents are supported by the EDX WMS interface:

- Purchase orders (not external work)
- Incoming stock transfers
- Sales complaints

After the goods receipt has been released, the message is sent to the logistics company. If the document "WMS WHSE RECEIPT EXP" is not configured for automatic processing, then the goods receipt can be sent manually with the action "Send EDX goods receipt".

When sending messages, one message is created in the EDX outbox for each origin document/origin number. The created EDX output can be retrieved with the action Line->EDX->Output.

In another transaction, the outgoing item is transferred.

Serial number/batches

The serial numbers/batches are reported back by the logistics company. An entry in the goods receipt is generally not required.

Storage location / storage place

When using the KUMAVISION QME, position locations are used. The WMS interface reports the goods receipt storage bin to the logistics company.

Send goods receipt from BC to WMS again

If it is necessary to send a goods receipt to the WMS again, then this can be done with the actions "Reset EDX status". If the document "WMS WHSE RECEIPT EXP" is not configured for automatic processing, then the goods receipt can be sent manually with the action "Send EDX goods receipt".

Note

The resending of messages should be coordinated with the WMS in advance.If the WMS has already started processing the goods receipt, changes are usually no longer possible!

Exclude goods receipt from transmission

In some cases, the created goods receipt may not be sent to the WMS. This is the case, for example, if the goods receipt was created for internal processing purposes only.

For this purpose, the status of the goods receipt must be set to "Open". Then the switch "External WMS" in the EDX info register can be set to "Off". When switching over, the following query is displayed:

"When the goods receipt is released, there is no transmission to the external WMS. Are you sure?"

Goods receipt from WMS to BC (inbound notification)

General

With the message "WMS WHSE RECEIPT IMP" the goods receipts are processed by the logistics company.

The message can be processed with the EDX intermediate document "WMS Goods receipt".

Procedure User/EDX

The following diagram shows the automatic sequence of message processing. Prerequisite EDX occupancy device:

- Automatic processing is enabled.
- BC Release document is enabled.
- BC Post document is activated. he posting date should be set to "Receipt document date". In this case the posting date will be used by the logistics company.
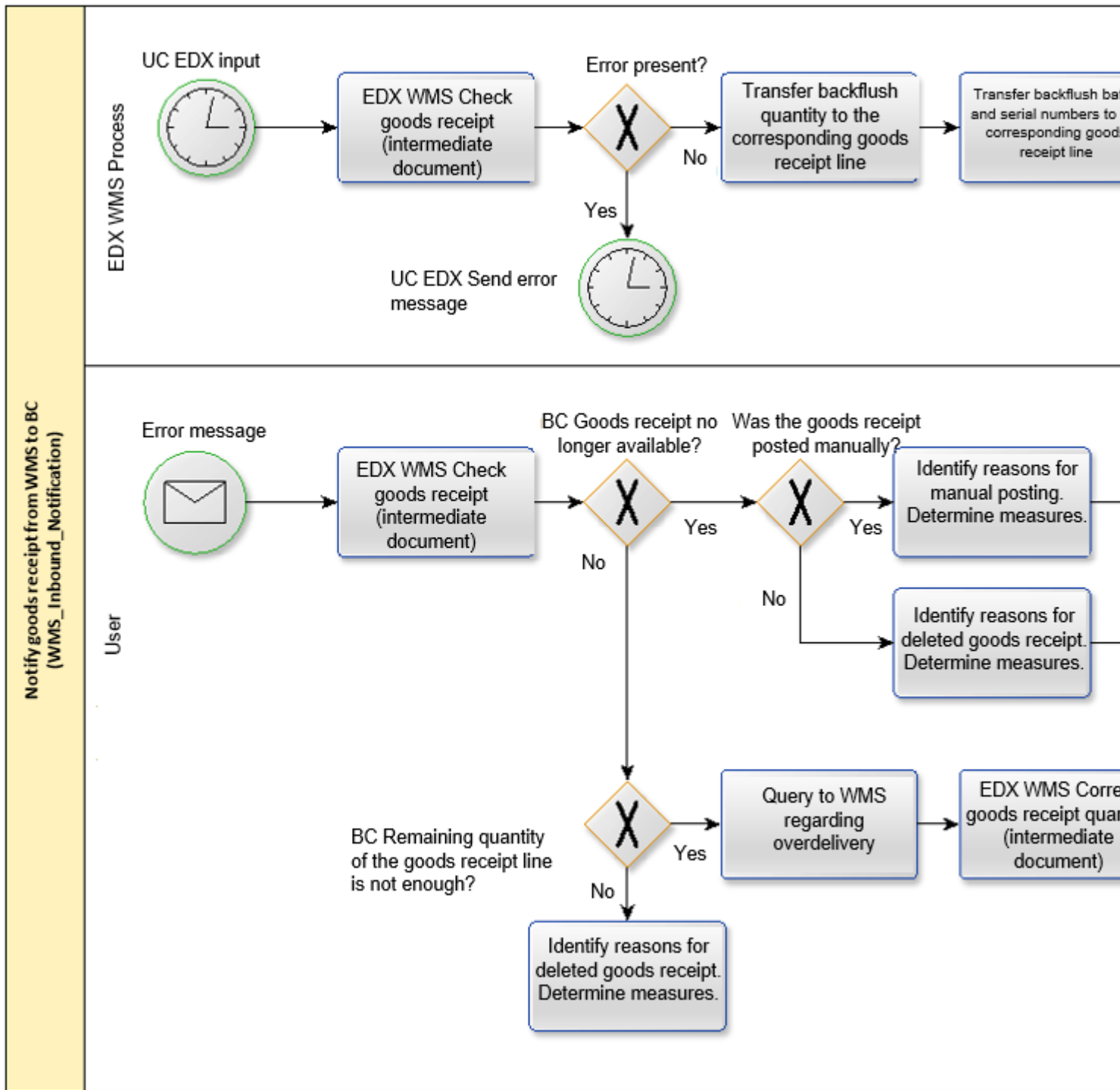
WMS Intermediate document

Serial number/batches

The serial numbers/batches assigned by the logistics company can be retrieved using the "Item tracking" action within the rows.

Packing material

The packing materials used by the logistics company can be retrieved with the action "Packing materials" within the lines. The overview contains the SSCC/NVE and the respective package tracking number.

> Note

Currently, the packaging materials are not transferred to the posted document when posting the goods issue.

Packing list

With the packing list, the returned packing materials are displayed in hierarchical form. For this representation, the logistics company must report back which packaging material is contained in which packaging material.

If outer packaging is used for several origin documents, it is sufficient to report the outer packaging when it is first used. For the subsequent origin documents, only the corresponding outer packaging is referred to (Contained in SSCC/NVE).

Example:

Type	Package Tracking No.	SSCC/NVE	Contained in SSCC/NVE	Packag Descrip
Outer		202103090000000001		CONTAI
Outer	DHL12334457563233	202103080000000000	202103090000000001	PALETTI
Inner	DHL12334457563234	202103080000000001	202103080000000000	KLT
Inner	DHL12334457563235	202103080000000002	202103080000000000	KLT
Additional			202103080000000002	BLISTER
Additional			202103080000000002	BLISTER

Storage location / storage place

When using the KUMAVISION QME, position locations are used. The storage bin reported back by the logistics company is not processed. Within the interface it is assumed that the storage bin specified in the goods receipt corresponds to the delivery storage bin.

Check action

The following tests are performed:

Status	Description
Goods receipt no.	Logistics document must exist
Goods receipt line number	Logistics document line must exist
Origin number	If transmitted, the origin number must match the origin number from the logistics document line.
Item number	Article number must exist and match logistics document line.
Variant	Variant must exist and match logistics document line.
Quantity supplied	Must be <= remaining quantity of the logistics document line.
Serial number/ batches	Must be present if the item is subject to batch or serial number requirements.

Action booking

- The posting date of the logistics document is set according to the document setup.
- WMS order number / transport number is transferred to the logistics document.
- Quantity delivered is transferred to logistics document line.
- Serial number/batches are transferred to the origin document.
- Goods receipt is posted if this is set in the document facility.
- Packing materials are transferred to the booked sales delivery.

Goods receipt

WMS order number / transport number

The order number and transport number used by the logistics company are displayed in the EDX info register.

Stock from WMS to BC (Inventory Notification)

General

The message can be processed with the EDX intermediate document "WMS Stock".

Excerpt from [Microsoft Dynamics Business Central™ Helpsite (F1)](#):
[...] *You can perform an inventory of items using the Inventory Order and Inventory Capture documents. The Inventory Order page is used to organize the complete inventory collection project, for example, one per location. The Inventory Capture page is used to communicate and record the actual count of items. You can create multiple records for one order, for example, distributing groups of items to different employees.*

The Inventory Capture report can be printed from any capture and contains blank quantity fields for entering counted inventory. When a user is finished capturing and the quantities have been entered on the Inventory

Capture page, select the Finish action. This will transfer the quantities to the appropriate rows on the Inventory Order page. This feature ensures that no item count can be entered twice.[...]

Procedure User/EDX

The following diagram shows the automatic sequence of message processing.

Prerequisite EDX occupancy device:

- Automatic processing is enabled.
- BC Release document is enabled.
- BC Post document is activated. The posting date should be set to "Receipt document date". In this case the posting date will be used by the logistics company.
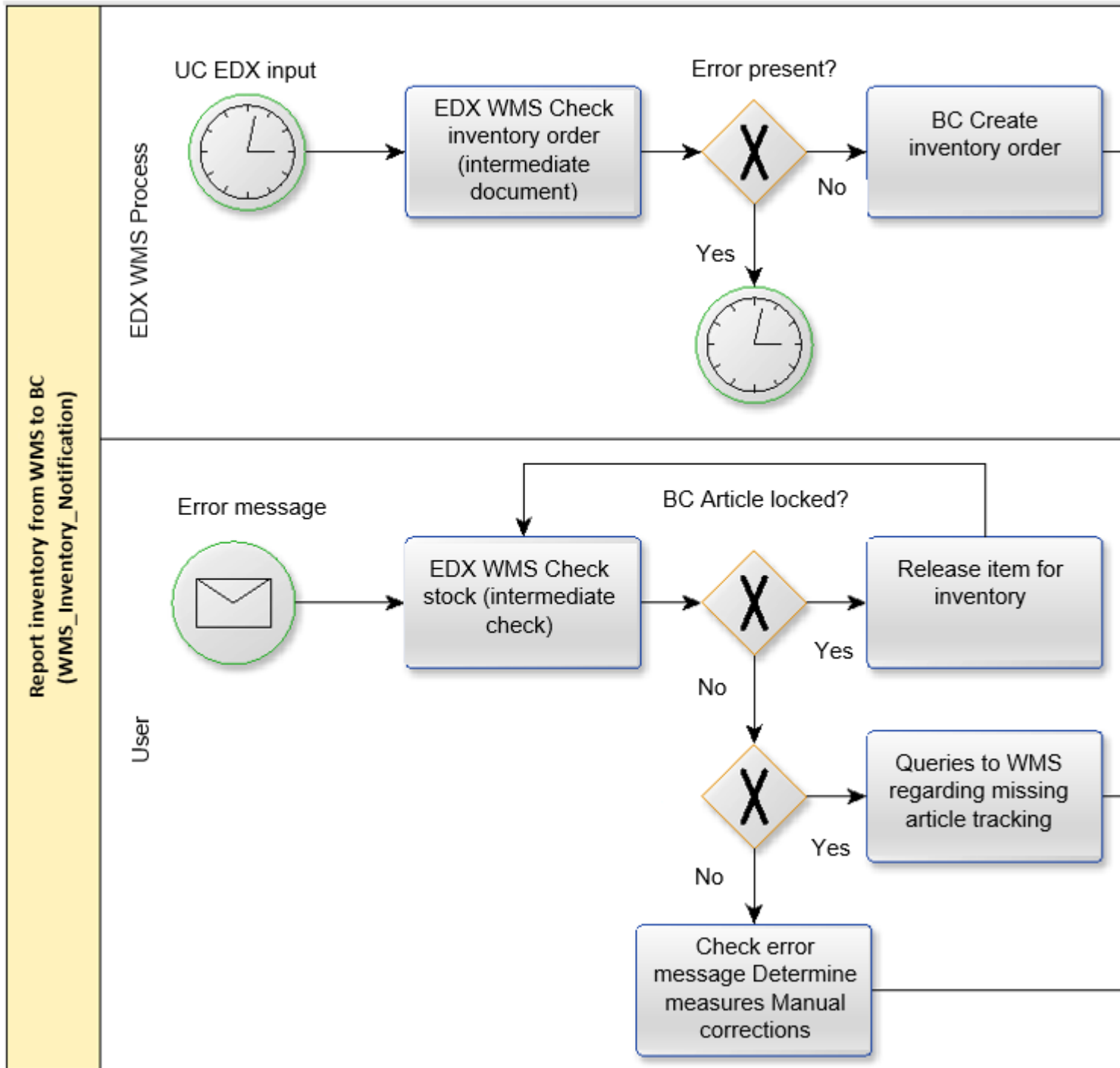
Confirmation of the article stock for all storage bins

Note

The logistics company must report the stock of an item for all storage bins.The inventory order reconciles the stock between the logistics company and BC. If the stock of a storage bin is not reported by the logistics company, then this stock is also deleted in BC.

WMS Intermediate document

Serial number/batches

The serial numbers/batches assigned by the logistics company are displayed directly in the line.

Check action

The following tests are performed:

Status	Description
Storage location	Storage location must exist. If no storage location is returned, then the storage location that was assigned to the EDX partner is used.
Stockyard	Storage space must exist.
Item number	Item number must exist. s. WMS setup regarding blocked articles.
Variant	Variant must exist and match logistics document line.
Serial number/ batches	Must be present if the item is subject to batch or serial number requirements.

Action booking

- Creating an inventory order
- The posting date of the inventory order is set according to the document setup.
- Create inventory record for all items
- Inventory order is posted if this is set in the document setup.

GS1 Application Receipt Acknowledgement

General

With the message "GS1 Application Receipt Acknowledgement" a receipt confirmation can be transmitted back to the message sender. The receipt acknowledgement can be used bidirectionally.

Example:
Message from WMS to BC
WMS sends the stock level.
BC sends the acknowledgement of receipt after receiving the stock

Example:
Message from BC to WMS
BC sends the goods issue.
WMS sends the acknowledgement of receipt after receipt of the goods issue

Note

All messages from BC to WMS contain the TransmissionId element with a unique GUID.

For messages from WMS to BC, the TransmissionId element is optional. If the acknowledgement of receipt from BC to WMS is to be used, then the messages from the messages from WMS must contain a unique TransmissionId.

Establishment

As described in chapter „EDX Documemt Types", the message "GS1 APP REC ACK EXP" must be assigned to the WMS partner. Then the option "Receipt Acknowledgement" is activated in the document setup.

Guideline for GS1 Application Receipt Acknowledgement

The message description can be obtained directly from GS1.

Application Receipt Acknowledgement - XML Application Receipt Acknowledgement | GS1

Example acknowledgement of receipt from BC to WMS

In the following example, the stock was received by the WMS with the transmission id **{B7E627FD-C00F-4826-93ED-B2D32D9F48E2}**. The receipt confirmation was sent to the WMS with the transmission id **{8415449F-E9BB-40DF-A459-5170F20E9AB4}**.

Extract from the XML message:

```
<applicationReceiptAcknowledgementIdentification>
  <entityIdentification>{8415449F-E9BB-40DF-A459-5170F20E9AB4}</entityIdenti
</applicationReceiptAcknowledgementIdentification>
<applicationResponseMessageHeaderLevel>
  <applicationResponseStatusCode>RECEIVED</applicationResponseStatusCode>
  <originalEntityIdentification>
    <entityIdentification>{B7E627FD-C00F-4826-93ED B2D32D9F48E2}</entityIde
  </originalEntityIdentification>
```

Example acknowledgement of receipt from WMS to BC

In the following example, the goods issue was sent from BC to the WMS with the transmission ID **{970cd006-f6f5-4aff-b152-c2d92f29a661}**. The receipt confirmation was sent with the transmission ID **{897D7F20-265F-4A16-8D32-17565A62FFE4}** from the WMS.

Extract from the XML message:

```xml
<applicationReceiptAcknowledgementIdentification>
  <entityIdentification>{897D7F20-265F-4A16-8D32-17565A62FFE4}</entityIdenti
</applicationReceiptAcknowledgementIdentification>
<applicationResponseMessageHeaderLevel>
  <applicationResponseStatusCode>RECEIVED</applicationResponseStatusCode>
  <originalEntityIdentification>
    <entityIdentification>{970cd006-f6f5-4aff-b152-c2d92f29a661}</entityIdentific
  </originalEntityIdentification>
```

WMS API Reference

The following chapters describe the EDX-WMS events and their functionality.

> Note

For the EDX WMS Integration Events, the "Sender" is always transmitted as the first parameter. In the following description this parameter is not listed, because the documentation is from the event publisher's point of view.

For all following events the Event Publisher CodeUnit "EDX WMS AddOn" can be used.

Integration of project-specific WMS messages

The registration of project-specific messages is to be implemented according to the "EDX API Reference".

Registration can be performed according to the examples below. "Object Type" and "Object ID" must be changed to the project-specific object accordingly. Attention: When using an XMLPort for the export of goods in/goods out, it must be ensured that the XMLPort has a table element for the goods in/goods out line. If this element is not present in the XMLPort, then an error will occur during the export!

When using a CodeUnit for the export of goods in/goods out, the field KVSEDXOutbound. "Record Id" can be used to determine which goods in/goods out is currently being exported. With the field KVSEDXOutbound. "KVSEDX WMS Detail RecordId" the current origin document (sales order, purchase order, etc.) is reported.

```
// KUMAVISION WMS Guideline Format
// Initialize Document WMS_WHSE_SHIPMENT EXPORT
EDXDocumentTypesVar.Init();
EDXDocumentTypesVar."EDX Document" := WMS_WhseShipmentExpTok.
EDXDocumentTypesVar.Description := WMS_WhseShipmentExpTxt;
EDXDocumentTypesVar.Channel := EDXDocumentTypesVar.Channel:Outbound;
EDXDocumentTypesVar."Doc. Table No." := Database::"Warehouse Shipment Header";
EDXDocumentTypesVar."File Type" := EDXDocumentTypesVar."File Type"::xml;
EDXDocumentTypesVar."Object Type" := EDXDocumentTypesVar."Object Type"::XmlPort
EDXDocumentTypesVar."Object ID" := XmlPort::"KVSEDX WMS Whse. Shipment Exp";
EDXDocumentTypesVar."Field Setup Active" := false;
EDXDocumentTypesVar."Collect Documents Possible" := false;
EDXDocumentTypesVar."Include PDF Possible" := true;
EDXDocumentTypesVar.Insert(true);


// Initialize Document WMS_WHSE_RECEIPT EXPORT
EDXDocumentTypesVar.Init();
EDXDocumentTypesVar."EDX Document" := WMS_WhseReceiptExpTok;
EDXDocumentTypesVar.Description := WMS_WhseReceiptExpTxt;
EDXDocumentTypesVar.Channel := EDXDocumentTypesVar.Channel::Outbound;
EDXDocumentTypesVar."Doc. Table No." := Database::"Warehouse Receipt Header";
EDXDocumentTypesVar."File Type" := EDXDocumentTypesVar."File Type"::xml;
EDXDocumentTypesVar."Object Type" := EDXDocumentTypesVar."Object Type"::XmlPort
EDXDocumentTypesVar."Object ID" := XmlPort::"KVSEDX WMS Whse. Receipt Exp";
EDXDocumentTypesVar."Field Setup Active" := false;
EDXDocumentTypesVar."Collect Documents Possible" := false;
// Actual no documents defined
EDXDocumentTypesVar."Include PDF Possible" := false;
EDXDocumentTypesVar.Insert(true);
```

```
// Initialize Document WMS_WHSE_RECEIPT IMPORT
EDXDocumentTypesVar.Init();
EDXDocumentTypesVar."EDX Document" := WMS_WhseReceiptImpTok.
EDXDocumentTypesVar.Description := WMS_WhseReceiptImpTxt;
EDXDocumentTypesVar.Channel := EDXDocumentTypesVar.Channel:Inbound;
EDXDocumentTypesVar."Doc. Table No." := Database::"KVSEDX WMS Whse.Rcpt.Header";
EDXDocumentTypesVar."File Type" := EDXDocumentTypesVar."File Type"::xml;
EDXDocumentTypesVar."Object Type" := EDXDocumentTypesVar."Object Type"::XmlPort;
EDXDocumentTypesVar."Object ID" := XmlPort::"KVSEDX WMS Whse. Receipt Imp";
EDXDocumentTypesVar."Field Setup Active" := false;
EDXDocumentTypesVar."Collect Documents Possible" := false;
EDXDocumentTypesVar."Disable create Transmission ID" := true;
EDXDocumentTypesVar.Insert(true);

// Initialize Document WMS_WHSE_SHIPMENT IMPORT
EDXDocumentTypesVar.Init();
EDXDocumentTypesVar."EDX Document" := WMS_WhseShipmentImpTok;
EDXDocumentTypesVar.Description := WMS_WhseShipmentImpTxt;
EDXDocumentTypesVar.Channel := EDXDocumentTypesVar.Channel::Inbound;
EDXDocumentTypesVar."Doc. Table No." := Database::"KVSEDX WMS Whse.Ship.Header";
EDXDocumentTypesVar."File Type" := EDXDocumentTypesVar."File Type"::xml;
EDXDocumentTypesVar."Object Type" := EDXDocumentTypesVar."Object Type"::XmlPort;
EDXDocumentTypesVar."Object ID" := XmlPort::"KVSEDX WMS Whse. Shipment Imp";
EDXDocumentTypesVar."Field Setup Active" := false;
EDXDocumentTypesVar."Collect Documents Possible" := false;
EDXDocumentTypesVar."Disable create Transmission ID" := true;
EDXDocumentTypesVar.Insert(true);
```

```
// Initialize Document WMS_INVENTORY IMPORT
EDXDocumentTypesVar.Init();
EDXDocumentTypesVar."EDX Document" := WMS_InventoryImpTok;
EDXDocumentTypesVar.Description := WMS_InventoryImpTxt;
EDXDocumentTypesVar.Channel := EDXDocumentTypesVar.Channel::Inbound;
EDXDocumentTypesVar."Doc. Table No." := Database::"KVSEDX WMS Inventory Header";
EDXDocumentTypesVar."File Type" := EDXDocumentTypesVar."File Type"::xml;
EDXDocumentTypesVar."Object Type" := EDXDocumentTypesVar."Object Type"::XmlPort;
EDXDocumentTypesVar."Object ID" := XmlPort::"KVSEDX WMS Inventory Imp";
EDXDocumentTypesVar."Field Setup Active" := false;
EDXDocumentTypesVar."Collect Documents Possible" := false;
EDXDocumentTypesVar."Disable create Transmission ID" := true;
EDXDocumentTypesVar.Insert(true);

// Initialize Document WMS_STATUS IMPORT
EDXDocumentTypesVar.Init();
EDXDocumentTypesVar."EDX Document" := WMS_StatusImpTok;
EDXDocumentTypesVar.Description := WMS_StatusImpTxt;
EDXDocumentTypesVar.Channel := EDXDocumentTypesVar.Channel::Inbound;
EDXDocumentTypesVar."Doc. Table No." := Database::"KVSEDX WMS Whse.Ship.State Hdr";
EDXDocumentTypesVar."File Type" := EDXDocumentTypesVar."File Type"::xml;
EDXDocumentTypesVar."Object Type" := EDXDocumentTypesVar."Object Type"::XmlPort;
EDXDocumentTypesVar."Object ID" := XmlPort::"KVSEDX WMS Whse.Ship.State Imp";
EDXDocumentTypesVar."Field Setup Active" := false;
EDXDocumentTypesVar."Collect Documents Possible" := false;
EDXDocumentTypesVar."Disable create Transmission ID" := true;
EDXDocumentTypesVar.Insert(true);
```

OnBeforeInitializeWarehouseShipmentHeader

The event is triggered before the WMS data (External WMS, EDX Partner) are initialized in the goods issue.

OnAfterInitializeWarehouseShipmentHeader

The event is triggered after the WMS data (External WMS, EDX Partner) has been initialized in the goods issue.

OnBeforeInitializeWarehouseReceiptHeader

The event is triggered before the WMS data (External WMS, EDX Partner) are initialized in the goods receipt.

OnAfterInitializeWarehouseReceiptHeader

The event is triggered after the WMS data (External WMS, EDX Partner) has been initialized in the goods receipt.

OnAfterPostSalesDocPackages

The event is triggered after the sales delivery is posted and the packages are transferred to the sales delivery line.

OnAfterPostPurchaseDocPackages

The event is triggered after the purchase delivery is posted and the packages are transferred to the purchase delivery line.

OnBeforeCreateWarehouseReceipt

The event is triggered before the intermediate document "EDX goods receipt" is processed.

OnAfterCreateWarehouseReceipt

The event is triggered after the intermediate document "EDX goods receipt" has been processed.

OnBeforeCreateWarehouseShipment

The event is triggered before the intermediate document "EDX goods issue" is processed.

OnAfterCreateWarehouseShipment

The event is triggered after the intermediate document "EDX goods issue" has been processed.

OnBeforeCreateInventory

The event is triggered before the intermediate document "EDX Stock" is processed.

OnAfterCreateInventory

The event is triggered after the intermediate document "EDX Stock" has been processed.

OnBeforeCreateWarehouseShipmentState

The event is triggered before the intermediate document "EDX goods issue status" is processed.

OnAfterCreateWarehouseShipmentState

The event is triggered after the intermediate document "EDX goods issue status" has been processed.

OnBeforeCheckWarehouseReceipt

The event is triggered before the intermediate document "EDX goods receipt" is checked.

OnAfterCheckWarehouseReceipt

The event is triggered after the intermediate document "EDX goods receipt" has been checked.

OnBeforeCheckWarehouseShipment

The event is triggered before the intermediate document "EDX goods issue" is checked.

OnAfterCheckWarehouseShipment

The event is triggered after the intermediate document "EDX goods issue" has been checked.

OnBeforeCheckInventory

The event is triggered before the intermediate document "EDX Stock" is checked.

OnAfterCheckInventory

The event is triggered after the intermediate document "EDX Stock" has been checked.

OnBeforeCheckWarehouseShipmentState

The event is triggered before the intermediate document "EDX goods issue status" is checked.

OnAfterCheckWarehouseShipmentState

The event is triggered after the intermediate document "EDX goods issue status" has been checked.

1.3.9 GAEB Interface and Calculation

1.3.10 General

With the app "GAEB Interface "KVS& Calculation"" you can optimize the participation in a tender by importing the received GAEB files for the preparation of the offer into your Business Central at the push of a button. You can then easily make the created offer available to your customer again in GAEB format.

