

## TIPS AND TRICKS

### How are Actual Component and Actual Product Costs computed during a production process?

In Production Order -> Summary tab, there are fields for 'Actual Component Cost' and 'Actual Production Cost'. How are these costs computed?

#### Actual Component Cost

This cost is the sum of actual issuances for production through the 'Issue for Production' window.

#### Actual Production Cost

This cost is based on the planned quantity in the production order which is defined in the 'Bill of Materials'.

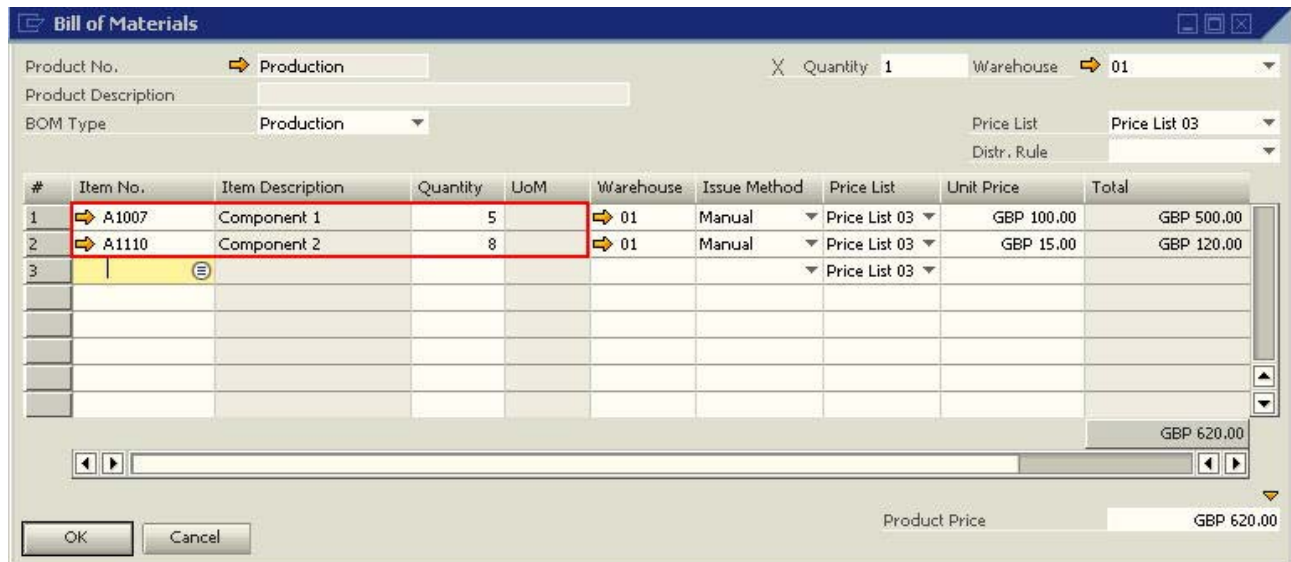
The difference between the two costs is posted as a production variance in the 'Total Variance' field.

For example, consider this scenario:

A Bill of Materials for 'Production' item has two components, both of which are issued manually:

A1007 - 5 Units

A1110 - 8 Units



The screenshot shows the SAP 'Bill of Materials' window. At the top, the product is set to 'Production' with a quantity of 1 and warehouse 01. The BOM Type is 'Production'. The table below lists two components:

#	Item No.	Item Description	Quantity	UoM	Warehouse	Issue Method	Price List	Unit Price	Total
1	A1007	Component 1	5		01	Manual	Price List 03	GBP 100.00	GBP 500.00
2	A1110	Component 2	8		01	Manual	Price List 03	GBP 15.00	GBP 120.00
3							Price List 03		

At the bottom right of the table, the total cost is shown as GBP 620.00. The 'Product Price' field at the bottom right also displays GBP 620.00.

