

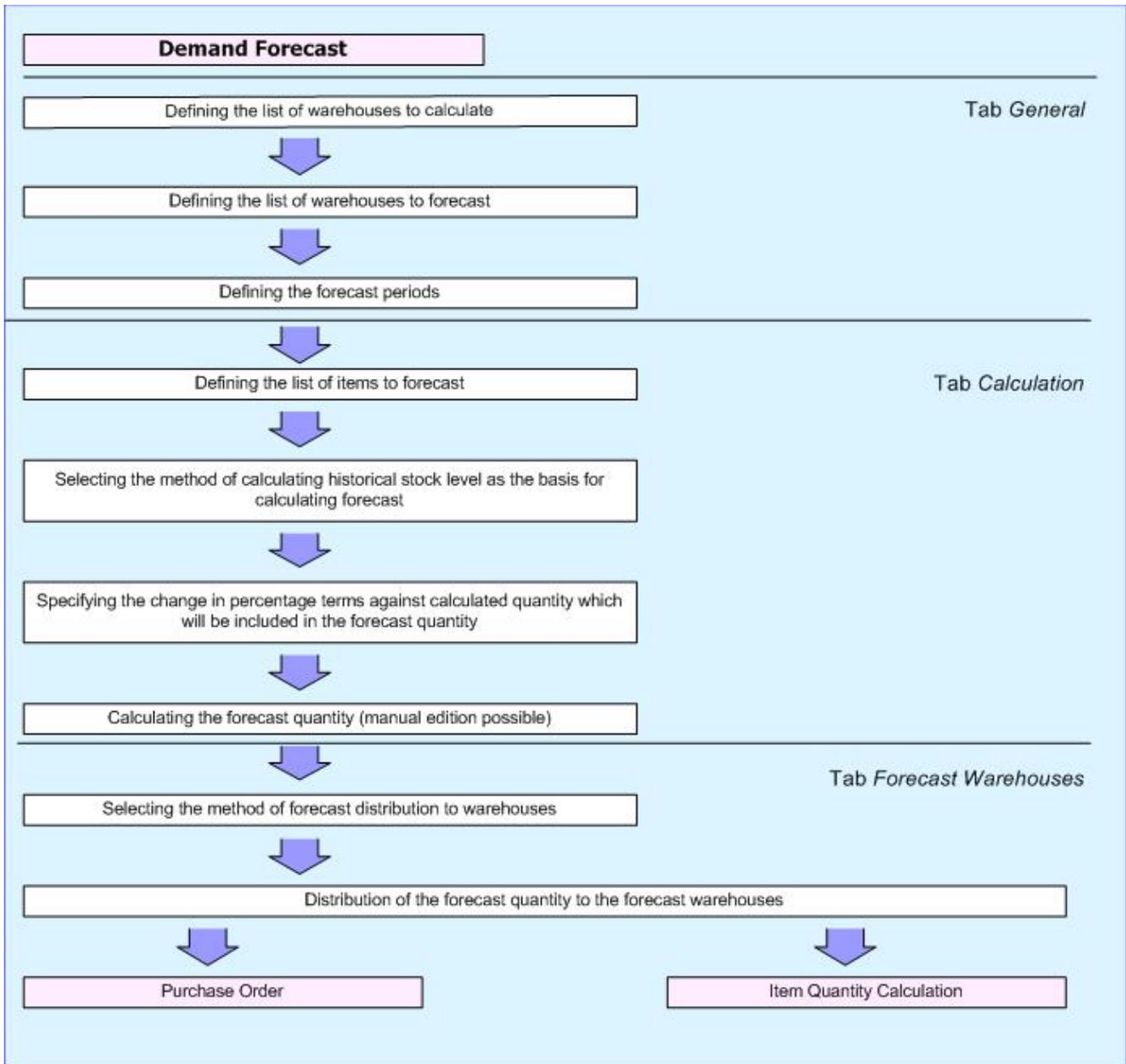
Introduction to demand forecast

Demand forecast is used for analyzing the sales volume of items from defined warehouses in a specified time interval. On its basis it is possible to forecast the future sales volume and generate documents allowing for replenishing a warehouse with an appropriate quantity of items within an appropriate time.