The app offers you the following advantages:

- Simple and clear quotation costing in the planning book sheet
- One-click creation of inquiries, quotations and orders from the planning ledger sheet
- Continuous presentation of the contribution margin and the project success during costing
- Maximum time savings through data import and export at the click of a mouse
- No transmission errors due to elimination of manual entries
- Accurate and simple costing including overhead, overhead and profit margins
- Clear version management of tenders and offers

Introduction GAEB Interface & Calculation

GAEB Interface & Calculation | KUMAVISION App from KUMAVISION on Vimeo.

Link to Microsoft App Source "KUMAVISION GAEB Interface and Calculation"

1.3.11 GAEB setup

In order to be able to use the functionalities of the app "GAEB Interface & Calculation", some settings on the GAEB setup card are required in advance. In the following, the setup options of the fields are explained in more detail.

Inforegister General

Field	Description
Unit price breakdown	Field to enable/disable unit price breakdown.
GAEB format	Specifies the standard GAEB format for import and export.
Assign manufacturer article no.	If the switch is set, it is checked whether the article no. in the GAEB file corresponds to a vendor article no. in the system.
FA Change status on release	If the switch is set, when the order is released, the status of the simulated FA corresponding to the "FA status" field is changed.
FA Status	Status to which the FAs should be changed if the "Change FA status on release" field is set. Transfer long texts to document Transfer long texts to sales document
Takeover in offer for sale	Specifies how the LV groups should be transferred to the sales offer. If the value is Bundle, only the group prices of the highest level are displayed, otherwise all rows with prices are displayed.
Headline line in sales offer	Specifies whether to create a heading line with the project description.
Standard quantity	Standard quantity
Automatic parts list calculation	Activates automatic calculation for items with bills of materials.
Standard OZ mask	Specifies the default OZ mask for manual calculations.
Automatic position numbering	If the identifier is set, the lines will be numbered automatically when closing the spreadsheet if the OZ Mask field is filled.
Level lock	Specifies the level of the locks. If several users are working on one calculation/tender, "rows" should be used to avoid overwriting.
Calculation basis	Specifies whether FA or GAEB BOMs are to be used as the basis for the calculation.
Working day hours	Working day hours

Inforegister Surcharges

Field	Description
Show surcharges	If the identifier is set, the surcharges will be shown during export.
Standard surcharge	Default value for the Surcharge (%) field when the line type is Item and no other surcharge is set up.
Standard surcharge 2	Default value for the "Surcharge 2 (%)" field if the line type is Item and no other surcharge is set up.
Surcharge 2 (%) Basis	Basis for the calculation of surcharge 2 (%)
Standard Surcharge (Res.)	Default value for the Surcharge (%) field when the row type is Resource and no other surcharge is set up.
Standard Surcharge 2 (Res.)	Default value for the "Surcharge 2 (%)" field if the line type is Resource and no other surcharge is set up.

Inforegister No. Series

The number series for the GAEB documents are stored on the "Number series" info tab.

Inforegister archiving

On the "Archiving" information tab, the descriptions for the archiving reason are stored in the "Archiving reason" field in case of the respective document archiving.

Inforegister Colors Calculation

Field	Description
Style position	Specifies color and style for items in the project spreadsheet.
Style note	Specifies color and style for notes in the project spreadsheet.
Style group	Specifies color and style for groups in the project spreadsheet.
Style alternative	Specifies color and style for alternative items in the project spreadsheet.
Style Incomplete	Specifies color and style for incomplete items in the project spreadsheet.
Style locked	Specifies color and style for locked items in the project spreadsheet.

Inforegister Support Information

On this info tab you will be presented with information about the app.

Unit assignment menu ribbon

To avoid having to select items for each row individually, the "Unit Assignment" function is available in the ribbon.

The "Unit" and "Description filter" fields can be used individually or in combination. If you create a row without a filter, it will always be used as long as no other row matches the unit mapping settings.

Field	Description
Unit	Unit from the tender.
Description filter	This filter searches the description of a GAEB line when the lines are imported.
Type	Type, which should be filled in the GAEB documents, if the assignment achieves a hit. (Combination of the GAEB unit and the description filter).
Article Copy Template	Article no. to be filled in the GAEB documents if the assignment results in a hit. (Combination of the GAEB unit and the description filter).
Resource/ Resource Group	Resource group/resource to be filled in the GAEB documents if the assignment gets a hit. (Combination of the GAEB unit and the description filter).
G/L account	G/L account to be filled in the GAEB documents, if the assignment gets a hit. (Combination of the GAEB unit and the description filter).
Article import	Specifies how to proceed with the item from the Item Template field. If the value is set to Use, the item will simply be used. If Copy is selected, the item will be copied with the number series from the "Number series" field. There is an option to lock the articles after copying to prevent them from being used in planning or orders until they are released.
No. Series	No. series for the copied items if the "Item import" field is equal to "Copy".

Standard Surcharges Ribbon

To make your work easier, there are several places in the system where you can assign a default overhead for the "Overhead" and "Overhead 2" fields.

This can be done at three different levels, which equally represents the hierarchy for determination:

- Debtor
- Customer price group
- GAEB facility

The fields are explained in more detail below:

Field	Description
Art 2	Here you can specify the type of element to which you want to assign the surcharge.
No.	Here you can enter the number of the group or record to which you want to apply the surcharge. The selection depends on the type chosen in the previous field.
Description 2	Description of the group or record.
Surcharge (%)	Default value of the surcharge (%)
Surcharge 2 (%)	Default value of surcharge 2 (%)
Start date	Date from which the surcharge is applicable.
End date	Date by which the surcharge is levied.

1.3.12 Process

Import tender

To import an RFx, first call up "Calculations" via the user search.

Via the menu item "New" > "Import RFx" or "Import XML RFx" you have the possibility to perform the import. After a successful import, the RFx will be opened immediately and you can start with the calculation.

Quotation costing

By calling up the "Calculations" you can easily carry out the offer calculations. To do this, select the desired offer via the calculations overview.

The offer itself is divided into the following info tabs:

Inforegister General

On this info tab you will be presented with general information such as the description and closing date of the RFP.

Inforegister lines

On the "Lines" info tab, the positions of the RFP are displayed in hierarchical order.

Inforegister Description

On the "Description" info tab, the long texts of the individual tender items are displayed.

GAEB information register

GAEB specific information is displayed on this info tab.

View original tender

To open and view the original RFx, go to "Related" > "Information" > "Original RFx" from the ribbon.

Note

Please note that it is not possible to edit the alert from this view.

Project spreadsheet

Within a quotation, the "Project costing sheet" can be opened. To do this, select the menu item "Actions" > "Offer" > "Calculation" via the menu ribbon.

Lock

To prevent data from being overwritten, you can set various locks in the "GAEB Setup".

If the lock is set at user level, the quote will be locked by the user who opens the calculation. The quote can only be unlocked by the same user by executing the "Unlock calculation" function in the ribbon.

Note

A prerequisite for this functionality is that a costing sheet has been created for each user in the GAEB setup.

On the other hand, if the lock is set up at row level, multiple users can edit a calculation at the same time without overwriting each other's input. As soon as a user creates a new row or edits an existing row in the book sheet, the "Locked by" field is automatically filled with his user ID.

Selected rows can also be locked manually using the "Lock row(s)" function. Likewise, the "Unlock row(s)" function can be used to unlock them again.

If it is necessary to unlock rows by a user who, for example, is absent and cannot perform this function, the "Force Unlock Row(s)" function is available. Make sure that you use this function carefully, as this can lead to data loss.

Color representation

The opened project costing book sheet displays the items according to the tender. In the GAEB setup, different colors can be assigned to the different lines to improve their display.

Infoboxes

Several info boxes are displayed on the right side of the map.

Description

You can add notes (hints) before and after each line by using the "Insert Note" function. The "Description" info box displays the long and/or short texts as well as the notes (hints) for each line.

Additional information

This info box shows the total duration of the required resource for the selected row. In addition, the average unit cost of the resource and the last date of use are displayed.

Project evaluation

This infobox presents the unit cost, the unit cost including the first overhead, and the unit cost including the second overhead, broken down by resources and materials.

Prices

To obtain a price, you can fill the items with items from the Business Central master data or with dummy items (items without inventory value) and enter the unit costs and up to 2 overhead rates. In addition, you can enter fixed costs, which are then independent of the quantities in the lines.

Surcharges

If the offer contains a position with a "free quantity", it is possible to adjust the quantity. In all other cases, the quantity values are not editable. The "Distribute surcharge" function allows you to change or set the surcharges for several or all lines.

Select Distribution type="Set" on the request page of the report if you want to overwrite the old overhead value with the overhead in the Value field. Select "Change" to increase or - in case of a negative value - decrease the current overhead in the rows by the value from the Value field.

You can use the overhead field to specify whether this should affect the first or second overhead.

Notes

The Show/Hide Notes action can be used to show or hide the notes in order to reduce the number of displayed lines and get a clear overview of the calculation.

Multilevel calculation

Production parts list

If you want to use production orders, select "FA" as the calculation basis in the GAEB setup.

Note

Please note that if this setting is selected, the steps in the following section can only be performed by a Microsoft Dynamics 365 Premium user.

If the item has been set up as a production item, you can set up a background structure for costing to get a more detailed overview of the costs. To do this, select the "Unfold Bill of Materials" call to open a new book sheet. It shows the items from the bill of materials that are linked to the current item, as well as the routing from the master data. In this view you can select the "Insert row" function to add new rows or the "Delete" function to delete existing rows. The purpose of the book sheet is to specify the cost of the offer item in more detail.

If the book sheet also contains a production item, you can use the "Unfold BOM" function again to go one level deeper. This allows you to define any number of levels.

Closing the sheet takes you one level higher again.

Note

Please note that closing the book sheet will not transfer the prices and changes to the higher level.

Run the "Transfer prices" function to transfer the prices and changes to the higher level.

Also in this book sheet you can distribute the surcharges as described in the previous section. The data maintained in this book sheet will not be included in an export, as it is only internal information that will be used for detailed costing and, if desired, for demand planning.

GAEB Calc. Parts list

If you do not use the production orders from the calculation, select in the "GAEB Setup" the "GAEB Calc. Bill of material" as calculation basis.

Note

No premium user is required for this procedure. Without the setting "GAEB Calc. Bill of material" the steps in the following section cannot be performed.

Manage GAEB parts list

On the article card you can create a new parts list with the call "GAEB parts list" or, if a parts list is already assigned to the article, edit an existing parts list.

To enable editing of the parts list, its status must be "Open". If this is not the case, you can use the "Reset status" function to reset the status to "Open". When you have finished editing the BOM, change its status to "Released" to make it available again. When the BOM is no longer needed, you can archive it using the "Close BOM" function.

Use GAEB parts list

If the item has a GAEB bill of materials, you can build a background structure for costing to get a more accurate overview of the costs. Select the "Unfold BOM" function to open a new book sheet. It shows the items from the BOM that are associated with the item, as well as the resources and resource groups from the master data. In this view, you can select the "Insert row" function to add new rows or the "Delete" function to delete existing rows.

The purpose of the book sheet is to specify the cost of the bid item in more detail. By selecting the work to be performed and the material to be used, and adding overhead (if applicable), planning can be done at a more detailed level.

If the book sheet also contains an article with a GAEB parts list, you can use the "Unfold parts list" function again to go one level deeper. This allows you to define any number of levels.

Closing the sheet takes you one level higher again.

Execute the "Transfer prices" function to transfer the prices and changes to the higher level.

Also in this book sheet you can distribute the surcharges as described in the previous section. The data maintained in this book sheet will not be included in an export, as it is only internal information that will be used for detailed costing and, if desired, for demand planning.

Export quotation costing

To export a quotation, you must first open the map that belongs to the quotation. To do this, call up the "Calculations" via the user search and open the desired card.

Via the menu item "Actions" > "Interfaces" > "Export offer" or "Offer XML Export" in the menu ribbon, you can export the offer into the GAEB90 format or into the GAEB XML format.

Manual quotation calculation

To create a manual calculation, call up the "Calculations" via the user search. You can create a new calculation manually via "New" > "Create calculation".

After you have created the manual price calculation, the calculation book sheet opens automatically. In this book sheet you can insert new lines with the functions "Insert line before" and "Insert line after".

You can define the line accordingly via the "Line type" field. To avoid manual numbering, execute the "Perform position numbering" function in the menu ribbon.

You can export the offer via the "Actions" > "Export" > "Export offer" menu item in the ribbon.

Transferred into a sales offer

To submit the calculation or the created quotation not only in GAEB format, but in a conventional commercial format, select the menu item "Interfaces" > "Transfer to sales quotation" in the ribbon on the quotation card. The quotation lines will now be transferred to a Microsoft Dynamics 365 Business Central standard quotation.

Confirmation of an offer for sale

There are two ways to confirm a sales offer. The first variant is used when the sales offer has been confirmed by phone or in writing and there is no order confirmation in GAEB format. To confirm the offer, open it and select the "Confirm offer" function.

If the offer was confirmed by an order confirmation in GAEB format, call up the "Order confirmation" via the user search and execute the "Imported order confirmation" function via the menu ribbon.

Regardless of the variant used, the ordered lines are transferred to a Microsoft Dynamics Business Central™ standard sales order. From the sales order, you can control its execution.

Archiving and versioning

Sales offers are archived in the following cases:

- When preparing an offer for sale
- When confirming the offer
- When confirming an addition
- Manual according to choice
- When restoring a previous offer

Under GAEB Settings, you can enter a code in the Archiving reason field that specifies the reason for archiving.

There are two ways to restore an archived sales quote.

Recovery from the offer:

In the RFx, you can select the "Related" > "Information" > "Versions" function. This opens an overview with all archived versions associated with this RFx.

To restore a previous version, select the "Restore Calculation" function. During this process, the current version is archived.

Recovery from the archive:

Call up the GAEB → Arch. Quotations via the user search. For this overview the same function "Restore calculation" is available.

> Note

Please note that closing the book sheet will not transfer the prices and changes to the higher level.

What happens after the free trial

[What happens after the free trial?](#) from [KUMAVISION](#) on [Vimeo](#).

1.3.13 KUMAconnect

General

With the APPs "KUMAconnect ELO4BC" and "KUMAconnect Output Link" you have an integration interface that connects the DMS/ECM of [ELO Digital Office GmbH (professional and enterprise)](#) directly with Microsoft Dynamics Business Central™.

For this purpose, an ELO client, the "ELO Integration Client", is directly integrated into numerous fact boxes and / or page parts of Microsoft Dynamics Business Central™. This allows working directly in Microsoft Dynamics Business Central™ with the ELO DMS/ECM. Files and documents can be archived by drag & drop.

With the "KUMAconnect Output Link", documents created in Microsoft Dynamics Business Central™, e.g. order confirmations, invoices, etc. can be archived directly in ELO DMS/ECM without further intervention. All files and documents are automatically tagged with appropriate metadata. For a business process or a transaction in Microsoft Dynamics Business Central™, these are then displayed by the Integration Client directly in the filing structure in ELO.

The app communicates with an ELO DMS/ECM system using modern web services. For this purpose, a KUMAconnect APP is also installed in ELO DMS/ECM so that the two systems can communicate directly with each other.

In addition, standard templates are provided that contain a complete configuration of the Integration Client, the outgoing documents, the metadata and the archive structure including the reference structure. An authorization concept rounds off the templates. The functional scope and operation of the ELO Integration Client can be accessed via the link.

Facilities for ELO are set up in the ELO Admin Console. Here the metadata is defined, the storage paths and reference paths. Please contact your ELO partner for this.

Setup

DMS General Setup

Before the Integration Client is displayed in the Fact Box or in the Page Part, the app requires the following settings in order to be able to communicate with the ELO archive. This setting is first made in the "DMS General Setup" page.

field	description
ELO Rest API URI	Here the URI of the REST API of the connected ELO system is stored. The rest API is used to archive documents in the background in ELO. **Example:** http<s>://<server>:<<port>/rest-<<archive name>/
ELO username	name of the ELO service user through which the Rest API is allowed to communicate.
ELO Password	Password for the ELO service user
KUMAconnect Fact Box activated	This switch activates or deactivates the KUMAconnect interface. If it is active, the Integration Client is displayed in the Fact Boxes or the Page Parts
Display of the client in lists	The Integration Client can also be displayed in many list pages. Here it should be noted, however, that scrolling within the list may be somewhat delayed if the Integration Client is active in the list pages. This can be turned off across the board using this switch
Use Single Sign On	With this switch the Windows credentials are transferred to ELO for automatic login when the Integration Client is called.
ELO Integration Client URI	The base URI of the ELO Integration Client is stored here. **Example:** http<s>://<SERVER>:<PORT>/ix-<ARCHIV>/plugin/ en.elo.ix.plugin.proxy/wf/apps/app/elo.integration.Client/
Auth with oAuth2	Logging in to ELO can also be done via OAuth, this can be enabled here.
ELO oAuth2 URI	Here URI of the OAuth authorization point is stored. **Example:** login.microsoft.com/common/oauth2/v2.0/authorize?
Fact Box Height	What height should the fact box be in all pages or page parts? Default: 500px Info: the width cannot be configured.

field	description
KUMAconnect archiving of outgoing documents activated	Here you generally activate whether documents created in Business Central should also be transferred to the ELO DMS/ECM. Which documents these are is set in the following "Document setup".

User setup

Users who are to use KUMAconnect must be assigned an ELO profile in the "User setup". The profile is configured in the ELO archive. Here, for example, it can be configured that the ELO web client and not the ELO full client is called up for the function "Open in ELO". Or that the function "Edit in Office" is available to the user. So open the "User Setup" in Microsoft Dynamics Business Central™ and go to the row of the corresponding user. If the user does not already exist in this setup, simply add him/her.

In the column "ELO Profile" *(often on the far right of the table)* you can then select the ensptechende user profile. If no "ELO profile" is entered in the cell, this user cannot use KUMAconnect and the integration client is not displayed.

Note

If the column "ELO profile" is not displayed, the general setup is not yet complete.

Document setup

The document setup can be used to control the event at which the source document is to be uploaded to the ELO archive in the background. The events are taken into account if archiving of source documents is activated in the "DMS General Setup".

Validity area	The department can be set here. Depending on the department, other outgoing documents can be configured. Possible validity areas: - Warehouse - Purchasing - Sales - Service - Reminder .
Table of records	A record is related to an outgoing document. For each output document, the field "Archiving on event" can be used to control when and whether it should be archived. Possible values are: - Do not archive - Processing outside of KUMAconnect *(Only relevant for Special Industry Solutions)* - When printing - When sending e-mail - When printing or sending e-mail - When releasing - When posting

The following output documents are configurable:

Range	Table ID	Table name	Document type
Sale	36	Sales header	Offer
Sale	36	Sales header	Order
Sale	36	Sale header	Invoice
sale	36	sales header	credit
sale	36	sales header	Blanket order
sale	36	sales header	complaint
Sale	36	Sales header	Draft Invoice
Sale	36	Sales header	Proforma invoice
Sale	110	Sales delivery header	Output
Sale	112	sales invoice header	invoice
Sale	114	Sales credit memo header	Credit memo
sale	6660	returns header	returns
Purchase	38	Purchase header	Inquiry
Purchase	38	Purchase Header	Order
Purchase	38	Purchase header	Invoice
purchase	38	purchase header	credit note
purchase	38	purchase order header	framework order
Purchase	38	Purchasing header	Complaint
purchase	120	purchase delivery header	receipt
purchase	122	purchase invoice header	invoice
purchase	124	purchase credit memo header	credit memo
purchase	6650	return delivery header	return delivery
Service	5900	Service header	Quotation
Service	5900	Service header	Order
Service	5900	Service header	Invoice
Service	5900	Service header	Credit note

Range	Table ID	Table name	Document type
Service	5900	Service header	Output
Service	5965	Service Contract Header	Contract Offer
Service	5965	Service Contract Header	Contract
Service	5992	Service Invoice Header	Invoice
Service	5994	Service credit memo header	Credit memo
warehouse	7316	goods receipt header	goods receipt
warehouse	7318	goods receipt header	goods receipt posted
Warehouse	7320	Goods issue header	Delivery
Warehouse	7322	Goods issue header	Posted delivery
Dunning notice	295	Dunning notice header	Dunning notice
Dunning notice	297	Registered dunning header	Dunning notice

Integration Client Activation

In this setup you can select whether the ELO Integration Client should be displayed in the Fact Box or in the Page area or not at all on this page.

Note

In pages of type List the ELO Integration Client can only be displayed as Fact Box.

field	description
Page ID	ID of the page where the ELO Integration Client should be embedded
Page Name	Name of the page on which the ELO Integration Client should be embedded
Enabled	The following selections are available: - Disabled - Factbox - Page Party - Factbox and Page Part

The Integration Client can be activated on the following pages:

Pages ID	Pages Name
20	Personal account
21	Accounts Receivable
26	Accounts Payable Card
30	Article card
39	Fibu book.sheets
41	Sales quotation
42	Sales order
43	Sales Invoice
44	Sales credit note
49	Purchase request
50	Purchase order
51	Purchase Invoice
52	Purchase credit note
88	Project card
130	Sales delivery charge
132	Sales invoice
134	Sales credit note
136	purchase delivery charge
138	purchase invoice
140	Purchase credit memo
254	Purchase ledger sheets
434	Reminder
438	Registered Reminders
507	Frame order
509	Frame order
1171	User task

Pages ID	Pages Name
5050	Contact card
5159	Sales order archive
5162	Sales quotation archive
5164	Purchase request archive
5167	Purchase order archive
5600	Purchase order archive
5768	Goods Receipt
5900	Service order
5933	Service Invoice
5935	Service credit note
5964	Service quotation
5972	Posted service credit note
5975	Posted service delivery
5978	Posted service invoice
6050	Service contract
6053	Service contract quotation
6620	Frame order archive
6623	Frame order archive
6630	Sales complaint
6640	Purchase complaint
6650	Posted return delivery
6660	Posted return delivery
7330	Posted goods receipt
7335	Goods issue
7337	Posted goods issue

Document buffer

If an error occurs during the transfer of documents created in Microsoft Dynamics Business Central™, this document is temporarily stored in the "Document Buffer" table.

Possible causes are that the ELO system is not accessible, e.g. it is being maintained, or there is an error in the configuration of the archive structure in ELO. If the transfer event "on release" is used for a document, this document is always stored temporarily in this table. The background is a locking behavior of Microsoft Dynamics Business Central™.

Normally, the table should be empty. If this is not the case, the background job that performs the processing may not have been activated. This table will be filled if there was an error or a block during the transfer of the source documents to the ELO.

field	description
Mode	Type of record
No.	consecutive number
Number of errors	Number of attempts to resend the faulty document to ELO using the task queue. If there is always a 1 here, the task queue is probably not set up for this. (See Setup background job)
Last Error	which error occurred during the last transmission. Here can be for example the following messages: - getArchivingSubFolder ... "the ELO filing structure is missing in the ELO software" - preparePrintout ... "data record for the structure could not be determined by ODATA" - no document service found ... "no document was defined for the usage in the document service in ELO KUMAconnect"
Table ID	Transfer came from table
Record ID	Transfer was made for the record with the ID
Page ID	Transfer came from the page with the ID
Parameter string	What other parameters were used in the transfer to enable archiving in ELO. **Example:** {"tenant": "kumaconnectqs", "company": "CRONUS AG", "systemId": "Warehouse Shipment Header:{B95B9BD8-33FD-EC11-9949-9087C1D55CB9}", "objectId": "Table Warehouse Shipment Header", "referenceId": "Page 7335", "usage": "KVSDMS Whse. Shipment", "keys":{"No":"AUSG000005"}}

Setting up a background job for the document buffer

The background job to be set up via the task queue items monitors the DMS document buffer. If there are entries here and the background job performs a new processing.

The following settings must be entered for the new job:

field	description
Type of object to be executed	Please select code unit
ID of the object to be executed	Please select here the code unit with the number 5593405
Label of the object to be executed	KVSDMSSendFaultedDocuments
Description	A free description can be entered here
... further fields	Further fields are described in the help of Microsoft Dynamics Business Central™ Online Help (F1)

1.3.14 Power BI SALES activator

Turn the wealth of sales data from Microsoft Dynamics 365 Business Central into valuable KIPs.

Increase the success of your sales! Structured sales work requires valid data in real time. Activate previously unused potential of your employees and organization.

With the "Power BI SALES activator" from KUMAVISION and EOS, you can collect, structure and visualize data from your Microsoft Dynamics 365 Business Central at the touch of a button. Score points in the next meeting in front of the management with resilient and graphically prepared data. This way you create transparency for your employees and colleagues!

General

The "Power BI SALES activator" provides answers to your essential questions:

- Which items are my top sellers?
- Which salespeople generate the most revenue?
- How does incoming orders compare to the previous month/year?
- In which countries and regions are which articles selling particularly well?
- Which articles and article groups have an above-average contribution margin?
- Which customers generate which sales?
- Where are the opportunities? Where are risks hidden?
- How can I optimally deploy my sales staff?

Your advantages:

Put an end to time-consuming research in your ERP system, error-prone calculations in Excel and outdated data. With the "Power BI SALES activator" you make sure that all data is always and at any time up-to-date at your disposal. This enables you to better analyze, control and plan sales activities.

Target group:

Sales, Management, Controlling

Installation "EOS PowerBI connector"

1. Navigate to the "Extension Marketplace" in Microsoft Dynamics Business Central™.
2. Search for "EOS PowerBI connector" and click on "Get it now"
   [Directlink to Microsoft AppSource](#)
3. Complete the Microsoft basic profile form and click the "Continue" button
4. Select your language and click on the "Install" button

Installation "KUMAVISION Power BI SALES Activator"

After the installation of the "EOS PowerBI connector" in Business Central you can install the "Power BI SALES activator" from KUMAVISION.

1. Go to the Power BI service, navigate to the app menu, and click the button "Get Apps" to go the Power BI Marketplace
2. Search for the "Power BI SALES activator"
3. Click the button "Get It Now" and install the Power BI app
4. After that you have a new app named "Power BI SALES activator"

Connect the "Power BI SALES activator" with your own data

After the installation of the apps "EOS PowerBI connector" in Business Central and the "Power BI SALES activator" you can connect the Power BI SALES activator with your own data. 1. Open the app "Power BI SALES activator" and click on the link "Connect your data" 2. Now you are prompted to enter the required parameters:

Field	Description
Company	Is the company you want to connect to your Microsoft Dynamics Business Central™ instance. This must be the company name and not the display name. You can find the name of the company in Microsoft Dynamics Business Central™ in the "Companies" list.Microsoft Dynamics Business Central™
Environment	Is the environment name of your Microsoft Dynamics Business Central™ instance. Normally, the environment of the production instance is "Production", however, you can look up the exact name in the Microsoft Dynamics Business Central™ Admin Center.