1. Create a Production Order.

Production Order

Type: Special  
Status: Released  
Product No.: Production  
Product Description:  
Planned Quantity: 1 UoM:  
Warehouse: 01

No.: Primary 1  
Order Date: 15.09.08  
Due Date: 15.09.08  
User: manager  
Origin: Manual  
Sales Order:  
Customer:  
Distribution Rule:

Components Summary

#	Item No.	Item Description	Base ...	Planned...	Issued	Avail...	UoM	Wareho...	Issue Method
1	A1007	Component 1	5	5	995		01	Manual	
2	A1110	Component 2	8	8	2		01	Manual	
3									

Remarks:

OK Cancel

2. Issue only some of the components to production:

A1007 - 4 Units

A1110 - 4 Units

#	Order No.	Series No.	Row ...	Item No.	Item Description	Quantity	Whse
1	➡ 1	Primary	0	➡ A1007	Component 1	4	➡ 01
2	➡ 1	Primary	1	➡ A1110	Component 2	4	➡ 01

At this stage, the 'Actual Component Cost' field is updated in the 'Production Order':

This value has been computed using this formula:

Issued Quantity x Current Cost  
Hence:

Component	Issued Qty	Current Cost	Total Cost
A1007	4	GBP 83.34	GBP 333.36
A1110	4	GBP 13.00	GBP 52.00
Total			GBP 385.36

**Inventory Posting List by Items**

Posting Date	Document	Whse	Item No.	Item Description	Qty	Inventory UoM	Price after Disc.
<b>A1007</b>							
15.09.08	SO 2	01	A1007	Component 1	-4		GBP 83.34
<b>A1110</b>							
15.09.08	SO 2	01	A1110	Component 2	-4		GBP 13.00

OK

3. Receive the finished item through the 'Receipt from Production' window.

**Receipt from Production**

Number: 2    Series: Primary    Posting Date: 15.09.08

Ref. 2

#	Order No.	Series No.	Item No.	Item Description	Type	Quantity	U..
1	1	Primary	Production		Complete	1	

Remarks:

Journal Remark:

OK    Cancel    Production Order    Return Components

It is at this stage the 'Actual Product Cost' and the Total Variance fields are updated in the 'Production Order':

The screenshot shows a 'Production Order' window with the following data:

Type	Special	No.	Primary	1
Status	Closed	Order Date	15.09.08	
Product No.	Production	Due Date	15.09.08	
Product Description		User	manager	
Planned Quantity	1	Origin	Manual	
Warehouse	01	Sales Order		
		Customer		
		Distribution Rule		

Costs		Quantities	
Actual Component Cost	GBP 385.36	Planned Quantity	1
Actual Additional Cost		Completed Quantity	1
<b>Actual Product Cost</b>	<b>GBP 520.70</b>	Rejected Quantity	
Total Variance	GBP 135.34		
Variance Per Product	GBP 135.34		
Variance %	25.99		

Dates	
Due Date	15.09.08
Actual Closing Date	15.09.08
Overdue	

Journal Remark: Production Order - Production

The Actual Product Cost of GBP 520.70 is computed as the 'Actual Component Cost' plus any difference between the 'Planned' and 'Issued Quantity'.

Hence:

$$\begin{aligned}
 &\text{Actual Component Cost} + \text{Quantity Difference} \\
 &= \text{GBP } 385.36 + \text{GBP } 135.34 \\
 &= \text{GBP } 520.70
 \end{aligned}$$

The Quantity Difference of GBP 135.34 is calculated as follows:

Component	Planned	Issued	Difference	Current Cost	Total Cost
A1007	5	4	1	GBP 83.34	GBP 83.34

A1110	8	4		GBP 13.00	GBP 52.00
Total					GBP 135.34

The 'Total Variance' field is also populated by the sum of the variances that occurred during the production process; in this case it is GBP 135.34.

5. When the Production Order is closed, the system automatically creates a journal entry for the 'Total Variance' as follows:

The screenshot shows the 'Production Order' window with the following details:

- General Information:** Type: Special, Status: Released, Product No.: Production, Planned Quantity: 1, Warehouse: 01.
- Order Details:** No. Primary: 1, Order Date: 15.09.08, Due Date: 15.09.08, User: manager, Origin: Manual.
- Summary Tab:**
  - Costs:** Actual Component Cost: GBP 385.36, Actual Product Cost: GBP 520.70, **Total Variance: GBP 135.34** (highlighted), Variance Per Product: GBP 135.34, Variance %: 25.99.
  - Quantities:** Planned Quantity: 1, Completed Quantity: 1, Rejected Quantity: 0.
  - Dates:** Due Date: 15.09.08.
  - Journal Remark:** Production Order - Production

Note: The 'WIP - Variance' Account is taken from the 'WIP Inventory Variance Account' field in the Item Group, Warehouse or Item Level depending on the setting on the 'Set G/L Accounts By' field of the *Parent* item.