A list of demand forecast documents is available in menu *Warehouse (Resources) Demand Forecasts*

The demand forecasting process can be executed in several stages:

- defining warehouses on the basis of which the historical stock levels will be calculated
- defining warehouses for which the quantity forecasts will be calculated
- defining the periods for which the forecasting will be performed
- determining the method for calculation of item forecasts:
 - defining the period as the basis for calculation
 - determining the percentage quantity change in relation to the quantity calculated on the basis of the selected period
- calculating the forecast quantity on the basis of the selected criteria for items
- defining the method of distributing the forecast quantity into warehouses
- distribution of the forecast quantity into individual warehouses



Scheme of creating demand forecast

Creating a demand forecast

Demand forecast form – tab *General*

General Calculation Forecast For Warehouses Associated Documents Attributes Change History

Number → DF / 2020 / 00001

Description:

Document Status: Initiated

Date of Issue: 25/05/2020

Confirmation Date:

Owner: Company

Warehouses To Calculate

Drag the column header here to group by that column

Code	Name	Forecast Coefficient
bc	bc	bc
Main Warehouse	Main Warehouse	1
NYC Warehouse	NYC Warehouse	1

Forecast Warehouses

Drag the column header here to group by that column

Code	Name	Forecast Coefficient
bc	bc	bc
Main Warehouse	Main Warehouse	1
NYC Warehouse	NYC Warehouse	1

Periods

Drag the column header here to group by that column

Name	From	To	Days
bc	bc	bc	bc
New Period	25/05/2020	26/05/2020	2

Tab General on demand forecast form

Warehouses to Calculate is a list of warehouses on the basis of which the historical stock levels are calculated. **<<Forecast Coefficient>>** defines size or weight (priority) of a warehouse and affects the distribution of the forecast quantities among warehouses.

Immediately above the list, button **[Add To Forecast]** is

available, which allows for copying selected warehouse to the adjacent list.

Forecast Warehouses is a list of warehouses for which an item forecast is calculated. It is identical to the list of warehouses to calculate. Immediately above the list, button **[Add To Calculation]** is available, which allows for copying selected warehouse to the adjacent list.

Section *Periods* presents time intervals for which item sales forecast is calculated. The number of days is calculated automatically upon entering the dates. When changing the number of days, the end date of the period are modified accordingly in relation to the start date of the forecast period.

Note

It is not possible to define identical periods within one DF document.

Tab *Calculation*

Calculation is a stage during which items for which a forecast is calculated and the method of its calculation are defined.

It is possible to select items upon clicking on button:

[Add] – opens a window with list of items, an item is added onto the document without lot

[Add By Features] – opens a window with list of items, all lots defined for a given item are added onto the document

[Add By Features Through Form] – opens a window allowing for selecting items along with their lots

For the selected items it is necessary to define a historical period on the basis of which the forecast is calculated. The following options are available for selection:

Corresponding period of the preceding year – default option, the calculation of the historical sales (calculated quantity) is performed on the basis of corresponding periods of the preceding year for each defined period

Example

The following periods have been defined in a forecast: January 2018, February 2018, March 2018. For parameter *Calculate on the basis of*, the option of corresponding period of the preceding year has been selected. When calculating the historical sales, therefore, the following quantities will be calculated:

for January 2018 – sales from January 2017

for February 2018 – sales from February 2017

for March 2018 – sales from March 2017

Preceding period – the calculation of the historical sales (calculated quantity) is performed on the basis of a period preceding the forecast period.