1. After entering the parameters, you need to click the button "Next"
2. Now you have to choose the authentication method to connect to your Business Central. Set it to "OAuth2" and the privacy level to "Organizational".
3. Click the button "Sign in and connect" and sign into your work Microsoft account.
4. After this check the refresh of the dataset and set up a refresh schedule to keep your data up to date.
5. After refreshing the dataset, you can use the reports of the "Power BI SALES activator" from KUMAVISION with your own data and validate the data.

1.3.15 Quality Management Extension

General

The Quality Management Extension Module (QME) is integrated with the base modules of Microsoft Dynamics 365 Business Central. It supports manufacturing, warehouse, and batch tracking processes as well as financials.

.
The following section of the online help is intended to assist you in completing quality assurance tasks using the QME module.

. QME allows you to manage test equipment and its calibration. With the help of defined inspection plans, you can perform and document inspections via incoming, intermediate and final inspections. Furthermore, the quality assurance module gives you the possibility to create a supplier evaluation taking into account the performed quality inspection.

> Note

The use of this module can be set up only for storage locations that do not work with controlled putaway and picking. *(Field "Controlled storage and picking" in the storage location card)*.

> Note

The module does not support project related procurement. I.e. goods, which are procured in connection with a project number, do not trigger test orders. The background is that in the context of the project procurement the receipt is debited directly as project consumption / project sales. As a result, there is no stock in the system that can be inspected in the inspection order.

Establishment

Quality assurance facility

Before you can use the QME quality assurance module in Dynamics 365 Business Central, you must go to QME - Quality Assurance > Administration > Quality Assurance Setup make basic settings.

Inforegister General

Field	Description
Print exams automatically	This is used to specify whether a test order is to be printed out directly when it is created.
Do not show in availability	Use this field to control whether item stocks that are in check should not be considered as "Available" in the availability check. This affects the availability check in the sales document or stock transfer order, as well as the display in the "Sales line details" info box.
Envelope Book Sheet Template Name	You define the stock transfers to and from the QA test storage bin that are carried out in the background using a separate article ledger sheet template of the type Stock transfer. **Note:** In the background, the system automatically uses the article book. sheet name "QK (Auto)". Because of this, no book. sheet name with the same name may be created in the system.
Obligation to check for release	If the inspection requirement for release is set to "Yes", all specified inspections must be recorded in accordance with the number of samples in the inspection results matrix or in the inspection data when an inspection order is released. If the inspection obligation is set up with "No", a finding can also be set without recording inspection data.
Testing with locked test equipment	This field is used to define how to proceed with locked test equipment in test orders. The following options are available: **-> Display warning and decide with special release** If the test equipment in the test order is not exchanged for a released test equipment, the test order can only be released via a special release. **-> Display faults and replace test equipment** If the test equipment in the test order is not exchanged for a released test equipment, the test order cannot be released, not even via a special release.
Minor error factor Main error factor Critical error factor	These fields are used to set up the weighting factor of the defect classes for the calculation of the quality score. The sum of the factors must be 100.

Inforegister numbering

Field	Description
Test order numbers, Test plan numbers, Test equipment numbers, Test Equipment Group Numbers, Sample numbers	The number series for the documents and master data are set up in these fields.

Storage locations

For those storage locations in which quality inspections are to be carried out, the necessary facilities must be provided. The basic prerequisite for storage locations with quality inspection is the setup and use of storage bins at the storage location. It is therefore only possible to set up the fields in the Quality Assurance tab if the Storage bin necessary field is set up with Yes in the Logistics tab.

Storage Location Setup in Inforegister Quality Assurance for Single-Level Logistics

Field	Description
Perform quality inspection from purchasing	This field indicates whether incoming inspection for vendors is possible in the storage location.
Perform quality inspection from sale	This field indicates whether incoming inspection for customers is possible in the storage location.
Perform quality inspection from production	This field indicates whether intermediate and final inspections are possible in the storage location as part of production.
Perform manual test	This field indicates whether the storage location allows manual checks.
Storage bin Quality inspection	Enter the storage bin for the incoming inspections in this field. Goods receipts from purchasing documents - if an incoming inspection is required - are automatically posted to this storage bin.
Storage location blocking storage	Enter in this field the storage location to which goods blocked during checks are to be automatically transferred. This storage location may differ from the one to be set up at the moment.
Storage place blocking storage	Enter the storage bin for the blocked storage in this field.
Debit destroyed items	Set this field to Yes if destroyed items are to be directly booked out in an inspection. In this case, the fields Destroyed items storage location and Destroyed items storage bin remain empty.
Storage location destroyed items	In this field, enter the storage location to which goods destroyed during inspections are to be automatically transferred. This storage location can be different from the storage location to be set up at the moment.

Storage Location Setup in Inforegister Quality Assurance for Two-Stage Logistics

If the two-step logistics for goods receipt is set up in the storage location, i.e. if the fields Goods receipt required and Putaway required in the Logistics tab are set to Yes, additional facilities must be taken into account and are necessary.

It is mandatory that the storage location to be set up is also used as storage location blocked storage and storage location destroyed articles. In the case of an inspection decision in a goods receipt inspection, the stock transfer from the inspection storage bin initially takes place in total to the goods receipt storage bin (inspected). Depending on the inspection result, the stock placement from this storage bin takes place to the storage bin blocked storage and storage bin destroyed articles as well as to the putaway bin for the released inspection quantity via a putaway document.

goods
receipt

stockyard
quality inspection

test
order
decision
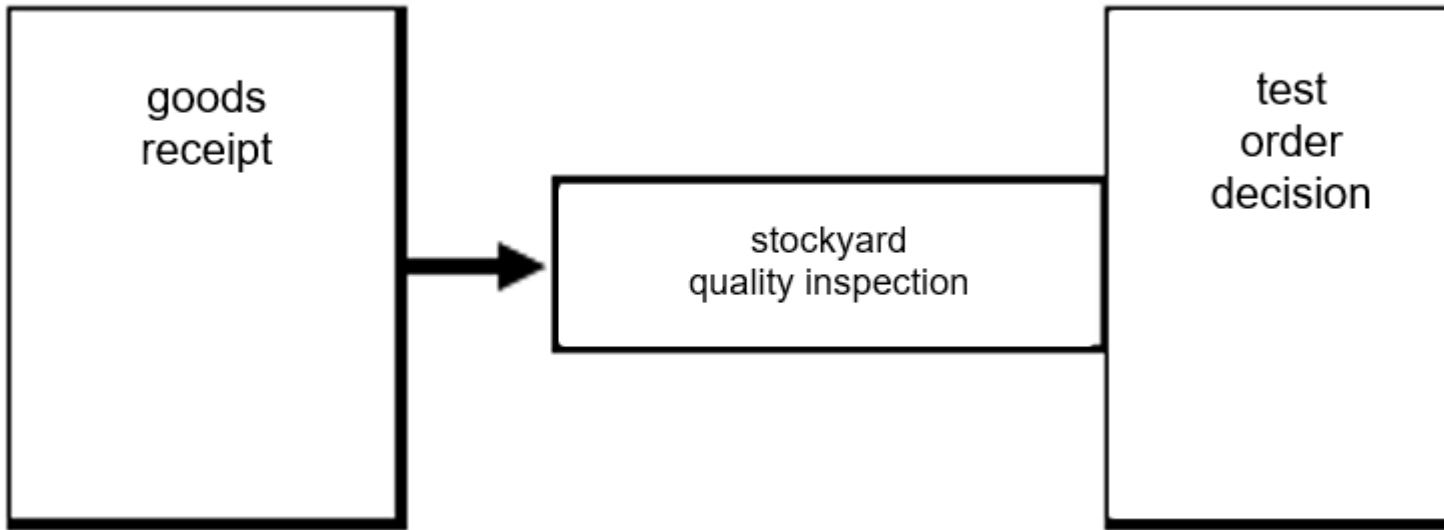
For storage locations with two-tier logistics in goods receipt, the following fields must also be set up in the Quality Assurance tab:

Field	Description
Goods receipt storage bin (checked)	This field defines the storage bin to which the items in incoming inspection are automatically transferred after the inspection decision. This transfer takes place independently of the test decision and the quantities to be released, blocked and destroyed. From this storage place subsequently takes place the storage: -> Quantity to be released Goods storage bins-> -> Quantity to be blocked->Storage place Blocking storage according to facility -> Quantity->destroyed Storage location destroyed articles acc. to facility
Automatic storage system	This field is used to set up which actions are to be preset in the dialog mask in the event of an inspection decision: **Option value <empty>** In the dialog mask for test decision, the two values ... -Create storage = No -Display document = No is displayed. These can be set to Yes in the dialog mask if required. **Create option value** If this value is set, an option value must be set in the Automatic storage for check result field. In the dialog mask, the two values ... • Create storage = Yes • Register storage = No are displayed. These can be changed in the dialog mask if required. **Create & Register Option Value** If this value is set, an option value must be set in the Automatic storage for check result field. In the dialog mask, the two values ... • Create storage = Yes • Register storage = Yes are displayed. These can be changed in the dialog mask if required.
Automatic storage in case of test result	This option value is empty if the automatic storage is empty. This option value must not be empty if the automatic storage is not empty. This parameter is used to define the quantities for which direct storage lines are created from the test decision. **Option value <empty>** A putaway line is automatically created for each of the released, blocked and destroyed quantities **Option value Locked** The automatic putaway is applied only to the quantity to be blocked. **Option value Destroyed** The automatic storage is applied only to the quantity destroyed. **Option value Locked & Destroyed** The automatic storage is applied to lock the quantity and destroy the quantity.

Storage bin type code with the property

Goods	receipt	Outgoing goods	Storage	Picking
Storage bin Quality inspection	YES	NO	NO	NO
Goods receipt storage bin (checked)	YES	NO	NO	NO
Storage place blocking storage	NO	NO	YES	NO (optional YES)
Storage place destroyed items	NO	NO	YES	NO (optional YES)

Use of the storage bins for quality assurance in logistics processes

The setup of the storage bins for quality assurance on the storage location map is strongly influenced by the selected logistics level for the storage location. The selected logistics level also determines what the QA process looks like when an item is received. Basically, two types of QA process are distinguished here:

- QA process for no warehouse logistics / single-stage warehouse logistics
- QA process for two-stage warehouse logistics The following sections describe the two QA processes and explain how the QA storage bins are set up and used in each process.
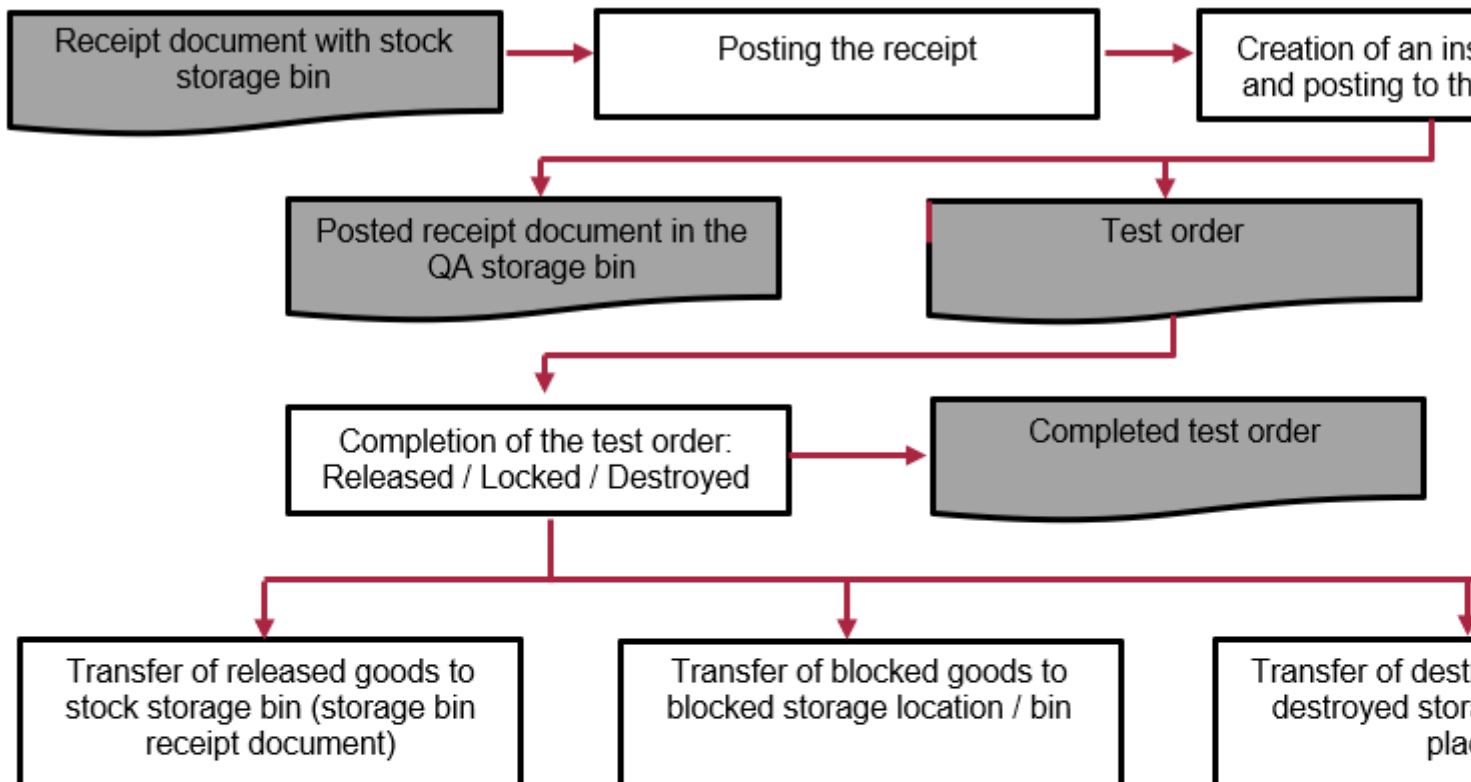
QA process for no warehouse logistics / single-stage warehouse logistics

Here we show the setup and use of the QA storage bins, which come into play in the case of single-level logistics, as well as bookings without warehouse logistics.
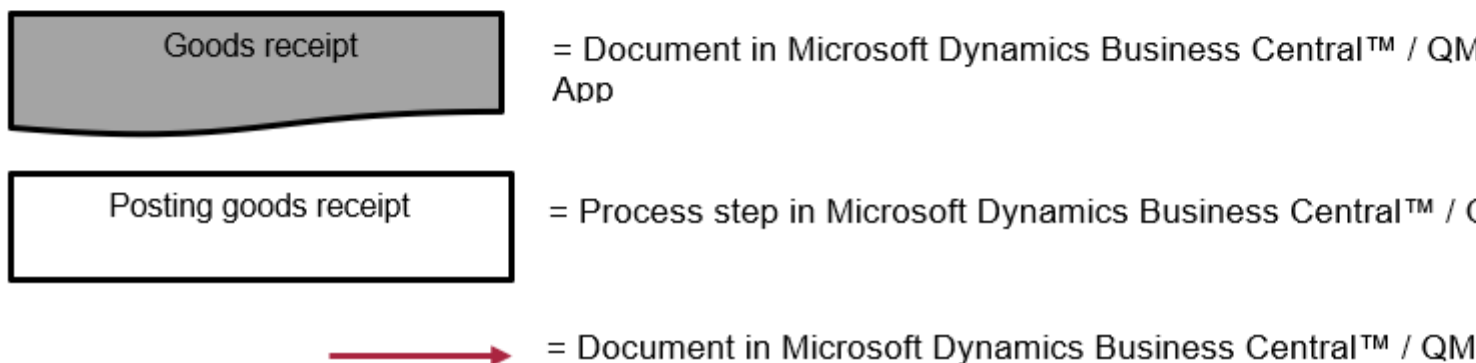
"No warehouse logistics" is defined by not using warehouse documents such as goods receipt, putaway, etc.

"Single-level warehouse logistics" is defined by the fact that only the warehouse documents of the first level are used. In this case, only the goods receipt without putaway and goods issue without picking.

If no warehouse logistics or only single-stage warehouse logistics are used, the receiving process for items that must undergo QA inspection looks like this:

| Receipt document with stock storage bin | → | Posting the receipt | → | Creation of an in... and posting to th... |

| Posted receipt document in the QA storage bin | | Test order |

| Completion of the test order: Released / Locked / Destroyed | → | Completed test order |

| Transfer of released goods to stock storage bin (storage bin receipt document) | Transfer of blocked goods to blocked storage location / bin | Transfer of dest... destroyed stor... pla... |

Legend:

| Goods receipt | = Document in Microsoft Dynamics Business Central™ / QM... App |

| Posting goods receipt | = Process step in Microsoft Dynamics Business Central™ / C... |

→ = Document in Microsoft Dynamics Business Central™ / QM...

Therefore, the following setup of QA storage bins is recommended for the two storage logistics options mentioned above:

Establishment	Description
Storage bin Quality inspection	A specific storage place within the storage location, which is used only for the inspection of the goods.
Storage location blocking storage	Here it is recommended to determine a separate storage location so that blocked goods do not flow into the stock of the main storage location.
Storage place blocking storage	When using the QME app, even if a separate storage location for blocked goods is used, it is mandatory to specify a corresponding storage location for blocked goods in this storage location.
Storage location destroyed items	Here it is recommended to determine a separate storage location, so that destroyed goods do not flow into the stock of the main storage location. Alternatively, the "Debit destroyed items" option can be used.
Storage place destroyed items	When using the QME module, even if a separate storage location for destroyed goods is used, it is mandatory to specify a corresponding storage location for destroyed goods in this storage location. Alternatively, the "Debit destroyed items" option can be used.

!!! "Note" If no storage logistics is used or only single-level logistics is applied, then the following setup fields of quality assurance must not be used in the storage location map: -Goods receipt storage bin (checked) -Automatic storage system -Autom. storage at test result

!!! "Note" The storage bin for quality inspection must not be used in incoming and outgoing documents. If the storage bins for destroyed items and blocked items are created in the same storage location as the storage bin for quality inspection, they also run into the inventory quantity of the item in this storage location. These storage bins can be used in the inbound and outbound documents. No further inspection is performed for this purpose.

**QA process for two-stage warehouse logistics**

Here we show the setup and use of QA storage bins when using two-tier logistics.

Two-level warehouse logistics is characterized by the fact that both the documents of the first storage level, such as goods receipt and goods issue, are used, and the documents of the second level, such as putaway and picking, are used.
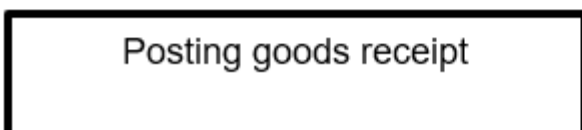
The receiving process for items that need to go through QA inspection is as follows:
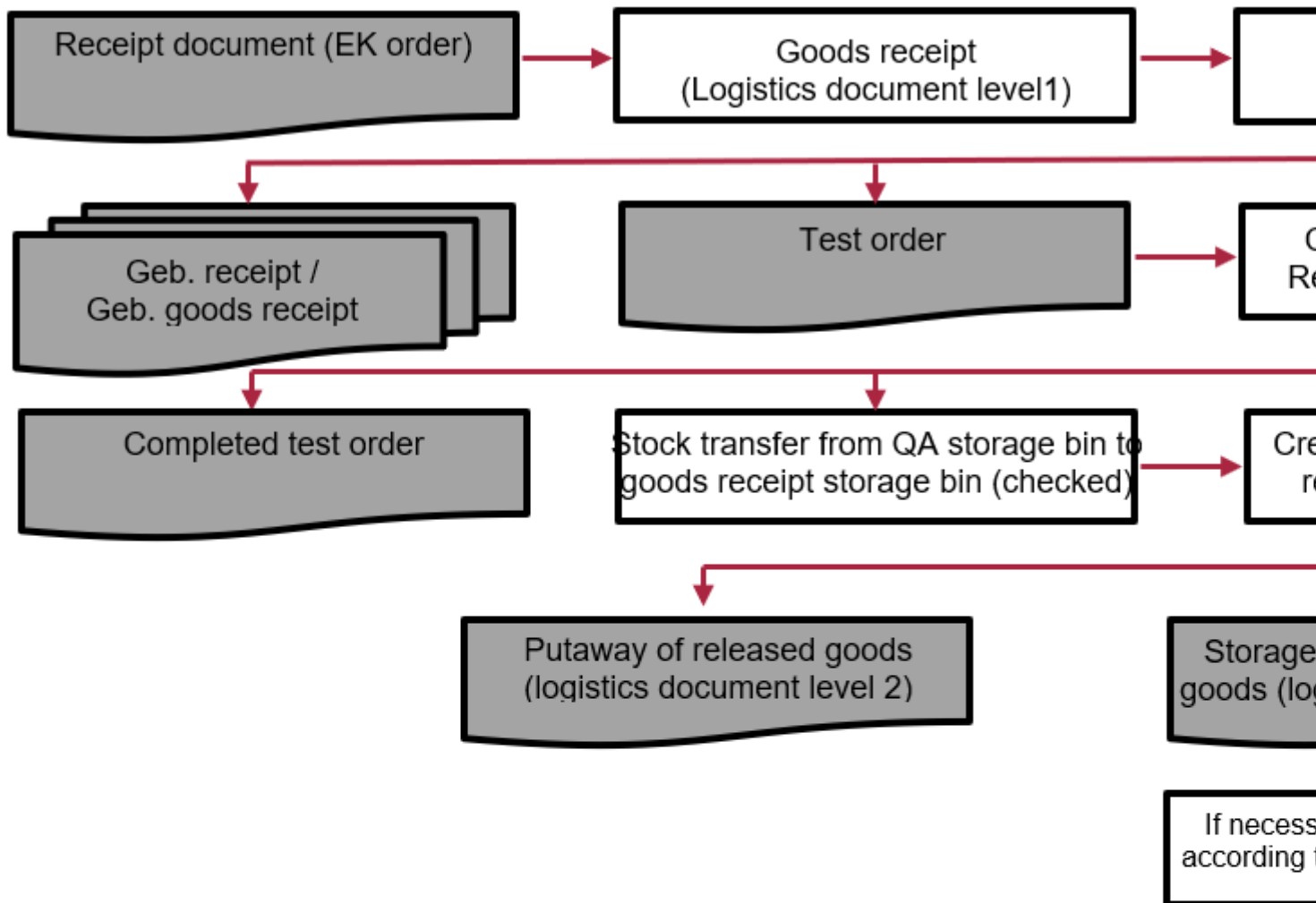
Legend:
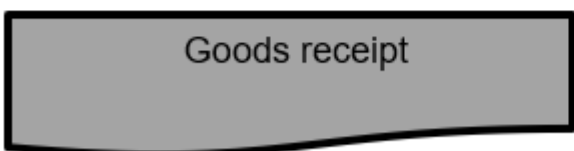
Goods receipt	= Document in Microsoft Dynamics Business C... App
Posting goods receipt	= Process step in Microsoft Dynamics Business...
	= Document in Microsoft Dynamics Business Ce...

Notes General setup

If the parameters of the QME app are set for a storage location with two-level logistics (See QME setup in the storage location map), all storage bins set there must refer to the same storage location. This is important because the inspected goods from an inspection order can be moved to respective storage bins within the warehouse by means of putaway (logistics document level 2). These include the stock storage bins for released goods, the blocked storage bin for blocked goods, and the destroyed storage bin for destroyed goods.

Furthermore, it is necessary to define the "Goods receipt storage bin (inspected)", as this is the storage bin in which the goods will be transferred after the inspection has been completed and will be ready for withdrawal for corresponding stock transfers.

Notes Handling of QA storage bins in logistics documents

The QA storage bins (storage bins for the QA inspection itself, for inspected goods, and for blocked and destroyed goods) are all components of one and the same storage location. However, since these storage bins are not intended to manage available stock, but rather to support the processes in quality assurance, the following restrictions apply to these storage bins in connection with two-level logistics:

"*QS*" *storage bin (field "Storage bin quality check"):*
It is the storage bin where goods are moved for inspection. The goods are checked in this storage bin. This bin must not be used in the logistics documents (putaway, picking, etc.).

"*QA checked*" *storage bin (field "Goods receipt storage bin (checked)"):*
It is a storage yard used as part of two-stage logistics in test orders. The goods from the QA inspection are moved to this storage bin when the inspection is completed. This storage bin is then used as a transit storage bin to store the inspected goods in accordance with the inspection result, in which it serves as a withdrawal storage bin for the stock placements from the inspection order. In connection with logistics documents, this storage bin may only be used for stock placements as a withdrawal bin (take) in order to place the goods into stock storage bins and the blocked/destroyed bin.

"*QS Blocked*" *storage bin (field "Blocked storage bin"):*
It is the storage bin to which the blocked goods are transferred when the inspection order is completed. In connection with logistics documents, this storage bin may only be used in a putaway as a putaway bin (place) if the blocked goods are put away in the blocked storage bin after an inspection order.

"*QS Destroyed*" *storage bin (field "Storage bin destroyed items"):*
It is the storage bin to which the destroyed goods are transferred upon completion of the inspection order. In connection with logistics documents, this storage bin may only be used in a putaway as a putaway bin (place) if the destroyed goods are transferred to the destroyed bin after an inspection order.

These storage bins may also not be used in other logistics documents. They are also not taken into account when creating a picking. On the one hand, these storage bins are excluded from the creation of the picking (picking lines of a picking), on the other hand, these storage bins may also not be used in the putaway lines of a picking as target storage bins.

Although the QA storage bins are not intended for managing the available stock, they are also not excluded from the available stock of the storage location. Therefore, it is important to check the blocked and destroyed stocks from the QA inspections regularly and, if necessary, to remove them to a separate storage location.

Notes Management of blocked / destroyed stocks in two-tier logistics.

Stocks in the "Destroyed goods" and "Blocked goods" storage bins should be transferred to a separate storage location using a stock transfer ledger sheet.

This is a manual process. (For this, it is recommended to use the "Get bin contents in stock transfer journal" function). This corrects the stock in the main storage location by removing the unusable stock in the "Blocked" and "Destroyed" storage bins to a separate storage location. Return documents for the blocked goods can then be triggered from this separate storage location. This is not possible in the main warehouse because the QA storage bins are ignored when using two-level logistics in the creation of a pick.

The QA storage bins (including the storage bin for blocked goods and storage bin for destroyed goods) are ignored during picking so that in normal operation only inspected/released goods from the stock storage bins are used during picking.

Notes Automatic return creation with two-stage outbound logistics

Automatic returns creation for two-tier logistics in the goods issue area is not supported.

In this case, the stock must be transferred from the blocked storage bin to a separate storage location (the "Get storage bin contents in stock transfer journal" function is recommended for this). A return document can then be created manually from this separate blocked storage location.

The direct creation of a return for the blocked storage bin from a storage location with two-level outbound logistics is not possible, since the goods issue here also requires picking and the blocked storage bin is not taken into account during picking.

