

Navigating through Item Structure

Understand the functionality of beas Item Structure

Boyum Solutions IT A/S

Beas Tutorial

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1. INTRODUCTION

Production processes generally require the creation of the following master data components:

- A finished good, what we usually sell or used to produce an assembly
- A factory calendar that specify the working days
- A resource, a machine where we produce or transform the assembly or finished good
- A routing or a list of production tasks with production lead times
- A bill of material, a list of raw material and packaging, a recipe

2. PROCESS

To start using beas as a production planning and an execution tool in a company, it is essential to understand how to build an item structure. This is actually the major step to consider doing when implementing beas. The process below was designed based on implementation best practices to help you manage specific data used in beas business processes.



Building an item structure

After defining the production master data described above, beas displays them all in one single screen called the item structure. In here, the item will have assigned the bill of materials, the routings to produce the item (if applicable) and many other details attached to the items and used in beas processes.

The item structure is the main and most important screen in beas. In here, we display all related manufacturing master data.

In order to navigate through the item structure screen, first we need to learn the different icons used in beas:

lcon	Description
۲	Raw Material
	Finished good / Sub-assembly (Stock related)
	Finished good / Sub-assembly (Order related)
	Finished good / Sub-assembly (Phantom Group)



2.1. Information Displayed

This screen shows a list of all items, with their descriptions, as created in SAP, from High level to Detailed level. It can be displayed the complete structure by clicking on the item or, alternatively, by clicking on the "+" icon as displayed below (if applicable).

Item	structure						
	Item no., Resource, op. sequ.	Brief Description, Activity	Quantity	Setup	JT Drawing number	Match code	DIN
h -C] FG001	Finished Good 01 - Storage Related					
i C	FG002	Finished Good 02 - Order Related					
	merge	merge					
	00	Outside operation cost					
	PK001	Package Item 01					
	PK002	Package Item 02					
	PK003	Package Item 03					
	PK004	Package Item 04					
	PK005	Package Item 05					
	RM001	Raw Material 01					
	RM002	Raw Material 02					
	RM003	Raw Material 03					
	RM004	Raw Material 04					
	RM005	Raw Material 05					
	SF001	Semi-finished 01					
÷	SF002	Semi-finished 02					
<u>ب</u>							
<							>
	Search Edit E	nd <u>N</u> ew Delete <u>R</u> efere	ence				
			·				4

When we expand an item, the screen shows all manufacturing master data assigned to it like: bill of materials and routings.

ltem structure								
Item no., Resource, op. sequ.	Brief Description, Activity	Quantity	Setup	JT Drawing number	Match code	DIN		
👆 🦳 💼 FG001	Finished Good 01 - Storage Related							
10 SF001	Semi-finished 01	3 Piece						
A20 PK003	Package Item 03	1 Piece						
10 Blist1	Operation 01		1.000	0.001				
20 Pack01	Operation 02		0.500	1.000				
FG002	Finished Good 02 - Order Related							
merge	merge							

Some items might have, underneath them, additional sub Bill of Material or Routing which can be expanded as well by clicking on the "+" sign.

Item structure							
Item no., Resource, op. sequ.	Brief Description, Activity	Quantity	Setup	JT Drawing number	Match code	DIN	
- FG001	Finished Good 01 - Storage Related		_				
	Semi-finished 01	3 Piece					
A20 PK003	Package Item 03	1 Piece	•				
🚛 🉀 10 Blist1	Operation 01		1.000	0.001			
20 Pack01	Operation 02		0.500	1.000			
+ 🛅 FG002	Finished Good 02 - Order Related						
🧰 merge	merge						

A routing master data can have a "+" icon next to it, when it has additional information like tools being used, parallel resources or alternative resources.

Item structure						_ 🗆 ×
Item no., Resource, op. sequ.	Brief Description, Activity	Quantity	Setup	JT Drawing number	Match code	DIN
🔚 🗁 FG001	Finished Good 01 - Storage Related					
10 SF001	Semi-finished 01	3 Piece				
A20 PK003	Package Item 03	1 Piece				
10 Blist1	Operation 01		1.000	0.001		
20 Pack01	Operation 02		0.500	1.000		
FG002	Finished Good 02 - Order Related					
merge	merge					

After expanding, here is how the item structure look like with all the sub-levels:

Item structure						_	
Item no., Resource, op. sequ.	Brief Description, Activity	Quantity	Setup	JT Drawing number	Match code	DIN	^
📇 🦳 FG001	Finished Good 01 - Storage Related						
10 SF001	Semi-finished 01	3 Piece					
10 RM001	Raw Material 01	3.0000 Gr					
👘 20 RM002	Raw Material 02	6.0000 ml					
👩 30 RM003	Raw Material 03	1.0000 ml					
	Raw Material 04	50.0000 ml					
6 50 RM005	Raw Material 05	10.0000 ml					
	Operation 01			2.000 AB			
15 ENC1	Operation 02			1.000 B			
20 ENCA	External Operation			A			
A20 PK003	Package Item 03	1 Piece					
10 Blist1	Operation 01		1.000	0.001			
10 Mixer	Mixer						
20 Pack01	Operation 02		0.500	1.000			
+ 🛅 FG002	Finished Good 02 - Order Related						_
merge	merge						

From left to right, beas shows the following columns:

Item no: Column used for item number of finished goods, sub-assemblies and raw materials. All sub-level items will have a position number according to the order given once created the bill of material.

Resource op. sequ.: Column used for routings assigned to the finished good. All routing positions have a position number according to the order given once they were assigned to the item. In this column, beas also displays tools and resources (parallel and alternative) assigned to routings.

