

Introduction to item quantity calculation

Item quantity calculation (IQC) is a document which allows determining what quantities of given items should be ordered to satisfy the requirements of a company.

A list of IQC is available in menu *Warehouse (Resources)* → *IQC*.

Creating IQC

Code	Name	Features	Quantity in Ware...	In Transit (-)	Ordered (-)	Forecast Quantity (-)	Planned Inventory (-)	Balance	Quantity To Order	Subtotal Price	Value
SMT-001	Smartphone		0	0	0	0	0	0	0	699,00	0,00
LPT-001	Laptop		0	0	0	-3,0000	0	-3,0000	3,0000	1.200,00	3.600,00
LCDM-001	LCD Monitor		0	0	0	0	0	0	0	700,00	0,00

IQC form

Section regarding items contains a list of items whose quantity is calculated or item lots. It is possible to add items onto a document with the use of the following buttons:

[Add] – with the use of this option an item is added onto document without lot

[Add Group] – enables addition of a whole group of items. With the use of this option an item is added onto document without lot

Note

In case a parent item group is selected, all child groups are added as well.

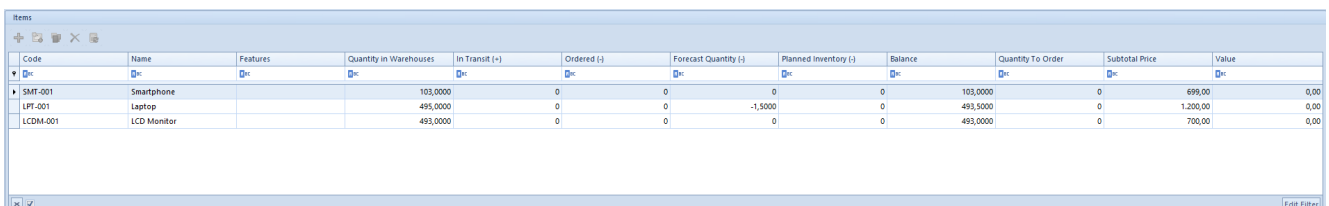
[Add By Features] – allows for indicating items which should be included in an item quantity calculation. Selecting an item from item list results in adding all lots defined for this item to a document.

[Add By Features Through Form] – allows for indicating items along with lots which should be included in an item quantity calculation.

Beside buttons allowing for adding and deleting items, there is also [Recalculate] button, thanks to which it is possible to recalculate an item quantity calculation in accordance with the settings in sections *Parameters* and *Components*.

Section Items

In this article, particular columns contained in the section *Items*, are described.



Code	Name	Features	Quantity in Warehouses	In Transit (-)	Ordered (-)	Forecast Quantity (-)	Planned Inventory (-)	Balance	Quantity To Order	Subtotal Price	Value	
SMT-001	Smartphone		103,0000	0	0	0	0	0	103,0000	0	699,00	0,00
LPT-001	Laptop		495,0000	0	0	-1,5000	0	0	493,5000	0	1.200,00	0,00
LCDM-001	LCD Monitor		493,0000	0	0	0	0	0	493,0000	0	700,00	0,00

Section Items in IQC document

Detailed description of the basic columns contained in the list can be found in article [Tab Items](#).

Other columns available in the list:

Column *Quantity in Stock* corresponds to a quantity:

- of resources of a given item/lot available in a given warehouse, indicated in section *Parameters*
- reduced by shortages resulting from SI and R documents
- reduced by reservations of resources from SI, R and SIQC trade documents not associated with any warehouse documents
- reduced by reservations resulting from unconfirmed SOR, IR-, WM-, PORQC, IR+QC warehouse documents
- reduced by quantity resulting from subitems associated with resources derived from not executed orders, when the due date or activation date in S0 or I0 is later than the **final date** in IQC
- increased by quantity resulting from SIQC or RQC, but only if no warehouse documents were generated to SI and R associated with them.

Column *In Transit (+)* presents quantity of items/lots resulting from:

- not executed purchase orders – *Unconfirmed, Confirmed, Pending*
- not executed internal orders – submitted, confirmed or pending, whose target warehouse is a warehouse indicated in IQC and whose expected date or activation date is not later than the final date of IQC

Column *Ordered (-)* presents quantities resulting from:

- not executed sales orders – initiated, unconfirmed, confirmed, pending
- not executed internal orders – confirmed or pending, whose target warehouse is a warehouse indicated in IQC and whose expected date or activation date is not later than the final date of IQC. A quantity calculated this way is presented as a negative value.