Example

The following periods have been defined in a forecast: January 2018, February 2018, March 2018. For parameter *Calculate on the basis of*, the option of preceding period has been selected. The periods on the basis of which the historical sales will be calculated will be the preceding three months before the start of the first forecast period: December 2017, November 2017, October 2017. The basis for calculating a forecast for:

January 2018 is the sales from October 2017

February 2018 is the sales from November 2017

February 2018 is the sales from November 2017

Specified period – the calculation of the historical sales (calculated quantity) is performed on the basis of an entered date starting the historical period – date *From* and the end date of this period – date *To* which constitutes the basis for calculation of historical quantity.

Sales for historical periods is calculated on the basis of confirmed SOR, IR-, SORQC and IR-QC documents whose “stocked” date is included in the indicated period.

It is also necessary to specify percentage value of sales change in forecasted periods.

Next to the name of each item there is a + sign. It expands a list of periods for which a forecast is being prepared along with information regarding the quantity calculated on the basis of the historical period.

If forecasted quantity is supposed to be different, its value can be changed manually in field *Change [%]* and <<*Forecast Quantity*>>. In such a case it is displayed in red to highlight the modified rows which will be changed after recalculation.

Percentual forecast quantity regards all warehouses indicated in the tab *General*.

In order to recalculate forecast quantity, e.g. after changing the method of calculation forecast quantity or the parameter *Change (%)*, it is necessary to click on one of the following buttons:

[Recalculate] – recalculates the forecast quantity only for the items selected in the list

[Recalculate All] – recalculates the forecast quantity for all items defined in the list

General				Calculation	Forecast For Warehouses	Associated Documents	Attributes	Change History
Items								
Drag the column header here to group by that column								
Name	Code	Features	Unit					
bc	bc	bc	bc					
Smartphone	SMT-001	item						
Period	Calculated Quantity	Change [%]	Forecast Quantity					
New Period	83,0000	0,00%	83,0000					
Laptop	LPT-001	item						
Period	Calculated Quantity	Change [%]	Forecast Quantity					
New Period	0	0,00%	0					
LCD Monitor	LCDM-001	item						
Period	Calculated Quantity	Change [%]	Forecast Quantity					
New Period	0	0,00%	4					
<div style="text-align: right;">Edit Filter</div>								
Calculation Method								
Calculate on the basis of: Corresponding period of the preceding year					From: 01/04/2020			
					To: 25/05/2020			

Tab Calculation on demand forecast form

Tab *Forecast For Warehouses*

In this part of the demand forecast form the forecast quantity is distributed into forecast warehouses. After confirming forecast quantities indicated for each warehouse constitute the final result of the forecast included in item quantity calculation or when generating a purchase order.

It is necessary to define the method of distribution of the forecast quantity into selected warehouses. The following options are available for selection:

Evenly – after activating the distribution into warehouses the

quantities of items will be distributed evenly into all warehouses within the forecast periods (regardless of the forecast coefficient defined for a warehouse)

Example

For period: January 2018, the forecast quantity of item BZKD is 800 pcs After distributing this quantity for this period into 2 warehouses, which were defined for the forecast (Warehouse CHIC and Warehouse NY), according to the *Evenly* method, 400 pcs were assigned to each of them.

Proportionally – after activating the distribution into warehouses the forecast quantity for each item in each period will be distributed in accordance with the forecast coefficient defined in the warehouse form

Example

For period January 2018, the forecast quantity of item BZKD is 800 pcs the warehouses have their coefficients defined:

Warehouse CHIC – 3

Warehouse NY – 5

After distributing this quantity for this period to Warehouse CHIC and Warehouse NY according to the *Proportionally* option, the following quantities were assigned: to Warehouse CHIC = 300 pcs (3/8 from 800), to Warehouse NY = 500 pcs (5/8 from 800).

In order for the quantities to be distributed, it is necessary to click on button [**Distribute To Warehouses**].

Section *Forecast Quantities* displays items for which a forecast is performed, including the calculated forecast quantity broken down into warehouses and periods.

