# How to Set Up and Use Serial/Batch Valuation Method

# Typographic Conventions

| Type Style | Description |
|---|---|
| *Example* | Words or characters quoted from the screen. These include field names, screen titles, pushbuttons labels, menu names, menu paths, and menu options. <br> Textual cross-references to other documents. |
| **Example** | Emphasized words or expressions. |
| `EXAMPLE` | Technical names of system objects. These include report names, program names, transaction codes, table names, and key concepts of a programming language when they are surrounded by body text, for example, SELECT and INCLUDE. |
| `Example` | Output on the screen. This includes file and directory names and their paths, messages, names of variables and parameters, source text, and names of installation, upgrade and database tools. |
| **`Example`** | Exact user entry. These are words or characters that you enter in the system exactly as they appear in the documentation. |
| **`<Example>`** | Variable user entry. Angle brackets indicate that you replace these words and characters with appropriate entries to make entries in the system. |
| `EXAMPLE` | Keys on the keyboard, for example, `F2` or `ENTER`. |

# Document History

| Version | Date | Change |
|---------|------|--------|
| 1.0 | 2015-07-25 | First version |
| 2.0, 3.0 | 2015-03-26 | 1. In chapter 2 Prerequisites, the following information has been removed:<br><br>   ○ You are not using the purchase accounts posting system. In the *Company Details* window, the *Use Purchase Accounts Posting System* checkbox is deselected.<br><br>2. In chapter 3.2 Defining Serial/Batch Valuation Method at Company Level, step 2 of the procedure has been updated as displayed below.<br><br><table><tr><td colspan="2">Version</td></tr><tr><td>1.0</td><td>The system manages the serial/batch valuation method at the company level, not per warehouse, therefore the *Manage Item Cost per Warehouse* checkbox on the *Basic Initialization* tab is disabled when you choose this method</td></tr><tr><td>2.0</td><td>The system manages the serial/batch valuation method at the company level, not per warehouse. Therefore, the *Manage Item Cost per Warehouse* checkbox on the *Basic Initialization* tab is irrelevant for the items with the serial/batch valuation method</td></tr></table><br>3. In chapter 3.4 Blocking Multiple Receipts for Same Batch When Valuation Method Is Serial/Batch, an additional note has been added:<br><br>**i  Note**<br>When using the multi-branch feature, it is strongly recommended that you block multiple receipts of the same batch due to the possibility that a batch which might be received with a different cost into another branch impacts the cost on both branches.<br>Examples are provided as well.<br><br>4. In chapter 7 Updating Valuation Method to Serial/Batch for Selection of Items, in the Prerequisites section, the following information has been added:<br>For more information, see SAP Note 869071.<br><br>5. Added: Chapter Determining Item Cost of By-Products with Serial/Batch Valuation Method. |

| Version | Date | Change |
|---|---|---|
| 4.0 | 2015-07-30 | 1. In chapter Determining Serial and Batch Item Cost, the following information has been added: |

1. In chapter Determining Serial and Batch Item Cost, the following information has been added:

ℹ **Note**

- When the system calculates the serial or batch item cost by the serial/batch valuation method, it considers only those transactions that were posted at the time when the item was managed by the serial/batch valuation method.
- You can receive old batches back after their valuation method has been changed to the serial/batch valuation method.

⬡ **Example**

- If an item had serial/batch valuation method for some time, then you changed it to MAP, and after some time you change it back to serial/batch, the system takes into account only transactions that were posted at the time when the item had serial/batch valuation method. It ignores the transactions posted at the time it had MAP valuation method.
- You can issue a batch item with MAP, change the item's valuation method to serial/batch, and receive the same batch again. When calculating the cost, the system ignores the transactions posted at the time the item had MAP valuation method, and takes into consideration the transactions posted from the time the item has the serial/batch valuation method.

2. In chapter Generating Batches and Serials Inventory Audit Report, the following information has been added:

ℹ **Note**

If the valuation method of an item has been changed in the past, this report will show only those transactions created at the time when the item was managed by the serial/batch valuation method.

How to Set Up and Use Serial/Batch Valuation Method in Release 9.1
**Typographic Conventions**

# Table of Contents

# 1 Introduction

In SAP Business One Release 9.1, when running perpetual inventory, you can use four valuation methods:

**Moving Average Price (MAP)** - Calculates the average cost for the item in each sales, purchasing, inventory, and production transaction.

**Standard Price** - Calculates value by a fixed price, which is then used for all transactions.

**First In First Out (FIFO)** - With this method, goods purchased or produced first are sold first, regardless of the actual goods flow.
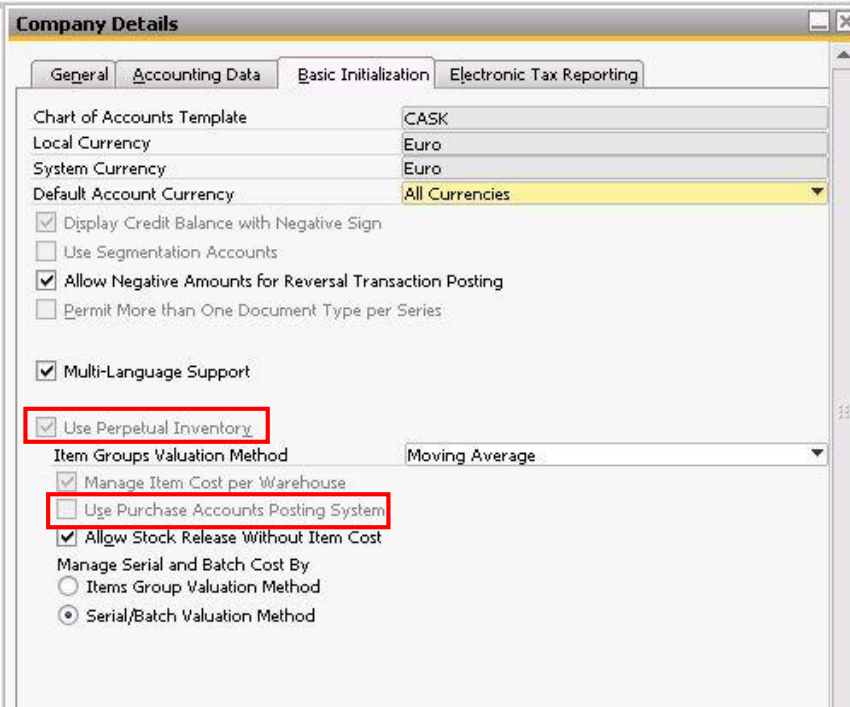
- o Each inventory receipt transaction creates a layer of quantities linked to costs. A FIFO layer is defined as the quantity of an item in a warehouse with a particular cost value.
- o Each inventory release transaction uses quantities and their corresponding costs from the first open layer or layers.

