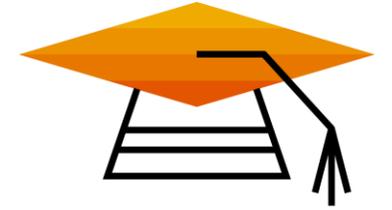


By Products and Additional Quantity

SAP Business One Version 9.3



Objectives



At the end of this topic, you will be able to:

- Explain the concept of a by-product.
- Add By-Products to inventory during the production process
- Define Additional Quantity in the Production Order
- Calculate the planned quantity of items and resources in the Production Order

By-Products



What is a by-product?

- A by-product is an item produced from left-over materials in the production process.
- One or more by-products can be produced along with the main product, using a single production order.
- These by-products are then stored in the warehouse as separate items and later are sold or used again as a component in production.

Examples:

- Production of window and door frames, where the remains after cutting are re-used for production of smaller sizes of final products.
- Production of chemicals, where beside the main chemical also some side chemicals can be produced.
- Metal plate cutting, where remains are re-used.

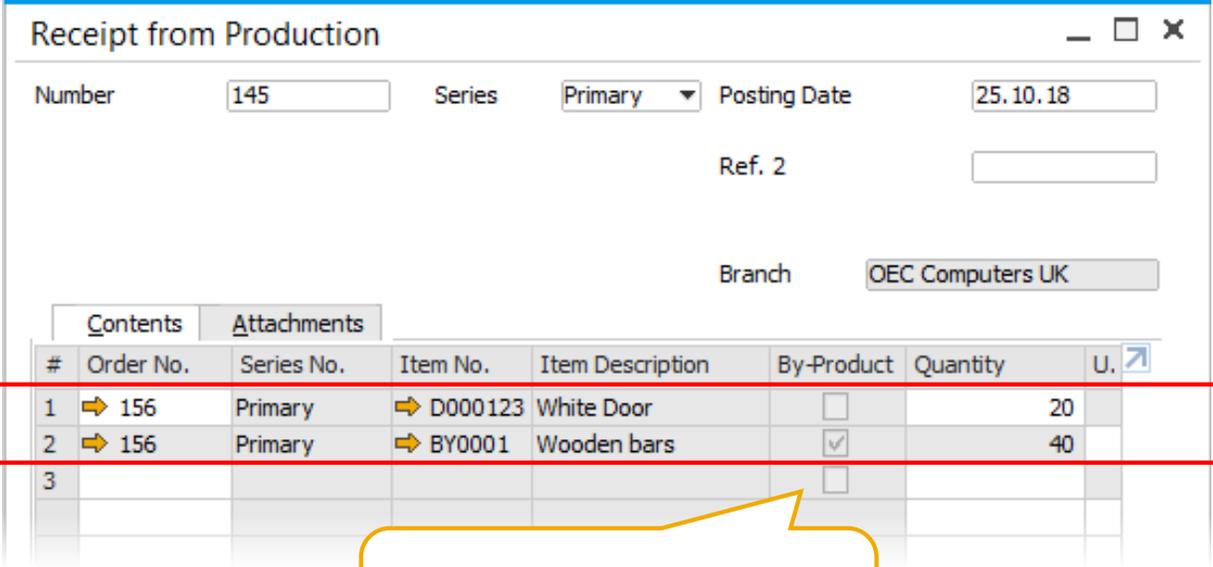
By-Products in BOM and Production Order

- By-products are defined in BOMs and *Production Orders* as items, but with a negative quantity
- Both the *Manual* and *Backflush* issue methods are supported for by-products

Components		Summary							
#	Type	No.	Description	Base Qty	Planned Qty	UoM Name	Ware...	Issue Method	End Date
1	Item	➔ D000111	Wooden Door	1	20		➔ 01	Backflush	25.10.18
2	Item	➔ H000001	Handel	2	40		➔ 01	Backflush	25.10.18
3	Resource	➔ RC0002	Carpenter	1.5	30	hours	➔ 01	Backflush	25.10.18
4	Resource	➔ L000001	Lathe Machine	1	20	hours	➔ 01	Backflush	25.10.18
5	Item	➔ BY0001	Wooden bars	-2	-40		➔ 01	Backflush	25.10.18
6	Item								