Detailed information on individual items is available after clicking on sign “+” that is located next to each item.

In tab *Calculation* it is possible to change forecast value. A

modified row is displayed in red to highlight the rows which have been modified manually and will be changed after recalculation.

The screenshot displays the 'Forecast For Warehouses' tab with the following data structure:

Product Name	Code	Unit	Warehouse	Period	Forecast
Smartphone	SMT-001	item	Main Warehouse	New Period	0
Smartphone	SMT-001	item	NYC Warehouse	New Period	0
Laptop	LPT-001	item	Main Warehouse	New Period	3
Laptop	LPT-001	item	NYC Warehouse	New Period	3
LCD Monitor	LCDM-001	item	Main Warehouse	New Period	0
LCD Monitor	LCDM-001	item	NYC Warehouse	New Period	0

Tab Forecast For Warehouses on demand forecast form

Upon completing tabs *General*, *Calculation*, and *Forecast For Warehouses* a document can be confirmed. The current date (confirmation date of a document) will automatically appear in a list of demand forecast documents in a given document in column *Confirmation Date*.

Generating a PO from demand forecast

It is possible to generate purchase orders only from a confirmed demand forecast.

When generating a document, an optimization window is opened which allows for specifying whether a PO should be generated for all periods and all warehouses or only for selected ones.

Periods and Warehouses

All
 Selected

Period Selection

Period	Date From	Date To	Order
▼ Dec	Dec	Dec	<input type="checkbox"/>
▶ New Period	25/05/2020	26/05/2020	<input checked="" type="checkbox"/>

Warehouse Selection

Name	Code	Order
▼ Dec	Dec	<input type="checkbox"/>
▶ Main Warehouse	Main Warehouse	<input checked="" type="checkbox"/>
NYC Warehouse	NYC Warehouse	<input type="checkbox"/>

Optimization window of PO generation

Option *All* – is used when ordered merchandise will be released within a short period. For a long-term plan it is recommended to use option *Selected*. In that way, we avoid a situation of creating large stock levels in a warehouse, which can be slow movers for a longer period, but ensure a quantity required to meet the sales on an ongoing basis without the unnecessary overfilling for several periods ahead

After selecting option *Selected* in section *Periods and Warehouses*, sections *Period Selection* and *Warehouse Selection* are activated. They display information about forecast periods and warehouses defined in the source demand forecast document. Next to each item there is column *Order*, which allows for defining whether a given period and warehouse should be included in generation of a purchase order.

Subsequent purchase orders can be generated until the entire forecast quantity has been used up

In purchase orders generated from DF each item lot will be displayed as a separate document item.

Generating an IO from demand forecast

It is possible to generate internal orders only from a confirmed demand forecast.

When generating a document, an optimization window is opened

which allows for specifying whether an IO should be generated for all periods and all warehouses or only for selected ones.

All periods

Drag the column header here to group by that column

Name	Date From	Date To	Selected
ec	ec	ec	<input type="checkbox"/>
▶ New Period	25/05/2020	26/05/2020	<input checked="" type="checkbox"/>

Edit Filter

Drag the column header here to group by that column

Source Warehouse	Target Warehouse	Selected
=	ec	<input type="checkbox"/>
▶ Local Warehouse	Main Warehouse	<input checked="" type="checkbox"/>
Main Warehouse	NYC Warehouse	<input type="checkbox"/>

Edit Filter

Optimization window of IO generation

Target warehouse is a warehouse defined in demand forecast as forecast warehouse. Source warehouse is a warehouse from which items are to be ordered. A default warehouse for the document is suggested by default. However, it can be edited.

Note

The button [**Generate**] is active only when at least one period and one pair of warehouses has been checked and the source warehouse is different from the target warehouse.

Subsequent internal orders can be generated until the entire

forecast quantity has been used up

In internal orders generated from DF each item lot will be displayed as a separate document item.