How-to Guide
Document Version: 4.4– 2020-09-07

CUSTOMER

How to Work with Resources and Production in SAP Business One 9.3 and higher

Typographic Conventions

Type Style	Description
Example	Words or characters quoted from the window. These include field names, window titles, pushbuttons labels, menu names, menu paths, and menu options. 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 window. 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	2014-09-10	First version
2.0	2015-04-13	Minor changes
3.0	2016-12-22	Minor changes
4.0	2017-09-21	• Introduced the concept of Single Run Capacity in Resource Master Data and Resource Capacity. • Added production routing related fields in BOM and Production Orders. • Added batch change production order status functionality in Production Orders. • Added linking resources to non-inventory items functionality.
4.1	2018-03-08	• Updated Bill of Materials - Component Management as follows: o Added a new task - Change BOM Header o Existing management tasks are enhanced to support Bill of Materials with Route Stages. • Added a new column Status to the Production Order Components grid. • Added a new Chapter 7.5 Recalculate Route Stage Dates
4.2	2018-07-03	Minor changes
4.3	2020-01-20	• 6.2.1 - Changing BOM Components o Added description and screenshot of Route Stage option in Step 5. • 6.2.1, 6.2.2, and 6.2.3 o Step 4: Added a description of Route Sequence and Route Stage fields and respective notes. • 7.1 Production Order Window o Step 3, No. and Description field, added a note that you can use a parent item as a component item in Special type production orders. • 11 - Tracing Serial and Batches in the Production Process (new) o 11.1 - Forward and Reverse Batches and Serials Trace Report Added description of the forward and reverse batches and serials trace reports (Inventory module).
4.4	2020-09-07	• 6.2 - Managing Bill of Material (BOM) Components o Changed to 6.2 - Managing Bill of Materials (BOMs) o Changed Bill of Materials – Components Management window to Bill of Materials Management window o Added section 6.2.5 - Deleting BOMs • 7.1 - Production Order Window

Version	Date	Change
		o Added description of procurement related fields and updated screenshots o In Step 2, in the Status field, added a description of the fields that can be edited even after a production order is closed. • 7.14 Creating Procurement Documents Directly from Production Orders (new) o Added a description of creating procurement documents based on production orders using the Procurement Confirmation Wizard.

Contents

1 Introduction

The Production module together with the existing resource functionality provides a base platform for managing light manufacturing processes in SAP Business One.

A resource is defined as a commodity, machine, labor, or other asset used to produce goods and services. As opposed to items, resources have capacity available throughout a period of time which can be consumed in a production process. Resources (resource capacity) can therefore be assigned to production orders. Resource capacity is always viewed within a period of time called "capacity period".

Consumption of resources in a production process contributes to the overall production costs and can be split into underlying cost elements for further accounting purposes.

Using the resources functionality, you can perform the following key business functions:

- Manage basic production capacity
- Analyze real production variances
- Simplify BOM management
- Use production order more flexibly

2 Initial Settings

2.1 Defining Primary G/L Accounts

Define G/L accounts to be used for resources. Postings behind transactions are made to these accounts directly unless you create advanced G/L account determination rules for resources and specify other accounts for certain transactions.

Example

You may have different resource groups which should use different standard cost expense accounts. If you name Standard Cost Expense 1 differently for two different groups, the system posts costs for both resource groups to the account defined for the Standard Cost Expense 1 in the G/L Account Determination window. To enable posting values for Standard Cost Expense 1 to different accounts depending on the resource group, you can define advanced G/L account determination rules, according to which the system will post cost expenses to the accounts determined by each resource group separately. For more information, see 2.2 Advanced G/L Account Determination.

Procedure

From the SAP Business One Main Menu, choose Administration → Setup → Financials → G/L Account Determination → G/L Account Determination → Resources tab.

Account	Description
Std. Cost Expense 1 ... 10	Note These fields are available only if you are using a perpetual inventory system. Define accounts for up to ten standard cost expense components. Each of the standard cost components is posted when the resource is consumed through the production order, that is, when a user creates the issue for production document with resource lines. When issuing to production, each separate standard cost component numbered from 1 to 10 is credited according to the quantity consumed to the corresponding standard cost expense account and debited to the related WIP account.
Resource WIP Account	Note This field is available only if you are using a perpetual inventory system. This account maintains the value of resources that are included in the work process, that is, the period between the start of production and the completion of the final product. The value from this field is copied to the Account Code field for resource lines in the issue for production document if the following applies: • The Component WIP Account radio button is selected for the production order document in the Document Settings window. For more information, see 7.6 Document Settings and WIP Account.
	• You have not defined the Account Code field for a resource line in the Production Order window. If you defined the Account Code field for a resource line in the production order manually, or if the value has been copied from the Bill of Materials window, then that

Account	Description
	code is used as the Resource WIP account in the issue for production for the resource in question.
Offset accounts	**Note** The offset accounts are available only if you are managing accounting with Balance Sheet accounts and Profit and Loss accounts. To manage accounting with these accounts, from the SAP Business One Main Menu, choose Administration → System Initialization → Document Settings → Per Document tab, in the Document field, select Production Order. In the Posting Schemas for Manufacturing area, select the Accounting with Balance Sheet Accounts and Profit & Loss Accounts radio button. Postings for resources related to issues for production, receipts from production and production order closure impact these accounts. That is, the offset accounts appear in any posting in which the WIP account and the Std Cost Expense accounts are used. The offset postings are dependent on the definition in the Document Settings window for the production order of whether to use component or parent item WIP accounts for component transactions. For more information, see 7.6 Document Settings and WIP Account.
WIP Offset P&L Account	This account is used to offset the WIP resource account posting.
Resource Offset P&L Account	This account is used to offset all of the Std Cost Expense accounts that are in use. This offset account selects component related account irrespective of the document settings option for parent or component WIP accounts.