Receiving By-Products

- By-products are received from production into the warehouse by a *Receipt from Production*, along with the main final product
- When the *Manual Issue* method is used then the quantity can be manually adjusted
- When the *Backflush* issue method is used then the quantity is derived from the quantity of the main final product



The screenshot shows the 'Receipt from Production' window in SAP. At the top, there are input fields for 'Number' (145), 'Series' (Primary), 'Posting Date' (25.10.18), and 'Ref. 2'. Below these is a 'Branch' field set to 'OEC Computers UK'. A table with two tabs, 'Contents' and 'Attachments', is visible. The 'Contents' tab is active, showing a table with columns: '#', 'Order No.', 'Series No.', 'Item No.', 'Item Description', 'By-Product', 'Quantity', and 'U.'. The first two rows are highlighted with a red border. Row 1: #1, Order No. 156, Series No. Primary, Item No. D000123, Item Description 'White Door', By-Product checkbox is unchecked, Quantity 20. Row 2: #2, Order No. 156, Series No. Primary, Item No. BY0001, Item Description 'Wooden bars', By-Product checkbox is checked, Quantity 40. Row 3 is partially visible with #3.

#	Order No.	Series No.	Item No.	Item Description	By-Product	Quantity	U.
1	156	Primary	D000123	White Door	<input type="checkbox"/>	20	
2	156	Primary	BY0001	Wooden bars	<input checked="" type="checkbox"/>	40	
3					<input type="checkbox"/>		

Two items are added:
the produced item and
the by-product

Indicates whether an
item is a by-product

Additional Quantities

What is an *Additional Quantity*?

- *Additional Quantity* (Setup Quantity) are items or resources that need to be consumed at the beginning or at the end of a production process.
- *Additional Quantities* are not affected by the number of parent items produced.

Examples:

- Machine startup time (Resource)
- Lead component used to set up the machine (Item)



Planned Quantity = (produced item planned Qty x base Qty) + *Additional Qty*

Example: Additional Quantities

Example – Additional Qty represents setup time of the resource

- BOM definition: Qty = 1 , Additional Qty = 0.25
- Planned final product Qty = 10
- Planned resource component Qty = $(10 \times 1) + 0.25 = 10.25$

Production Order

Type: Standard
 Status: Planned
 Product No.: D00003
 Product Description: Decorative Door
 Planned Quantity: 10
 Warehouse: 01
 Priority: 100
 Routing Date Calculation: On Start Date

Bill of Materials

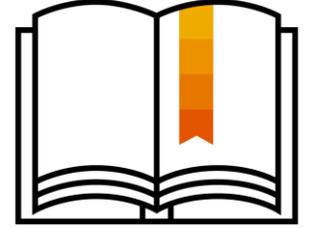
Product No.: D00003 X Quantity: 1
 Product Description: Decorative Door
 BOM Type: Production
 Production Std Cost: GBP 0.00
 Planned Average Production Size: 1.00

#	Type	No.	Description	Quantity	UoM Name	Wareho...	Additional Quantity	Issue Method	Price List
1	Item	D000111	Wooden Door	1		01		Backflush	Base Price
2	Item	H000001	Handel	2		01		Backflush	Base Price
3	Resource	L000001	Lathe Machine	1	hours	01	0.25	Backflush	
4	Item								Base Price

Components

#	Type	No.	Description	Base Qty	Additional Qty	Planned Qty	UoM Name	Issue Method	Ware...
1	Item	D000111	Wooden Door	1		10		Backflush	01
2	Item	H000001	Handel	2		20		Backflush	01
3	Resource	L000001	Lathe Machine	1	0.25	10.25	hours	Backflush	01
4	Item								

Summary



Here are some key points:

- By-products are defined in *Bills of Materials* and *Production Orders* as items, but with negative quantity.
- Additional Quantity is an amount of items or resources that needs to be consumed at the beginning or at the end of a production process, and is not affected by the number of parent items to produce.
- The *Planned Quantity* of a component in the *Production Order* row is equal to:
(the quantity in the row X the planned quantity of the production order) + the additional quantity in the row.

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