**Serial/Batch** - This valuation method is associated with serial and batch managed items. The cost used in outbound transactions is the actual inbound cost of a specific item determined by its serial or batch number; the cost of the item is managed on the serial or batch number level.

This document describes how to set up and manage the serial/batch valuation method in SAP Business One Release 9.1.

# 2    Prerequisites

- You have initialized the perpetual inventory system on the *Basic Initialization* tab of the *Company Details* window.

# 3 Initial Settings

The serial/batch valuation method is applicable only to items managed by serial numbers or batches. You can define this valuation method for the mentioned items at the company level and at the item level.

## 3.1 Defining Items Managed by Serial Numbers or Batches

**Procedure**

> **i** Note
>
> Only the steps relevant to the serial/batch valuation method are described below. For a detailed description of creating new items, see the online help.

3. From the SAP Business One *Main Menu*, choose *Inventory → Item Master Data*.

   The window opens in *Find* mode. Switch to *Add* mode.

4. On the *General* tab, under the *Serial and Batch Numbers* section, in the *Manage Item By* field, select one of the options:

   o *Serial Numbers* - the item is managed by serial numbers.

   o *Batches* - the item is managed by batches. This type of management tracks items that have unique numbers and characteristics but have been combined in a single group.

**i** Note

You can change the way the item is managed by, for example, from *Serial Numbers* to *Batches* only if the quantity of the item in stock is zero and the item is not included in any open document.

## 3.2 Defining Serial/Batch Valuation Method at Company Level

You can manage serial and batch items by the serial/batch valuation method or by the same method defined for item groups. To initialize the serial/batch valuation method for the serial and batch managed items at the company level, follow the procedure below.

**Procedure**

1. From the SAP Business One *Main Menu*, choose *Administration → System Initialization → Company Details → Basic Initialization* tab.

2. In the *Manage Serial and Batch Cost By* section, select the *Serial/Batch Valuation Method* radio button.

   The system manages the serial/batch valuation method at the company level, not per warehouse. Therefore, the *Manage Item Cost per Warehouse* checkbox on the *Basic Initialization* tab is irrelevant for the items with the serial/batch valuation method.



**i** Note

You can change the valuation method by which you manage serial and batch cost at any time, however, the change always applies to new items which you create after the change.

3. Choose *Update*.

## 3.3 Defining Serial/Batch Valuation Method at Item Level

If you have defined the serial/batch valuation method at the company level as described in Defining Serial/Batch Valuation Method at Company Level, any new item you create and define as managed by serials or batches automatically has the serial/batch valuation method.

If you have chosen a different valuation method for serial or batch managed items at the company level, you can define the serial/batch valuation method for a specific item.
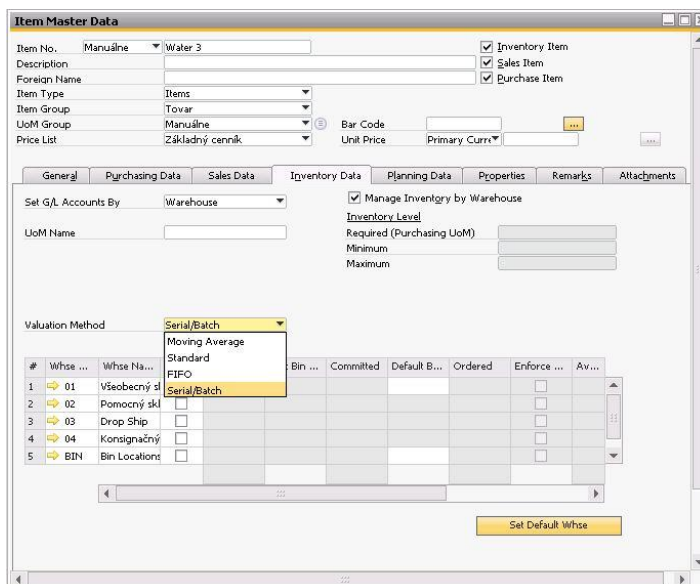
**Procedure**

1. From the SAP Business One *Main Menu*, choose *Inventory → Item Master Data*.

   In the *Item No.* field enter the desired item.

   **i** Note

   The item must be managed by serials or batches.

2. On the *Inventory* tab, from the dropdown menu in the *Valuation Method* field, select *Serial/Batch*.



   **i** Note

   You can change the valuation method at any time, as long as the item is not linked to any open documents and its in-stock quantity is zero.

3. Choose *Update*.

## 3.4 Blocking Multiple Receipts for Same Batch When Valuation Method Is Serial/Batch

Receiving the same batch into stock more than once may increase the chance that the same batch will be received each time with a different price, which complicates the tracking of the actual cost of the batch. To prevent this, you can block multiple receipts for the same batch at the company level or at the item level.

