



ProcessForce User's Guide

Author: Piotr Koszela [CompuTec]

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How to Guide – ProcessForce

Subcontracting

Subcontracting is a method of managing “purchase of a service”. For example items are sent to the subcontractor to perform a service e.g. painting, heat treatment, annealing.

The service is a part of the production process and there is no change in item code for the parent.

Related pages:

- [Subcontractor type Resource](#)
- [Subcontract Assembly and Free Issue Materials](#)

Subcontracting in ProcessForce can be performed using one of the following procedures:

- using Subcontractor type Resource
- creating External type Manufacturing Order

1.1 Subcontractor type Resource

1.1.1 Overview

Subcontracting can be taken into production process by creating subcontractor type Resource, adding to Operation and adding Operation to Routing.

1.1.2 Resources

A resource type may be set as a Subcontractor for a service performed by an external organization.

- Select the resource type Subcontractor. After a selection a number of additional fields are displayed.

The screenshot shows the 'Resource' form with the following fields and values:

- Code: Sub01
- Description: Painting
- Group: (empty)
- Number of Resources: 1
- Cycles: (empty)
- Cycle Capacity: 1,000
- Resource Type: Subcontractor (highlighted with a red circle)
- Queue Time: 0.000 Fixed minutes
- Setup Time: 0.000 Fixed minutes
- Run Time: 0.000 Fixed minutes
- Stock Time: 0.000 Fixed minutes
- Resource Calendar: Sub01
- Vendor Code: 00001
- Vendor Name: ABC Inc
- Item Code: Painting
- Item Name: Painting

The Vendor Code, Vendor Name, Item Code, and Item Name fields are highlighted with a red circle. Below the main form is a table with columns: #, Property Code, Property Name, Condition Type, UoM, Condition Value, and Condition V... The table contains one row with # 1 and Condition Type Equal.

- Select the supplier performing the service (Vendor Code and Vendor Name fields)
- Select the item (defined as a non-inventory item and purchased)

The screenshot shows the 'Resource' form with the 'Item Master Data' dialog open. The dialog has the following fields and values:

- Item No.: Manual
- Description: Painting
- Foreign Name: (empty)
- Item Type: Items
- Item Group: Items
- UoM Group: Manual
- Price List: Price List 01
- Bar Code: (empty)
- Unit Price: (empty)
- Primary Curr: GBP 500.00

The 'Purchase Item' checkbox is checked, and the 'Purchase Item' and 'Fixed Asset Indicator' checkboxes are highlighted with a red circle. A red arrow points from the 'Painting' item name in the dialog to the 'Painting' item code in the main form.

- As per resources, define the operation, and add the operation to the route:

Routing _ □ ×

Routing Code: Active
Routing Name:

Operations Resources

#	Sequence	Operation Code	Operation Name	Operation Overlay Sequence	Overlay Code	Ove...
1	10	→ 04	→ Prep			
2	20	→ 09	→ Subcontracting			
3	0					

Property Code	Property Name	Condition Type	Condition Value	Condition Value To	UoM

Remarks:

1.2 Subcontract Assembly and Free Issue Materials

Overview

To manage the Subcontract Assembly and Free Issue materials process ProcessForce uses the following functions:

- Bill of Material to define the items to be assembled, type External
- Manufacturing Order to manage the inventory issues, receipts and external WIP and WIP Variance journals
- Inventory can be manually picked or backflushed
- Inventory Transfers linked to the Manufacturing Order to move inventory from the main warehouse to subcontractor warehouse
- Purchase Order and Goods Receipt PO for the service based on a Non-Inventory Item, linked to the Manufacturing Order for reference
- Automatic Goods Receipt PO when Subcontract production is booked
- Batch trace items are also managed via manual picking or backflushed based on FIFO, FEFO or FMFO
- Cost analysis planned and actual

Related pages:

- [General Ledger Settings](#)
- [Master Data Settings](#)
- [Process flow](#)

1.2.1 General Ledger Settings

Overview

- Inventory consumed at a subcontractor is accounted for in the same way as production within a manufacturer.
- When inventory is issued and received financial postings occur within an External WIP account, thus providing visibility of the value of production at the subcontractor.

