



BEAS

MANUFACTURING

Beas Tutorials

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2019

Beas Manufacturing

Beas Manufacturing is the global solution for small to mid-sized discrete and process manufacturing businesses. Offering functionality from the planning phase through to control, implementation and fulfilment, Beas Manufacturing ensures efficiency and flexibility for manufactures.

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1 Cost elements

In manufacturing different costs need to be posted during the production process: material costs, external operation cost, non-material manufacturing cost, tool procurement and maintenance, quality control, surcharges and so on.

Extended cost evaluation provides the option to split these costs into different cost elements, with the required granularity, and post the costs into different accounts according to the configuration.

Cost elements have the function of holding values for further accounting in Beas.

Beas cost elements can be set up in different ways:

- Accounts can be defined for each cost element. The values in this case are booked at the time, when the time receipt is created and can be different, for example for each time type. The calculation schema accounts are not set, or a calculation schema is not set up.
- Accounts can be set up in the cost element and the cost element can be included in the calculation schema.
- A cost element can be connected to a calculation schema and the account can be set up in the calculation schema. This results in the journal entry not being created, when the time receipt is posted.

In this tutorial we are looking at the setup of cost elements and how they can be connected to the production process.

1.1 Using cost elements example

In this example, a cost group called *Production* is set up that contains cost elements for labor, production and setup.

Cost Element Group	
Group	Description
1	Standard
Production	Production cost elements
Projekt	Projekt
qc_pc	QC PostCalculation Group
sdfsdf	fghfghf
STANDARD	STANDARD Group
test	test2

#	Cost Element	Beschreibung	Marginal Cost %	Full Co
1	Labor_c	Labor cost		
2	Production_c	Production cost		
3	Setup_c	Setup cost		

Buttons: Edit, End, New, Delete

If we look into the details of the *Production_c* cost element, by clicking **Edit**, the account to be credited is defined for the cost element.

Cost Element: Production_c
 Description: Production cost
 Group: Production

At time receipt direct booking on

Account Marginal Cost	x	
Account Fix costs	x	
Account Full Cost	x	15200001-01-001-01 Machine-Costs (HO, USA, GA)
WIP Inventory Account	x	

(if empty, then WIP of assembly)

The cost elements are connected to the resource in its master data and the operation. In the resource, it is defined that we want to use the *Production_c* cost element for posting the resource cost. The *Value labor cost separately* checkbox is marked in the resource, so the labor rate can be defined.

The screenshot shows the SAP Resource Master Data configuration for resource R-01-1T.STD.08H. The 'Cost' tab is active, displaying the following data:

Time types	Marginal Cost Rate	Full Cost Rate	Cost Element (Default)
Cost Rate	14.00	26.00	Production_c
Labor cost rate	0.00	3.50	Labor_c

Additional settings include: Cost Status (dropdown), Cost Center (dropdown), Expand to cost elements (dropdown set to 1), and Value labor costs separately (checkbox checked). Buttons for 'Cost Rate', 'Cost Elements Update', 'OK', 'Cancel', 'Reference', and 'Dispatches' are visible at the bottom.

On the operation, the labor cost element must be included, so it is used for the posting.

The screenshot shows the SAP operation sequence configuration for operation 30. The 'General' tab is active, displaying the following data:

Field	Value	Cost Element	Use factor
Operation sequence	30		1.0000
Type	operation		
Operation	OP-IN.STD.001		1.0000
Resource	R-01-1T.STD.08H		
Active	<input checked="" type="checkbox"/>		
Clock Mandatory?	<input type="checkbox"/> Closed		
Setup time Precalculation	0.000		
Setting up Capacity	5.000		
Processing	25.000	Production_c	
Labor costs on cost type		Labor_c	
Quantity per Time	100.0000		
Time Unit	Minute		
Resource allocation			

Additional settings include: Description (Internal Operation STND001 - Standard (default Resource only)- Setup for), Instructions, and various other parameters like Idle time, Overlap limit, Scrap factor, and QC inspection plan.

On time receipt posting, the cost elements are used, and the journal entries reflect the accounts set up in the cost elements.