If multiple receipts for the same batch are blocked, you cannot draw an A/P reserve invoice for a batch into a goods receipt PO more than once.

> **i** Note
>
> When you draw an A/P reserve invoice into a goods receipt PO, the batch price is based on the A/P reserve invoice. However, due to header freights in a goods receipt PO, which are updatable in SAP Business One 9.1, the price can be changed due to the amount applied on each batch entry.

> **i** Note
>
> When using the multi-branch feature, it is strongly recommended that you block multiple receipts of the same batch due to the possibility that a batch which might be received with a different cost into another branch impacts the cost on both branches.
>
> For example, Batch No. B1_1200 is received to inventory through GRPO1 with the following data:
> o Branch 1
> o Warehouse 1
> o Quantity 10
> o Cost 10
>
> Batch No. B1_2300 is received again through GRPO1 with the following data:
> o Branch 2
> o Warehouse 2
> o Quantity 10
> o Cost 12
>
> Since the system does not manage batch cost on the warehouse level, the cost of B1_1200 is calculated as follows: (10*10+10*12)/20=11. That is, the outbound cost from Branch 1 is impacted by the inbound cost to Branch 1. With such scenario, the inventory audit report and the batch and serial audit report cannot differentiate between the inventory value of postings to Branch 1 and the inventory value of postings to Branch 2.

**Workaround**

When you receive the same batch more than once, add a prefix or a suffix to Batch No.. For example, for GRPO2, set *Batch No.* to B1_1200_1.

## 3.4.1 Blocking Multiple Receipts for Same Batch at Company Level

If you block multiple receipts for the same batch at the company level, the setting automatically applies to any new batch items that you create and to any batch item for which you change the valuation method to serial/batch. You can change the settings at any time; if you select this checkbox after you have received the same batch more than once, it has no influence on the existing items, but it blocks any new multiple receipts for the same batch for the existing items as well.

> **i** Note
>
> This checkbox is selected by default.

**Procedure**

1. From the SAP Business One *Main Menu*, choose *Administration → System Initialization → General Settings → Inventory* tab→ *Items* subtab.

2. Select the checkbox *Block Multiple Receipts for Same Batch with Serial/Batch Valuation Method*.

   The following system message appears: "Multiple receipts for the same batch are blocked for new batch items with serial/batch valuation method. Do you want to block multiple receipts for existing items?"

   Choose *Yes*.

3. Choose *Update*.

## 3.4.2 Blocking Multiple Receipts for Same Batch at Item Level

You can block multiple receipts for the same batch at the item level regardless of whether multiple receipts for the same batch are blocked at the company level.

> ⅰ Note

You can change this setting at any time, even if a batch item already had multiple receipts for the same batch.

**Procedure**
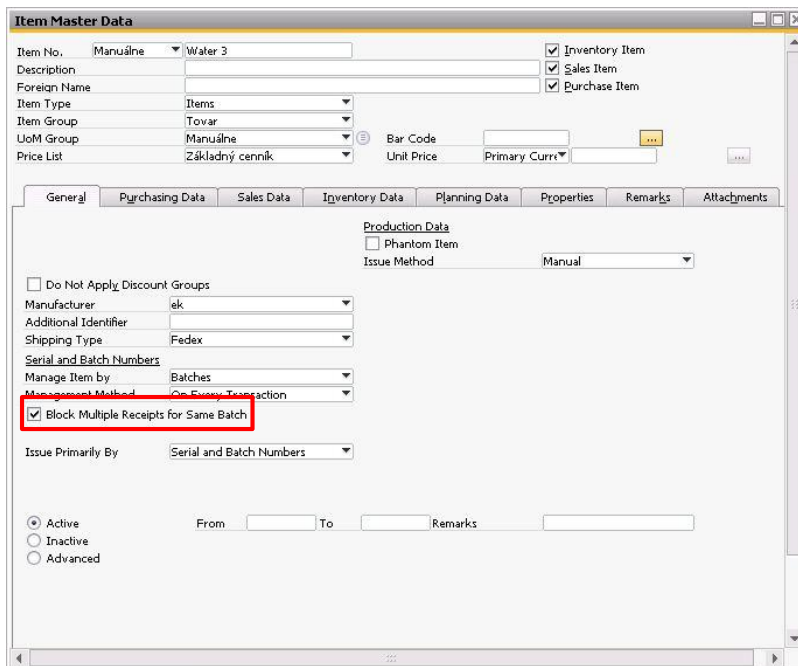
1. From the SAP Business One *Main Menu*, choose *Inventory → Item Master Data*.

   In the *Item No.* field, enter the desired item.

   > ⅰ Note

   The item must be managed by batches.

2. On the *General* tab, select the checkbox *Block Multiple Receipts for Same Batch.*

   When you change the item's valuation method to one other than serial/batch, this checkbox is deselected and not visible.



3. Choose *Update*.

# 4 Enhancements to Item Management

A new field *Cost* displaying the current cost of a selected batch item or serial number item has been added to the following windows:

* *Serial Number Details and Batch Details*
* *Serial Number Management - Update and Batch Management - Update*

## 4.1 Serial Number Details Window

To access the *Serial Number Details* window, do the following:

1. From the SAP Business One *Main Menu*, choose *Inventory → Item Management → Item Serial Numbers → Serial Number Details*. The window opens in *Find* mode.
2. In the *Item Number* field, enter the item number or use (*Previous Record*) (*Next Record*) in the toolbar to browse through the serial number items.

   The current cost of the serial number item is displayed in the *Cost* field.