Account Settings

- As per SAP Business One rules, accounts can be set at Warehouse, Item Group and Item level or by using Advanced G/L Account Determination
- At the appropriate level (implementation decision) for the WIP Inventory and Inventory Variance Account, set the account codes for External WIP and WIP Variance

Item Groups - Setup

Item Group Name: SubContracting

General | Accounting | ProcessForce

#	Account Code	Account Name
Expense Account - EU	500005	Raw Materials - Cost of Goods Sold
Revenue Account - Foreign	410000	Sales Revenue (Foreign) - Product No. 1
Expense Account - Foreign	500005	Raw Materials - Cost of Goods Sold
Exchange Rate Difference	500200	Materials - Purchase Price Gains
Goods Clearing Account	130090	Raw Materials Goods Clearing
G/L Decrease Account	500310	Stock Revaluation Losses
G/L Increase Account	500300	Stock Revaluation Gains
WIP Stock Account	131011	External WIP
WIP Stock Variance Account	131012	External WIP Variance
Expense Clearing Account		
Stock in Transit Account		
Sales Credit Account	400000	Sales Revenue (Domestic) - Product No. 1
Purchase Credit Account	500005	Raw Materials - Cost of Goods Sold
Sales Credit Account - Foreign	410000	Sales Revenue (Foreign) - Product No. 1
Purchase Credit Account	500005	Raw Materials - Cost of Goods Sold
Sales Credit Account - EU	410000	Sales Revenue (Foreign) - Product No. 1
Purchase Credit Account	500005	Raw Materials - Cost of Goods Sold

OK Cancel

- Expense Account has to be set up for Service Items

1.2.2 Master Data Settings

Following settings are required to perform a subcontracting procedure.

On this page:

- [Item Master](#)
- [Bill of Material](#)
- [Item Costing](#)

Item Master

Subcontract Sub-Assembly Parent

- Create an Item Master for the Subcontract Sub-Assembly parent using the same setting for a normal manufactured item
- Set the default warehouse as the warehouse within the company warehouse

Service to be Purchased

- Create an Item Master for the service.
- Set the Item as follows:
 - Purchase Item
 - Preferred Supplier Code
 - Unit Price or Price List

The screenshot shows the 'Item Master Data' window with the following settings:

- Item No.: Manual
- Description: Sub-Contract Service
- Foreign Name: Sub-Contract Service
- Item Type: Items
- Item Group: Items
- UoM Group: Manual
- Price List: Price List 01
- Stock Item:
- Sales Item:
- Purchase Item:
- Fixed Asset Indicator:
- Unit Price: GBP 500.00
- Preferred Supplier: 00001
- Mfr Catalogue No.: [Empty]
- Purchasing UoM Name: [Empty]
- Items per Purchase Unit: 1
- Packaging UoM Name: [Empty]
- Quantity per Package: 1
- Length: [Empty]
- Width: [Empty]
- Height: [Empty]
- Volume: [Empty]
- Weight: [Empty]
- Factor 1: 1
- Factor 2: 1
- Factor 3: 1
- Factor 4: 1
- Duty Group: Duty Exempt
- VAT Code: UK Std rate 17.5%

- On Inventory Data tab set Valuation Method for Standard:

Item Master Data

Item No. Manual Sub-Contract Service

Description Sub-Contract Service

Foreign Name

Item Type Items

Item Group → Items

UoM Group Manual

Price List Price List 01

Stock Item

Sales Item

Purchase Item

Fixed Asset Indicator

Bar Code

Unit Price Primary Curr GBP 500.00

General Purchasing Data Sales Data Stock Data Planning Data Production Data Properties Remarks Attachments

Set G/L Accounts by Warehouse

UoM Name

Weight

Manage Stock by Warehouse

Stock Level

Required (Purchasing UoM)