30	R-01-1T.STD.08H	Internal Operation STND001 - Standard (default Resource	01.04.19	01.04.19	7.500	10.000	Min.
25	Test User		01.04.19		1.00Pcs	10.000	Min.
Document 4243: New Time Receipt Pos. 10/30 (4/1/2019)					295.00	295.00	
5687 4/1/2019 Timereceipt							
152000010100101		Full Cost Machine-Costs (HO, USA, GA)				260.00	
132000000100101		Full Cost Inventory - Work In Progress (HO, USA, GA)			260.00		
612500000100101		labor costs Fix Payroll Expense - Other Absences (HO, USA, GA)				35.00	
132000000100101		labor costs Fix Inventory - Work In Progress (HO, USA, GA)			35.00		

1.2 Setting up cost elements

Cost elements can be created in **Administration > Setup > Production > Cost Elements**.

1.2.1 Setting up a cost element group

Administration > Setup > Production > Cost Elements

Create a cost elements group (with code and description) and add the cost elements in the Cost elements tab of the group.

Group: Name of the group.

Description: Short description of the group.

1.2.2 Setting up cost elements

Administration > Setup > Production > Cost Elements

Use the **New** button on the cost elements tab to add a new element.

Cost element: Unique id of the cost element.

Description: Description of the cost element.

Group: The cost group, that the cost element belongs to.

The account values should only be used, if the account can be credited, when the time receipt is recorded. You can either specify the marginal and fixed cost accounts or the full cost account.

At time receipt direct booking on

Account marginal cost: Account to be credited with marginal cost.

Account fix cost: Account to be credited with fixed cost.

Account full cost: Account to be credit with full cost.

WIP Inventory account: If the amount is not posted to the WIP inventory account of the assembly, another account can be used. This option can only be used if it is configured in the

Configuration Wizard. See [WIP inventory account](#).

Surcharge on

Surcharges can be identified separately in the pre-calculation and costing analysis. The surcharges can be posted directly, like normal costs. Define the rate and accounts for surcharge.

Marginal cost %: Surcharge on the marginal cost rate.

Full cost %: Surcharge on the marginal cost rate.

Labor cost

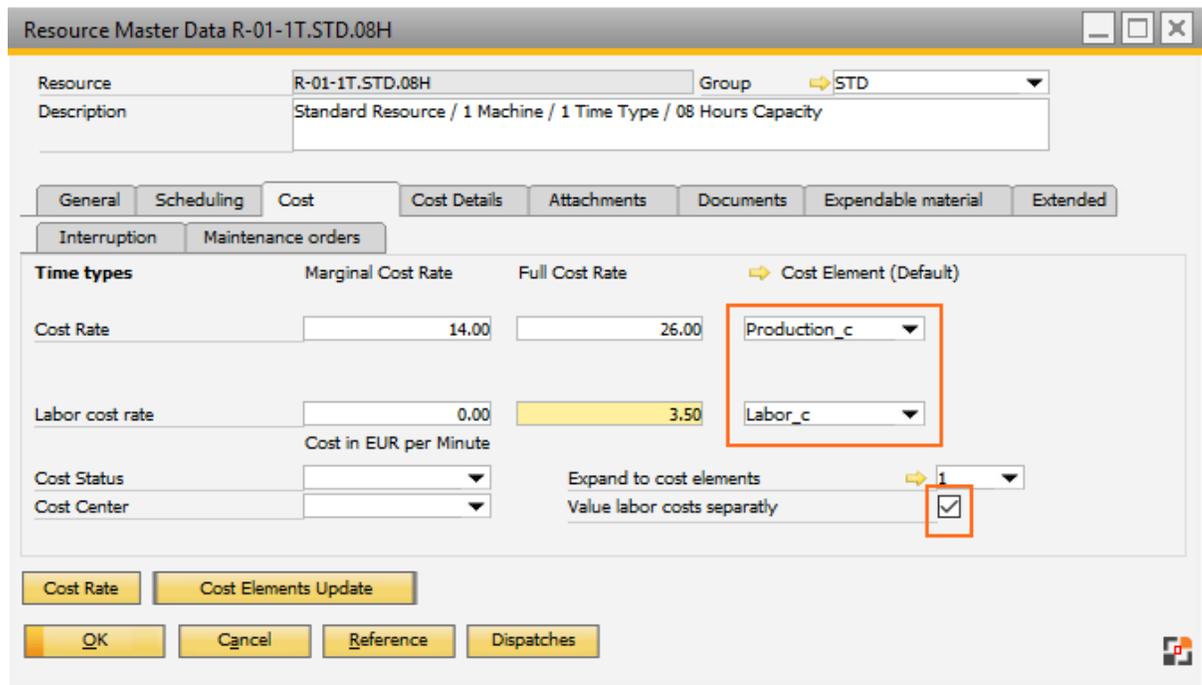
Define the account for the labor cost. The labor cost element should be used in the operation.