Notes on the creation of putaways for two-stage logistics

The Quality Management Extension module limits the standard Microsoft Dynamics Business Central™ functionality for creating putaways.

Putaways for a posted goods receipt can only be created for lines whose goods are not in an open inspection order. You can view this in the posted goods receipt line via the "Quantity to be inspected (base)" and "Open inspection order no." fields.

For goods that are in inspection, putaways are automatically created when the inspection order is completed.

This restriction ensures that goods in inspection are not transferred from the QA storage bin to an inventory storage bin by a separate putaway.

It also prevents the inspection order from not being completed due to a lack of the appropriate stock of goods to create putaways from the inspection order.

In such cases, if a putaway created from the test order is accidentally deleted by the user, the following should be noted:

If the quantity of the posted goods receipt line has been completely checked and there is no longer an open inspection order for this line, a corresponding putaway can be created using the standard functionality for creating putaways. However, it must be taken into account that in this putaway the quantities of the goods are not differentiated according to released goods or blocked goods and are therefore not distributed to the corresponding storage bins. This differentiation must be done manually. If there is still an open inspection order for the posted goods receipt line, because only a partial quantity was released from the inspection, the standard functionality for creating a putaway can only be used when the open inspection order has also been completed.

Note on working with putaway worksheets

When using putaway worksheets for a storage location, it is possible that a posted goods receipt is displayed during the action "Get logistics document", even if all items in this posted goods receipt have a link to the open inspection order. This is due to the fact that the standard "Get logistics document" functionality takes into account all posted goods receipts whose items have not yet been completely put away. Since a putaway is not created for items subject to inspection until the inspection order is completed, the corresponding posted goods receipt is also displayed in the logistics document overview. However, items from a posted goods receipt that are linked to an "open" inspection order cannot be dragged into the putaway worksheet lines. At this point, a message may appear stating that no putaway worksheet lines could be created. This ensures that for goods in inspection, putaways can only be created by completing the inspection order.

Report selection

In the "Report selection", the corresponding report must be set up for the respective use (inspections). Report 5483763 - "Inspection order" is available in the QME and can be used for all inspections. Report usages for which customized reports can be created and assigned if required are: * Incoming inspection * Intermediate inspection operation * Intermediate examination external work course * Final inspection * Manual test

Exams facility

Test characteristics

Recurring inspection characteristics can be set up via the "Inspection characteristics overview". These inspection characteristics form the basis for creating inspection plan lines. The Code and Description fields identify and describe the inspection characteristic. The Attribute field defines whether the characteristic is to be inspected attributively or whether it is a characteristic with measured values to be recorded.

Field	Description
Code	Assignment of the unique code of the inspection characteristic
Description	The description of the inspection characteristic
Attribute	Setup of the type of inspection characteristic **-> Yes** For an attributive inspection characteristic, the inspection result is to be recorded as Yes (attribute fulfilled) or No (attribute not fulfilled). **-> No** A measured value is to be recorded for a non-attributive inspection characteristic

Additional lines with a further description of the inspection characteristic can be created for an inspection characteristic. If an inspection characteristic is specified in an inspection plan line, these additional description lines of the inspection characteristic are transferred to the inspection plan lines below the selected inspection characteristic.

Via Further options > Navigate > ActionGroup2 > Translations, a translation for the required language codes can be set up for each inspection characteristic. The translations are accessed when an inspection order is printed for a vendor with the corresponding language code.

Error category

Error categories can be assigned to the detailed test errors and serve as a grouping element of the test errors. To create a defect category, first call up the "Defect categories" via the user search. Via "New" in the menu ribbon, you can define a new defect category with the help of the table below.

Field	Description
Code	Assignment of the unique code of the error category
Description	The description for the error category

Via Further options > Navigate > Translations, a translation for the required language codes can be set up for each error category. The translations are accessed when a check order is printed for a vendor with the corresponding language code.

Test error

When recording the test data of a test order, a defined test defect can be assigned if defects are detected. Test errors are used to evaluate and group the test data. To define the test errors, call up the "Test errors" via the user search. Via "New" in the menu ribbon, you can define a new test error with the aid of the table below.

Field	Description
Code	Assignment of the unique code of the test error
Description	The description of the test error
Error category code	Assignment of a defect category as grouping element for test defects

Via Further options > Navigate > Translations, a translation for the required language codes can be set up for each check error. The translations are accessed when a check order is printed for a vendor with the corresponding language code.

Test Equipment Group

A test equipment group can be assigned to a test equipment. To define a test equipment group, call up the "Test equipment group overview" via the user search. Via "New" in the menu ribbon, you can create a new test equipment group using the table below.

Field	Description
No.	Assignment of the unique number of the test equipment group. The number series for the test equipment groups must be set up in the quality assurance facility.
Description	The description of the test equipment group. The value from Description is automatically transferred to the Search term field.
Description 2	The description 2 to the test equipment group.
Search Keyword	The search term for the test equipment group
Built on Built by	These non-editable fields show when and by which user the record was created.
Modified on Modified	These non-editable fields show when and by which user the record was last modified.

Via the test equipment group list, remarks can be stored for a test equipment group via further options > Navigate > Test equipment groups > Remarks.

Sampling regulations

Both standardized and freely defined regulations can be set up as sampling regulations. A sampling regulation is a basic element of the inspection plan. For each inspection plan, 3 sampling regulations must be assigned: * Sampling rule Code (Normal) * Sampling requirement code (Tightened)
-> Sampling rule Code (reduced)
Therefore, it makes sense to set up three sampling rules with the respective inspection severity for a basic sampling rule.

To set up the sampling regulations, call up the sampling regulation overview via the user search. You can define a new sampling regulation via "New" in the menu ribbon.

Sampling regulations consist of a header (info tab "General") and the sampling regulation lines (info tab "Lines").

Inforegister General

Field	Description
Code	Assignment of the unique code of the sample. The number series for the samples is to be set up in the quality assurance facility.
Description	The description to the sampling rule.
Test severity	This field is used to set up the inspection severity of the sampling requirement. Possible option values are: • Normal • Reduces • Tightened In a goods receipt inspection, a skip instruction can be set up for an inspection plan. This is used to dynamically determine the inspection severity. Therefore, it can make sense to set up three sampling instructions for a basic sample such as AQL 25 II: • AQL 0.25-II normal test • AQL 0.25-II reduced test • AQL 0.25-II tightened test
Skip lot number	The Skip lot number field is used to specify how many tests are to be skipped after a test has been performed and ended with a "Release" test decision

Inforegister lines

Field	Description
From batch size	This field is used to set up the lot size (delivery or production quantity) for which the subsequent parameters are used.
Sample size in %	This field specifies what percentage of the delivery or production quantity is used for sampling. The system calculates the
Sample size	This field is to be filled with a fixed value that will be used as the sample size. If this field is filled, no entries are allowed in the Sample size % and Skip item count fields.
Skip item quantity	This field is used to control how many test items are to be skipped within the sample. If every 5th part is to be inspected, 4 parts of the batch size are to be skipped. In this case, the skip item number must be set to 4.
Assumption %	The acceptance number is the maximum number of defective specimens in the sample at which the inspection may be released. This value can be specified as a % value in relation to the sample size. This value is purely informative. It is not checked by the system in the inspection decision.
Acceptance number	The acceptance number is the maximum number of defective specimens in the sample at which the inspection may be released. As an alternative to the acceptance %, an absolute acceptance number can also be set up. This value is purely informative in the inspection order. It is not checked by the system in the inspection decision.

Jump instructions

The jump instructions can be used to set up dynamic modification of the sample size for goods receipt inspections. The jump instructions can be set up ...

1) ... for a specific item and vendor
The Article no. field is filled with the respective article no. The Vendor no. field is filled to the respective vendor

2) ... for a specific vendor - regardless of the item.
The Item no. field remains empty The Vendor no. field is filled to the respective vendor

3) ... for a specific item - regardless of the respective vendor.
The Article no. field is filled with the respective article no. The Vendor No. field remains empty

4) ... for generally valid for all articles and creditors
The fields Item no. and Vendor no. remain empty

The system checks in the sequence listed above whether a jump instruction is set up for the combination of article and vendor and accesses the first set up found. According to the jump instruction found and the previous inspection decisions in the goods receipt inspections, the current goods receipt inspection is created with the corresponding sample size. The history of the goods receipt inspections can be found in the skip lot history overview.

In the jump instructions, the test decisions "Release" and "Special release" are treated in the same way.

When an incoming inspection is first created for a specific supplier and specific item, an incoming inspection is always created with the Normal sampling rule.

To define the jump instructions, call them up via the user search. Via "New" in the menu ribbon you can set up a new jump instruction with the help of the table below.

Field	Description
Item no.	Enter the article no. for which a jump instruction is to be made in this field. If the field remains empty, the condition applies to all articles.
Creditor no.	Enter a vendor in this field for which a jump instruction is to be made. If the field remains empty, the condition applies to all vendors
Tightened to Normal	Enter in this field the number after how many consecutive released inspections the sampling requirement should change from Tightened to Normal.
Normal to Reduced	Enter in this field the number after how many consecutive released inspections the sampling rule should change from Normal to Reduced.
Reduced to Normal	Enter in this field after how many consecutive blocked inspections the sampling rule should change from Normal to Reduced.
Normal to Tightened	Enter in this field after how many consecutive blocked inspections the sampling rule should change from Normal to Tightened.
Max, number of reduced tests	Enter in this field the maximum number of inspections with reduced sampling requirement before an inspection with the normal sampling requirement is to be created again. To be able to use inspection orders with reduced sample size, a value <> 0 must be set up in this field.

Tolerance classes

The tolerance classes are used to create the individual dimensional categories for the free size tolerances. Common tolerance classes are: * f (fine) * m (medium) * c (coarse) * v (very coarse)

To define the tolerance classes, call them up via the user search. Via "New" in the menu ribbon you can create a new tolerance class with the help of the table below.

Field	Description
Code	The unique code of the tolerance class is created in this field
Description	The description of the tolerance class is created in this field

Tolerances of free dimensions

Via the free size tolerances, the free size tolerance ± is set up for the respective tolerance class and the nominal dimension range above … / to … . Tolerances are used in inspection plan lines. The minimum nominal value and the maximum nominal value of the inspection characteristic are automatically calculated from the nominal value of the inspection characteristic and the tolerance of the inspection characteristic. Nominal value of the inspection characteristic.

To set up the tolerance, call up the "Tolerances" via the user search. Via "New" in the menu ribbon you can define a new free size tolerance with the help of the table below.

Field	Description
Tolerance class Code	This field is used to specify the tolerance class code.
Nominal dimension above	This field indicates the lower nominal dimension
Until nominal dimension	This field indicates the upper nominal dimension
Tolerance ±	In this field, the permissible tolerance of the tolerance class and the nominal dimension range is specified

The table for limit dimensions for linear dimensions ...

Limit dimensions in mm for nominal dimension range in mm

Tolerance class	over 0.5 to 3	over 3 to 6	over 6 till 30	over 30 till 120	over 120 till 400	over 400 till 1000	over 1000 till 2000	over 2000 till 4000	over 4000 till 8000
f (fine)	± 0,05	± 0,05	± 0,10	± 0,15	± 0,2	± 0,3	± 0,5	-	-
m (medium)	± 0,10	± 0,10	± 0,20	± 0,30	± 0,5	± 0,8	± 1,2	± 2	± 3
c (coarse)	± 0,20	± 0,30	± 0,50	± 0,80	± 1,2	± 2,0	± 3,0	± 4	± 5

... are to be set up in the table of free size tolerances as follows as an example:

Fit tolerances

To set up the fit tolerances, call them up via the user search. Fit tolerances are used in inspection plan lines. The nominal value of the inspection characteristic and the fit tolerance of the inspection characteristic automatically result in the min. nominal value and the max. nominal value of the inspection characteristic. Nominal value of the inspection characteristic.

Fit tolerances can only be created with the tolerance abbreviations for outer dimensions (lower case) and inner dimensions (upper case) if a distinction between upper and lower case is technically activated in the database for primary key fields. If this is not the case, no distinction is made between a fit tolerance h13 and H13 and the creation of the second fit tolerance leads to an error:

"The record already exists in the Fit Tolerance table. Identifying fields and values: Fit='H13'.

In such a constellation, the fit tolerances must be created with unique code, such as:

H13 (A) ... for outside dimension fit tolerance H13 (I) ... for inside dimension fit tolerance

Field	Description
Fit	This field is used to specify the fit code
Nominal dimension above	This field indicates the lower nominal dimension
Until nominal dimension	This field indicates the upper nominal dimension
Lower tolerance in µm	In this field, the lower tolerance of the fit and nominal dimension range is specified. The value must be specified as a negative value
Upper tolerance in µm	In this field, the upper tolerance of the fit and nominal dimension range is specified. The value must be specified as a positive value

The table of fit tolerances (example: h6) must be created as follows

External dimensions (shafts): Limiting dimensions in µm (1 µm = 0.001 mm)

Nominal dimension range in mm	f6	f7	g6	h3	h4	h5	h6	h8	h9	h15
from 1	-6	-6	-2	0	0	0	0	0	0	0
Until 3	-12	-16	-8	-2	-3	-4 -6	-14	-25	-400	
over 3	-10	-10	-4	0	0	0	0	0	0	0
to 6	-18	-22	-12	-2,5	-4	-5	-8	-18	-30	-480
over 6	-13	-13	-5	0	0	0	0	0	0	0
Until 10	-22	-28	-14	-2,5	-4	-6	-9	-22	-36	-580
over 10	-16	-16	-6	0	0	0	0	0	0	0
Until 18	-27	-34	-17	-3	-5	-8	-11	-27	-43	-700
over 18	-20	-20	-7	0	0	0	0	0	0	0
Until 30	-33	-41	-20	-4	-6	-9	-13	-33	-52	-840
over 30	-25	-25	-9	0	0	0	0	0	0	0
up to 50	-41	-50	-25	-4	-7	-11		-16	-39	-62
over 50	-30	-30	-10	0	0	0	0	0	0	0
up to 80	-49	-60	-29	-5	-8	-13	-19	-46	-74	-1200
over 80	-36	-36	-12	0	0	0	0	0	0	0
up to 120	-58	-71	-34	-6	-10	-15	-22	-54	-87	-1400

Example setup of the fit tolerance h6

Testing equipment

Call up the "Test equipment overview" via the user search to access the test equipment list. Test equipment is the equipment that is used in the test to determine measured values. A piece of test equipment can be assigned to the respective test plan line with which the characteristic in question is to be measured. Within the inspection plans and inspection orders, a check is performed to determine whether the specified test equipment has the status Released or Not subject to calibration in order to be used in the inspection line. However, there is no check whether the technical specifications in the test equipment card, such as unit code, reading accuracy or measuring range, match the characteristic and value range to be measured.

Test equipment card

The TEST EQUIPMENT CARD consists of the GENERAL, USE, CALIBRATION and CALIBRATION LINES tabs. These are explained in more detail below.

Inforegister General

In the GENERAL INFO tab, enter the master data of the test equipment.

Field	Description
No.	This field contains the unique number of the test equipment. The number series for test equipment must be set up in the quality assurance facility.
Description	The description of the test equipment
Units code	This field is used to enter which unit of measurement the test equipment measures. This field accesses the Units table. If necessary, suitable units must first be created in this master data table.
Test equipment group no.	This field is used to set up the assignment of the test equipment to a test equipment group.
Reading accuracy	The smallest distinguishable reading value of the test equipment is entered in this field.
Measuring range	The measuring range of the test equipment is entered in this field.
Search Keyword	This field contains the search term for alternative selection next to the number. The entry in the Description field appears here as the default.
Manufacturer no.	The manufacturer no. of the test equipment is entered in this field.
Serial no.	The serial number of the test equipment is entered in this field
Date of receipt	The date of receipt of the test equipment is entered in this field
Status	This field displays the current status of the test equipment. The option values for Status are: **Locked** Locked test equipment cannot be used in the test order line or can only be used to a limited extent. If necessary, the test equipment specified in the test plan must be replaced in the test order by an unlocked test equipment. See also Quality assurance setup, Inspection with locked test equipment field. **Under test** This status indicates that the gage is currently in inspection. When a new piece of test equipment is created, the status is automatically In test. **Release** This status indicates that the test equipment can be used for tests. In this status, the test equipment cannot be edited **Not subject to calibration** This status indicates that the test equipment does not need to be calibrated. It is available for quality tests.

Field	Description
Created on	This field is filled automatically. It indicates when this test equipment was created.
Created by	This field is filled automatically. It indicates which user has created this test equipment.
Corrected on	This field is filled automatically. It indicates when this test equipment was last processed.
Corrected from	This field is filled automatically. It indicates which user last processed this test equipment.
Number of test plan lines	This field shows how many inspection plan lines the gage is assigned to. If the Released status of a piece of test equipment must be reset, the affected test plans can be displayed via the drilldown of this field and opened for revision in order to exchange the current test equipment for a released piece of test equipment.
Number of open test order lines	This field shows how many open test order lines the gage is assigned to. If the Released status of a piece of test equipment has to be reset, the affected test orders can be displayed via the drill-down of this field and opened for revision in order to exchange the current test equipment for a released piece of test equipment.

Inforegister Use

In the USAGE info tab, you can additionally specify which persons are responsible for the test equipment and to which department of the company the test equipment is assigned.

Field	Description
Responsible	This field can be used to assign an employee responsible for this test equipment from the Employees table.
Deputy	This field can be used to assign a deputy responsible for this test equipment from the Employees table.
Department code	This field can be used to assign a department from the Departments table

Inforegister Calibration

In the Calibration tab, you can store the regulation, location, cycle, etc. according to which the calibration takes place.

Field	Description
Calibration specification	A calibration specification can be entered in this field.
Calibration location	This option value is used to set up the calibration location. Option values are: **<empty>** Calibration location is not defined or the test equipment does not require calibration **Internal** Calibration takes place in the company **External** The calibration takes place outside the company. With this radio button a vendor can be entered in the following field
Calibration Vendor no.	If the calibration location is External, the vendor who performs the calibration of the test equipment as a service provider can be entered in this field.
Calibration cycle	This field is used to set up the calibration cycle using a date formula.
Next calibration date	This field is calculated automatically and is not editable. After the completion of a calibration, the next calibration date is calculated based on the calibration cycle.

Inforegister Calibration Lines

The calibrations performed are documented in the calibration lines. The calibration lines are created automatically from the calibration specifications when a new calibration is created. See Calibrating test equipment.

Right-click in the Calibration Date column heading to expand or collapse all rows. Click on a Calibration Date value to collapse or expand just those calibration rows.

Field	Description
Calibration date	This field is filled with the current date when the calibration was created.
Calibration type	This field contains the measured variable that is to be calibrated.
Feature	This field describes the calibration type.
Attribute	This field indicates whether the characteristic is qualitative or not.
All right	Check this field if the actual value is within the setpoint specifications.
Set point	This field contains the nominal value if it is a quantitative characteristic.
Min. set point	This field contains the smallest permissible measurement if it is a quantitative characteristic.
Max. Set point	This field contains the largest permissible measurement if it is a quantitative characteristic.
Actual value	In this field you enter the actual value for calibration.
Units code	This field contains the unit of the measurand.

Test equipment Remarks and translations

Additional data can be maintained via the menu ribbon using Further options > Associated > Test equipment:

Comments

This form can be used to record internal remarks about a piece of test equipment

Translations

In this form, a translation for the required language codes can be set up for each piece of test equipment. The translations are accessed when an inspection order is printed for a vendor with the corresponding language code.

Calibrate test equipment

The module enables you to schedule necessary calibrations and to record and thus document calibrations that have been performed.

Note

When you create a new piece of test equipment that requires calibration, you should record an initial calibration in order to have the next calibration date calculated after the test equipment has been released.

Create calibration presets

Before you can document a calibration for a piece of test equipment, you must enter calibration specifications. To do this, go to the Calibration specifications call in the test equipment CARD IN the menu ribbon. In the CALIBRATION SPECIFICATIONS form that opens, you can enter the measured quantities and conditions to be inspected for the test equipment. The following table describes the fields of the CALIBRATION SPECIFICATIONS FORM.

Field	Description
Calibration type	In this field you define the method of calibration.
Feature	In this field you define the characteristic to be checked
Attribute	If the characteristic is to be tested purely attributively, mark the line with Yes. If, on the other hand, a measured value is to be recorded for this characteristic during calibration, mark this line No.
Set point	If the characteristic is not to be assessed attributively, the nominal value of the calibration specification is specified in this field.
Min. set point	If the characteristic is not to be assessed attributively, the minimum target value of the calibration specification up to which the result is OK is specified in this field.
Max. Set point	If the characteristic is not to be assessed attributively, the maximum target value of the calibration specification up to which the result is OK is specified in this field.
Units code	The unit code of the characteristic to be assessed is entered in this field

Document calibration

To perform a new calibration, you must first set the status of the test equipment to "In test". Note that test equipment with the status "In test" cannot be used in test orders, or can only be used to a limited extent.

A new calibration is created via the "Create new calibration" function. Here, the current calibration specifications are copied into the calibration lines. The working date is used as the calibration date. The calibration date can be changed manually if required.

For calibration lines to be measured, enter the respective measured value in the Actual value field. If the actual value is within the limits specified in the calibration specification, Min. Setpoint, the indicator OK is automatically set. No actual value can be entered for attributive calibration lines. In these lines, the OK indicator must be set manually.

Once all calibration lines are acquired, the overall result must be set on the calibration date line.

Finally, the status of the test equipment must be set. If all lines including the overall result line are marked with OK, the status of the test equipment can be set to Released. By setting the status, the next calibration date is automatically calculated using the calibration date of the calibration line and the date formula from the Calibration cycle field.

If not all lines are marked with OK, the status of the test equipment must be set to Locked.

Copy test equipment

To create similar test equipment, an existing test equipment can be used as a copy template. Proceed as follows when copying a piece of test equipment:

First create a new empty data set. Then call up the Copy from function from the menu ribbon of the test equipment card. Select the test equipment that you want to use as a template from the test equipment overview that opens. Confirm the selection with OK. The copy function copies all fields from the test equipment selected as the source as well as the calibration specifications. The Next calibration date field is also copied. If you create a new gage that requires calibration, you should record an initial calibration in order to have the next calibration date calculated after the gage has been released.

Test plans

Call up the "Test plan overview" via the user search to access the test plan list. The test plan is the basis from which test orders are created. The test plan contains the parameters relevant for the test order. The characteristics to be inspected are also defined in the inspection plan. Which inspection plan is to be used in which process by the system is defined in the inspection plan usage.

Via "New" in the menu ribbon you can define a new test plan using the tables below.

When a new inspection plan is created, it initially receives the status New. The status can be changed to In development, Certified or Expired using the functions in the test order header menu. Only with the status Certified can an inspection plan be used as a default for creating inspection orders. In the Certified status, no changes can be made in an inspection plan. To change a certified inspection plan, the status must be reset to In development. Changes are also possible in the New or Expired status.

Create test plans

Inforegister General

In the GENERAL info tab you will find general information such as description, status and version.

Field	Description
No.	This field contains the unique number of the test plan. The number series for test plans must be set up in the quality assurance facility.
Description Description 2	A description of the test plan can be set up in these fields. The description is transferred to the test order.
Test type	If the test plan includes destructive tests, select the Destructive option value for the test type. This option value is transferred to the inspection order. Only in the case of inspection orders with the Destructive inspection type is it possible to specify a destroyed quantity in the inspection and to transfer or clear it during the inspection.
Search Keyword	You can use the Search term field to search for a specific test plan whose test plan no. you do not have present. The entry from the Description field appears as the default.
Drawing	This field can be used to import a file, such as a drawing, for the item to be inspected. Unlike file links, the specified file is imported into the inspection plan. The file is transferred to the inspection order.
Status	This option value defines the status of the test plan **New** This status is set automatically when a new test plan is created. With this status, changes can be made in the test plan. **In development** This status is set via the Reset status function. With this status, changes can be made in the test plan. **Certified** This status is set via the Certify function. With this status, no changes can be made in the inspection plan. Only with this status can inspection orders be created from the inspection plan. **Expired** This status is set via the Exit function. This status indicates that the test plan has expired and is no longer used for test orders.
Version numbers	A test plan can be versioned. If this is intended, the number series for the version numbers must be stored in this field. For more information on versioning the test plan, please refer to the corresponding chapter.
Active version	In this field you can see the active certified version of the test plan depending on the working date. If you have not created a certified version, this field remains empty.

Inforegister lines

The Lines info tab lists the characteristics to be inspected with detailed information such as description, inspection equipment, nominal values and inspection notes, etc.

Field	Description
Position	An item number must be entered in this code field. The way you assign position numbers is up to you. This field is mandatory for the certification of an inspection plan.
Inspection feature code	The inspection characteristic to be inspected in the inspection order must be entered in this field. The Lookup button can be used to select an inspection characteristic from the inspection characteristic overview. After selection, the description and the value of the Attribute field are transferred to the inspection plan lines. For certification of an inspection plan, there must be at least one line with inspection characteristic code.
Attribute	After selecting the inspection characteristic code, the Attribute Yes/No indicator is taken from the inspection characteristic. The indicator can be changed in the inspection plan line.
Description	After selecting the inspection characteristic code, the description of the inspection characteristic is transferred to the inspection plan line. The description can be changed in the inspection plan line.
Test equipment groups No.	In this field, a test equipment group can be selected from the test equipment group overview using the Lookup button. The use of a test equipment group no. is not mandatory in the test plan line and in the test order.
Test equipment no.	In this field, a test equipment can be selected via the Lookup button. All test equipment within the test equipment group specified in the previous field is displayed here. If you have not entered a test equipment group, all available test equipment that has been created without a test equipment group no. will be displayed via the lookup button. The use of a test equipment no. is not mandatory in the test plan line and in the test order.
Test equipment designation	After selecting the test equipment no., the description is automatically transferred to this field. You can change the description individually.
Manual free size tolerance class	Here you can select the free size tolerance class from the previously set tolerance classes via the Lookup button. The minimum setpoint value and the maximum setpoint value are then automatically calculated from the tolerance class and the setpoint value to be specified for the characteristic. Nominal value. Only one free size tolerance class or one fit can be specified in the line.
Fit	Here you can select a previously set up fit via the Assist button. The min. setpoint and the max. setpoint are then automatically calculated via the fit and the setpoint to be specified for the characteristic. Target value. You can only ever enter either a free size tolerance class or a fit in the line.
Min. set point	If the inspection position has a quantitative size, then you can enter a value for the smallest permissible dimension here. If a free size tolerance class or a fit is entered in the line, this value is automatically calculated from the nominal value.