## 4.2 Batch Details Window

To access the *Batch Number Details* window, do the following:

1. From the SAP Business One *Main Menu*, choose *Inventory → Item Management → Batches → Batch Details*. The window opens in *Find* mode.
2. In the *Item Number* field, enter the item number or use (*Previous Record*) (*Next Record*) in the toolbar to browse through the batch items.

   The current batch cost of the item is displayed in the *Cost* field.

## 4.3 Serial Number Management - Update Window

To access the *Serial Number Management - Update* window, proceed as follows:

1. From the SAP Business One Main Menu, choose *Inventory → Item Management → Item Serial Numbers → Serial Number Management*. The window *Serial Numbers Management - Selection Criteria* appears.
2. In the *Operation* field, select *Update*.
3. Define the remaining selection criteria for the range of the items for which you want to update the serial numbers and choose *OK*. The *Serial Number Management - Update* window appears.

   In the *Cost* column, you can view the current cost of the item serial numbers displayed.

## 4.4  Batch Management - Update Window

To access the *Batch Management - Update* window, proceed as follows:

1. From the SAP Business One *Main Menu*, choose *Inventory → Item Management → Batches → Batch Management*. The *Batch Management - Selection Criteria* window appears.

2. In the *Operation* field, select *Update*.

3. Define the remaining selection criteria for the range of batches you want to update and choose *OK*. The *Batch Management - Update* window appears.

   In the *Cost* column, you can view the current cost of the item serial numbers displayed.

# 5 Determining Serial and Batch Item Cost

The cost of a serial or batch item is determined by the following documents:

- Receipts to stock
  - A/P documents
    - Goods receipt PO
    - A/P invoice
  - Inventory Transactions
    - Goods receipt
    - Entry from the inventory opening balance
    - Entry from the inventory posting/opening balance
    - Receipt from production
    - Non-based A/R return, non-based A/R credit memo, non-based A/R correction invoice

  i Note

  If the return cost is not set in the document, the serial/batch cost is calculated by the current cost. If the return cost is set in the document, the serial/batch cost is calculated by the return cost.

- Purchase returns - the cost is calculated by the current serial/batch cost.
- Revaluation postings
  - A/P invoice based on goods receipt PO with price change
  - Landed costs
  - Material revaluation
  - A/P correction invoice with price change
  - A/P correction reversal with price change
  - A/P credit memo without quantity posting

The following documents are posted by the current serial/batch cost:

- Issues from stock (all types of documents)
- A/R delivery, A/R return with negative quantity
- Goods receipt, A/P cancelation, A/P documents with negative quantity
- A/R correction, reversal with entry to stock
- Return components
- Disassembly in issue for production
- Inventory posting (exit: counted quantity is smaller than the quantity in warehouse)
- Negative inventory opening balance

$i$ Note

o   When the system calculates the serial or batch item cost by the serial/batch valuation method, it considers only those transactions that were posted at the time when the item was managed by the serial/batch valuation method.

o   You can receive old batches back after their valuation method has been changed to the serial/batch valuation method.

Example

o   If an item had serial/batch valuation method for some time, then you changed it to MAP, and after some time you change it back to serial/batch, the system takes into account only transactions that were posted at the time when the item had serial/batch valuation method. It ignores the transactions posted at the time it had MAP valuation method.

o   You can issue a batch item with MAP, change the item's valuation method to serial/batch, and receive the same batch again. When calculating the cost, the system ignores the transactions posted at the time the item had MAP valuation method, and takes into consideration the transactions posted from the time the item has the serial/batch valuation method.

## 5.1   Determining Item Cost of By-Products with Serial/Batch Valuation Method

As of SAP Business One 9.1, the *Issue Method* of a by-product item can set to *Manual*. As a result, a by-product item can use the serial/batch valuation method. The cost of such item is determined by the value that you enter in the *Unit Price* field in the receipt from production document as displayed below.

# 6 Revaluating the Inventory with Serial/Batch Valuation Method

Items with serial/batch valuation method can be revaluated using the inventory revaluation functionality. Inventory revaluation for serial/batch items is similar to that of the FIFO items.

You can revaluate the item values by:

- *Price Change* -Changes the item price for a specific serial number or batch. The inventory price is changed and the inventory value is recalculated according to the new price.
- *Inventory Debit/Credit* - Changes the value of a specific serial number or batch and the system recalculates the new price according to the value debited or credited.

> **i** Note
>
> You cannot perform inventory revaluation if any item involved has a negative value.

## 6.1 Revaluating the Inventory by Price Change

> **i** Note
>
> The following procedure shows how to revaluate the items managed by serial numbers as well as those managed by batches.

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**Revaluating the Inventory with Serial/Batch Valuation Method**

**Procedure**

1. From the SAP Business One *Main Menu* → *Inventory* → *Inventory Transactions* → *Inventory Revaluation*. The *Inventory Revaluation* window appears.



2. In the *Revaluation Type* field, select *Price Change*.

3. In the *Item No.* column, select one or more desired items. All available batches or serial numbers are listed in the lower table.

4. Select the item row in the upper table for which you want to update the prices. In the lower table, enter the new cost for the desired batch or serial number.

> Example
>
> In the figure below, the first item selected is managed by batches and the second item is managed by serial numbers.

**Note**

You can press CTRL to select desired items in the lower table, and update the price in the *Set Value for Selection* field located between the two tables.

5. Choose *Add*.


## 6.2 Revaluating the Inventory by Debit/Credit

1. From the SAP Business One *Main Menu,* choose *Inventory → Inventory Transactions → Inventory Revaluation*. The *Inventory Revaluation* window appears.

2. In the *Revaluation Type* field, select *Inventory Debit/Credit*.

3. In the *Item No.* column, select one or more desired items. All available batches or serial numbers are listed in the lower table.

4. In the upper table, select the item row for which you want to debit or credit the inventory value. In the lower table, enter the amounts you want to debit or credit for the desired batch or serial number.