1.2.3 Connecting cost elements to the resource and operation

Resource > Resource Master Data

Go to the resource and add the specific cost element to the resource.

1. In **Resource > Resource Master Data** choose the item and click the **Edit** button.
2. Go to the **Cost** tab and select the cost element form the drop-down list.



If you need the labor to be valued as a separate entry, use the checkbox and add the required cost element. If this option is active, the personnel cost fields (marginal costs / full costs) are displayed respectively. In case the cost element for labor is to be used on the operation, set the cost element to be used.

operation sequence 1228/10/30

Operation sequence: 30
Type: operation
Operation: OP-IN.STD.001
Resource: R-01-1T.STD.08H
Active:
Clock Mandatory?: Closed

Description: Internal Operation STND001 - Standard (default Resource only)- Setup for

General | **Scheduling** | Extended | Tool | Utilities | Parallel | Alternative | Attachments

	Time	Cost Element	Use factor	
Setup time Precalculation	0.000		1.0000	
Setting up Capacity	5.000		1.0000	
Processing	25.000	Production_c		
Labor costs on cost type		Labor_c		
Quantity per Time	100.0000			
Time Unit	Minute			
Resource allocation				

Work Steps: 1.0000
Idle time: Hr.
Overlap limit: None Hr.
Scrap factor:
QC inspection plan:
Use factor: 1.0000
Work Steps: 1.0000
Idle time: Hr.
Overlap limit: None Hr.
Scrap factor:
QC inspection plan:
Labor_c

1.2.4 Connecting cost elements to tools

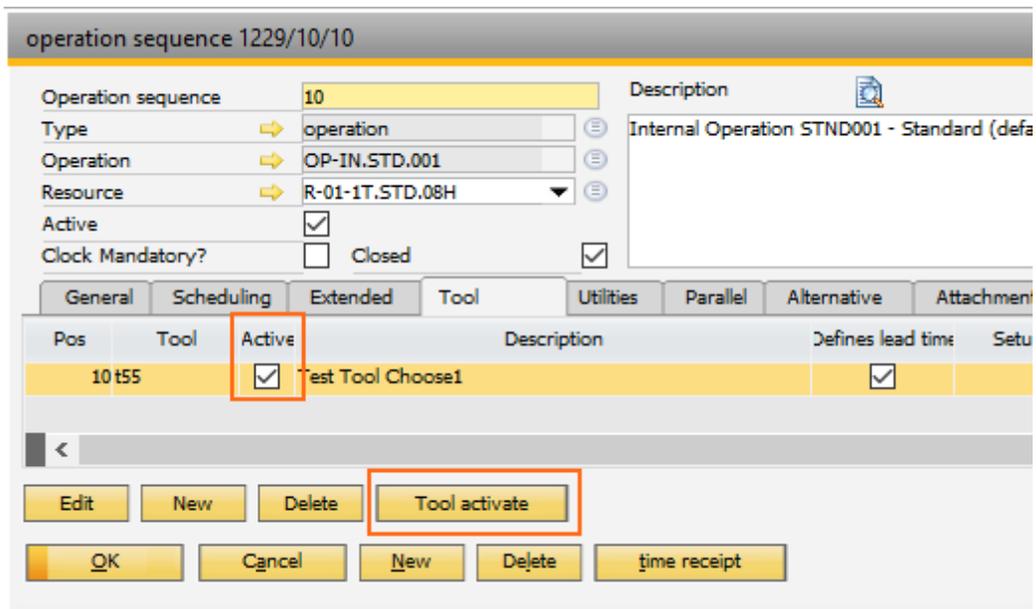
Administration > Setup > Inventory > Tool Administration

Tools can be assigned to operations and they have an associated cost. Therefore, tools can also be assigned cost elements.

1. Go to **Administration > Setup > Inventory > Tool Administration**, select the tool and click the **Edit** button.
2. A cost element can be set for depreciation of the tool and for the maintenance of the tool. Deprecation cost is calculated. *Cost element for buy = the Purchase Price / by Tool life* (in units or hours).