Field	Description
Set point	If the test position has a quantitative value, you can enter a nominal value here. If a free size tolerance class or a fit is entered in the line, the min. nominal value and the max. nominal value are automatically calculated from this value. Nominal value are calculated.
Max. Set point	If the test position has a quantitative size, then you can enter a value for the largest permissible dimension here. If a free dimension tolerance class or a fit is entered in the line, this value is automatically calculated from the nominal value.
Units code	In this field, specify the reference unit for the entered dimensions.
Test note	You can enter an additional test note as free text in this field.
Specification	In this field, a file, such as a specification for the characteristic to be inspected, can be imported. Unlike file links, the specified file is imported into the inspection plan line. The file is transferred to the inspection order line.

Inforegister sampling requirement

The SAMPLING REGULATION info tab contains the sampling regulations to be used in general if no other sampling definitions are shown in the rows.

Field	Description
Sampling rule Code (Normal)	In this field, you store the sampling specification for the normal inspection severity. The inspection quantity is calculated on the basis of this sampling specification as soon as the system classifies an inspection as a normal inspection severity by means of jump instructions.
Sampling pres. Code (Tightened)	In this field, you store the sampling specification for the tightened inspection. The inspection quantity is calculated on the basis of this sampling specification as soon as the system classifies an inspection as tightened by means of jump instructions.
Sampling pres. Code (Reduced)	In this field, you store the sampling specification for the reduced inspection severity. The inspection quantity is calculated on the basis of this sampling specification as soon as the system classifies an inspection as a reduced inspection severity by means of jump instructions.

A sampling specification must be entered in the Sampling specification field, otherwise the inspection plan cannot be released and a corresponding message is issued.

Note

Sampling rules used must have at least one row with "Sample Size">0, "Sample Size %">0 or "Skip Item Count">0.

Inforegister Management

In the ADMINISTRATION tab, you will find information about who created or modified the test plan and when.

Field	Description
Built on	Date of the test plan installation
Built by	User of the test plan system
Modified on	Date of last change
Modified from	User of the last change

Test plan remarks / test plan notes

Test plan remarks

You can store any number of remarks for each test plan. Click on the test plan card in the "Related>Test plan>Remarks" menu band. The "Remarks" window opens in which you can enter your remarks.

The remarks can be viewed and also changed via the same path.

Test plan notes

The test equipment notes are recorded in the "Notes" info box and are also displayed there with date and user name after "Save".

Test plan uses

Call up the "Inspection plan usages" via the user search. In the inspection plan usage, you must set up in which processes which inspection plans are to be accessed in order to create the process-relevant inspection orders.

The "Inspection plan usage" can also be opened directly from the inspection plan map or the inspection plan overview. Furthermore, this can also be called up in the vendor, customer, article, work center groups, work centers, operation filtered to the respective data record.

The USAGE TEST PLAN page is divided into a header and a row area. The header area is used to filter the usage lines.

Test plan Use filter area

You can perform the following filtering for the test plan usage lines:

Field	Description
Origin type filter / Origin code	filter This can be used to set a filter on one of the origin type options. If a unique data source is defined by the origin type filter, such as vendor, an additional origin code filter can be set. In this case, a specific vendor can be selected from the list of vendors as the origin code filter, or an origin code filter can be entered manually. In this case, a filter string such as <>'' or 1* etc. can also be used. If no unique data source is defined by the origin type filter, no additional origin code filter can be set. Selecting the Origin type filter None will remove the filtering on a specific origin type. All origin types are displayed.
Routing version filter	This can be used to set a filter on the version of a routing for production.
Working aisle filter	If you have selected an intermediate inspection operation as the origin type and the routing in the Origin code field in the next step, you can finally filter to the specific operation.
Type filters / Item no. Filter	Here a filter can be set on the option value article. If this type of filter is set, an article no. filter can also be set. A certain article can be selected from the list of articles as article no. filter or an article no. filter can be entered manually. In this case also a filter string like <>'' or 1* etc. can be used.Likewise, a kind of filter on All articles can be selected. This filters the use of the test plan to those lines that are generally valid for all articles. Selecting the Type Filter None will remove the filtering on the type.
Test plan filter	In this field, a test plan can be selected from the selection list of test plans to which the usage list is to be filtered. Likewise, a filter on the test plan can be entered manually. In this case, a filter string such as <>'' or 1* etc. can also be used.
Start date filter	The Start Date Filter can be used to set a filter on the usage lines with a specific start date In this field, in addition to an exact date, a date filter string, such as a period, can also be used.

Test plan use lines

The test plan usage is set up in the lines described below. Mandatory fields for the complete setup of a test plan usage are:

-> Type of origin
Depending on the selected origin type, further fields are to be filled differently.

-> Type
Depending on the selected type, further fields are to be filled differently

-> Test plan

The inspection plan to be used for the combination of origin type and species, which is used to create the respective inspection order.

Field	Description
Type of origin	Enter here for which tests the test plan is to be used. The following options are available: **Receipt check vendor** Here, an incoming inspection for goods of the creditors takes place. **Receipt check customer** An incoming inspection for goods from the debtors takes place here. **Incoming inspection Both** Here, an incoming inspection for goods from creditors and debtors takes place. **Intermediate examination workplace** Here, an intermediate inspection takes place in the manufacturing process for a specific workstation (KVS Manufacturing Quality Control). **Intermediate examination workplace group** Here, an intermediate inspection takes place in the manufacturing process for a specific workstation group (KVS Manufacturing Quality Control). **Intermediate exam Both** Here, an intermediate inspection takes place in the manufacturing process for specific workstations and workstation groups (KVS Manufacturing Quality Control). **Final inspection** Here, a final inspection is performed after the actual message of the last operation (KVS Production Quality Control). **Manual test** Here, manual inspection takes place independently of the business and manufacturing process. **Intermediate inspection operation** Here, an intermediate inspection takes place in the manufacturing process for certain operations (KVS Manufacturing Quality Control). Note: An intermediate inspection at the last operation is not possible (see final inspection).
Origin code	If a unique data source is defined by the origin type filter, such as Vendor, an additional origin code filter can be set. In this case, a specific vendor can be selected from the list of vendors as the origin code filter or an origin code filter can be entered manually. In this case, a filter string such as <>'' or 1* etc. can also be used. If no unique data source is defined by the origin type filter, no additional origin code filter can be set.
Working aisle no.	If you have selected an intermediate inspection operation as the origin type and the routing in the Origin code field in the next step, you can finally determine the specific operation.
Type	In this field you can enter whether the inspection plan should be applied to one item or all items.
Code	If you have entered the Article option in the Type field, you must select an Article No. in this field.

Field	Description
Test plan	Here you enter the inspection plan no. to be used for the specified origin type and species. If the TEST PLAN USES form is called up via a test plan, this field is preassigned with the test plan no..
Start date/ End date	Here you enter the date values for which the test plan usage is active/valid. This is not a mandatory field for the system to create checks.
Work plan version code	If checks are to be used in production and routings with versions are maintained, this field shows the active version.

Test plan

Inspection plan usages can be set up for the following processes. Which inspection plan is used to create the inspection order depends on the following hierarchy:

Incoming inspection use priorities{ #incoming-inspection-testplan-use-priorities }

Example: A goods receipt is posted for vendor 10000 and item 70011. The inspection plan usage is run through in the following hierarchical order to determine the valid inspection plan for creating the inspection order:

Priority	Type of origin	Origin code	Type	Code
1	Receipt check vendor	10000	Article	70011
2	Receipt check vendor		Article	70011
3	Receipt check vendor	10000	All articles	
4	Receipt check vendor		All articles	
5	Incoming inspection Both		Article	70011
6	Incoming inspection Both		All articles	

If the test plan usages are managed with start date and end date, the entry with the most recent start date is used within the same priority. The sorting is therefore ascending within the priority level according to the start date. The last entry of the test plan usage is accessed.

If test plans are managed with versions, the version with the most recent start date is used within the same priority.

Intermediate exam

Example: A routing 1001 is available for the article 1000 "Touring bike" to be produced. In operation 40 at work center 110, an intermediate inspection is to be set up before the touring bike is packed.

In the inspection plan usage, the trigger for creating the intermediate inspection with the required inspection plan can be set up in different ways. The priority rule is "from the most accurate assignment to the most general assignment":

Priority	Type of origin	Origin code	Operation	Type	Code
1	Intermediate inspection operation	1000	40	Article	1000
2	Intermediate inspection operation	1000	40	All articles	
3	Intermediate examination workplace	110		Article	1000
4	Intermediate examination workplace	110		All articles	
5	Intermediate exam Both			Article	1000
6	Intermediate exam Both			All articles	

If the test plan usages are managed with start date and end date, the entry with the most recent start date is used within the same priority. The sorting is therefore ascending within the priority level according to the start date. The last entry of the test plan usage is accessed.

If test plans are managed with versions, the version with the most recent start date is used within the same priority.

Test plan usage Incomplete data records in the test plan usage

An incomplete data record in the test plan usage is ignored by the system.

Incoming inspection

Example:
A data record exists in the inspection plan usage for the vendor 01254796 and the article 70000. This data record does not contain an assigned inspection plan. A goods receipt is posted for vendor 01254796 and item 70000.

In this case, the goods receipt is posted without creating an incoming inspection or issuing an error message.

Intermediate exam

Example:
A work plan with the following operations is available for item 1000:

1000 · Tourenrad

📑 Arbeitsplan kopieren… ■ Versionen C⅗ Verwendung | Aktionen Navigieren

Allgemein ›

Zeilen | Verwalten Arbeitsgang Weniger Optionen

Arbeitsgan… ↑		Art	Nr.	Beschreibung	
10		Arbeitsplatzgruppe	100	Radmontage	
→ 20	⋮	Arbeitsplatz	120	Kettenmontage	
30		Arbeitsplatz	130	Endmontage	
40		Arbeitsplatz	110	Kontrolle	
50		Arbeitsplatz	210	Packtisch 1	

)

Intermediate tests for article 1000 are set up in the test plan usage with
-Intermediate inspection Operation with operation no. 20 without inspection plan assignment
-Intermediate test workstation 120 with test plan PP-00004

When the production order is released, the first line of the inspection plan usage is ignored, an intermediate inspection is created according to the (less relevant) second line for work center 120 via the stored inspection plan PP-00004.

Copy test plan

You have the possibility to copy an existing test plan. To do this, proceed as follows:

1.) Create a new test plan with a new test plan number under Planning > Test plans using the New button.

2.) Click the Copy test plan function in the ribbon.

3.) In the TEST PLANS form, select the test plan to be copied.

4.) The header and row information of the selected test plan will be copied to the current test plan.

The newly created inspection plan must be assigned in the inspection plan usage to the business transactions in which the inspection orders are to be created from it. (See also Inspection plan usage)

Versioning the test plan

You can create any number of versions for an existing test plan when making changes to the test plan. A prerequisite for the versioning of inspection plans is the assignment of a number series in the inspection plan header in the Version numbers field. To avoid working with a consecutive version number for all inspection plans and their versions, create a number series with purely manual number assignment. This number series can be used in every inspection plan. When creating a new test plan version, you can now manually assign the respective version number of the test plan version (V-001, V-002, V-003 ...).

An inspection plan version does not have to be set up in the inspection plan usage. The test plan usage accesses the stored test plan and the latest certified version available for it. (See Test plan usage)

To create a new version for an existing test plan, proceed as follows: 1. From the test plan list or from the test plan map, you can call up the test plan version overview using the Versions function. 2. In the test plan version overview, call up the New function. 3. Depending on the setup of the number series in the test plan header for the version numbers, a new test plan version number is assigned automatically or must be assigned manually by the user. 4. You can manually fill all header and row fields in the new test plan version as described above. Likewise, you can use the inspection plan header as the basis for a new version or use an existing inspection plan version as the basis for a new version. To do this, use the Copy test plan or Copy test plan version function. The header and line information will be copied from the selected source to the new test plan version. 5. Use the Start date field in the test plan version to specify from which working date this version should be automatically used by the system. The most recent certified version of a test plan is always accessed. 6. Finally, you use the functions to define the status of the current test plan version:
-Certify
The version receives the status Certified. From the inspection plan usage, the most current inspection plan version according to the work date is accessed for creating inspection orders.
-Reset status
The version receives the status In development. In this status, changes can be made to the version. The test plan usage does not access this version when creating test orders.
-Exit
The version receives the status Expired. The test plan usage does not access this version when creating test orders.

Quality checks

The QME module creates quality inspections in the various business and manufacturing processes. The chapter describes how quality inspections are created on the basis of inspection plans and sampling regulations. The quality inspections can be subdivided as follows: * Incoming inspection * Intermediate exam * Intermediate examination external work course * Final inspection * Manual test

QME also supports quality inspections in production in interaction with external work (intermediate inspections and final inspections).

Incoming inspection

Receiving inspection is provided for both the purchasing and sales processes.

The incoming inspection in purchasing is intended for the inspection of purchase deliveries. Purchasing deliveries can be posted directly via the purchase order or the goods receipt, depending on the setup of the storage location. If "Perform quality inspection from purchasing" is activated for the storage location in

question and an inspection plan has been set up in the inspection plan usage for the combination of article and vendor, the system automatically creates an incoming inspection for the posted purchasing delivery.

Receipt check in sales is intended for checking incoming postings from posted returns due to a sales complaint. Returns can be posted directly from the complaint or the goods receipt, depending on the setup of the storage location. If "Perform quality inspection from sales" is activated for the storage location in question and an inspection plan has been set up in the inspection plan usage for the combination of article and customer, the system automatically creates an incoming inspection for the posted return.

The list of incoming inspections to be processed from purchasing deliveries or sales complaints can be called up in the QME - Quality Assurance role center directly via the corresponding tile. You can also open the list of incoming inspections to be processed from the role center menu via Tasks > Inspection orders > Incoming inspection.

From the purchase order, the list of incoming inspections to be processed can be opened via the relevant document line and the call Line > Inspection orders. In this case, the list is filtered to ... * the origin number (order number) * the origin type (purchase line) * the line number of origin

By showing the filter area and unfiltering the origin line number, the list view can be expanded to list all the incoming inspections to be performed on that particular purchase order.

From the sales complaint, the list of incoming inspections to be processed can be opened via the relevant document line and the call Line > Inspection orders. In this case, the list is filtered to ... * the origin number (sales complaint number) * the origin type (sales line) * the line number of origin

By showing the filter area and unfiltering the origin line number, the list view can be expanded to list all incoming inspections to be performed for the sales complaint in question.

Intermediate exam

Intermediate inspections are created automatically when production orders are processed. If "Perform quality inspection from production" is activated for the storage location in question and if an inspection plan has been set up in the inspection plan usage for a combination of article and work center, work center group or operation in the routing, the system creates the respective inspection order for the intermediate inspection. This means that several intermediate inspections can exist for different work steps in a production order.

Intermediate checks are created automatically when a simulated or firmly planned production order is transferred to a released production order via the status change.

If a released production order is created directly, the execution of the function Update production order triggers the creation of the intermediate inspections. If changes are made to a released production order for which interim inspections already exist, executing the Update production order function again causes existing interim inspections to be deleted and new interim inspections to be performed based on the current data of the released production order.

The list of interim inspections to be processed can be called up directly in the role center QME - Quality Assurance via the corresponding tiles. There are two tiles, one tile for intermediate inspections from in-house production operations and one tile for intermediate inspection of external operations. You can also open the respective list of interim inspections to be processed from the role center ribbon via Tasks > Inspection orders > Interim inspection or Interim inspection (external).

From the production order, the list of intermediate inspections to be processed can be opened by calling Line > Inspection order.

Final inspection

The final inspection for a production order is created automatically if "Perform quality inspection from production" is activated for the storage location of the production order and an inspection plan is set up in the inspection plan usage for the origin type final inspection for the article to be produced. A final inspection is created automatically when the last operation is posted via the production ledger sheet or the actual message ledger sheet.

If the last operation is an external work, the final inspection is generated by posting the delivery of the external work order.

The list of final inspections to be processed can be opened in the QME - Quality Assurance role center directly via the corresponding Final inspections tile. You can also open the list of final inspections to be processed from the role center menu via Tasks > Inspection orders > Final inspection.

Manual test

The QME quality assurance module allows you to create manual inspections on goods that are in stock, independently of the business and manufacturing process. See "Creating a manual inspection

Test order

Test orders have an identical structure, regardless of their origin. A test order is divided into a test order header and the associated test order lines. The basis for the test order is the test plan described in the basic setup.

Inforegister General

Field	Description
No.	The unique number of a test order. The assignment of the number is defined to the quality assurance facility via the number series in the Test order numbers field
Test plan no.	This non-editable field contains the test plan number of the test plan that was accessed to create this test order.
Test plan version no.	If test plan versions exist for the test plan, this non-editable field shows the test plan version number that was accessed to create this test order.
Inspection plan description/ Inspection plan description 2	These non-editable fields are automatically filled with the test plan descriptions.
Test severity	Depending on the sampling rule and the jump instructions, the field is automatically filled by the system. The field is not editable. Possible test severities are • Normal • Reduces • Tightened The inspection severity was used to determine the relevant sampling requirement in the inspection order and the required inspection quantity was calculated based on the document quantity.
Test type	If the test plan used allows destructive testing, this is indicated here. The field is not editable.
Drawing	If a drawing (file) has been stored in the test plan, it is available here in the test order and can be opened. The field cannot be edited.
Item no.	This field contains the article number of the item to be checked. Depending on the origin type, this is the item from the goods receipt, from the production order or from the manual inspection.
Article description/ Article description 2 Search Keyword	These fields are taken from the article master. The fields are not editable.
Document quantity	This field is filled with the document quantity. This is either the total goods receipt quantity, the total production quantity or the selected total stock of a manual inspection. This field is not editable.

Field	Description
Required test quantity	The document quantity and the sampling requirement result in the required inspection quantity, i.e. the number of inspection items to be inspected in the inspection order according to the rules and regulations. This field is not editable.
Quantity to check	This field indicates the actual quantity to be checked. For items without item tracking, this quantity is preset with the required check quantity. For items with item tracking, the quantity to check must be defined by assigning corresponding serial and/or batch numbers. The quantity to check can be reduced to the required check quantity. Likewise, the quantity to check can be increased up to a maximum of the document quantity. Since the "Quantity to check" determines the number of checks in the check matrix, a whole number without decimal places must always be entered here. If the document quantity contains decimal places and a check of the total quantity is required, the document quantity rounded up to a whole number can be entered in the "Quantity to check" field. (See <u>"Perform check"</u>)
Quantity to lock	The quantity to be blocked must be entered in this field before the check is completed. (See <u>"Perform check"</u>)
Quantity destroyed	The quantity destroyed during the test must be entered in this field before the test is completed. (See <u>"Perform check"</u>)
Storage location release	This field displays the storage location used from the origin document and is not editable.
Storage bin release	This field shows the used bin from the origin document. The field is editable.
Storage location blocking storage	This field is filled with the default from the Storage Location Setup Quality Assurance tab and is not editable.
Storage place blocking storage	This field is filled with the default from the Storage Location Setup Quality Assurance tab and is not editable.
Storage location destroyed items	This field is filled with the default from the Storage Location Setup Quality Assurance tab and is not editable.
Storage place destroyed items	This field is filled with the default from the Storage Location Setup Quality Assurance tab and is not editable.
Justification special release	A reason must be entered in this field in the case of a special release (See <u>"Perform check"</u>).

Field	Description
Quality number	This field is calculated from the number of inspections, the number of deviations and the findings of the inspection plan line (OK, minor defect, major defect, critical defect) and defect factors (weighting) stored in the quality inspection setup according to the following formula: Quality number = 101- (Total number of exams + Weighted minor error deviations + Weighted main error deviations + Weighted Critical Error Deviations) / Total number of tests (see example for the calculation of the quality number) The quality number can assume a value between 0 and 100. This field is not editable. The value of the quality number of an incoming inspection is included in the supplier rating.
Built on	This field is automatically filled with the date once the test has been set up.
Built by	This field is automatically filled by the system with the logged-in user who triggered the check.
Modified on	This field is automatically created by the system when entries or changes are made in the test order.
Modified from	This field is automatically filled in with the user logged in to the system as soon as a field is changed.
Employee no.	In this field, a responsible employee for this check can be selected from the previously set up employee table.
Employee first name	Displays the first name of the employee from the employee table. The field is not editable.
Employee name	Displays the name of the employee from the employee table. The field is not editable.

Inforegister origin

Field	Description
Origin reference area	In the "Origin reference" group, fields are displayed that represent the document / operation from which an inspection order was created. Clicking on the Assist button in the "Document type" field will take you to the corresponding reference.
Document type	The document type of the document that caused the test order is displayed hereFollowing options are possible: • Purchasing / Order • Sale / Complaint • FA line (This type is used for final checks) • Routing line (This type is used for intermediate checks) • Article book. Sheet **Note:** With the origin reference "Article-book.sheet", no document can be displayed via the Assist button, since the book sheet was only used to generate a manual check and does not represent an independent document.
Document no.	This field contains the number of the document of origin.
Document line no.	This field contains the line number of the origin document.
Work plan no.	This field is used only for intermediate checks. The number of the task list that caused the intermediate check is entered here.
Working aisle no.	This field is used only for intermediate checks. The number of the operation that caused the intermediate check is entered here.
Booking limit area	In the "Posting reference" group, fields are displayed that form a reference to the posted document. However, the posting reference is filled only if there is a corresponding posting transaction in the system that caused the check order. This happens in the following cases: • Receipt inspection from posted purchase delivery • Receipt check from posted sales return • Final inspection from a production order **Note:** The posting reference remains empty for manual checks and checks for operations, since no posted document is stored by the system for these check types.

Field	Description
Document type	Specifies the type of document of the posting reference. The following options are possible: • Booked purchase delivery • Booked return • Article journal (for actual messages from the production order) Clicking on the Assist button in the "Document type" field will take you to the corresponding reference
Document no.	Specifies the number of the posting reference document.
Document line no.	Specifies the line number of the item in the referenced posting document. For the document type "item journal", the field remains empty, since the item journal is already uniquely determined by the document number.
Logistics reference area	In the group "Logistics reference" fields are displayed that form a reference to the posted goods receipt.In the area "Logistics reference" only the reference to a posted goods receipt is displayed. This is only managed if the underlying storage location has been set up in such a way that putaways have to be created as part of the goods receipt. Only then does the logistics reference also make sense in an inspection order, because only in this case are putaways created from the inspection order that must have a reference to the posted goods receipt.
Document type	Indicates the type of document of the logistics reference. Here always a posted goods receipt. Clicking on the Assist button in the "Document type" field takes you to the corresponding reference.
Document no.	Indicates the number of the logistics reference document.
Document line no.	Specifies the line number of the item in the referenced logistics document.

Note

The documents caused by the external work (purchase order / delivery) are not kept in an inspection order. Even in the case of external work, the production order for which the external work was requested is the primary document for the inspection order. The reference to the corresponding ACTUAL message (final inspection) or to the operation (intermediate inspection) is then kept in the inspection order.

Inforegister lines

The test order lines are filled from the specifications of the test plan when the test order is created. In addition, the results of the individual tests are displayed in the test order lines. A final test result must be set in each test plan line. The following table describes the fields of the test order line.

Default fields

Field	Description
Position	The item number according to the inspection plan line.
Inspection feature code	The inspection characteristic code according to the inspection plan line.
Attribute	The inspection type according to the inspection characteristic or inspection plan line.
Description	The description of the inspection characteristic.
Test equipment groups No.	The test equipment group number according to the test plan line.
Test equipment no.	The test equipment number according to the test plan line.
Test equipment status	The status of the test equipment existing at the time of creation of the test order.
Test equipment designation	The designation of the test equipment group or test equipment according to the test plan line.
Manual free size tolerance class	The manual clearance tolerance class according to the test plan line
Fit	The fit according to the test plan line.
Min. set point	The minimum target value of the characteristic according to the inspection plan line
Set point	The setpoint according to the test plan line.
Max. Set point	The maximum setpoint according to the test plan line
Units code	The reference unit for the entered dimensions according to the test plan line.
Test note	The inspection note according to the inspection plan line.
Specification	The file attachment, taken from the test plan line.
Required test quantity	The calculated inspection quantity. This is calculated from the sampling specification and the document quantity.

Fields filled when performing the check

Field	Description
Number of exams	This field displays the number of recorded tests for the test order line.
Actual value (min.)	This field displays the smallest measured value of the test order line.
Actual value (average)	This field displays the average value of all measurements of the test order line.
Actual value (Max.)	This field displays the largest measured value of the test order line.
Quantity Deviating	This field shows how many measurements are outside the tolerance of Min. Set point value lie
Test result	Finally, the inspector must enter the inspection result for the inspection order line in this field.

Example for the calculation of the quality number

With the setup for the weighting of the defect findings shown above and the adjacent illustration of the test results, the formula ...

Quality number = 101 - (Total number of tests
+ Weighted minor error deviations
+ Weighted main error deviations
+ Weighted Critical Error Deviations)
/ Total number of tests

Quality number = 101 - (15 + (2 x 10) + (0 x 30) + (1 x 60)) / 15 = 94.67

Perform quality check

The following sections explain how a quality inspection is performed. The execution of an inspection is identical for all inspection order types. Completed quality inspections of the type incoming inspection (vendor) are included in the supplier evaluation. The inspection result can be made available as a document to the supplier in the event of justified complaints. Within production, the intermediate inspections performed and the final inspection performed can be used as proof of quality for documenting the production process.

Set quantity to check

In the inspection order header, the required inspection quantity has been calculated via the sampling specification and the document quantity. The quantity to be inspected defines the actual quantity to be inspected. In principle, the quantity to be inspected can be kept different from the calculated required inspection quantity. You can set the quantity to be inspected lower and you can also increase the quantity to be inspected up to a maximum of the total document quantity.

Item without article tracking
For items without item tracking, the required check quantity is automatically written to the Quantity to check field.

Item with article tracking
For articles with article tracking, it is mandatory that the indicator "Batch no. warehouse" or "Serial no. warehouse" is set to Yes for the article tracking codes used. The item tracking information must also be carried across storage bins.

For items with item tracking, the required inspection quantity is automatically written to the Quantity to inspect field only in the intermediate inspections of production. In incoming inspections, final inspections or manual inspections, the quantity to inspect must be defined via the item tracking lines assigned to the inspection order. To do this, use the Assist button of the Quantity to check field. In the page opened by this, all posted batch numbers with movement quantity (base) or all posted serial numbers with movement quantity (base) = 1 are displayed. In the Quantity to check column, enter the required check quantity for the respective batch number. For serial numbers, you must enter the quantity to check = 1 for the respective serial number to be checked until you have reached the required quantity to check.

Record test results

The inspection results for the individual inspection order lines can be recorded in two different ways:

Recording in the test result matrix

The test result matrix is called up via the Test result matrix button in the menu ribbon of the test order.