**Note**

You can press CTRL and select desired items in the lower table, and enter the debit or credit amount in the *Debit/Credit Amount* field located between the two tables.

5. Choose *Add*.

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**Revaluating the Inventory with Serial/Batch Valuation Method**

# 7 Updating Valuation Method to Serial/Batch for Selection of Items

You can now update the valuation method to serial/batch for a range of items managed by serial numbers or batches.

**Prerequisites**

- The quantity of the items whose valuation method is to be changed is zero in all warehouses.
- The item is not drawn into any open document.

For more information, see SAP Note 869071.

**Procedure**

1. From the SAP Business One *Main Menu*, choose *Inventory → Item Management → Inventory Valuation Method*.
2. In the *Item No. From... To* fields, define the range of items for which you want to update the valuation method to Serial/Batch.
3. In the *Default Valuation Method* field, select *Serial/Batch*.
4. Choose *OK*.
   The *Update Valuation Method* window appears.
5. In the *Approved* column, all checkboxes are selected. If you want to exclude any of the items from the update, deselect the appropriate checkbox.
6. In the *New Method* column, select *Serial/Batch* for those items for which you want to update the valuation method.
7. Choose the *Update* button.

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**Updating Valuation Method to Serial/Batch for Selection of Items**

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# 8 Examples of Cost Calculation and Postings for Items with Serial/Batch Valuation Method

## 8.1 Purchasing Documents

**Goods Receipt PO (GRPO)**

**Example 1 - A new received quantity for the same batch number with a price that is different from the current cost triggers the cost recalculation.**

| Batch1 (B1) | Qty | Price | Total | Cost Price per Unit | JE Debit | JE Credit | Batch Value Balance |
|---|---|---|---|---|---|---|---|
| GRPO1 -B1 | 10 | 10 | 100 | 10 | Inventory 100 | Allocation 100 | 100 |
| GRPO2-B1 | 10 | 30 | 300 | 20* | Inventory 300 | Allocation 300 | 400 |
| Delivery1-B1 | -5 | Not relevant | | 20 | COGS 100 | Inventory 100 | 300 |
| GRPO3- B1 | 5 | 50 | 250 | 26** | Inventory 250 Price Diff. 30 | Allocation 250 Inventory 30 | 520 |

\* Total receipts value (100+300) / Total receipts qty (10+10) = **20**

\*\* Total receipts value (100+300+250) / Total receipts qty (10+10+5) = **26**

**Example 2 - The cost of a serial number item is set by the price in the receipt to stock.**

| Serial S100 | Qty | Price | Qty Balance | Cost | JE Debit | JE Credit |
|---|---|---|---|---|---|---|
| GRPO1 | 1 | 10 | 1 | 10 | Inventory 10 | Allocation 10 |
| Delivery1 | -1 | - | 0 | 10 | COGS 10 | Inventory 10 |
| GRPO2 | 1 | 13 | 1 | 13 | Inventory 13 | Allocation 13 |
| Delivery2 | -1 | - | 0 | 13 | COGS 13 | Inventory 13 |

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How to Set Up and Use Serial/Batch Valuation Method in Release 9.1
**Examples of Cost Calculation and Postings for Items with Serial/Batch Valuation Method**

## Goods Return or Cancellation of GRPO

**Example 1 - After issuing a goods return or a cancellation of a GRPO, the current cost is recalculated. If the system identifies that all purchased quantity has been returned, the batch cost is set to zero.**

Scenario 1 - Some batch items have been returned

| Batch1 | Qty | Price | Total | Cost per Unit | JE Debit | JE Credit | Batch Value Balance |
|---|---|---|---|---|---|---|---|
| GRPO1 | 10 | 10 | 10 | 10 (100/10) | Inventory 100 | Allocation 100 | 100 |
| A/R Delivery1 | -4 | | | 10 | COSG 40 | Inventory 40 | 60 |
| A/R Return Based on Delivery1 | 1 | | | 10 | Inventory 10 | COGS 10 | 70 |
| Goods Return | -2 | | | 10 | Allocation 20 | Inventory 20 | 50 |

Scenario 2 - All batch items have been returned and the current cost is set to zero

| Batch1 | Qty | Price | Total | Cost per Unit | JE Debit | JE Credit | Batch Value Balance |
|---|---|---|---|---|---|---|---|
| GRPO1 | 10 | 10 | 100 | 10 (100/10) | Inventory 100 | Allocation 100 | 100 |
| A/R Delivery1 | -4 | | | 10 | COSG 40 | Inventory 40 | 60 |
| A/R Return1 Based on Delivery1 | 4 | | | 10 | Inventory 40 | COGS 40 | 100 |
| Goods Return or Cancellation of GRPO1 | -10 | | | 10 | Allocation 100 | Inventory 100 | 0* |
| A/R Return | 10 | Return price not set | | 0 | 0 | 0 | 0 |

* The current cost is set to zero because all the purchased quantity has been returned. The next A/R return is posted with zero cost because it does not have a set return price and the system uses the current cost.

**Example 2 - Based goods return when the current cost is different from the one in the base document.**

| Batch1 | Qty | Price | Total | Cost per Unit | JE Debit | JE Credit | Batch Value Balance |
|--------|-----|-------|-------|---------------|----------|-----------|---------------------|
| GRPO1 | 10 | 10 | 100 | 10 (100/10) | Inventory 100 | Allocation 100 | 100 |
| A/R Delivery | -4 | | | 10 | COGS 40 | Inventory 40 | 60 |
| Non-Based A/R Return | 4 | Return cost set to 13.5 | | 11 (100+13.5*4)/14 | Inventory 50 Price Diff. 4 | COGS 54 | 110 |
| Goods Return Based on GRPO1 | -2 | | 20 | 11 (100+54-2*11)/(10+4-2) | Allocation 20 Price Diff. 2 | Inventory 22 | 88 |

Due to the need to balance the allocation amount (20) and the inventory amount (22), the amount 2 is posted to the price difference account.