3. The tool is assigned to an operation and is activated. Go to the operation Tools tab and click the **New** button to add a tool.
4. In the Cost tab of the new screen add the required cost elements.

5. Activate the tool for the operation in the operation Tools tab.



6. Add the cost element to a calculation schema, as described in [Adding a cost element to calculation schema](#).

1.2.5 Adding a cost element to calculation schema

Administration > Setup > Precalculation > Calculation schema

Cost elements can be used in a calculation schema. This is an example of connecting a cost element to a calculation schema and using it in an operation.

1. Create a cost element, that has no accounts set. This means that the journal entry is not created, when the time receipt is posted.

Cost Element Production

Cost Element: Quality_Control
 Description: Quality control costs
 Group: Production

At time receipt direct booking on

Account Marginal Cost
 Account Fix costs
 Account Full Cost
 WIP Inventory Account
 (if empty, then WIP of assembly)

Surcharge on

Marginal Cost %
 Full Cost %

Surcharge at time receipt post immediately to

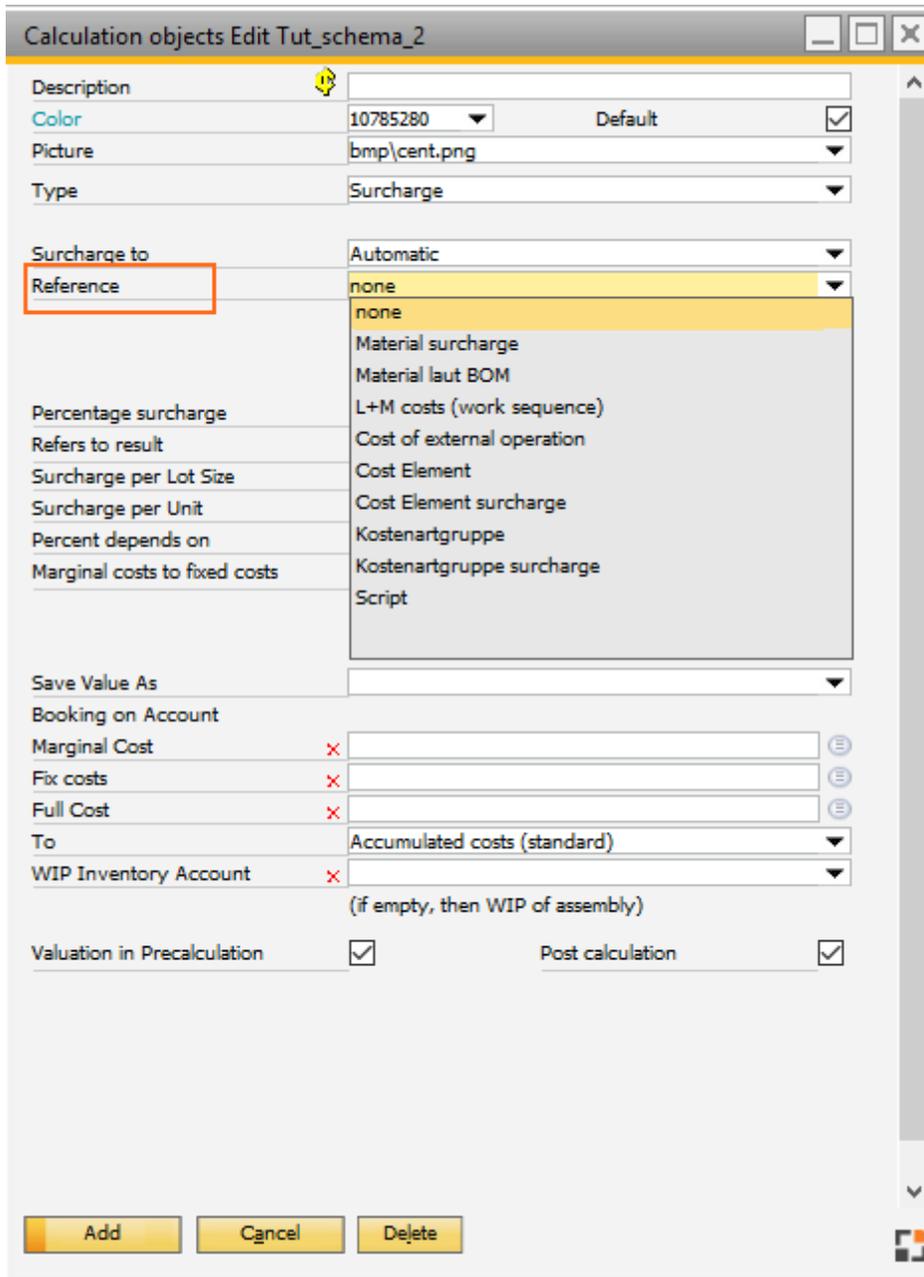
Account Marginal Cost
 Account Fix costs
 Account Full Cost