In the inspection result matrix, all inspection order lines are displayed one below the other. Behind the information from the inspection order lines (position, inspection characteristic code, unit code, attribute, min. nominal value, nominal value and max. nominal value), the fields for recording the inspection results are displayed in the following numbered columns. Target value), the fields for recording the inspection results are displayed in the following numbered columns. The number of columns corresponds to the quantity to be inspected defined in the inspection order. A maximum of 32 columns for recording the results can be displayed on one page of the test results matrix. If the "Quantity to check" is larger, you can scroll to the next recording record using the "Next record" button. The "Previous record" button is used to return to the previous record of test results. In the test results matrix, no more results can be recorded than have been defined via the quantity to be tested.

General information from the test order is displayed in the header of the test result matrix. Filters of the test result matrix are displayed in the Display options area. These display options can be changed. According to the display options set, it is possible to switch to the test result matrices of other test orders without having to leave the test order itself. The buttons on the left and right of the test result matrix page are used for this purpose.

Acquisition via test data

The test data is called up via the Lines > Test data button. In the test data page, the individual test results are recorded line by line for the test order line from which the call was made. No number of lines is predefined based on the quantity to be inspected. If test results have already been recorded via the test result matrix, they are displayed line by line on the test data page. The test data can be used to record other values in addition to the pure test result.

Fields of the Test Data table

Field	Description
Test specimen no.	You can enter a number in this field for each specimen to be inspected. If the data was recorded via the test results matrix, the test data is already available. The test data lines are numbered chronologically starting with 1.If the data is recorded via the test data, the test specimen no. can also be assigned manually. Test data is only displayed in the test results matrix if the manual test specimen no. is assigned chronologically starting with 1.
Actual value Attribute fulfilled	If the characteristic is not attributive, the Actual value column is displayed. The measured actual value must be entered in this field. If the attribute is an attributive characteristic, the Attribute fulfilled column is displayed. In this field it is to be indicated whether the attribute is fulfilled or not.
Deviation	If the characteristic is not attributive, the Deviation column is displayed. The value displayed is the deviation of the actual value from the minimum setpoint or the deviation of the actual value from the maximum setpoint. Setpoint resulting from the actual value. A deviation of 0 means that the actual value is within the min. and max. setpoint. Setpoint. The field is not editable.
Deviation present	Non-attributive characteristic The Deviation present field is displayed with Yes if the actual value is outside the min. and max. setpoints. Setpoint. Attributive characteristic The field Deviation present is displayed with Yes if attribute fulfilled was entered with No. The field is not editable.
Check error code	A check error code can be entered in this field
Error category code	In this field the error category code of the test error is automatically taken over. This field can also be filled manually
Test error description	In this field the description of the test error is automatically taken over. A test error description can also be entered as free text in this field.

Test feature Test result

After an inspection has been performed and recorded for all test items, the "Inspection data" window or the "Inspection results matrix" can be closed. The entered data is transferred to the lines of the test order. From the input of the actual values, the minimum and maximum actual values are determined and an average is calculated. These values are entered by the system in the Actual value (min.), Actual value (average) and Actual value (max.) fields. The number of your test data per test order line is displayed in the Number of tests field. Via Drilldown you can display the respective test data.

On the basis of the test data entered and the min., max. and average values determined from them, you must carry out a test result for each test item. To do this, select your assessment in the "Test result" field. The following options are available: * **blank**
No check result set * **in order**
The inspection characteristic is free of defects. This result can only be set, if there are no deviations. * **Minor defect**
The inspection characteristic is not free of defects. The error is classified as a minor error * **Main error**
The inspection characteristic is not error-free. The error is classified as a main error * **critical error**
The inspection characteristic is not free of errors. The error is classified as a minor error

The definition of a minor, major and the critical error must be defined internally. A minor defect is not of great importance, while a major defect restricts the use of the item and a critical defect could have serious consequences. If you leave the field blank, you have not recorded a valuation for this inspection item and cannot complete the inspection order. The characteristic of the result is subject to the subjective assessment of the user and can be fixed per inspection characteristic, but not per inspection item.

Test decision for a test order

An inspection order is completed via an inspection decision. Depending on whether the Inspection requirement on release field is activated, the inspection can only be completed if you have entered the specified quantity to be inspected in the inspection data for each inspection order line. Once you have recorded all the prescribed tests and assigned a test result to each test order line, you can use the menu with the respective buttons to complete the test order as follows:

- Release document quantity
- Release
- Special release
- Document quantity locks

The following table illustrates which inspection decision is possible depending on which recorded inspection data and quantity fields.

Field	Release document quantity	Release	Special release	Document quantity locks
"Test result" field in test order lines	All test order lines must be "in order".	All test order lines must be "in order".	At least one test order line must be unequal to "in order".	At least one test order line must be unequal to "in order".
Quantity to be released" field in the test order header	The complete document quantity is automatically released. Entries are not taken into account.	Inputs are processed.	Inputs are processed.	Inputs are not processed; an error message occurs when the action is executed
Quantity to block" field in the test order header	Inputs are not processed; an error message occurs when the action is executed	Inputs are processed	Inputs are processed	The complete document quantity is automatically blocked. Entries are not taken into account.
Quantity destroyed" field in the test order header	Entries are only possible for the Destructive test type. Inputs are not processed; an error message occurs when the action is executed	Inputs are only possible with Destructive test type Inputs are processed.	Entries are only possible for the Destructive test type. Inputs are processed	Entries are only possible for the Destructive check type. Inputs are not processed; an error message is displayed when the action is executed.
Which quantity check takes place in the background?	The reference quantity for the quantity check is always the total document quantity	Sum of quantity to be released, blocked and destroyed may be max. the document quantity	Sum of quantity to be released, blocked and destroyed may be max. the document quantity	The reference quantity for the quantity check is always the total document quantity

Field	Release document quantity	Release	Special release	Document quantity locks
What quantities are booked?	Always the entire document quantity	maximum the document quantity, or less	maximum the document quantity, or less	Always the entire document quantity
Is a follow-up test order possible?	no	yes, with the remaining quantity	yes, with the remaining quantity	no
Feature	none	none	Field Reason special release becomes mandatory field	none

Change inspection plan for inspection order

Via "Action>Function>Change test plan" you have the possibility to manually use another test plan for the test order instead of the test plan set up in the test plan usages.

Manual test

The QME quality assurance module allows you to create manual checks.

To do this, go to the menu Departments > Quality assurance > Manual inspection and select the menu item Create manual inspection.

By means of the Stock transfer book sheet you can transfer an article to the storage location or storage bin of the quality inspection. The stock transfer creates a manual inspection.

The following table describes the fields of the CREATE MANUAL CHECK form.

Field	Description
Book. sheet name	Use Lookup to select the book sheet you want to use.
Item no.	Enter in this field the item no. for which the bin contents are to be retrieved.
Article variant	If there is an article variant, you can enter it here.
Storage location	In this field, enter the storage location from which you want to retrieve the content.

To fill the Book. sheet and create a manual check, proceed as follows on the CREATE MANUAL CHECK form:

1. Navigate to the function Get bin contents in the menu.
2. Enter a posting date and document number.
3. In the request window you can make further restrictions so that only the desired items appear.
4. After you have executed the Get bin contents function, the book.sheet will be filled automatically.
5. For the New storage location code and New storage bin code fields, make sure that the storage location has been set up for quality inspections and that the new storage bin code corresponds to the set up QA storage bin on the storage location map.
6. You can use the Post & Create Check Orders function to create a Manual Check for the generated rows.

Via Departments > Quality assurance > Manual inspection > Manual inspections, you can perform the generated manual inspection.

Note

For the treatment of the dimensions: When fetching the bin contents, the dimensions are NOT written to the rows. This is a known limitation of the Microsoft Business Central standard, not of the product. If you go via "Select item" the dimensions are taken over correctly.

When creating a manual inspection, it can basically come to the state that the quantity to be inspected is fetched from several different item items, each of which can have its own dimensions. However, because this is not clear, no dimensions are seen on the inspection order. If dimensions are stored at the test order, only these are written to the incoming article items, the outgoing dimensions compensate for the old items. Important: The check order does not add any dimensions to the article item, but replaces them, if they exist. However, if no dimensions are stored in the check order, then the dimensions of the existing item are passed on to the new item.

1.3.16 Interface to the "Vendor Rating Management (VRM) module

If the module "Quality Management Extension (QME)" is used together with the module "Vendor Rating Management (VRM)" of KUMAVISION AG for supplier rating, the results of the test orders can be transferred into the supplier rating.

Establishment

In order to activate the interface to the supplier evaluation, settings must be made in the "Quality assurance setup".

To do this, first call up the "Quality assurance setup" via the user search. On the "Supplier rating connection" information tab, you can then make the necessary settings using the table below.

Field	Description
Link to supplier evaluation	This field controls whether to establish an API connection to the Vendor Rating Management (VRM) module. This field contains the following options: **Draw:** No decision has been made yet whether to establish a connection between the QME module and the VRM module. This value is the initial value of the setup. **Yes:** A connection between the QME and VRM module is to be established. In this case, the other fields in the interface setup must be filled in. **No:** The interface between the QME and VRM modules should not be used.
Supplier rating User ID	This field must be used to enter the user through which the API interface passes data to the supplier evaluation module.
Password	The password of the selected user must be entered in this field to secure the connection via the API interface.
Supplier rating	Rating type This field is used to set the evaluation type from the supplier evaluation module for quality evaluation. The "Assist" button for this field can be used to reference an existing evaluation type of the "Quality" evaluation group. If no corresponding evaluation type exists yet, it will be created automatically. **Notice:** If there is not yet an evaluation type for the quality evaluation, it must be created via the Assist button. A corresponding evaluation type for quality is necessary to pass the information between the QME module and the VRM module.

Action "Test supplier rating API connection

This action can be used to test the API connection to the Vendor Rating Management (VRM) module. The system issues a corresponding message here whether the connection could be established or not.

Functionality

Through the API interface between the Quality Management (QME) and Vendor Rating (VRM) modules, vendor rating items are formed based on the inspection orders, which can be processed by the vendor rating functionality.

The basis for the supplier evaluation item is the "Quality score" field in the header of the inspection order. This quality score reflects the points that are written to the supplier evaluation item when the inspection order is completed.

Note

As part of the interface between the modules for quality management and supplier evaluation, a supplier evaluation item is generated for each inspection order.

The interface to the Vendor Evaluation module (VRM) only takes into account the inspection order types that have a reference to the vendor. These are the following inspection order types:

- Receipt check vendor
- Intermediate examination for external work
- Final inspection (with external work as the last operation)

1.3.17 Replenishment and Kanban Bin

General

The application "Replenishment and Kanban Bin" supports you in the consumption-based storage bin transfer of material. Defined storage areas can thus be replenished automatically - even without a "controlled warehouse".

In doing so, the application offers you the following advantages:

- Optimization of warehouse processes
- Efficient organization of your warehouse
- Fast and flexible setup of the storage areas
- Demand-driven determination of stock transfer quantities
- Time saving in the snacking area

The standard Microsoft Dynamics Business Central™ process supports the user in stock transfers from bin to bin based on stockkeeping units and the request or planning lines.

The replenishment and kanban bin functionality is designed to assist the user with a consumption-based bin transfer of material within a non-controlled storage location during putaway and picking.
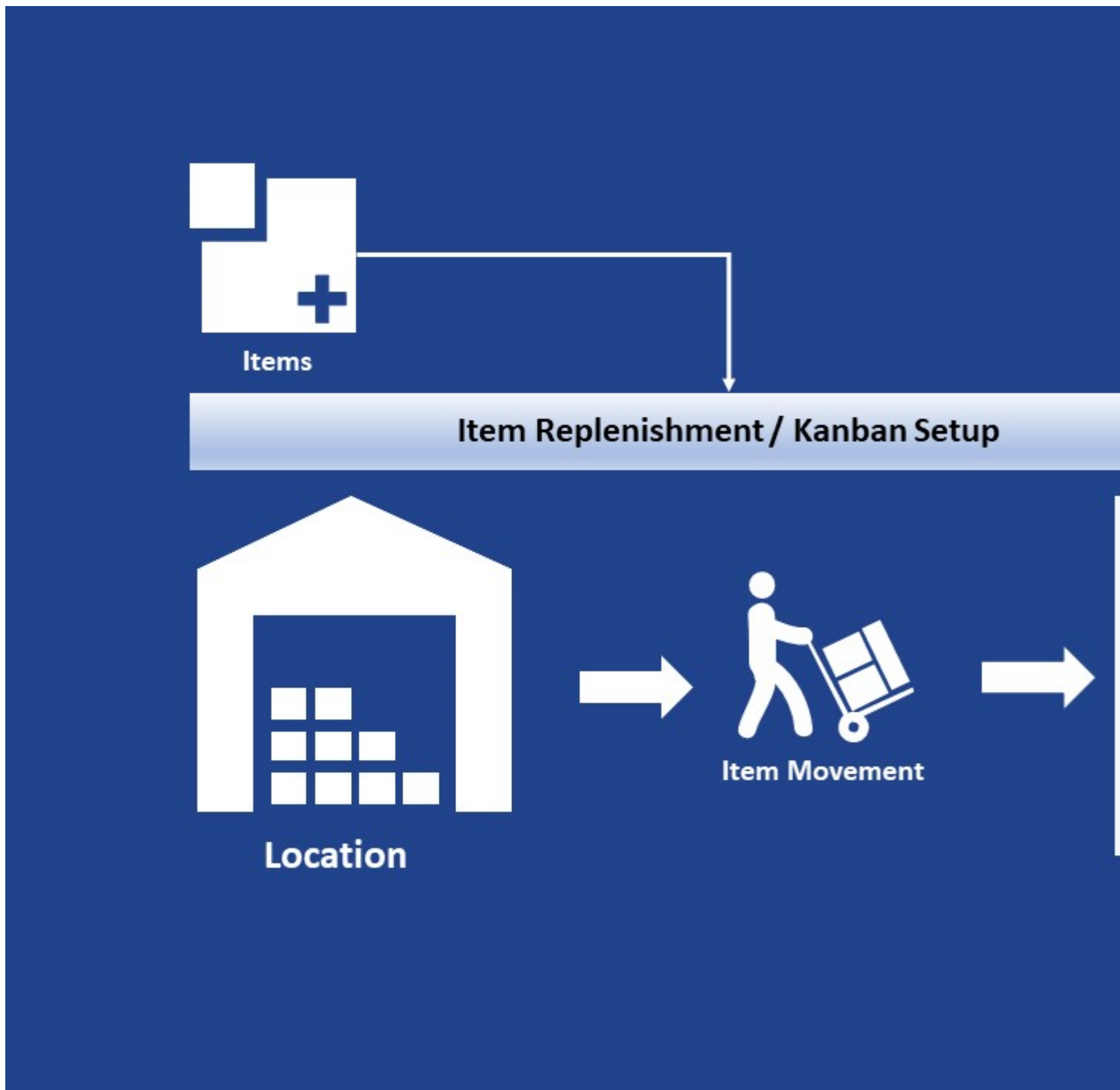
Note

In order to obtain a meaningful result for the storage bin relocation, the execution must take place in the "off-peak hours" in the warehouse / logistics area.

Storage bin transfers during operating hours, e.g. parallel picking and goods receipt / putaway, are not advisable as picking / putaway could have an unfavorable effect on the contents of the storage bin.

1.3.18 Introduction Replenishment and Kanban Bin

[Replenishment & Kanban Bin | KUMAVISION App](#) from [KUMAVISION](#) on [Vimeo](#).

[Link to Microsoft App Source "KUMAVISION Replenishment and Kanban Bin"](#)

Establishment

User authorization

To assign the user the necessary authorizations for the replenishment and Kanban storage bin functionality, first call up the "Users" via the user search.

On the desired user card, you then have the option of assigning the intended authorization record "REPL+KANBAN ADMIN" to the user on the "User authorization records" info tab.

Storage location

The following points should be considered when setting up the storage location: * You should configure storage locations directly with storage bins. * These storage locations must not be configured as " Direct putaway and picking". * The warehouse has two areas: Preferred picking area and replenishment area Within these areas, the warehouse can be organized arbitrarily or with fixed storage locations.

This application is not suitable for a completely chaotic warehouse or a completely "directed storage and retrieval warehouse".

On the corresponding storage location map, the following setups must be made for the replenishment and kanban storage location functionality on the "Logistics" info tab:

Field	Description
Standard Kanban Stock Transfer Book Sheet Templates Name	In this field, enter from the article book. sheet templates List the stock transfer ledger sheet template for Kanban functionality.
Standard Kanban stock transfer ledger sheet Name	Enter in this field from the assigned article book.sheet templates the article book.sheet batch If this has not yet been created for the Kanban functionality, you can define it from the list via "New".

Storage bins

In the storage bins, the "Supply area" or the "Replenishment and kanban area" is defined via the "Stock transfer type" field.

To do this, call up the storage bins via the menu ribbon and set up the corresponding storage bin via the "Stock transfer type" field.

Field	Description
Replenishment and Kanban area (picking area)	Indicates the storage bins to which the stock is transferred, i.e. which are filled.
Service area	Indicates the storage bins from which stock is transferred.
Empty	For all storage bins that are neither "kanban area" nor "supply area", e.g. special storage bins like goods receipt bin code, goods issue bin code. For these storage bins it is also explicitly checked if the stock transfer type is "empty".

Note

Please note that you define at least one storage bin as "Supply area" and one storage bin as "Replenishment and Kanban area".

Storage bin replenishment / Kanban setup

In the "Storage bin replenishment / Kanban setup" there is general support information of the application.

Replenishment and Kanban setup list

In a chaotic warehouse, an item can be located in any bin. There can also be several items in one bin. Therefore, the rules for the "Replenishment and Kanban bin" functionality are not located directly in the bin, but in a separate table.

The following should be noted here: * Article maintenance is always performed manually * Items that are not to be transferred do not receive inventory data * Data maintenance is mandatory here

The calculation is based on the content of the storage bin in combination with the "Stock transfer type" of the storage bin. Only storage bins with the "Stock transfer type" = Kanban area (picking area) are taken into account.   On the "Replenishment and Kanban setup list" you can configure the replenishment for the articles.

To do this, call up the "Replenishment and Kanban setup list" via the menu ribbon of the storage bin Replenishment / Kanban setup. Via "New" you can define a new data record with the help of the table below.

Field	Description
Location code	Specifies the storage location code.
Item no.	Specifies the article no.
Variant code	Indicates the variant of the item (if any).
Article description	Indicates the item description of the item.
Minimum quantity	Specifies the minimum quantity (base). If the minimum quantity per article is fallen short of (sum of all storage bins with "transfer type" = picking area), a refill / stock transfer is triggered.
Replenishment quantity	Specifies the replenishment quantity (base). Suggested replenishment quantity calculated for all storage bins with "Stock transfer type" = supply area. The replenishment logic corresponds to the "fixed order quantity" replenishment procedure for the external procurement of an article.
Automatic change of quantity per batch (stack)	Check the box if you want to allow automatic change of the quantity per batch. For the calculation of the two fields Minimum Quantity (Base) and Replenishment Quantity (Base), a function is available for the regular revision of these data.

Note

Please note that at least one item is set up with a minimum quantity (base) and one item is set up with the replenishment quantity (base).

Recalculation of quantities in replenishment and Kanban storage bins

For the maintenance of Kanban stock data, a function is available for the initial creation and regular revision of the above data structure or the Minimum quantity (base) and Replenishment quantity (base) fields.

The function is called via the menu ribbon of the "Bin replenishment / Kanban setup".

The Minimum quantity (base) field is calculated on the basis of monthly values. All expenses for the storage location, storage bins of the "stock transfer type" = Kanban area for the respective article (and variant) in the corresponding period are taken into account.

The replenishment quantity (base) is calculated from the field Minimum quantity (base) * Factor for replenishment quantity.

Process

Essentially, there are two procedures for the storage bin transfer proposal: * Manual call of the function from the article Stock transfer book.sheet * Periodic call of the function ("Calculate bin replenishment") in the task queue items.

In the following, these two function options will be explained to you in more detail.

Manual filling via the article Stock transfer book.sheet

Call up the "Book.sheet article stock transfer" via the user search and execute the "Calculate storage bin replenishment" function via the menu ribbon.

After executing the function, the book sheet for the article transfer is filled accordingly. With the function "Calculate storage bin replenishment", only storage locations are taken into account where the article has already been posted once and the minimum quantity is not reached. The book sheet can be modified and deleted manually. The function can be executed any number of times.

Periodic automatic filling of the article stock transfer book.sheet

The "task queue items" can be used to automatically refill during the night, for example.

The fields on the "General" info tab can be filled as follows:

Field	Description
Status	Wait and see
User ID	"ADMIN"
Type of object to be executed	Report
ID of the object to be executed	70260117

You can use the "Report request page options" filter to use the filters of the report. Moreover, they will be saved and used automatically when the report is run automatically.

Field	Description
Delete existing lines	Deletes the already existing lines of the report
Storage bin code	Filters according to the bin code
Location code	Filters by the storage location code
Item no.	Filters according to the article no.
Variants code	Filters by variant code

Print

The print view of the book sheet can be used as a picking document to perform the stock transfer in the warehouse.
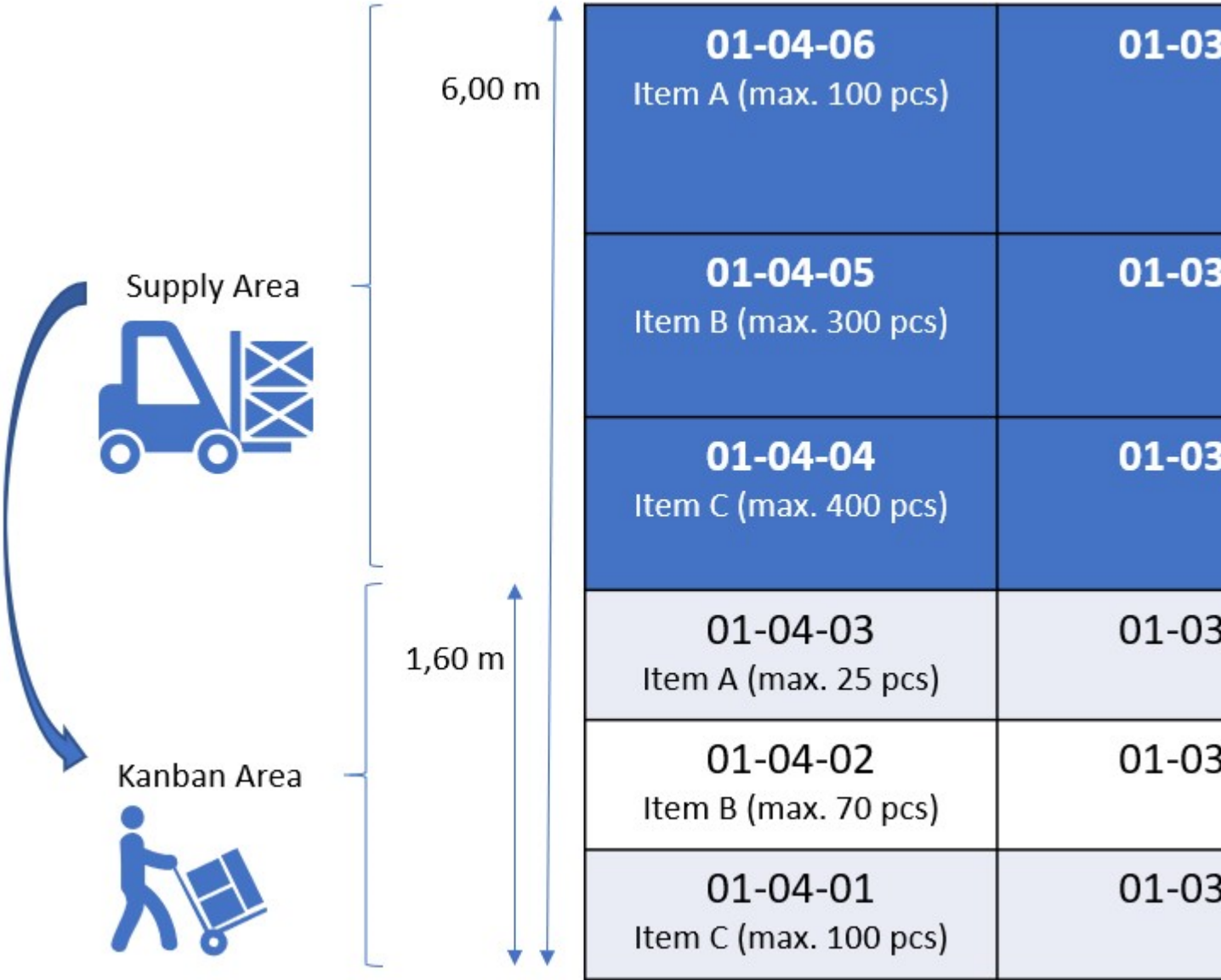
Book

The "Post" or "Post and Print" calls post the book sheet after the physical stock transfer.