Minimum

Maximum

Valuation Method Standard

Item Cost

#	Whse Code	Whse Name	Locked	In Stock	Committed	Ordered	Available	Min. Stock
1	→ SubCon	Subcontractor	<input type="checkbox"/>					
2			<input type="checkbox"/>					

Set Default Whse

Update Cancel

Bill of Material

- Create the Bill of Material for the Sub-Assembly
- Item's can be set as "Manual" and/or "Backflush"
- Set the Item's to "Backflush" if you do not want to record the confirmed consumption of inventory from the Subcontractor
- Set the Item's to "Manual" if you want to confirm the consumption of inventory from the Subcontractor, either by the Production Planner confirming the values provided by the Subcontractor or by the Subcontractor entering the values themselves
- Select Type = "External" to indicate this Bill of Material is made externally
- Within the Items Tab, add the Item for the Service to be Purchased

- The Warehouse for the Item, represents the subcontractor warehouse where the inventory is moved to and related inventory transactions performed

Bill of Materials

Item Number: Sub-contract Product Type: External

Description: Distribution Rules: Project: MRP Def. Batch Size: 1.000

Revision: default Quantity: 1.000 UoM: Warehouse: 01

#	Sequence	Item Number	Description	Description	Revision	Revision Description	Warehouse	Factor	Factor Description	Q
1	10	Active-Item-01	Active-Item-01	Active-Item-01	code00	default	SubCon	1.000		
2	20	Sub-Contract Service	Sub-Contract Service	Sub-Contract Service	code00	default	SubCon	1.000		
3	0							0.000		

Remarks:

OK Cancel You Can Also

- For this Item check the column "Subcontracting Item"

Bill of Materials

Item Number: Sub-contract Product Type: External

Description: Distribution Rules: Project: MRP Def. Batch Size: 1.000

Revision: default Quantity: 1.000 UoM: Warehouse: 01

#	UoM	Type	Issue Type	Project	Remarks	Subcontracting Item	Distribution Rules
1	ms.U_Factor(10)*Items.U_Quantity(10)*100/(100 - Items.U_ScrapPercentage(10))	KG	Buy	Manual		<input type="checkbox"/>	
2	ms.U_Factor(20)*Items.U_Quantity(20)*100/(100 - Items.U_ScrapPercentage(20))	KG	Buy	Backflush		<input checked="" type="checkbox"/>	
3						<input type="checkbox"/>	

Remarks:

OK Cancel You Can Also

Item Costing

- The Cost of the Subcontracted Sub-Assembly is the total of the Item material costs + the purchase price per unit of the Service to be Purchased
- For the Items which are inventory set the costing records as normal
- For the Item for the Service to be Purchased set the Type to Price List
- Perform the cost roll-up manually or via the cost roll-up function
- Perform the cost roll-over

1.2.3 Process flow

Here you can find a step-by-step guide on how to use subcontracting function by adding Item to Manufacturing Order

On this page

- [Create a Manufacturing Order](#)
- [Create a Purchase Order for the Service](#)
- [Move Inventory Items to Subcontractor Warehouse](#)
- [Manually Pick Inventory](#)
- [Record Subcontract Production](#)

Create a Manufacturing Order

- Type will default to "External"
- Subcontractor Code (displayed on Others tab) will default from the Item for Purchasing the Service

Manufacturing Order

Item Code → Product-A Type **External** Series Primary 7
 Item Name Product-A Status Not Scheduled
 Revision → default Routing → 01
 Warehouse → 01
 Planned Quantity 1.000 UoM EA
 Actual Quantity 0.000

Planned Start Date
Planned End Date

Items Coproducts Scrap WIP Items Operations **Others** Documents Sales Orders Attachments