Labor costs

Account Marginal Cost
 Account Fix costs
 Account Full Cost

OK Cancel Delete

2. Go to the calculation schema and click on the **Edit** button.
3. Go to the **Overhead Cost** tab and click the **New** button to add a new element.
4. In the **Reference** field, select *Cost element*.



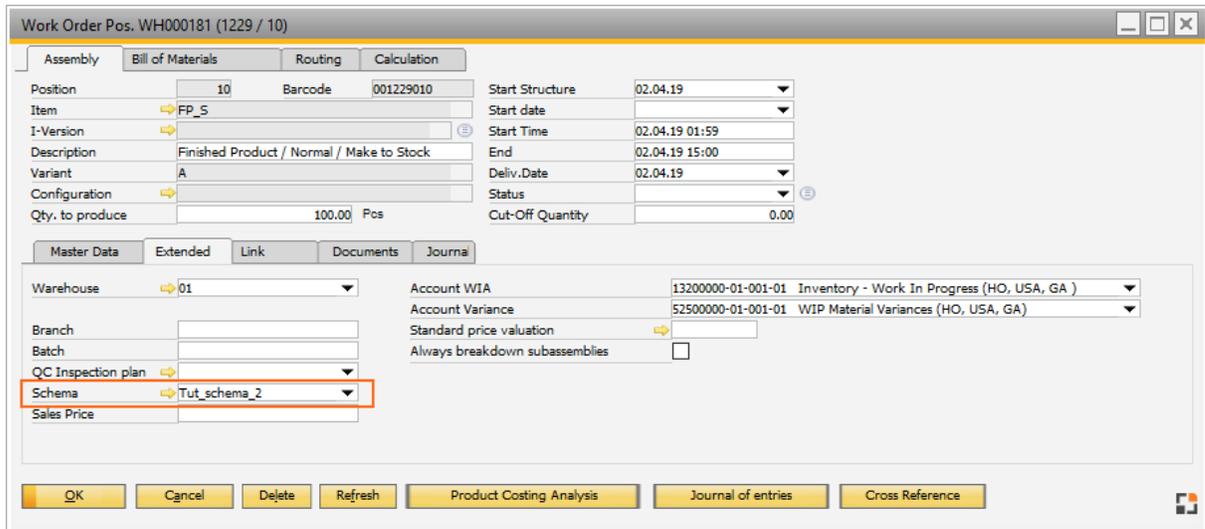
5. In the **Cost element** field, select the required cost element and set the account to be used in the schema.