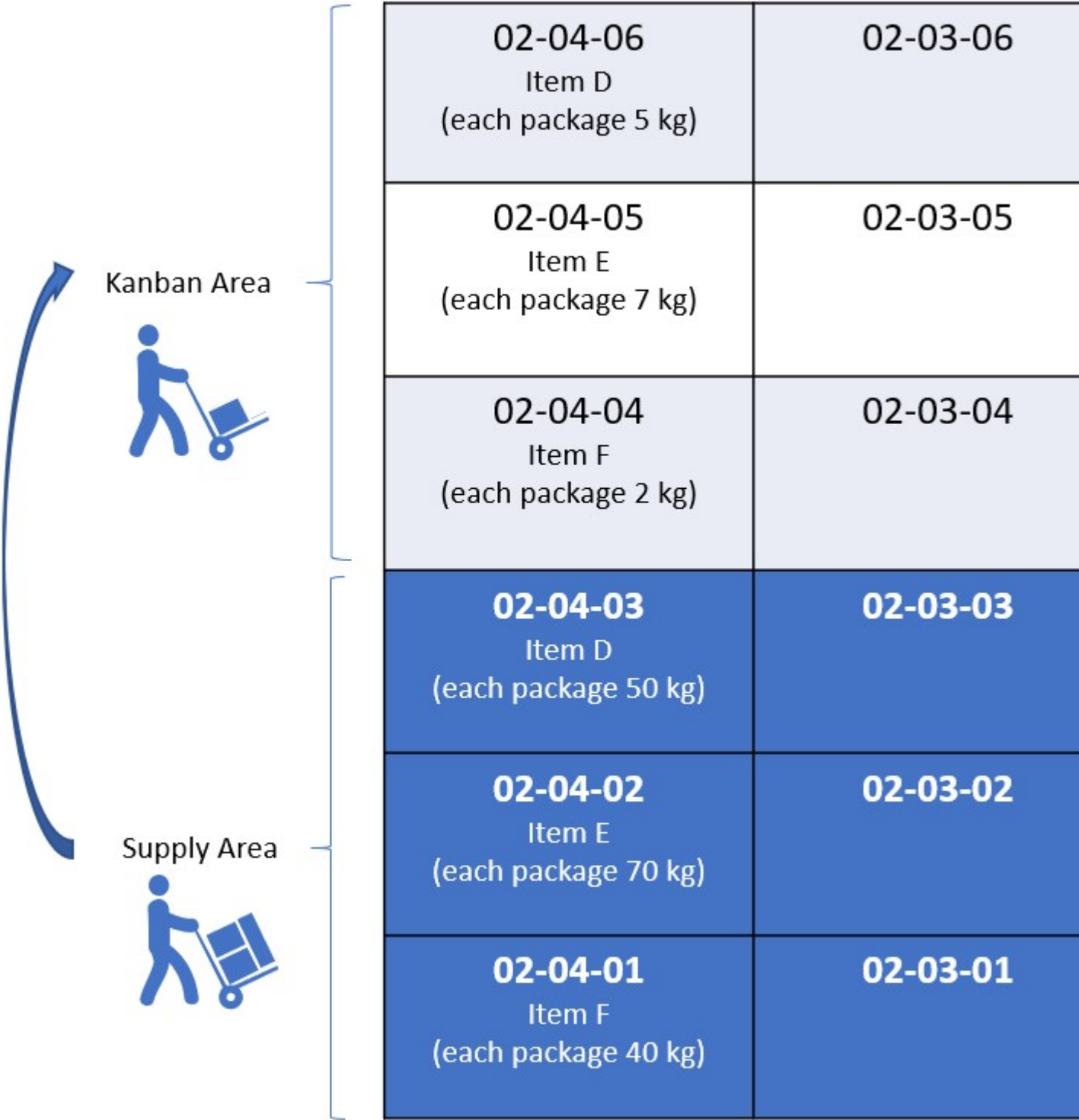## Application examples

Application in trade

Example 1

Stock transfer in high-bay warehouses - the goods are transferred to the lower storage bins by forklift, for example, to enable consistent picking by employees without forklifts.
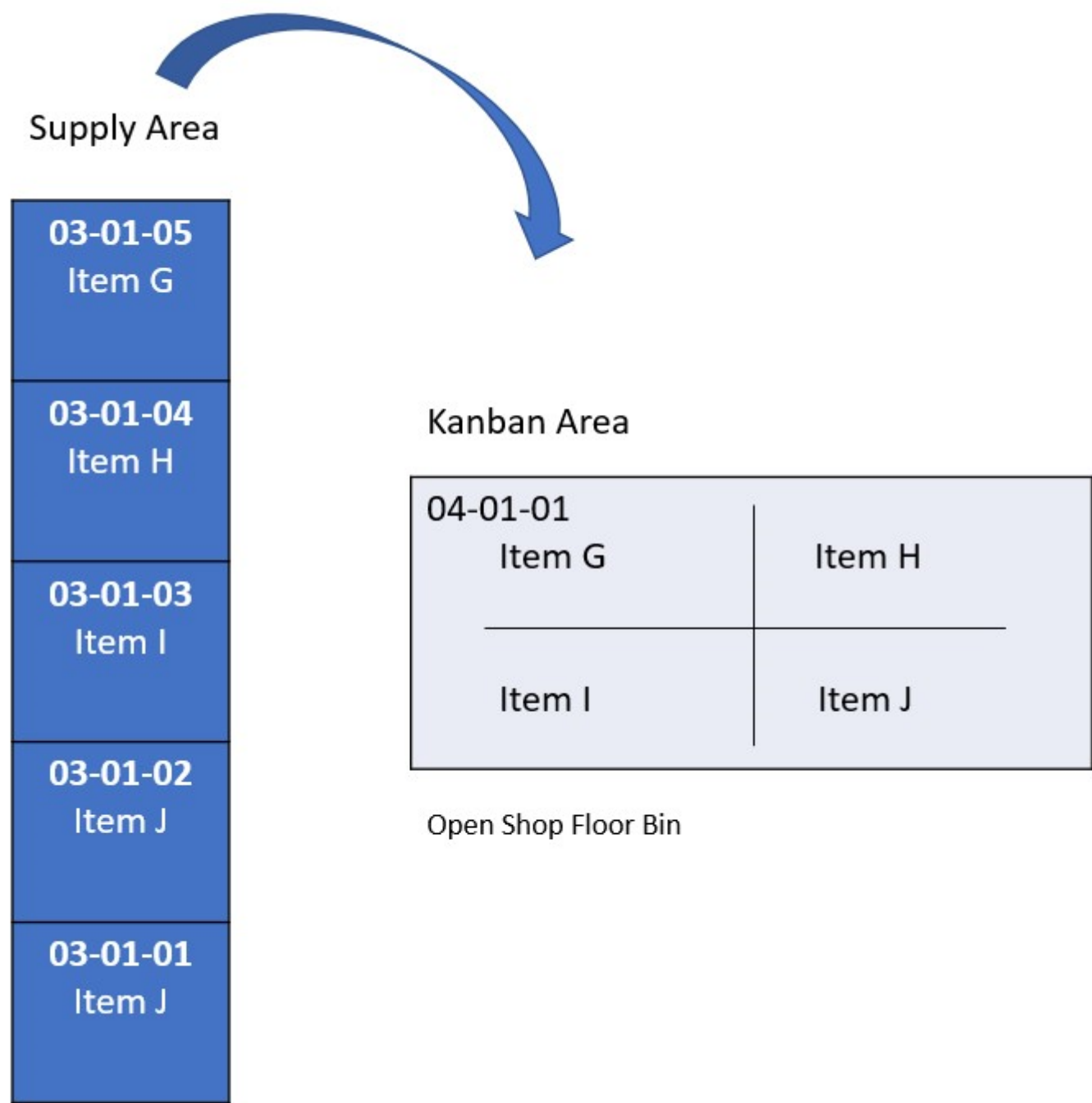
Example 2

Redistribution of heavy goods present in the picking area (Kanban area) into smaller containers and thus reduced in weight.

02-04-06 Item D (each package 5 kg)	**02-03-06**	
02-04-05 Item E (each package 7 kg)	**02-03-05**	
02-04-04 Item F (each package 2 kg)	**02-03-04**	
02-04-03 Item D (each package 50 kg)	**02-03-03**	
02-04-02 Item E (each package 70 kg)	**02-03-02**	
02-04-01 Item F (each package 40 kg)	**02-03-01**	

Kanban Area

Supply Area

Application in production

Example 1

Storage bin 04-01-01, which is stored in the storage location as an "open production staging bin". The goods in this bin are production components that do not need to be picked explicitly. Since they are continuously needed for production, they are stored in large quantities in storage bin 04-01-01. Consumption staging is automatic (forward or backward).

Example 2
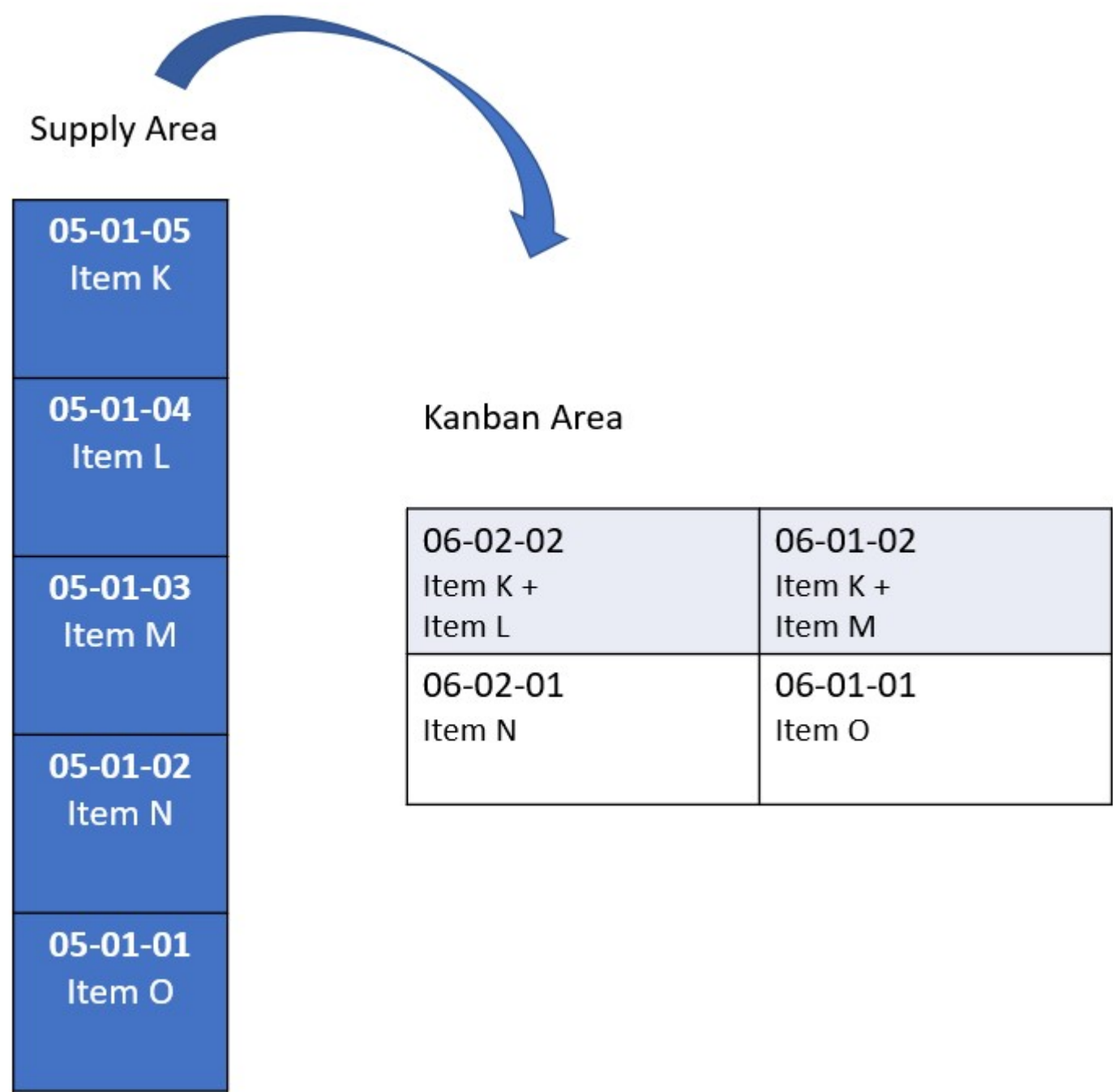
Storage bins 06-xx-xx contain goods that are prepared for production. This is a manual Staging for consumption picked via logistics documents.

What happens after the free trial

What happens after the free trial? from KUMAVISION on Vimeo.

1.3.19 Sales Order Status

General

The Sales Order Status app gives you a simple and visual representation of various status messages related to your sales orders at the item level:

- Availability status
- Stock status
- Picking status
- Shipment status
- Invoice status

All views can be filtered multiple times. The existing signal lights can also be replaced by icons of your choice.

In doing so, the app offers you the following advantages: * Maximum transparency through visual representation * Short reaction time in case of bottlenecks in warehouse and logistics * Prompt invoicing for booked delivery * High level of customer satisfaction thanks to the ability to quickly provide information on the availability of articles * Short-term information provision for management

Introduction Sales Order Status

Sales Order Status | KUMAVISION App from KUMAVISION on Vimeo.

Link to Microsoft App Source "KUMAVISION Sales Order Status"

Order status setup

After the app has been successfully installed, the necessary settings must be made. To do this, call up the "Order status setup" via the user search.

The order status setup opens. The setup options are explained in more detail below:

Inforegister article availability

Field	Description
Consider planning proposals in the availability calculation	Specifies whether planning suggestions for calculating item availability are to be observed.
Consider blanket purchase orders in the availability calculation	Specifies whether blanket orders are to be taken into account when calculating item availability.
Lime. Status OnOpen Sales Status Form	Specifies whether you want to calculate the status auto. on open from the sales order statuses.

Note

The fields "Include blanket orders in availability calculation" and "Include planning proposals in availability calculation" only affect the availability calculation when calculating the availability traffic light. These fields have no effect on the calculation of the standard, e.g. on the "Article availability after event".

Inforegister traffic light symbols

When the app is installed, images for the red, yellow and green traffic lights and a "blank" (transparent) image of the facility are automatically stored. If you want to use your own images, click on an image, click on "Select", select the image file and click on "Open".

Note

To avoid performance problems of the order overview (long times for refreshing the page), it is recommended to use small image files for the traffic light icons.

Inforegister Support Information

Field	Description
App ID	Specifies the ID of the current app.
Registration status	Indicates whether the app is registered.
Last registration check	Specifies the date of the last check.
App name	Specifies the name of the app.
App version	Indicates the current version of this app.
UID	Specifies the UID.
HTTP request allowed	Specifies the permissibility of the http request from the extension setting.
AAD Client ID	Specifies the Azure Active Directory ID.
Environment name	Specifies the name of the current environment.

Sales order status

Sales order overview

The following fields for the traffic light status display were added to the sales order overview after the app was successfully installed:

Field	Description
Availability status	Indicates whether the required items are fully available (green), partially available (yellow) or not available (red).
Stock status	Indicates whether item positions in goods issues are included completely (green), partially (yellow) or not at all (red).
Picking status	Indicates whether item items are included in picks or warehouse picks completely (green), partially (yellow) or not at all (red).
Delivery status	Indicates whether items were delivered completely (green), partially (yellow) or not at all (red).
Invoice status	Indicates whether items have been fully (green), partially (yellow) or not at all (red) invoiced.

> Note

Please note that the traffic light display is not calculated automatically. Because of this, all traffic light fields are initially empty when you first open the Sales Order Summary.

Sales order status calculation

To calculate the sales order status, first select the orders for which you want to calculate the sales order status.

Then click Order > Update Sales Order Status from the ribbon. The sell order status is calculated by the system for the selected sell orders.

Filtering on sales order status

If you want to filter on the sales order statuses, e.g. to display all sales orders for which all items are available but not yet delivered, this is possible via the "Sales order status".

To do this, call up "Order" > "Sales order status" via the sales order overview ribbon.

The sales order status card opens. In the "General" info tab, the following filter options are available for the "Availability", "Goods issue", "Picking", "Delivery" and "Invoice" criteria:

- No status
- Red: no position available
- Yellow: part of the positions available
- Green: All positions available
- Show all

In addition, the following actions are available in the menu ribbon:

- Update sales order status
  The sell order status is calculated by the system for the selected sell orders.
- Update all sales order statuses
  The sell order status is calculated by the system for all sell orders.
- Show receipt
  Here you can display the document for a selected sales order line
- Sales order lines status
  Here you can view the sales order line status for a selected sales order line
- Warehouse picking lines
  Here you can view the warehouse picking lines for a selected sales order line
- Outgoing goods lines
  Here you can view the goods issue lines for a selected sales order line

Sales order lines status

To obtain a detailed status overview for a sales order line, call up the sales order line status. This makes sense especially if a sales order line has the status "yellow".

You can access the sales order line status from the sales order overview via the ribbon > Order > Sales order line status or via the sales order status ribbon.

In addition, the following functions are available in the sales order line status card in the ribbon:

- Calculate sales order line status
  Sales order line status recalculation function
- Picking lines
  Here you can view the pick lines
- Goods issue lines
  Here you can view the goods issue lines

Calculation logic of the status

The following chapters will describe you the rules for calculating the traffic light representations of a single sales order line.

The total traffic light of the sell order is displayed as follows:

- If the sell order has no lines, the traffic light display is empty.
- If the traffic light representations in all rows are empty, the traffic light representation of the sales order is empty.
- If the traffic light display is yellow in at least one row, the traffic light display of the sell order is yellow.
- If there are rows with red traffic light representations and others with green, the traffic light representation of the sales order is yellow.
- If the traffic light representation of all rows is empty or green, the traffic light representation of the sell order is green.
- If the traffic light representation of all rows is empty or red, the traffic light representation of the sales order is red.

Availability status of the sales order line

The availability traffic light of the sales order line is empty if * "Kind" is not "article." * "No." is empty, * "Quantity (base)" is negative or zero, or * it is a "drop shipment" business

Otherwise, the traffic light is green if "Outstanding quantity (base)" is zero.

Otherwise, the availability calculation decides like the "item availability by event": * If the "Projected Inventory" is negative or zero before the sell order line event, the traffic light display is red. * If the "Projected Inventory" is greater than zero before the sell order line event and greater than or equal to zero afterwards, the traffic light display is green. * Otherwise (before positive, after negative) the traffic light display is yellow.

If an assembly order refers to the sales order line, this event-by-event availability calculation is performed for each assembly order line with "Type" = "Article" and "Remaining quantity (base)" > 0. Here, the traffic light representation of the sales order line is the worst traffic light representation of the assembly order lines: * If there is no assembly order line with "Type" = "Article" and "Remaining quantity (base)" > 0, the traffic light display of the sales order line is green * If one or more of these assembly order lines have a red traffic light display, the traffic light display of the sales order line is red. * Otherwise, the traffic light for the sales order line is yellow if one or more assembly order lines have a yellow traffic light, otherwise it is green.

Another difference in the availability calculation of the assembly order line is that the consumed quantity is taken into account: If the "Projected inventory" before the event is negative or zero, the assembly order line is yellow, provided that the "Consumed quantity (base)" > 0.

Stock status of the sales order line

The stock status stamp of the sales order line is empty if: * "Quantity (base)" is negative or zero, or * no goods issue is required.

Otherwise, the traffic light is green if " Outstanding quantity (base)" is zero. Otherwise, the traffic light is green if there is an associated goods issue line, red if not.

There is a function that determines whether a goods issue is required. In the "Order status" app, a goods issue is required if * "kind" = "article", * "No." is not empty, * "Storage location code" is not empty, and * Goods issue required" is set in the storage location.

Pick status of the sales order line

The picking status stamp of the sales order line is empty if * "quantity (base)" is negative or zero, or * No picking is required.

Otherwise, the traffic light is green if "Outstanding quantity (base)" is zero.

Furthermore, the traffic light is green if a goods issue is required and the sum of "Quantity Picked" and "Quantity Delivered" of the associated goods issue line is equal to the "Outstanding Quantity (Base)" of the sales order.

Otherwise, the traffic light display is green if there is a pick or registered pick line, red if not.

There is a function that determines if picking is required. In the "Order status" app, picking is required if

- "kind" = "article",
- "No. " is not empty,
- "Storage location code" is not empty, and
- Picking required" is set in the storage location.

Delivery status of the sales order line

The delivery status stamp of the sales order line is empty if "Quantity (base)" is zero.

Otherwise, the traffic light display is green if "Outstanding quantity. (Base)" is equal to zero.

The traffic light display is red when "Quantity. supplied" is zero.

Otherwise, the traffic light display is yellow.

Invoice status of the sales order line

The invoice status stamp of the sales order line is empty if "Quantity (base)" is zero.

Otherwise, the traffic light display is green if "Quantity (base)" = "Quantity invoiced".

The traffic light display is red when "Quantity invoiced" is zero.

Otherwise, the traffic light display is yellow.

What happens after the free trial

What happens after the free trial? from KUMAVISION on Vimeo.

1.3.20 Split by Picking Area

General

With the app "Split by Picking Area" from KUMAVISION 365, different picking areas within a storage location can be defined individually on storage bin level. If a picking is triggered, the app creates the picking lists according to these areas. One picking list is created per picking area. The prerequisite for using the app is two-stage goods issue logistics, which consists of goods issue and picking, as well as working without a "controlled warehouse".

Picking by areas" offers you the following advantages:
Optimize your picking processes
Easy and fast definition of picking areas
* Clarity by combining several picking lists in one delivery bill

Practical examples:

Example of small and bulky parts:
In one storage location, small parts are picked by hand and bulky parts are picked by forklift. You now receive a separate picking list for both the small parts and the bulky parts. However, your customer only receives one delivery bill.

Example of multiple warehouses:
Your main storage location consists of several halls. With the Split by Picking Area app, you get one pick list per hall - instead of one entire pick list as before.

Introduction Split by Picking Area

[Split by Picking Area | KUMAVISION App](#) from [KUMAVISION](#) on [Vimeo](#).

[Link to Microsoft App Source "KUMAVISION Split by Picking Area"](#)

Establishment

After successful installation of the app, some settings have to be made. These are explained in more detail below.

Storage location

In the storage location for which you want to define the picking areas, the following switches must be activated: * "Picking by Picking Areas, * "Goods issue required" and * "Commissioning required"

> Note

The "Picking by picking area" field is automatically added to the storage location map when the app is installed.
All other fields are present by default.

Create picking areas

To define the picking area for your storage location, first call up the "Picking area list" via the user search.

Via "New" in the ribbon you can define a new picking area using the table below:

Field	Description
Location code	Select the storage location code for which you want to define the picking area.
Code	Assign a meaningful abbreviation for the picking area e.g. "High".
Description	Enter a description for the picking area. E.g. "High rack

Assignment of storage bins - picking area

To assign the storage bins from a storage location to the picking areas, call up the storage bins in the desired storage location via the Ribbon > Associated > Storage location > Storage bins.

The storage bin map opens. For each storage bin you can now assign the picking area code.

Process

After you have made all the necessary setups, you will receive a separate pick list for each picking area within the goods issue process.

Application examples

Example 1 "Small and large items"

Your items are stored in a warehouse location where your warehouse staff picks items manually from the floor and picks items from the high rack using a forklift. Therefore, you create two picking areas. When you receive an order with mixed items from high rack and floor, you receive two picking tickets. This way your warehouse workers can do all manual picking first and then all picking from high rack.
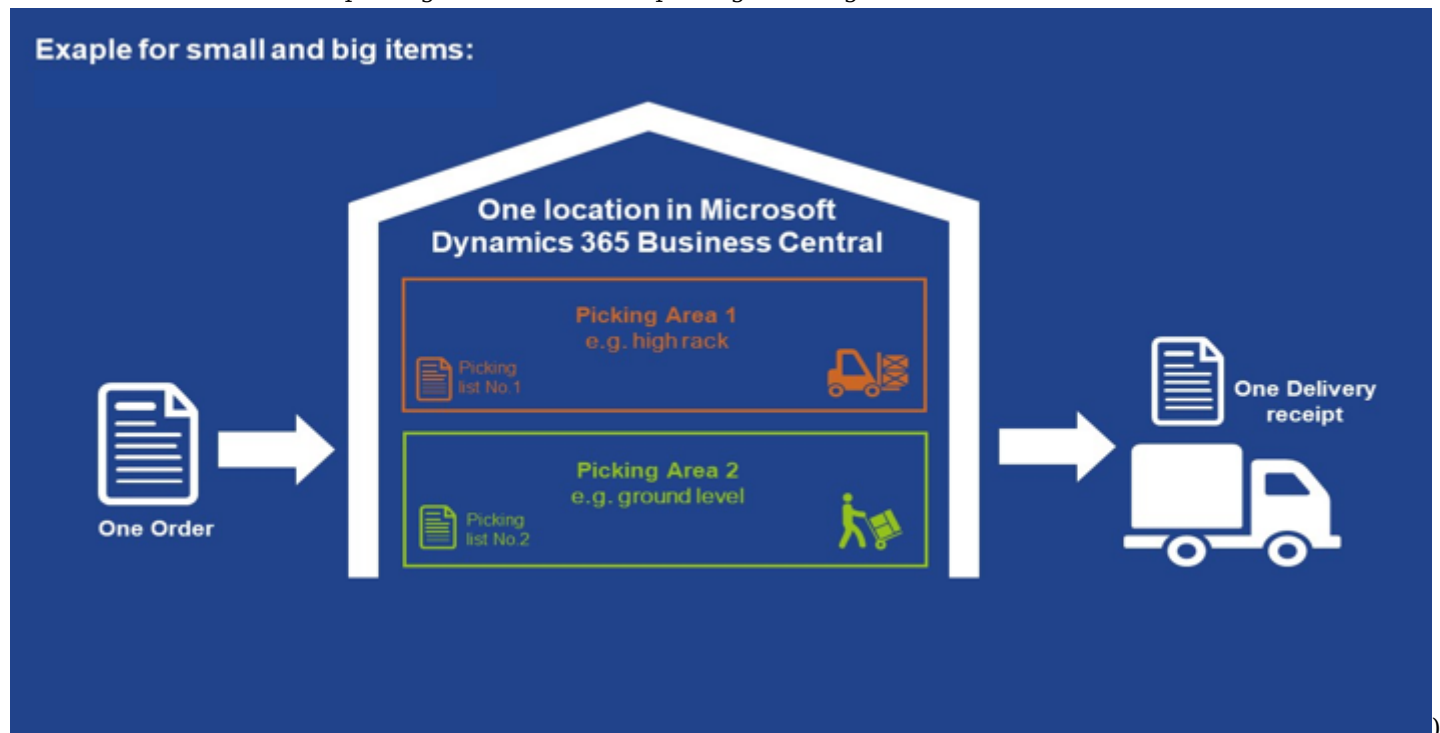
Example 2 "Various warehouses"

Your main warehouse consists of different warehouses. The app suggests a separate pick list for each warehouse - instead of one pick list for all warehouses.
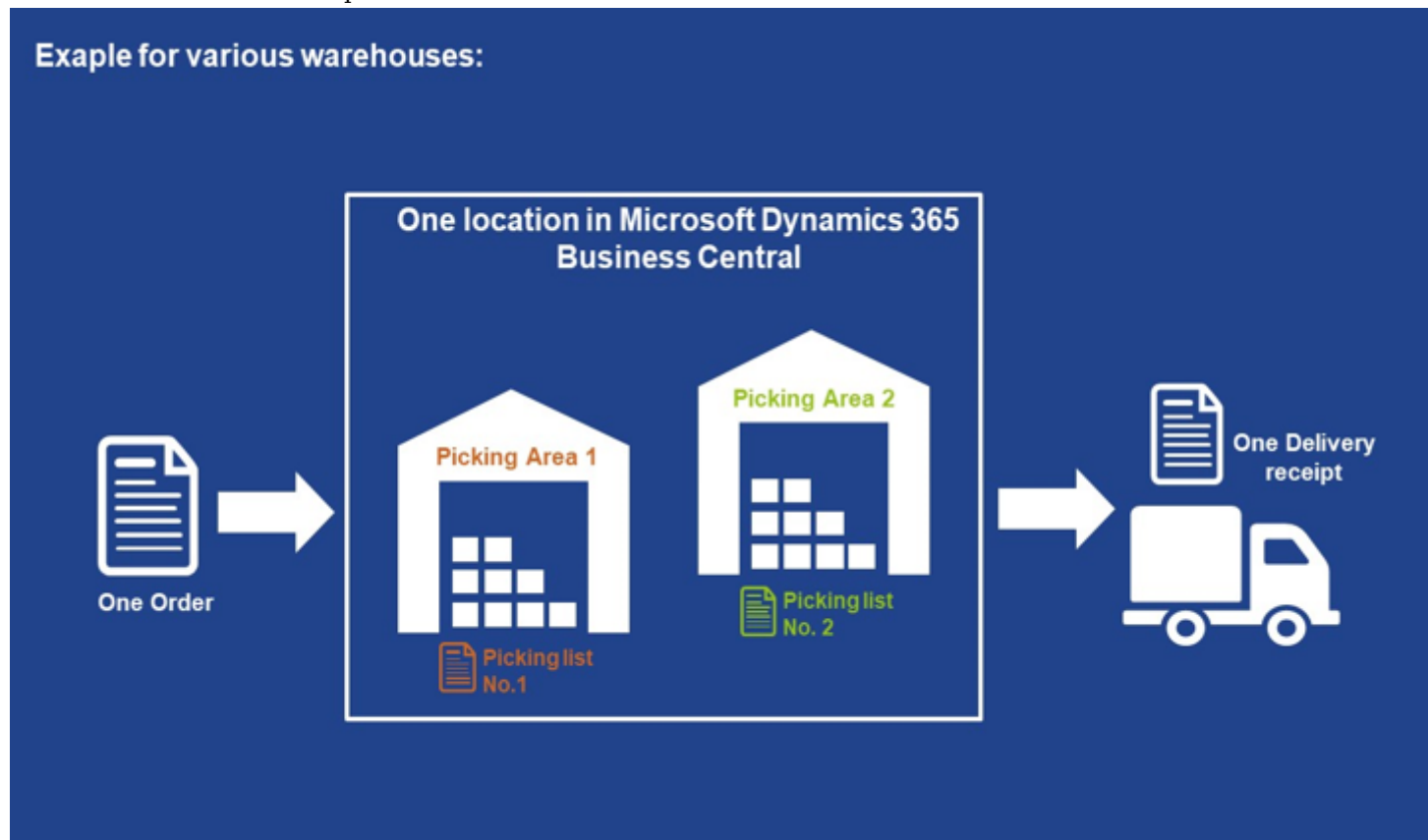
What happens after the free trial

What happens after the free trial? from KUMAVISION on Vimeo.