The quantity of the component *Demand Forecast* results from the

quantity forecasted in demand forecast document for individual items/lots. It is proportional to the period indicated in the IQC. Forecast quantity is presented with a minus sign, because it reduces the balance by increasing a quantity necessary for order.

Example

In the item quantity calculation, for item BZKD, a period from 01/01/2019 to 15/01/2019 was defined. The forecast quantity from the forecast document, in which the quantity of item BZKD was forecasted for a period from 01/01/2019 to 31/01/2019, will be included in the IQC Quantity resulting from the forecast = 310 pcs of BZKD. However, the quantity of 150 pcs only from this forecast will be included in the item quantity calculation (for 15 days from a period from 01/01/2019 to 31/01/2019).

The quantity of the components *Forecast Realization* results from the quantity of a given item/lot released with the use of a confirmed warehouse document (IR-, WM-, SOR) whose:

- **date of release** – for SOR documents
- **date of issue** – for IR- and WM- documents

falls within the period indicated in the item quantity calculation. The value of forecast realization is displayed with a minus sign, because it decreases the forecast quantity.

Note

If quantity resulting from a demand forecast document is less than quantity resulting from warehouse documents for released items (SOR, IR-, and WM-) included in component *Forecast Realization*, column *Forecast Quantity* takes on value 0.

In case of adding onto IQC document an item with features, quantity is retrieved for that specific lot from DF document for components *Demand Forecast* and *Forecast Realization*.

The value in column *Planned Inventory* is retrieved from the item form, where in tab *Resources* → *Planned Inventory* a user can define the minimum and optimal quantity of an item in

individual warehouses.

In an IQC, in section *Parameters*, in field *Planned Inventory*, it is necessary to specify which value should be included the calculation.

In case of adding onto IQC document an item with features, quantity is retrieved for that specific lot from DF document for components *Demand Forecast* and *Forecast Realization*.

Example

On item BZKD form, the following values of planned stock are defined for the main warehouse:

- Item BZKD (without division into lots) – 10 pcs
- Item BZKD with features Red/S – 5 pcs

The item is added onto IQC document with the use of button:

- **[Add]**, **[Add Group]** – quantity in column *Planned Stock* will be 10 pcs
- **[Add By Features]**, **[Add By Features Through Form]** and selection of lot Red/S – quantity in column *Planned Stock* will be 5 pcs

The balance shows the quantity of an item that is a sum of quantity in columns:

- *Quantity in Stock* – positive values
- *In Transit (+)* – positive values
- *Ordered (-)* – negative values
- *Forecast Quantity* – negative values
- *Planned inventory* – negative values

Quantity to Order takes on the value required to cover the balance. The field is editable. If the balance has a positive value or equals zero, then the quantity to order will be zero.

Subtotal Price is retrieved from the last up-to-date and active purchase price list.

Value is the product of price and quantity to order.

Note

If currency of the price retrieved from a purchase price list is different from system currency of a company, a recalculation is made according to the default exchange rate type for that company by the recently available value of the exchange rate.

A list of items can be narrowed down through selecting in field *Items*, located immediately below the list, one of the following options:

- **All** – default value; it displays all items regardless of the assumed values
- **All with non-zero subitems** – it shows items which assume value other than zero in particular columns
- **All with balance less than zero** – it displays items whose balance assumes a negative value

Section Parameters

Section *Parameters* is composed of three areas:

- [Components](#)
- [Documents](#)
- [Parameters](#)

Components is the section in which components included in the calculation of the IQC are defined. In the case of unchecking a parameter (in the column next to a relevant component) and clicking on button [**Recalculate**], the corresponding column will be deleted from the list of merchandise and the balance

will be recalculated without including the selected component.