Brief description, activity: Column used for the description of the items and/or routings within the item structure.

Quantity: Column used to show the quantity needed from the Bill of Material position to produce the finished good or sub-assembly. For more information, please refer to the *Bill of Material* tutorial.[DN1]

Setup: Column used to show the *Setup Time* of the routing positions. This includes, operations and tools. For more information, please refer to *Setup Time* in the *Routings* tutorial.[DN2]

JT: Column used to show the *Processing Time* of the routing position. This includes, operations and tools. For more information, please refer to *Processing Time* in the *Routings* tutorial.

Drawing Number: Column used to show the *Drawing Number* defined in the item master data. For more information, please refer to *Drawing Number* field in the *Item Master Data* tutorial.[DN₃]

Match Code: Column used to show the *Match Code* defined in the item master data. For more information, please refer to *Match Code* field in the *Item Master Data* tutorial.[DN4]

DIN: Column used to show the *DIN* defined in the item master data. For more information, please refer to *DIN* field in the *Item Master Data* tutorial.[DN5]

Material Group: Column used to show the *Material Group* defined in the item master data. For more information, please refer to *Material Group* field in the *Item Master Data* tutorial.

[DN6] **Raw Material:** Column used to show the *Raw Material* defined in the item master data. For more information, please refer to *Raw Material* field in the *Item Master Data* tutorial.[DN7]

3. ADDITIONAL FUNCTIONS

By right clicking on a line in the item structure, or in short, a position, some functions are available.

Item structure					
Item no., Resource, op. sequ.	Brief Description, Activity Finished Good 01 - Storage Related	Quantity	Setup	т	Draw
10 SF001	Semi-finished 01	3Piece			
10 RM001	Raw Material 01	3.0000 Gr			
20 R Position M	anagement	6.0000 ml			
	Treat-menener vo	1.0000 ml			
🕋 A 40 RM004	Raw Material 04 Customizing	50.0000 ml			
Assembly Management	Raw Material 05	10.0000 ml			
			1.000	2.000	AB
				1.000	в
20 ENC Bill of N	1aterials: Edit: SF001				A
Batch Changing of M	Aterials: New Position: SE001	1 Piece			
E. S 10 Blist1	Edit: S		1.000	0.001	
(), 10 Mixel + Operation	on: New Position: SF001 Options		0.500	1 000	
	Position: 10		0.500	1.000	
Operati	ion: Delete: SF001 Position: 10				
a oo	Selection				
PK001	on cut				
PK002	i Ali				
PK003 Q Search	for Structure				
🔍 🗸 structu	re report				
<		1			
Search Edit Er	nd <u>N</u> ew Delete <u>R</u> eference	e			

3.1. Assembly Management

This button displays different tasks available for the position selected (except for tools). These task are:

- Edit the bill of material
- Add a material to the bill of material
- Edit the routing for the assembly
- Add a new position in the routing
- Edit or delete the position selected (whether it is a BOM position or a routing position)
- Copy or cut the selection
- Expand all

- Search for structure
- Call the structure report

For Tools positions only these tasks are available:

- Edit the routing for the specific tool
- Edit tool

3.2. Batch Changing

These functions are only available for the finished goods items. For more information, please refer to *Item Structure Functions* tutorial.[DN8]

- Batch changes in item, BOM and/or routings
- Bill of Material: List of differences
- Bill of Materials: Duplicate to

There is an option available for all positions within the item structure:

Calculate Resources

3.3. Position Management

Functions available here are the same as the ones displayed at the bottom of the item structure window, like: create, edit, search, delete, and go to the *Reference* report. For more information about this report, please refer to *Item Master Data* tutorial.

It also has additional functions like:

- Reports: which calls directly to the report lists for items
- Last messages: which calls to the beas last message report. For more information, please refer to System Tools tutorial.[DN9]

3.4. Printing Options

This button displays the different printing options available:

- Preview
- Fax
- E-mail
- Word
- Excel
- PDF
- Layout: which let the user to define a new printing layout. For more information, please refer to System Tools tutorial.[DN10]

3.5. Templates Administration

Clicking on this option will display the Templates Administration where the user can set the different templates created. For more information, please refer to *System Tools: Templates* tutorial.

3.6. Customizing

This button displays the different configuration options available:

- Setup Overview
- Add validation configuration
- Add function buttons. For more information, please refer to B1UP Button tutorial. [DN11] [NA12]

4. CONFIGURATION WIZARD

Expand Max.. levels:

Configuration Wizard: There is a parameter that will allow to specify the maximum number of levels to expand in the item structure. By default, the maximum is 5.

PATH: Master Data > Item > Display > Item Structure > Expand Max.. levels

Configuration wizard								
1	Administration							
	Financials							
8	Business partner							
	Sales							
_ ()	Master Data							
1	Item group	Item group Edit						
1	Item properties	Item properties Edit						
Þ	Length and Width UoM	Length and Width UoM Edit						
Þ	Weight UoM	Weight UoM Edit						
je –	Unit of M.	Unit of M. Edit						
i 🔎	Manufacturer	Manufacturer Edit						
je 👘	Cut-Off	Cut-Off Edit						
je 👘	Raw material	Raw material Edit						
i 📁 🔻	Item							
Þ	Default Item	RM001	.					
Þ	Display							
Þ	Item structure							
10	Expand max levels	5						
je –	Allow item copy	\checkmark						
-	Extension Step Item							
	Extension Step Bill of Materials							
	Extension Step Routing							
1	Item master							
	I-Version Administration							
	Variant							
/ Þ	Bill of Materials							
je 🕨	Routing							
- N								