1.3.21 Vendor Rating Management

General

Vendor Rating Management is used to classify as well as categorize the vendor master based on clear specifications.

The supplier evaluation supports you in this regard in order to evaluate important supplier requirements.

You can define the following requirements:

- Audits
- On-time delivery
- Set loyalty
- Freely definable evaluation types

Establishment

Before you can use supplier evaluation, you must prepare the system for this purpose. This chapter describes and explains the necessary setups.

Supplier evaluation facility

The basic setup for the supplier rating is done in the "Supplier evaluation facility". To do this, first call this up via the user search.

The *Valuation reference date* field is used to specify which date is to be used to determine the date fidelity. The following options are available for selection:

Committed date of receipt of goods
Indicates the date when the vendor has agreed to deliver the items of the order line.

Expected goods receipt date
Planned date of goods receipt + Savingallowanceprocurement date + Receiving date Stock cycle time = Expected goods receipt date

Planned goods receipt date
Planned goods receipt date = purchase order date + vendor procurement time

In the *Audit number series* field, enter the number series for the audits.

Valuation types

The system allows you to create different types of evaluations. The system distinguishes between manual criteria and system criteria. The system criteria are the criteria of adherence to deadlines, quantity and quality.

Feld	Beschreibung
Code	
Evaluation group	The field is responsible for setting the system criteria. Choose from these options: **Empty** for manual criteria **Date** for the system criterion adherence to delivery dates **Quantity** for the system criterion set fidelity **Quality** for the system criterion quality (Please note, the Quality assessment is only possible in conjunction with the Module Management Extension (QME)). **Audit** for the recording of audits **Note** Please note that it is mandatory to set up an assessment type "Audit" Art=Audit to record an audit. You cannot store a rating or rating points for this rating type. This evaluation type is only used to ensure that an evaluation item is created by the system in the event of a completed audit.
Description	Description of the evaluation type
Value type	In this field you specify whether you want to define absolute or percentage values. **Note** Please note that the field "Value Type" is linked to conditions. For example, absolute values must always be entered for Type=Date and percentag values for Type=Quantity. Otherwise a hint message will be issued by the system.
Status	Indicates the status of the evaluation type. The following are available for selection: • New • Certified • In development • Closed **Note** Please note that only the assessment types with the status "Certified" can be used in the processes.

Feld	Beschreibung
Valuation characteristics exists	Indicates whether evaluations of the evaluation type are stored.
Evaluation points exist	Indicates whether evaluation points of the evaluation type are stored.

For each *assessment type* can be stored *assessment characteristics*. To do this, select the desired evaluation type and call up the *evaluation characteristics* via the menu ribbon.

Feld	Beschreibung
Evaluation type code	The evaluation type code is preset by the system according to the respective evaluation type.
Code	Specifies the abbreviation of the supplier rating.
Description	Specifies the description of the supplier rating.
Quantity	Specifies the quantity that is valid for supplier evaluation in the subsequent processes with respect to the evaluation reference date that has been set up.
Points	Indicates the score allocation for the respective supplier rating. **Note** When the points are entered, the system automatically creates a row for the points allocation in the "Evaluation points" table.

Evaluation points can be stored for each supplier evaluation. To do this, select the desired supplier rating and call up the "Rating points" via the menu ribbon.

Feld	Beschreibung
Evaluation type code	The evaluation type code is preset by the system according to the respective evaluation type.
Evaluation code	The evaluation code is preset by the system according to the respective supplier evaluation type.
Vendor group code	If for certain vendor groups the points allocation should be different (higher or lower) from the standard allocation, the vendor group can be assigned in this field. **Note** Please note that a separate line must be entered for the applicable vendor group with the appropriate point allocation.
Article group code	If for certain article groups the points allocation should be different (higher or lower) from the standard allocation, the article group can be assigned in this field. **Note** Please note that a separate line must be entered for the applicable item group with the corresponding point allocation.
Start	date Specifies the date from which the record should have its validity.
Points	Specifies the number of points for the evaluation.

Evaluation templates

With the help of the evaluation templates you can comfortably evaluate your creditors according to the same criteria. For this purpose, it is first necessary that you define the valuation templates.

Call up the "Evaluation templates overview" via the user search. You can create a new evaluation template via "New" in the menu ribbon. The individual fields are explained in more detail below:

Inforegister General

Feld	Beschreibung
Code	Assignment of a unique evaluation template identifier
Description	Description of the evaluation template
Status	Indicates the status of the evaluation template. The following are available for selection: • New • Certified • In development • Closed **Note** Please note that only the assessment types with the status "Certified" can be used in the processes.
Total weighting	Specifies the total weighting of the evaluation template.

Inforegister Valuation types

In the Valuation types info tab, you can include as many valuation types as you want for the respective valuation template. The individual fields are explained in more detail below:

Feld	Beschreibung
Sequence no.	The "Sequence No." field specifies the sequence of the evaluation types in the later process. This means that it defines the order in which the individual evaluation types are displayed in the evaluation template and later in the evaluation. This sequence can be structured individually.
Evaluation type code	In the fields "Valuation type code" the corresponding valuation types for the valuation template are assigned.
Description	Specifies the description of the assigned evaluation types.
Weighting	Indicates the weighting of the respective evaluation type. **Note** Please note that the total weighting of all evaluation types must = 100.
Standard points	Specifies the possible standard points to be included as a lump sum for the valuation. This means that if there are no valuation items for the vendor and the valuation type at the time of a valuation, the standard points will be included in the valuation as a lump sum. **Note** Please note that in case of a standard point allocation, there are no valuation items for the respective vendor and the valuation type in the system.

Inforegister classification

Feld	Beschreibung
A-H Classification points	Determination of the respective classifications. In the respective fields you define from how many points the respective classification should apply. **Note** Please note that at least the determination of the points for classification A must be made. All other classifications can, but do not have to be specified.

Accounts payable group

With the help of the vendor group you can group your vendors and, if necessary, set separate points for them for the valuations.

To do this, call up the "Vendor group valuation" via the user search. Via "New" in the menu ribbon you can define a new vendor group with the help of the table below.

Feld	Beschreibung
Code	Assignment of a unique vendor evaluation group code
Description	Description of the vendor valuation group

Then the vendor rating group is assigned on the corresponding vendor card, in the "Vendor Rating" info tab in the "Vendor Group Code" field.

Article group rating

With the help of the item group, you can group your items and if necessary, set separate points for them, for the ratings.

To do this, call up the "Evaluation article group" via the user search. Via "New" in the menu ribbon you can define a new article group with the help of the table below.

Feld	Beschreibung
Code	Assignment of a unique article rating group identifier
Description	Description of the item rating group

Then the item rating group is assigned on the corresponding item card, in the "Vendor rating" info tab in the "Item group code" field.

Audit questions

Audit questions can be created to record the audits in a structured manner. To do this, first call up the "Audit questions" via the user search.

Via "New" in the ribbon you can create a new audit question using the table below.

Feld	Beschreibung
Code	Assignment of a unique audit question identifier
Description	Description of the audit question

Audit template

With the help of the audit templates you can prepare your audits for the initial supplier evaluation or for requalification.

To do this, call up the "Audit template list" via the user search. You can create a new audit template via "New" in the ribbon: The fields of the audit template are explained in more detail below.

Inforegister General

Feld	Beschreibung
Code	Assignment of a unique audit template identifier
Description	Audit Template Description
Status	Indicates the status of the audit template. You can choose from the following: • New • Certified • In development • Closed **Note** Please note that only the audit templates with the status "Certified" can be used in the processes. To edit an existing audit template, the status must be set to "under development".

Inforegister lines

Feld	Beschreibung
Question code	Specification of the question code (audit question)
Description	Description of the question code (audit question)

Report selection Supplier evaluation

Numerous reports are available for supplier evaluation: * Delivery rate evaluation * Valuation list * Finished audits * Audit

Before use, the report selection must be initialized once. To do this, call up the "Supplier evaluation report selection" via the user search. With the help of the "Initialize" button you can initialize the reports. Initialization automatically sets the reports in the report selection.

Article

Inforegister Rating

On the item card, the following supplier rating facilities can be made in the "Supplier rating" info tab:

Feld	Beschreibung
Article group code	Selection of an article group.
Excluded from the evaluation	Activate the check box if the item should not be included in the supplier rating.

Vendor

Inforegister Rating

On the accounts payable card, the following supplier rating facilities can be made in the "Supplier Rating" info tab:

Feld	Beschreibung
Vendor group code	Selection of a vendor evaluation group
Excluded from the evaluation	Activate the check box if the vendor should not be included in the supplier rating.

Furthermore, the last determined supplier rating is displayed. You can find further information on this in the section "Creating the supplier rating".

Supplier evaluation

Automatic supplier evaluation

The automatic supplier evaluation refers to the evaluation criteria quantity, deadline and quality. During the booking process of the purchase order, the system automatically creates the registrations for the evaluation criteria quantity, adherence to delivery dates and quality.

> Note

Please note, for the automatic evaluation of quality the separate module "QME" Quality Management Extension" of KUMAVISION 365 is required. This is not
included in the scope of this module

Manual supplier evaluation

Manual evaluation is used to record "soft" evaluation criteria, such as communication, and incorporate them into the supplier evaluation. In addition to the automatic creation of evaluation criteria, users can enter and register manual criteria in all purchasing-relevant documents. These purchasing-relevant documents are:

- Purchasing request
- purchase order
- purchase invoice
- Purchasing complaint
- Purchasing credit memo
- goods receipt

The call is here everywhere identically integrated. For this you mark the desired line and call yourself over the info register *Line* in the menu selection *Line* the menu option *Manual evaluation*.

Alternatively, you can create a manual supplier rating directly via the respective vendor card. To do this, call up *Action > Vendor evaluation > Manual evaluation* via the *Row* menu ribbon.

A manual rating contains the following information:

Field	Description
Evaluation type code	Select evaluation type (evaluation criterion)
Evaluation type description	Indicates the description of the selected evaluation type
Valuation Code	Selection of a corresponding valuation characteristic for the selected valuation type
Valuation Description	Gives the description of the selected valuation proficiency
Evaluation points	Gives the evaluation points for the selected evaluation characteristic
Posting date	Indicates the date on which the manual rating is posted

In the manual rating worksheet, multiple ratings can be entered at the same time.

In order to generate supplier valuation items based on the manual valuations, the manual valuations must be posted. To do this, the posting function is called up in the manual valuation worksheet via the *Actions > Post manual valuation* menu ribbon. After executing this action, the system will acknowledge the posting with a corresponding message. Subsequently, the *Manual Valuation Items* section of the worksheet displays the vendor valuation items created.

The Manual Valuation Worksheet also provides the option to cancel a vendor valuation item from a manual valuation. To do this, go to the *Manual Valuation Items* section and select the menu item *Manage > Cancel Manual Valuation*. This action calls up the worksheet for reversing supplier valuation items. For details please refer to the section [Cancellation of Vendor Rating Items](#).

Vendor valuation items

The table Supplier evaluation items is the central place for the evaluation of the supplier evaluation. The results of the automatic as well as manual registration are stored here.

Feld	Beschreibung
Lfd. No	Shows the Lfd. No. that the application has given to the item. Each supplier valuation item has a unique item number. When posting, a number is automatically assigned to each item.
Vendor no.	Specifies the vendor number of the transaction. The field is automatically transferred from the purchase order during the registration of the item using the field Vendor number.
Type	Displays the type of order line. The following options are available: **Empty** Not used **G/L account** the line contains a G/L account. **Article** the line contains an article. **WG/plant** the line contains an attachment. **Addition/Discount (Article)** the line contains an article addition/deduction. **Workstation group** The line contains a work center group (external work) **Note** Please note that the supplier rating is only valid for the type=article. All other types have been listed here for completeness only.
No.	Indicates the number of the item.
Description	Specifies the description of the "No." field.
Vendor group code	Specifies the assigned vendor grouping of the accounts payable. The field is filled in automatically when the item is registered.
Article group code	Indicates the assigned item grouping of the item. The field is filled in automatically when the item is registered based on the deposit of the item.
Posting date	Specifies the date on which the associated document was posted.
Document date	Indicates the date when the related document was created.
Evaluation group	Specifies the evaluation group.

Feld	Beschreibung
Evaluation type	Specifies the description of the assigned evaluation type.
Evaluation type Description	Indicates the assigned rating type of the item. The field is filled in automatically when the item is registered based on the deposit of the item.
Evaluation code	Indicates the assigned rating. In the case of automatic assessments, the assignment is made by the system; in the case of manual entry, it corresponds to the manually entered assessment.
Rating Description	Indicates the description of the evaluation points.
Points	Indicates the number of evaluation points.
Quantity debit	Specifies the original quantity of the order line.
Quantity Actual	Specifies the delivery quantity of the order line.
Quantity Delta	Indicates the difference between the original quantity and the delivery quantity of the respective order line.
Quantity Delta Percent	Indicates the percentage difference between the original quantity and the delivery quantity of the respective order line.
Valuation reference date	Indicates the valuation reference date when the item was valued.
Assigned date of receipt of goods	Indicates the date when the vendor agreed to deliver the order. This field is filled based on the respective order line.
Expected date of goods receipt	Indicates the date when the item is expected to be available in the warehouse. This field is filled based on the respective order line.
Planned date of goods receipt	Specifies the date when the item should arrive at the warehouse. This field is filled based on the respective order line.
Date Delta in days	The delta in days between the valuation reference date and the actual delivery date is displayed here.
Type of origin	This is an internally used field. It indicates by which system table the item was created.
Source Info	This field records a description of which origin document was used to create the supplier rating item.
Source Purchase Doc. Type	This field is only relevant for purchasing documents. In this field the purchasing document type of the origin document is defined.
Source System ID	This is an internally used field. The unique system ID of the record in the table of the corresponding origin document is recorded here.

Feld	Beschreibung
Origin ID	This is an internally used field. It outputs the number of the table record that caused the item.
Origin Ref. no.	This is an internally used field. If necessary, the row number of the record of a table on the basis of which this item was created is displayed here.
Reference type	Here it is the open document (purchase order) while the origin type then refers to the delivery.
Reference Info	This field records a description of which reference document the supplier evaluation item was created from.
Reference Purchase Doc. Type	This field is only relevant for purchasing documents. In this field the purchasing document type of the reference document is defined.
Reference System ID	This is an internally used field. The unique system ID of the record in the table of the corresponding origin document is recorded here.
Reference ID	Here it is the open document (purchase order) while the origin type then refers to the delivery.
Reference Ref. no.	Here it is the open document (purchase order) while the origin type then refers to the delivery.
Cancellation	A check mark in this field indicates that the item has been cancelled. This may occur in the case of a delivery cancellation.
Correction Date	This field indicates the date on which the supplier valuation item was cancelled.
Correction User	This field indicates by which user the supplier evaluation item was cancelled.
Correction Description	This field displays the comment that was stored when the item was cancelled.

Action origin document

The origin document can be displayed for a vendor valuation item. The origin document is the document that caused the vendor valuation item. This includes both manual evaluations and evaluations created by the system (quantity, date).

Reference document action

A vendor evaluation item can refer to a reference document. A reference document is understood here to be a purchase order or a purchase complaint, since these documents form a link to other linked documents, such as goods receipts, deliveries, invoices, returns, and credit memos. This means that if a vendor evaluation was entered for a posted purchase delivery, for example, the posted purchase delivery is entered in the item as the origin document and the purchase order on the basis of which the delivery was created is entered as the reference document.

Cancel valuation item action

Vendor valuation items can be canceled. For this purpose, the action *Cancel valuation items* is used in the list of supplier valuation items. If the action is called, the selected vendor valuation items are displayed in a separate "Cancellation document". Details on this can be found in the section Cancellation of supplier evaluation items.

Cancellation of supplier evaluation items

Vendor valuation items can also be canceled. This is possible regardless of whether the items were generated automatically by a system posting or manually. Canceled vendor evaluation items are not taken into account when evaluating a vendor.

Vendor valuation items can be canceled in the following ways:

Automatically when canceling a purchasing delivery:
When a posted purchasing delivery is cancelled, the vendor valuation items for the corresponding items are also automatically cancelled. No further user interaction is required here.

From the manual valuation worksheet:
In the worksheet for manual valuation, the function for cancelling the created supplier valuation items can be called up directly. To do this, in the *Manual evaluation items* area, the *Manage > Cancel manual evaluation* menu ribbon is called up. The worksheet for cancelling supplier evaluation items is called up for the user with the selected items. Here the user can cancel the selected items by specifying a cancellation description.

Directly from the list of supplier evaluation items:
. The reversal functionality for supplier evaluation items can also be called up in the list of supplier evaluation items. To do this, the corresponding items to be cancelled are selected in the list and then the worksheet for cancelling supplier evaluation items is called up via the *Actions > Cancel evaluation items* ribbon. Here, the user can cancel the selected items by specifying a cancellation description.

In the worksheet for cancelling supplier evaluation items, a reason for the cancellation must be entered in the *Cancellation description* field. Without this reason, the cancellation cannot be carried out. Then, the *Cancel Valuation Items* action is used to cancel the vendor valuation items.

After a supplier valuation item has been cancelled, the following fields are filled in the items:

Cancellation:
A check mark is placed in this field to indicate that the item has been cancelled.

Cancellation Date:
This field is used to set the date that the item was cancelled.

Cancellation User:
This field displays the user who performed the reversal.

Cancellation Description:
This field displays the reason for the cancellation.

Vendor valuation items in purchasing documents

In addition to displaying the vendor valuation items per vendor, you can also display the vendor valuation items for the respective purchasing documents. This applies to both open and posted as well as archived documents. For this purpose, there is the action *Vendor valuation items* in the respective document lines.

By executing the action *Supplier valuation items*, the items are displayed for the respective line item for which the line item was stored as *Origin document*.

Exceptions to this are purchase orders and purchase complaints. Since these documents form a bracket for further purchase documents like e.g. born purchase deliveries, born purchase invoices. Therefore, the following options are available for displaying the vendor evaluation items for these documents:

Voucher valuation items
Vendor valuation items that are directly assigned to the document are referred to as "document valuation items". Direct assignment can be identified by the fact that the document is entered as the originating document in the vendor valuation items.

Linked Valuation Items
Linked valuation items are vendor valuation items that are not directly assigned to the corresponding purchase order / complaint, but have a reference to the corresponding purchase order / complaint as a reference document. An example of this would be the vendor evaluation items for quantity and date, which are assigned to a posted purchasing delivery as an origin document, but contain the associated purchase order as a reference document. As a result, these items can also be viewed in the corresponding purchase order as *Linked valuation items*.

Audit

Record audit

By means of audits, you can check and evaluate processes, requirements and guidelines using general investigation procedures. This is a frequently used investigation procedure, especially in the context of quality management. You can record, evaluate and document audits for your suppliers and use them as evidence. The evaluation of the audits is a possible key figure of the supplier evaluation.

Call up the "Audit overview" via the user search. Via "New" in the menu ribbon you can enter a new audit. Alternatively, you can enter an audit directly via the Accounts Payable card using the Ribbon>Action>Supplier Assessment.

The fields of the audit card are explained in more detail below:

Inforegister General

Feld	Beschreibung
No.	The field is the unique identification of an audit. The number can be created using a series of numbers or manually.
Description	Enter the description of the audit in this field.
Vendor no.	Use a lookup to enter the vendor for which you want to record an audit in this field.
Audit director	In this field, select the responsible auditor from the user table.
Audit appointment	Enter the date of the audit in this field.
Search Keyword	The entry in the Description field appears here as the default. You can freely select the search term.
Status	In this field you can store the current status of the audit. The following options are available: **New:** This status indicates that the audit has just been recreated. **Planned:** You can set this status if an audit capture or assessment is imminent. **In progress:** This status indicates that the audit is currently being performed or is in progress. **Finished:** You set this status after the audit is complete.
Ended on	This field is set automatically by the system. It indicates when the audit was completed.
Ended from	This field is set automatically by the system. It indicates by whom the audit was created.
Achieved rating number	This field is automatically calculated by the system based on the audit parts. The value is the audit result, which can be included in the supplier rating.
Max. achievable evaluation number	Indicates the possible maximum score that can be achieved in the audit. This field is automatically calculated by the system based on the audit parts.
Template no.	Specifies a set audit template. For more information, see "Set template function".

Inforegister lines

Feld	Beschreibung
Question code	In this field, select the previously set up question codes that you want to evaluate for this vendor during this audit.
Description	This field is pre-populated with the description of the question code.
Evaluation number	The rating number is the result, i.e. the rating of the audit code.
Comment	In this field you can record additional remarks about the audit code and the associated rating.

Functions in the ribbon

Set template

The function "Set template" is available via the menu ribbon. This allows you to add already created audit templates to the audit, so that the questions defined in the template are set for the audit.

Print

You can print the audit questionnaire using the "Print" function.

You can either forward this printout to your suppliers with a request for a response or use it yourself during the audit. Due to this, neither the evaluation number nor the remarks are displayed in this printout.

Change status

Via the function "Change status" in the menu ribbon, you can change the status of the audit. The following options are available: * New
This status indicates that the audit has just been recreated. * Planned
You can set this status if an audit capture or assessment is imminent. * In process
This status indicates that the audit is currently being performed or is in progress. * Ends
You set this status after the audit has been completed. As soon as an audit has the status "Finished", the audit is not displayed in the audit overview, but in the audit archive list.

Audit archive list

Audits with the status "Finished" are kept in the audit archive list. Alternatively, you can access the archived audits directly from the respective vendor card via the Manüband> Belonging>Vendor Evaluation>Audits Archive.

Preparation of the supplier evaluation

You can carry out supplier evaluations on the one hand via the vendor card via the menu ribbon>Action>Supplier evaluation>Supplier evaluation and on the other hand via the general call via the user search. Thereby it is distinguished that with the call from the supplier card, the filtering is already set on the respective supplier.

The filter criteria of the supplier evaluation mask are explained in more detail below:

Feld	Beschreibung
Valuation date	The valuation date is automatically preset by the system and always corresponds to the working date of the system.
Valuation Template Code	This field specifies the evaluation template code for which you want to perform the supplier evaluation. This specification is mandatory.
Valuation Template Description	Specifies the description of the selected evaluation template code.
Evaluation period beginning	Specifies the start date of the considered evaluation period. This date can, but does not have to be set.
Evaluation period end	Specifies the end date of the considered evaluation period. This date must be set and must not be greater than the evaluation date or the current work date.
Accounts Payable Group Code Filter	In this field, a filter can be set for the vendor groups for the evaluation. If a filter is set here, it will be checked before the evaluation of a vendor whether this is assigned to a vendor group which corresponds to this filter. If this is not the case, the vendor will not be evaluated.
No.	Filter option on a specific vendor.
Buyer code	Filter option on a specific buyer
Responsibility unit code	Filter option on a particular unit of responsibility.

You can call up the created supplier evaluations afterwards either via the general call *Supplier evaluations* via the user search or via the Accounts Payable card via the menu ribbon *Affiliated > Supplier evaluation > Supplier evaluations*.
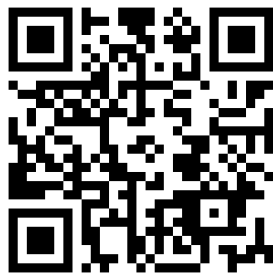
The individual fields of the supplier ratings list are explained below:

Feld	Beschreibung
Lfd. No.	Shows the Lfd. No. that the application has given to the item. Each supplier valuation item has a unique item number. When posting, a number is automatically assigned to each item.
Vendor no.	Specifies the associated vendor number.
Vendor name	Specifies the associated vendor name.
Valuation date	Indicates the rating date when the supplier rating was created.
Rating Templates Code	Specifies the scoring template against which the supplier score was created.
Evaluation Templates Description	Specifies the description of the evaluation template.
Evaluation period beginning	Specifies the start date of the considered evaluation period.
Evaluation period end	Specifies the end date of the considered evaluation period.
Points	Indicates the evaluation points obtained.
Evaluation classification	Indicates the evaluation classification based on the evaluation points obtained.

Creditor card

The last determined supplier rating is displayed on the "Supplier rating" information tab of the accounts payable card.

Feld	Beschreibung
Last rating item number	Indicates the Lfd. No. of the last valuation item created.
Date last rating	Indicates the evaluation date of the last evaluation.
Last rating template code	Specifies the rating template code used to create the last supplier rating.
Last rating template description	Specifies the description of the evaluation template code.
Evaluation period beginning	Specifies the start date of the considered evaluation period of the last evaluation.
Evaluation period end	Specifies the end date of the considered evaluation period of the last evaluation.
Evaluation points	Indicates the number of achieved evaluation points of the last evaluation.
Evaluation classification	Indicates the classification of the last rating.

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