	Planned	Actual	UoM
Total	1.000	0.000	EA
Quantity	1.000	0.000	EA
Rework		0.000	EA

Factor 1.000

Batch Number
Subcontractor Code → **00001**

Scheduling Method Forward
Priority 1
Calculated 0:00:00
Parent Document

Distribution Rule
Project
Batch Size 1.000
Price 26.34

Remarks
Journal Remarks
Close Date

OK Cancel

Create a Purchase Order for the Service

Manufacturing Order

Item Code → Product-A Type External Series Primary 7
 Item Name Product-A Status Not Scheduled
 Revision → default Routing → 01
 Warehouse → 01
 Planned Quantity 1.000 UoM EA
 Actual Quantity 0.000

Planned Start Date
Planned End Date

Items Coproducts Scrap WIP Items Operations Others Documents Sales Orders Attachments

#	Sequence	Item Num	Revision	Factor	Factor Description	Q...
1	10	→ Bottle	default	1.000		
2	20	→ Label	default	1.000		
3	30	→ Top				
4	40	→ Activ				
5	50	→ Activ				
6	60	→ Non-				
7	70	→ Non-				
8	80	→ Sub-				
9	0					

What's this?
Copy
Recalculate Lead Time
Time Recording Report
Subcontracting
Reports
Planning and Costing Operation Details
Create Semi-finished Products
Create Activity
Open Operation Bind Form

Subcontracting Procurement Report
Subcontracting Material Report
Create Purchase Order for service
Create Purchase Request for service

Remarks
Journal Remarks
Close Date

OK Cancel

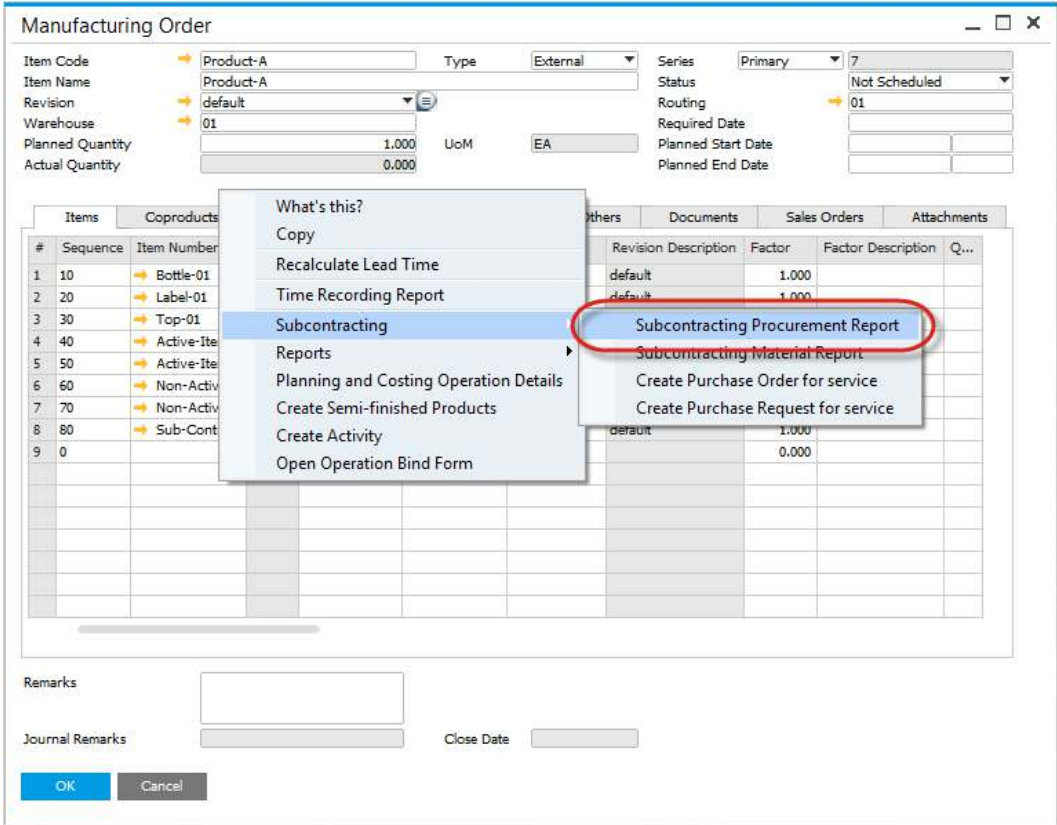
Note that you can set automatic generation of Purchase Order or Purchase Order Request for subcontracting after posting Manufacturing Order.