	Component Name	Quantity
<input type="checkbox"/>	ABC	ABC
<input checked="" type="checkbox"/>	Quantity in Stock	0
<input checked="" type="checkbox"/>	Quantity on Purchase Orders	0
<input checked="" type="checkbox"/>	Quantity on Sales Orders	0
<input type="checkbox"/>	Demand Forecast	0
<input checked="" type="checkbox"/>	Forecast Realization	0
<input checked="" type="checkbox"/>	Quantity Ordered in Other Warehouses	0
<input checked="" type="checkbox"/>	Quantity Ordered by Other Warehouses	0

Components of IQC document

Components correspond to the following columns in the list of merchandise:

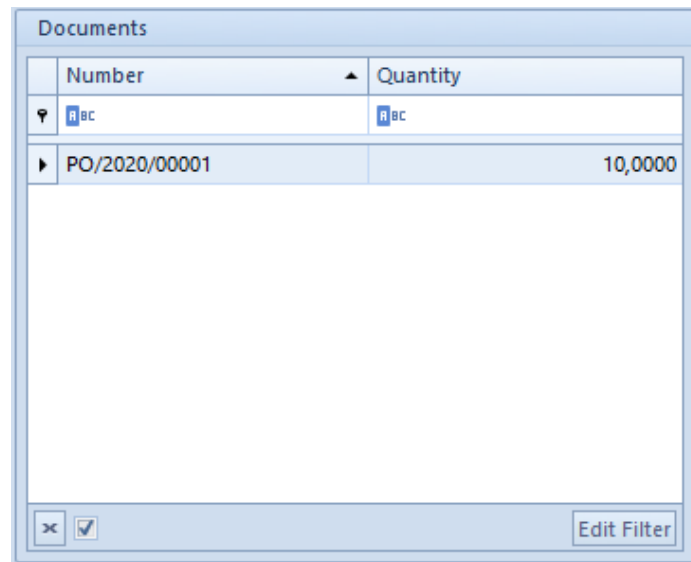
- **Quantity in Warehouses** – corresponds to the column [Quantity in Stock](#)
- **Quantity on Purchase Orders** – corresponds to the column [In Transit \(+\)](#)
- **Quantity on Sales Orders** – corresponds to the column [Ordered \(-\)](#)
- **Demand Forecast** – corresponds to the column [Forecast Quantity](#)
- **Forecast Realization** – corresponds to the column [Forecast Quantity](#)
- **Quantity Ordered in Other Warehouses** – corresponds to the column [In Transit \(+\)](#)
- **Quantity Ordered by Other Warehouses** – corresponds to the column [Ordered \(-\)](#)

Next to each of the components its corresponding quantity in the table of items, which relates to the item marked in the list, is displayed.

Section *Documents* is strictly linked to the section

Components.

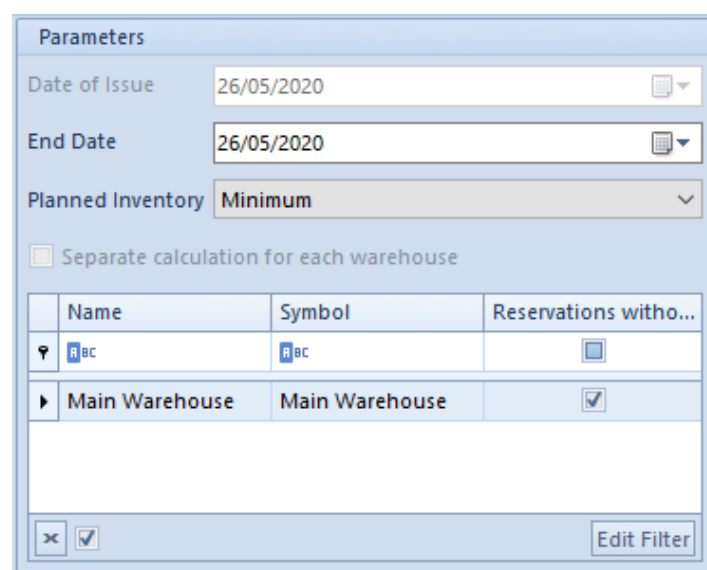
In this section the source documents of the type indicated in the area *Components* for an item marked in the list of merchandise, are displayed. It presents the numbers of documents and the quantity of an item from a given document.



Number	Quantity
PO/2020/00001	10,0000

Section Documents

Section *Parameters* is intended for defining a time interval on the basis of which an IQC is to be created, the values of planned inventory as well as warehouses included in the IQC.