2.2 Advanced G/L Account Determination

You can manage resource G/L account determination according to a flexible and centralized method. By setting a hierarchy of rules, you can assign resource G/L accounts by the following determination criteria:

- Resource groups
- Resources
- Warehouses
- Various combinations of all the above criteria

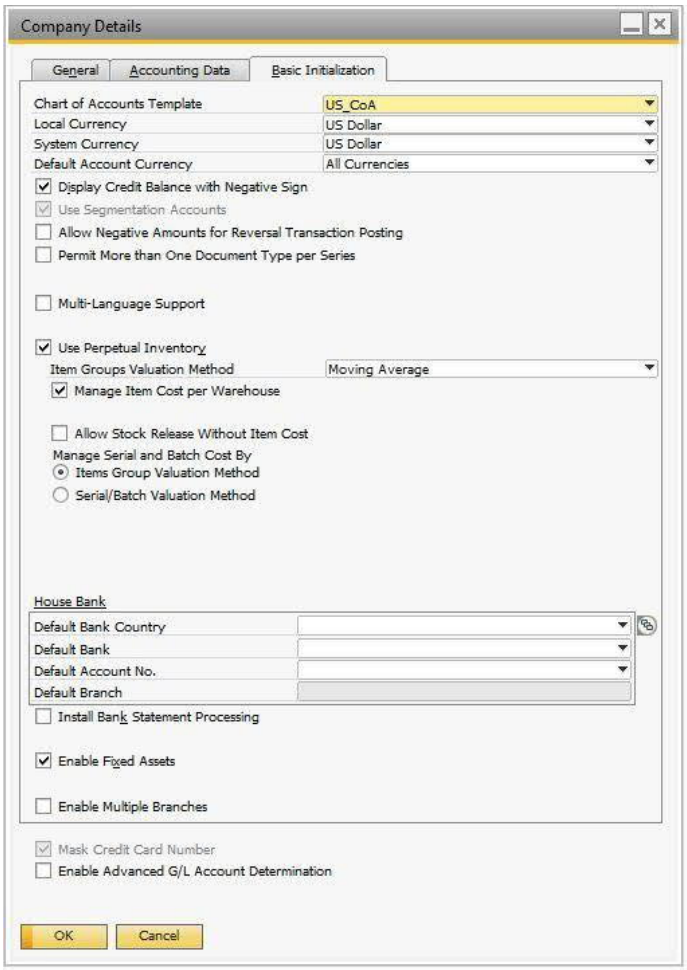
If defined, the advanced G/L account determination rules have priority over the settings in the G/L Account Determination window. However, there are exceptions, for example, if you define the WIP Account field in the Bill of Materials or the Production Order window manually, that account will be used as the WIP account regardless of the criteria you defined in the Advanced G/L Account Determination window. For more information on this functionality, see the How To Set Up and Work with Advanced G/L Account Determination guide in the documentation resource center.

2.3 Enabling Fixed Assets Functionality

If you want to associate some resources with fixed assets, you need to enable the fixed assets functionality.

Procedure

1. From the SAP Business One Main Menu, choose Administration → System Initialization → Company Details → Basic Initialization tab.
2. Select the Enable Fixed Assets checkbox.



   A system message appears informing you that enabling this functionality is an irreversible process. Choose Yes.

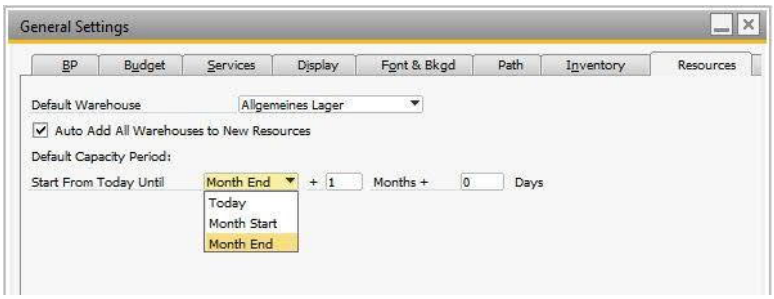
3. On the Basic Initialization tab, in the Calculate Depreciation By field, select one of the following options:
   - Month
   - Day
4. Choose Update.

For more information on how to use the fixed assets functionality, see the online help for SAP Business One.