Purchase Order is created

- Supplier Code is defaulted from the Manufacturing Order "Subcontractor Code"
- Manufacturing Order number is copied into the Purchase Order for reference
- Planned Quantity of the Service item is copied into the Purchase Order
- Price of the Item defaults from the SAP Business One Price List

Review related Purchase Orders

- To review related purchase orders select "Subcontracting Procurement Report"



- List of related purchase orders

Document Type	BP Code	BP Name	Document Number	Item Code	Item Name	Ship...
Purchase Order	→ 00001	ABC Inc	→ 3	→ Sub-Contract Service	Sub-Contract Service	25.03.15

OK

Move Inventory Items to Subcontractor Warehouse

- Select Transfer All Components to move inventory related to the manufacturing order, and ignore what inventory has already been transferred
- Select Transfer Components to move inventory. If the transaction does not occur this means there is already enough inventory in the subcontractor warehouse to be used for the manufacturing order

Manufacturing Order

Item Code → Product-A Type External Series Primary 7

Item Name Product-A Status Released

Revision → default Routing → 01

Warehouse → 01 Required Date 25.03.15

Planned Quantity 1,000 UoM EA Planned Start Date

Actual Quantity 0,000 Planned End Date

#	Warehouse	Revision	Revision Description	Factor	Factor Description	Q...
1						
2						
3						
4						
5						
6						
7						
8						
9						

What's this?
Copy
Issues and Receipts
Recalculate Lead Time
Recording Time
Quality Control
Subcontracting
Reports
Planning and Costing Operation Details
Create Semi-finished Products
Create Activity
Open Operation Bind Form

Operations Others Documents Sales Orders Attachments

Issue to Production
Issue Rework to Production
Receipt from Production
Coproduct Receipt
Scrap Receipt
Create Receipt for all Items (Final Goods, Scrap and Coproducts)
Transfer Components
Transfer Request Components
Stock Transfer for all items
Stock Transfer Request for all items

Remarks

Journal Remarks Close Date

OK Cancel

Inventory Transfer

- An Inventory Transfer document is created
- Business Partner is defaulted from the Manufacturing Order
- Items and To Warehouse are defaulted from the Manufacturing Order

Stock Transfer

Business Partner → 00001
Name ABC Inc
Contact Person → Fred Barns
Ship To UNITED KINGDOM

Number 1
Series Primary
Posting Date 25.03.15
Document Date 25.03.15

From Warehouse → 01
To Warehouse → 01
Price List Price List 01

Contents Attachments

#	Item No.	Item Description	Fro...	To Ware...	Quantity	Item Cost	UoM Code	U...
5	→ Active-Item-0	Active-Item-02	→ 01	→ 01	0.278		Manual	
6	→ Non-Active-0	Non-Active-01	→ 01	→ 01	0.444		Manual	
7	→ Non-Active-0	Non-Active-02	→ 01	→ SubCon	0.111		Manual	
8			→ 01	→ 01				

Sales Employee -No Sales Employee-

Journal Remarks Stock Transfers - 00001
Remarks Based on Manufacturing Order: 7

Add Cancel Copy From

Batch Number Selection

- If the Item is Batch Traced, have to select the batch to be issued
- If the Item is set to Backflush, ProcessForce will backflush the batches based on the queue definition based on the Item Details i.e. FIFO, FEFO or FMFO

Batch Number Selection

Rows from Documents

#	Item No.	Item Description	Whse Code	Quantity	Total Needed	Total Selected	Total B...
1	Active-Item-01	Active-Item-01	01	0.278		0.278	
2	Active-Item-02	Active-Item-02	01	0.278	0.278		

Available Batches

Find:

#	Batch	Available Qty	Selected Qty
1	2012-04-18-4	994.166	
2	2012-04-18-5	90	
		1,084.166	

Selected Batches

#	Batch	Selected Qty	System
1	2012-04-18-4	0.278	1
		.278	

Display Available Batches:

Subcontracting Materials Report

- Select this function to view the Inventory Transfers related to the manufacturing order

Manufacturing Order

Item Code: Product-A, Type: External, Series: Primary, 7
Item Name: Product-A, Status: Released
Revision: default, Routing: 01
Warehouse: 01, Required Date: 25.03.15
Planned Quantity: 1.000, UoM: EA
Actual Quantity: 0.000

Operations, Others, Documents, Sales Orders, Attachments

Warehouse	Revision	Revision Description	Factor	Factor Description	Q...
01	code00	default	1.000		
01	code00	default	1.000		
01	code00	default	1.000		
01	code00	default	1.000		
			1.000		
			1.000		
			1.000		
			0.000		

What's this?
Copy
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Recalculate Lead Time
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Reports
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Create Semi-finished Products
Create Activity
Open Operation Bind Form

Subcontracting Procurement Report
Subcontracting Material Report
Create Purchase Order for service
Create Purchase Request for service

Remarks:
Journal Remarks: Close Date:

Subcontracting Material Report

Docume...	Doc Date	BP Code	BP Name	Item Code	Source Whs	Destination Whs	Quan...
→ 1	25.03.15	→ 00001	ABC Inc	→ Bottle-01	→ 01	→ SubCon	1.000
→ 1	25.03.15	→ 00001	ABC Inc	→ Label-01	→ 01	→ SubCon	1.000
→ 1	25.03.15	→ 00001	ABC Inc	→ Top-01	→ 01	→ SubCon	1.000
→ 1	25.03.15	→ 00001	ABC Inc	→ Active-It	→ 01	→ SubCon	0.278
→ 1	25.03.15	→ 00001	ABC Inc	→ Active-It	→ 01	→ SubCon	0.278
→ 1	25.03.15	→ 00001	ABC Inc	→ Non-Acti	→ 01	→ SubCon	0.444
→ 1	25.03.15	→ 00001	ABC Inc	→ Non-Acti	→ 01	→ SubCon	0.111

OK

Inventory Data

- The Inventory Transfer will move the inventory from the main warehouse to the subcontractors warehouse

Item Master Data

Item No. Stock Item

Description Sales Item

Foreign Name

Item Type Purchase Item

Item Group Fixed Asset Indicator

UoM Group Bar Code

Price List Unit Price

General | Purchasing Data | Sales Data | Stock Data | Planning Data | Production Data | Properties | Remarks | Attachments

Set G/L Accounts by Manage Stock by Warehouse

UoM Name Stock Level

Weight Required (Purchasing UoM)

Valuation Method Minimum

Item Cost Maximum

#	Whse Code	Whse Name	Locked	In Stock	Committed	Ordered	Available	Item Cost	W
1	→ 01	General Warehouse	<input type="checkbox"/>	994.166	14.445		979.721	3	
2	→ SubCon	Subcontractor	<input type="checkbox"/>	0.278			.278		
3			<input type="checkbox"/>						
				994.444	14.445		979.999		

Set Default Whse

OK **Cancel**

Manually Pick Inventory

Recording Inventory Usage

- To manage the inventory issued by the subcontractor, select the Issues and Receipts menu, Issue to Production

The screenshot displays the SAP Manufacturing Order (MO) interface. At the top, the title bar reads 'Manufacturing Order'. Below it, a header section contains fields for Item Code (Product-A), Item Name (Product-A), Revision (default), Warehouse (01), Planned Quantity (1,000), and Actual Quantity (0,000). To the right, there are fields for Type (External), Series (Primary), Status (Released), Routing (01), Required Date (25.03.15), and Planned Start/End Dates.