Name	Symbol	Reservations witho...
Main Warehouse	Main Warehouse	<input checked="" type="checkbox"/>

Section Parameters

- **Date of Issue** – date of creating an IQC, not subject to

edition

- **End Date** – defines the maximum date for documents included in an IQC
- **Planned inventory** – allows defining whether an IQC is to be calculated for the minimum or optimal planned inventory
- **Separate calculation for each warehouse** – the value of this parameter is retrieved from definition of IQC document, but it can be changed directly in a document form

Upon checking parameter *Separate calculation for each warehouse*, column *Warehouse* appears in *Items* section on the list. Upon unchecking the parameter, the column is automatically hidden and the IQC is recalculated. If the parameter is checked, then after adding an item onto IQC, that item is included separately for each warehouse. It is not possible to change value of *Separate calculation for each warehouse* parameter if an item has been added onto IQC.

Example

Parameter *Separate calculation for each warehouse* is checked on IQC document.

The list of warehouses includes: *Main Warehouse, Complaint Warehouse, Outlet Warehouse*

Situation 1:

Item BZKD is added onto IQC, it is presented in three separate rows:

Code	Name	Warehouse	Features	Quantity in ...	In Transit (+)	Ordered (-)	Forecast Quan...	Planned...	Balance	Quantity To O...	Subtotal Price	Value
BZKD	BZKD	Main Wareh...		23,0000	0	0	0	0	23,0000	0	23,00	0,00
BZKD	BZKD	Complaint W...		0	0	0	0	0	0	0	23,00	0,00
BZKD	BZKD	Outlet Ware...		12,0000	0	0	0	0	12,0000	0	23,00	0,00

Situation 2:

Item BKZD with feature white/S and black/M is added onto IQC, it is presented in the following way:

Code	Name	Warehouse	Features	Quantity in ...	In Transit (+)	Ordered (-)	Forecast Quan...	Planned...	Balance	Quantity To O...	Subtotal Price	Value
BZKD	BZKD	Main Wareh...	white, S	16,0000	0	0	0	0	16,0000	0	23,00	0,00
BZKD	BZKD	Complaint W...	white, S	0	0	0	0	0	0	0	23,00	0,00
BZKD	BZKD	Outlet Ware...	white, S	4,0000	0	0	0	0	4,0000	0	23,00	0,00
BZKD	BZKD	Main Wareh...	black, M	7,0000	0	0	0	0	7,0000	0	23,00	0,00
BZKD	BZKD	Complaint W...	black, M	0	0	0	0	0	0	0	23,00	0,00
BZKD	BZKD	Outlet Ware...	black, M	4,0000	0	0	0	0	4,0000	0	23,00	0,00

List of warehouses contains warehouses whose resources are included in the calculation. In a newly added IQC document, these are warehouses set as default in the IQC document definition.

Note

Several default warehouses can be associated with an IQC document.

If the parameter Separate calculation for each warehouse is checked, quantity for individual components of IQC is calculated individually for each warehouse.

The last column on the list of warehouses in section Parameters is column *Reservations without Specified Warehouse*. Depending if parameter in this column for a given warehouse is:

- **checked** – quantities of items which have option <All> (reservations without resources) selected in subitems of orders are included in item quantity calculation for a warehouse for which the parameter is checked
- **unchecked** – quantities of items which have option <All> (reservations without resources) selected in subitems of orders are not included in for a warehouse for which the parameter is unchecked

Generating WM- from IQC

Generating of a warehouse movement WM- is possible only from a confirmed item quantity calculation, for items whose quantity in the column *Quantity To Order* is higher than zero.

In case the parameter *Separate calculation for each warehouse* is:

- **unchecked** – a WM- document can be generated if there is only one warehouse in the IQC document. Upon selecting the option of generating, a list of warehouses enabling to select a source warehouse from which the resources will be ordered, is displayed. The warehouse defined in the IQC will be set as the source warehouse.
- **checked** – upon selecting the option of generating WM- a list of warehouses possible to select, will be displayed.

After selecting the option of generating [WM-] a window with warehouse selection appears:

- *Source Warehouse* – it is possible to select warehouses associated with WM- document in a center from the level of which the document is being generated. A warehouse checked as default in definition of WM- document is suggested automatically.
- *Target Warehouse* – displays warehouse retrieved from the IQC document for which quantity in the column *Quantity To Order* is higher than zero.
- *Generate* – it is necessary to check the parameter for warehouses for which a WM- document is to be generated. A WM- document will be generated with *Unconfirmed* status.