**Example 3 - Non-based goods return when the current cost is different from the one in the base document**

| Batch1 | Qty | Price | Total | Cost per Unit | JE Debit | JE Credit | Batch Value Balance |
|--------|-----|-------|-------|---------------|----------|-----------|---------------------|
| GRPO1 | 10 | 10 | 100 | 10 (100/10) | Inventory 100 | Allocation 100 | 100 |
| A/R Delivery | -4 | | | 10 | COSG 40 | Inventory 40 | 60 |
| Non-Based A/R Return | 4 | Return cost set to 13.5 | | 11 (100+13.5*4)/14 | Inventory 50 Price Diff. 4 | COGS 54 | 110 |
| Non-Based Goods Return | -2 | | 20 | 11 (100+54-2*11)/(10+4-2) | Allocation 22 | Inventory 22 | 88 |

The price in the goods return is ignored and there is **no posting to the price difference account**.

## 8.2 Sales Documents

### A/R Return and A/R Credit Memo

**Example 1 - Non-based A/R return without a set return cost does not influence the current cost calculation.**

| Batch1 | Qty | Price | Total | Cost per Unit | JE Debit | JE Credit | Batch Value Balance |
|---|---|---|---|---|---|---|---|
| GRPO1 | 10 | 10 | 100 | 10 (100/10) | Inventory 100 | Allocation 100 | 100 |
| A/R Delivery | -4 | | | 10 | COSG 40 | Inventory 40 | 60 |
| A/R Delivery Cancellation | 4 | | | 10 | Inventory 40 | COGS 40 | 100 |
| Goods Return | -10 | 10 | | 10 | Allocation 100 | Inventory 100 | 0* |
| A/R Return | 1 | Return cost not set | | 0** | Inventory 0 | COGS 0 | 0 |

*The batch has been returned, the current cost is set to zero.

**The system uses the current cost which in this case is zero.

**Example 2 - Non-based A/R return with a set return cost influences cost calculation.**

| Batch1 | Qty | Price | Total | Cost per Unit | JE Debit | JE Credit | Batch Value Balance |
|---|---|---|---|---|---|---|---|
| GRPO1 | 10 | 10 | 100 | 10 (100/10) | Inventory 100 | Allocation 100 | 100 |
| A/R Delivery | -4 | | | 10 | COSG 40 | Inventory 40 | 60 |
| A/R Delivery Cancellation | 4 | | | 10 | Inventory 40 | COGS 40 | 100 |
| Goods Return | -10 | 10 | | 10 | Allocation 100 | Inventory 100 | 0 |
| A/R Return | 1 | Return cost not set | | 0 | Inventory 0 | COGS 0 | 0 |
| Non-Based A/R Return or A/R Credit Memo or A/R Correction Invoice | 1 | 15 Return cost set | | 7.5 | Inventory 15 | COGS 15 | 15 |

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**Examples of Cost Calculation and Postings for Items with Serial/Batch Valuation Method**

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**Example 4 - A cancellation of a non-based A/R return is considered as a purchasing cancellation or purchase return.**

| Batch1 | Qty | Price | Unit Cost (Accum. Value / Accum. Qty) | Accum. Qty* | Accum. Value ** | Accum. Out Qty *** | Price Diff. Amt **** | JE Debit | JE Credit | Qty Bal. | Batch Value Bal. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| GRPO1 | 10 | 10 | 10 | 10 | 100 | 0 | - | Inventory 100 | Allocation 100 | 10 | 100 |
| A/R Delivery 1 | -10 | | 10 | 10 | 100 | 10 | - | COGS 100 | Inventory 100 | 0 | 0 |
| Non-Based A/R Return1 | 3 | | 10 (10*10+3*10)/(10+3) | 13 | 130 | 10 | | Inventory 30 | COGS 30 | 3 | 30 |
| GRPO2 | 2 | 25 | 12 (10*10+3*10+2*25)/ (10+3+2) | 15 | 180 | 10 | 20 | Inventory 30 Price Diff. 20 | Allocation 50 | 5 | 60 |
| Cancellation of A/R Return1 | -3 | | 12 | 12 | 144 (100+30 +50-36) | 10 | | COGS 30 Price Diff. 6 | Inventory 36 | 2 | 24 |

*Purchased quantity

**Based on purchases and purchase cancellations

***Based on sold quantity and based returns

**** Accumulated Out Qty * Delta Unit Cost

**Example 6 - A/R credit memo or A/R return (based or non-based) after a serial number item has been issued uses the current cost of the serial number item.**

| Serial S100 | Qty | Price | Qty Balance | Cost | JE Debit | JE Credit |
|---|---|---|---|---|---|---|
| GRPO1 | 1 | 10 | 1 | 10 | Inventory 10 | Allocation 10 |
| Delivery1 | -1 | - | 0 | 10 | COGS 10 | Inventory 10 |

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| Serial S100 | Qty | Price | Qty Balance | Cost | JE Debit | JE Credit |
|---|---|---|---|---|---|---|
| A/R Credit Memo or A/R Return (Based on Delivery1 or Non-based and the Return Cost Not Set in A/R Return) | 1 | - | 1 | 10 | Inventory 10 | Allocation 10 |