The main area features a grid with columns for #, Warehouse, Receipts, Revision Description, Factor, and Factor Description. A context menu is open over the grid, listing various actions. The 'Issues and Receipts' menu item is highlighted in blue, and its sub-menu is also open, with 'Issue to Production' highlighted in red. Other sub-menu items include 'Issue Rework to Production', 'Receipt from Production', 'Coproduct Receipt', 'Scrap Receipt', 'Create Receipt for all Items (Final Goods, Scrap and Coproducts)', 'Transfer Components', 'Transfer Request Components', 'Stock Transfer for all items', and 'Stock Transfer Request for all items'.

At the bottom of the window, there are fields for Remarks, Journal Remarks, and Close Date, along with 'OK' and 'Cancel' buttons.

Pick Order

- Enter the amount of inventory consumed
- Business Partner is copied from the Manufacturing Order
- The Warehouse is the source warehouse for the inventory reduction
- The External WIP account code will be used for the journal posting

Batch Number Selection

- If the item is managed by batches select the batch number

Create the Production Issue

- This will create the SAP Goods Issues document and the financial posting

Journal Entry

- The Journal Entry will be posted with the inventory value posted to External WIP

Record Subcontract Production

- Select the Receipt from Production function to record the finished production

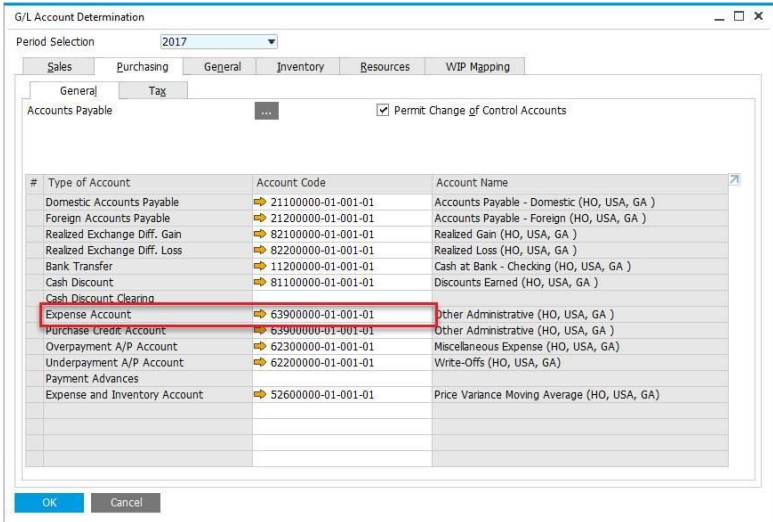
The screenshot displays the SAP Manufacturing Order (MO) interface. At the top, the title bar reads 'Manufacturing Order'. Below it, a header section contains fields for Item Code (Product-A), Type (External), Series (Primary), Status (Released), Revision (default), Warehouse (01), Planned Quantity (1.000), UoM (EA), and Planned End Date. A context menu is open over the 'Operations' tab, with 'Receipt from Production' highlighted and circled in red. Other menu options include 'Issue to Production', 'Issue Rework to Production', 'Coproduct Receipt', 'Scrap Receipt', 'Create Receipt for all Items (Final Goods, Scrap and Coproducts)', 'Transfer Components', 'Transfer Request Components', 'Stock Transfer for all items', and 'Stock Transfer Request for all items'. The bottom of the window features a 'Remarks' field, 'Journal Remarks', and 'Close Date' fields, along with 'OK' and 'Cancel' buttons.

Pick Receipt

- Enter the quantity produced by the subcontractor
- Business Partner defaults from the Manufacturing Order
- External WIP account defaults from the SAP Business One settings/configuration
- Production Receipt is created
- SAP Goods Receipt is created and the corresponding financial postings

Purchase Order Goods Receipt

- On completing the Receipt from Production process, a Goods Receipt PO is automatically created for the Subcontract Service Purchase Order
- The Goods Receipt PO document is recorded within the Documents Tab for reference
- A Journal Entry for the Service Item is also created



CompuTec S.A.
ul. Sikorskiego 9
66-200 Swiebodzin
Poland

tel. + 48 68 38 188 00
fax + 48 68 38 188 20
www.computec.pl
info@computec.pl

CompuTec
S.A.