Source Warehouse	Target Warehouse	Generate
=	EC	<input type="checkbox"/>
Main Warehouse	Complaint Warehouse	<input checked="" type="checkbox"/>

Window with warehouse selection during generation of WM-document

It is possible to change a unit on a WM- document generated from IQC.

On WM- documents generated from IQC, each item lot is displayed as a separate item.

It is not possible to generate a WM- when:

- many warehouses are indicated in an IQC and the parameter *Separate calculation for each warehouse* is unchecked
- there are not enough resources in the source warehouse

Generating IO from IQC

Generating internal orders is possible only from a confirmed item quantity calculation, for items whose quantity in the column *Quantity To Order* is higher than zero.

In case the parameter *Separate calculation for each warehouse* is:

- **unchecked** – an IO document can be generated if there is only one warehouse in the IQC document. Upon selecting the option of generating, a list of warehouses enabling to select a source warehouse from which the resources will be ordered, is displayed. The warehouse defined in the IQC will be set as the source warehouse.

- **checked** – upon selecting the option of generating IO a list of warehouses possible to select, will be displayed

After selecting the option of generating [IO] a window with warehouse selection appears:

- *Source Warehouse* – it is possible to select warehouses associated with IO document in a center from the level of which the document is being generated. A warehouse checked as default in definition of IO document is suggested automatically.
- *Target Warehouse* – displays warehouse retrieved from the IQC document for which quantity in the column *Quantity To Order* is higher than zero.
- *Generate* – it is necessary to check the parameter for warehouses for which an IO document is to be generated. An IO document will be generated with *Unconfirmed* status.

Source Warehouse	Target Warehouse	Generate
=	bc	<input type="checkbox"/>
▶ Outlet Warehouse	Main Warehouse	<input checked="" type="checkbox"/>
Main Warehouse	Complaint Warehouse	<input type="checkbox"/>
Main Warehouse	Outlet Warehouse	<input checked="" type="checkbox"/>

Window with warehouse selection during generation of IO document

It is possible to change a unit on an IO document generated from IQC without recalculating quantity in accordance with the settings on an item form.

Note

On internal orders generated from IQC, each item lot is displayed as a separate item.

Generating PO from IQC

Purchase orders can be generated only from a confirmed IQC.

All items whose quantity in the column *Quantity To Order* is greater than zero will be added to the generated purchase order. In case the parameter [Separate calculation for each warehouse](#) in the IQC is unchecked, their subitems will be assigned to a warehouse:

- from IQC, if only one warehouse was indicated
- default from the PO definition, if there is more than one warehouse in the IQC

If parameter *Separate calculation for each warehouse* is checked on IQC, a window with warehouse selection is displayed while generating a PO:

Name	Code	Order
▼ <input type="checkbox"/> ec	<input type="checkbox"/> ec	<input type="checkbox"/>
● Main Warehouse	Main Warehouse	<input type="checkbox"/>
I Complaint Warehouse	Complaint Warehouse	<input checked="" type="checkbox"/>
Outlet Warehouse	Outlet Warehouse	<input checked="" type="checkbox"/>

Window with warehouse selection during generation of PO document

The displayed list includes only those warehouses for which quantity in column *Quantity To Order* is greater than 0. Upon checking option *Order*, it is possible to generate a purchase order document with <All> warehouses set in the document header.

Example

Parameter *Separate calculation for each warehouse* is checked on IQC document.

The list of warehouses includes: *Main Warehouse, Complaint Warehouse, Outlet Warehouse*

Item BZKD is added onto IQC document.

For warehouse:

- Main Warehouse – 15 pcs
- Complaint Warehouse – 5 pcs
- Outlet Warehouse – 10 pcs

Parameter *Order* is checked for Main Warehouse and Complaint Warehouse in the warehouse selection window during generation of PO.

One item BZKD in quantity 20 pcs and two is added onto PO document with two subitems:

- Main Warehouse – 15 pcs
- Complaint Warehouse – 5 pcs

It is possible to change a unit on a PO document generated from IQC without recalculating quantity in accordance with the settings on an item form.

Note

On purchase orders generated from IQC, each item lot is displayed as a separate item.