## A/P Invoice

**Example 1 - A based A/P invoice with a price change influences the current cost calculation.**

| Batch1 | Qty | Price | Total | Cost per Unit | JE Debit | JE Credit | Batch Value Balance |
|---|---|---|---|---|---|---|---|
| GRPO1 | 10 | 10 | 100 | 10 (100/10) | Inventory 100 | Allocation 100 | 100 |
| A/R Delivery1 | -3 | 10 | -30 | 10 | COGS 30 | Inventory 30 | 70 |
| A/P Invoice Based on GRPO1 | 8 | 15 | 40 | 14 ((100+40)/10) | Allocation 80 Inventory 28 Price Diff. 12 | BP 120 | 98 |

**Example 2 - Price change in A/P invoice when there is zero batch quantity**

| Batch1 | Qty | Price | Total | Cost per Unit | JE Debit | JE Credit | Batch Value Balance |
|---|---|---|---|---|---|---|---|
| GRPO1-B1 | 1 | 10 | 10 | 10 | Inventory 10 | Allocation 10 | 10 |
| Delivery-B1 | -1 | - | -10 | 10 | COGS 10 | Inventory 10 | 0 |
| A/P Invoice Based on GRPO1-B1 | - | - | 2 | 12 | Allocation 10 Inventory 0 Price Diff. 2 | BP 12 | 0 |

## Landed Costs

**Example 1 - Landed costs value influences the current cost calculation.**

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| Batch1 | Qty | Price | Total | Cost per Unit | JE Debit | JE Credit | Batch Value Balance |
|---|---|---|---|---|---|---|---|
| GRPO1 | 10 | 10 | 100 | 10 (100/10) | Inventory 100 | Allocation 100 | 100 |
| A/R Delivery1 | -3 | 10 | -30 | 10 | COGS 30 | Inventory 30 | 70 |
| A/P Invoice Based on GRPO1 | 8 | 15 | 40 | 14 ((100+40)/10) | Allocation 80 Inventory 28 Price Diff. 12 | BP 120 | 98 |
| Delivery2 | -3 | Not relevant | | 14 | COGS 42 | Inventory 42 | 56 |
| Landed Costs for GRPO1 | | - | 20 | 16 (100+40+20)/10 | Inventory 8 Price Diff. 12 | Allocation 20 | 64 |

## 8.3 Production Documents

**Issue from Production**

**Example 1 - An issue from production based on a disassembly order is considered as purchase cancellation.**

| Batch1 | Qty | Price | Unit Cost (Accum. Value / Accum. Qty) | Accum. Qty * | Accum. Value ** | Accum. Out Qty *** | Price Diff. Amt **** | JE Debit | JE Credit | Qty Bal. | Batch Value Bal. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Production Order of Standard or Special Type | 2 | | 0 | 0 | 0 | 0 | - | 0 | 0 | 0 | 0 |
| Components are issued for production | | | Total components cost is 1000 | | | | | | | | |
| Receipt from Production No. 1 | 2 | | 500 | 2 | 1000 | 0 | - | Inventory 1000 | COGS 1000 | 2 | 1000 |
| A/R Delivery1 | -2 | | 500 | 2 | 1000 | 2 | - | COGS 1000 | Inventory 1000 | 0 | 0 |

| Batch1 | Qty | Price | Unit Cost (Accum. Value / Accum. Qty) | Accum. Qty * | Accum. Value ** | Accum. Out Qty *** | Price Diff. Amt **** | JE Debit | JE Credit | Qty Bal. | Batch Value Bal. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| A/R Return1 Based on Delivery1 | 2 | | 500 | 2 | 1000 | 0 | - | Inventory 1000 | COGS 1000 | 2 | 1000 |
| Production Order No. 2 of Disassembly Type | 2 | | 500 | 2 | 1000 | 0 | - | 0 | 0 | 0 | 1000 |
| Issue from Production No. 4 (Disassembly Order No. 2) | -2 | | 500 | 0 | 0 | 0 | - | Inventory WIP Account 1000 | Inventory 1000 | 2 | 0 |
| Non-Based A/R Return | 1 | | 0 | 1 | 0 | 0 | - | Inventory 0 | COGS 0 | 1 | 0 |

*Purchased quantity

**Based on purchases and purchase cancellations

***Based on sold quantity and based returns

**** Accumulated Out Qty * Delta Unit Cost

**Example 2 - An issue from production based on a disassembly order is considered as purchase cancellation even if the production BOM was not received from a receipt from production (for example, the product BOM was received from A/R / A/P / Inventory).**

The system uses the current cost, which in this case is zero.

| Batch1 | Qty | Price | Unit Cost (Accum. Value / Accum. Qty) | Accum. Qty * | Accum. Value ** | Accum. Out Qty *** | Price Diff. Amt **** | JE Debit | JE Credit | Qty Bal. | Batch Value Bal. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| GRPO1 | 2 | 500 | 500 | 2 | 1000 | 0 | - | Inventory 1000 | Allocation 1000 | 2 | 1000 |
| A/R Delivery1 | -2 | | 500 | 2 | 1000 | 2 | - | COGS 1000 | Inventory 1000 | 0 | 0 |
| A/R Return1 Based on Delivery1 | 2 | | 500 | 2 | 1000 | 0 | - | Inventory 1000 | COGS 1000 | 2 | 1000 |

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| | Qty | Price | Unit Cost | Accum. Qty | Accum. Value | Accum. Out Qty | Price Diff. Amt | JE Debit | JE Credit | Qty Bal. | Batch Value Bal. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Production Order No. 2 of Disassembly Type | 2 | | 500 | 2 | 1000 | 0 | - | 0 | 0 | 0 | 1000 |
| Issue from Production No. 4 (Disassembly Order No. 2) | -2 | | 500 | 0 | 0 | 0 | - | Inventory WIP Account 1000 | Inventory 1000 | 2 | 0 |
| Non-Based A/R Return | 1 | | 0 | 1 | 0 | 0 | - | Inventory 0 | COGS 0 | 1 | 0 |
| Issue from Production No. 4 (Disassembly Order No. 2) | -2 | | 500 | 0 | 0 | 0 | - | Inventory WIP Account 1000 | Inventory 1000 | 2 | 0 |
| Non-Based A/R Return | 1 | | 0 | 1 | 0 | 0 | - | Inventory 0 | COGS 0 | 1 | 0 |