Calculation objects Edit Tut_schema_2

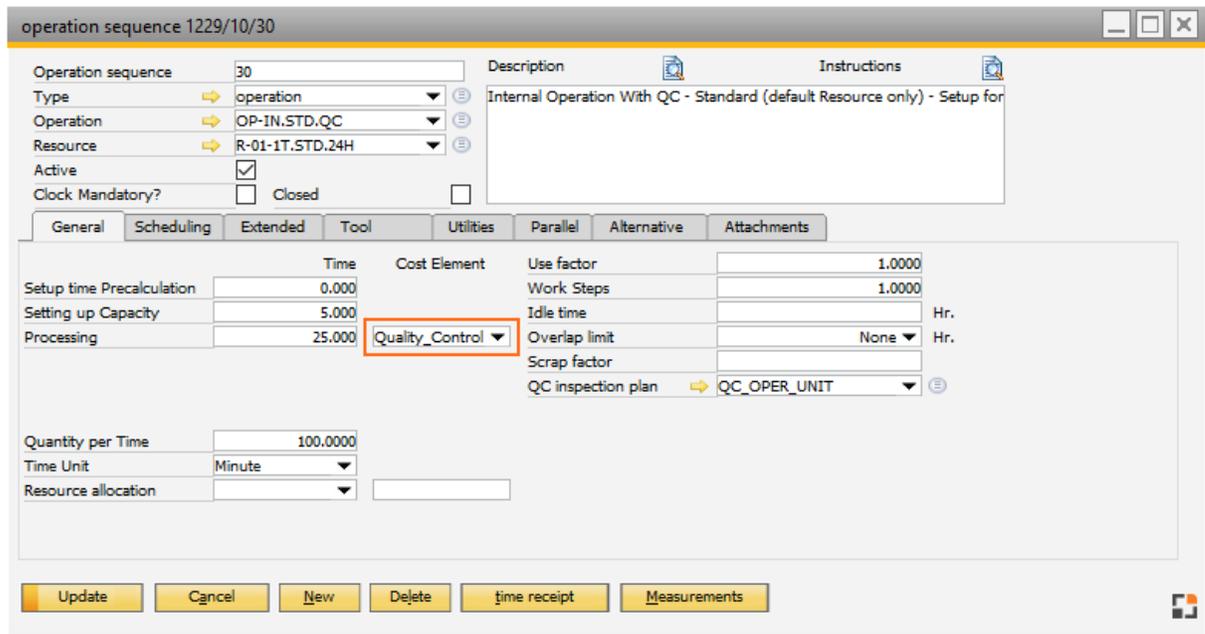
Description	CC	
Color	10785280	Default <input checked="" type="checkbox"/>
Picture	bmp\cent.png	
Type	Surcharge	
Surcharge to	Automatic	
Reference	Cost Element	
Cost Element	Quality_Control	
Time Requirement display	<input type="checkbox"/>	
Save Value As		
Booking on Account		
Marginal Cost	<input type="text"/>	<input type="button" value="⊖"/>
Fix costs	<input type="text"/>	<input type="button" value="⊖"/>
Full Cost	63900000-01-001-01 Other Administrative (HO, USA)	<input type="button" value="⊖"/>
To	Accumulated costs (standard)	
WIP Inventory Account	<input type="text"/>	
(if empty, then WIP of assembly)		
Valuation in Precalculation	<input checked="" type="checkbox"/>	Post calculation <input checked="" type="checkbox"/>

Update Cancel Delete

6. Connect the schema to the work order by opening the work order Extended tab and using the *Schema* field.



7. Connect the cost element to the operation by opening the operation and choosing the cost element in the drop-down field.

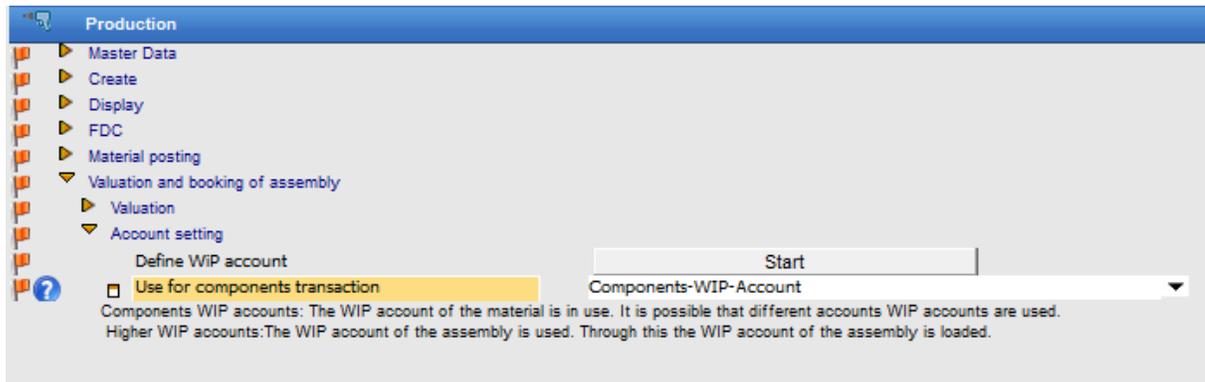


Since the account is set up in the calculation schema and not in the cost element, the journal entry is not created, when the time receipt is posted.

1.3 Configuration Wizard

1.3.1 WIP inventory account

Administration > Configuration Wizard > Production > Valuation and Posting of Assembly > Account setting > Use for component transactions



Determines the WIP account to which the material positions should be posted:

WIP accounts for components: For material posting, the value is posted to the WIP account of the material.

WIP accounts for superordinate items: For material posting, the value is posted to the WIP account of the assembly.