*Purchased quantity

**Based on purchases and purchase cancellations

***Based on sold quantity and based returns

****Accumulated Out Qty * Delta Unit Cost

**Example 3 - Batch1 is received back to stock after it was issued in an issue for production based on a disassembly order.**

| Batch1 | Qty | Price | Unit Cost (Accum. Value / Accum. Qty) | Accum. Qty * | Accum. Value ** | Accum. Out Qty *** | Price Diff. Amt **** | JE Debit | JE Credit | Qty Bal. | Batch Value Bal. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Production Order of Standard or Special Type | 2 | | 0 | 0 | 0 | 0 | - | - | - | - | 0 |
| Components are issued for production | | | Total components cost is 1000. | | | | | | | | |
| Receipt from Production No.1 | 2 | | 500 | 2 | 1000 | 0 | | Inventory 1000 | Inventory WIP Acc. 1000 | 2 | 1000 |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| A/R Delivery1 | -2 | | 500 | 2 | 1000 | 2 | - | COGS 1000 | Inventory 1000 | 0 | 0 |
| A/R Return1 Based on Delivery1 | 2 | | 500 | 2 | 1000 | 0 | - | Inventory 1000 | COGS 1000 | 2 | 1000 |
| Production Order No.2 of Disassembly Type | 2 | | 500 | 2 | 1000 | 0 | - | - | - | 0 | 0 |
| Issue from Production No. 4 (Disassembly Order No. 2) | -2 | | 500 | 0 | 0 | 0 | - | Inventory WIP Account 1000 | Inventory 1000 | 2 | 0 |
| Production Order of Standard / Special Type | 2 | | 0 | 0 | 0 | 0 | - | 0 | 0 | 0 | 0 |
| Components are issued for production | | Total components cost is 1200 | | | | | | | | | |
| Receipt from Production No.5 Receives Batch1 | 2 | | 600 | 2 | 1200 | 2 | - | Inventory 1200 | Inventory WIP Acc. 1200 | 2 | 1200 |
| A/R Delivery1 | -2 | | 600 | 2 | 1200 | 2 | - | COGS 1200 | Inventory 1200 | 0 | 0 |

*Purchased quantity

**Based on purchases and purchase cancellations

***Based on sold quantity and based returns

**** Accumulated Out Qty * Delta Unit Cost

# 9 Generating Batches and Serials Inventory Audit Report

The inventory audit report displays results pre item only, it does not display results per serial numbers or batches. Therefore, users can use the batches and serials inventory audit report for items with serial/batch valuation method.
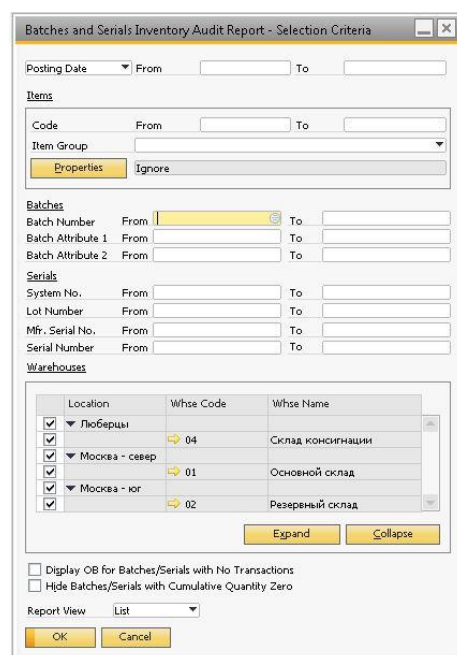
**Procedure**

> i **Note**
>
> The procedure is the same as with generating the inventory audit report, a few differences. In the procedure below, only the steps relevant to the batches and serials inventory audit report are described in more detail.

> i **Note**
>
> If the valuation method of an item has been changed in the past, this report will show only those transactions created at the time when the item was managed by the serial/batch valuation method.

1. From the SAP Business One *Main Menu*, choose *Inventory → Inventory Reports → Batches and Serials Inventory Audit Report*.
   The *Batches and Serials Inventory Audit Report - Selection Criteria* window appears.

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2. From the drop down list of the *From... To* field, define the date which you want to be taken into account:

   o *Posting Date*

   o *System Date*

   In the *Items* section, define the criteria pertaining to the selection of items.

3. In the *Batches* section, in the *Batch Number From... To* fields, define the range of the batch numbers which you want to include in the report.

   Define further criteria for batches, through the *Batch Attribute 1 From... To* and *Batch Attribute 2 From... To* fields.

4. In the *Serials* section, define the range of the serial numbers you want to include in the report through the following fields:

   o *System No.*

   o *Lot Number*

   o *Mft. Serial No.*

   o *Serial Number*

5. In the *Warehouses* table, select the line checkbox of the warehouse you want to include in the report.

6. To display open balances for batches or serial numbers with no transaction, select the *Display OB for Batches/Serials with No Transactions* checkbox.

   If an item has no transactions within the selected date range but has open transactions from previous periods, the total of these transactions is presented as an open balance for this item.

   To hide batches and serial numbers with zero cumulative quantity, select the *Hide Batches/Serials with Cumulative Quantity Zero* checkbox.

7. In the *Report View* field, from the drop down list, select one of the following options:

   o *List*

   o *Hierarchical*

8. Choose *OK*.

   The *Batches and Serials Inventory Audit Report* window appears. Use the *Expand* button for a detailed view of the report.

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