2.4 Defining Resource Defaults

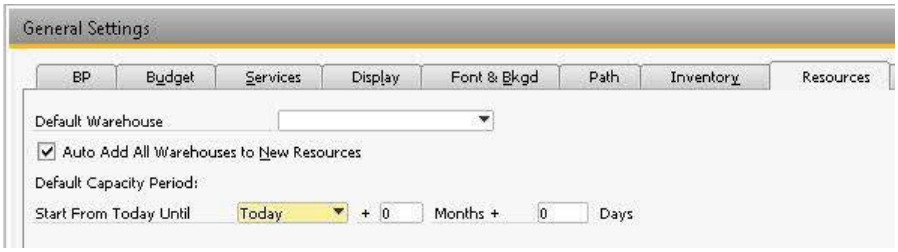
To define default settings for resources at the company level, proceed as follows:

1. From the SAP Business One Main Menu, choose Administration → System Initialization → General Settings → Resources tab.
2. Define the following fields:

Field / Checkbox	Activity / Description
Default Warehouse	Select a default warehouse. This warehouse will be used for resources in production orders. **Note** You can also set a default warehouse at the resource level and at the user level. For more information, see Defining a Default Warehouse.
Auto Add All Warehouses to New Resources	If you select this checkbox, when adding a new resource master data record, all warehouses appear in the Warehouse table on the Capacity Data tab. If you deselect this checkbox, when adding a new resource master data record, only the default warehouse appears in the Warehouse table on the Capacity Data tab.
Default Capacity Period	Determines the default capacity period displayed upon opening any of the windows that contain the Capacity Period From...To fields. **Note** Upon opening windows and tabs which contain the Capacity Period field, the From date is always the current system date. The To date is calculated by the settings for resources in the General Settings window. You can shift between periods using the arrow buttons; the buttons move the capacity period backwards and forwards by the same number of days as displayed upon opening the window. 1. In the Start From Today Until field, specify the default end date for capacity period calculation: • Today - The current system date is taken as a start date for calculation. • Month Start - The first day of the month of the current system date is taken as a start date for calculation. • Month End - The last day of the month of the current system date is taken as a start date for calculation.  2. In the Months and Days fields, specify the number of months and days from the start date. Both positive and negative numbers are allowed.

Example 1

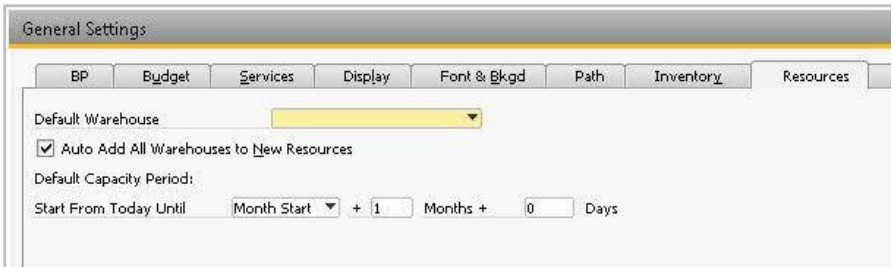
You have defined the default capacity period as displayed below.



Upon opening the Capacity Data tab of the Resource Master Data window, the Capacity Period From field is always the current date, for example, September 23, 2017. Since the end date of the capacity period is Today, the To field is September 23, 2017. The forward and backward arrows move the capacity period by one day.

Example 2

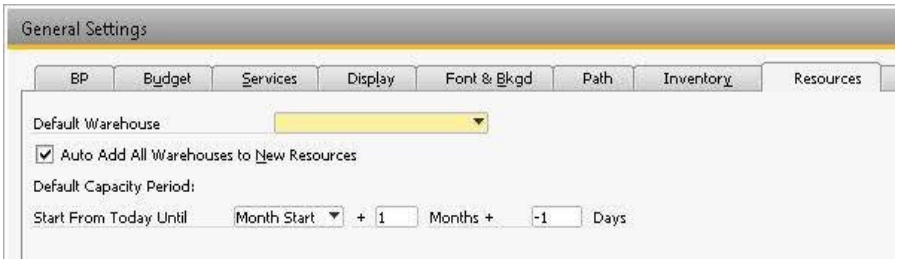
You have defined the default capacity period as displayed below.



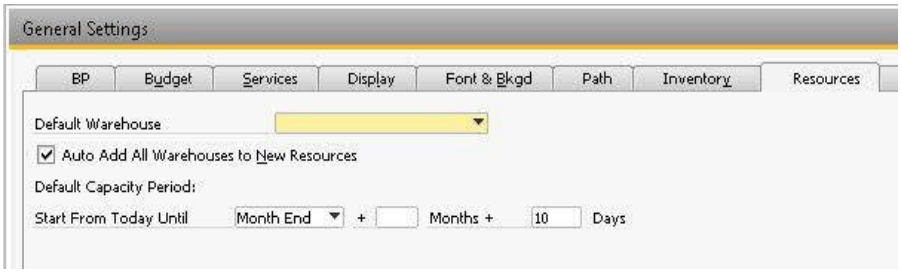
Upon opening the Capacity Data tab of the Resource Master Data window, the Capacity Period From field is the current system date, for example, September 23, 2017. The To field is October 1st, 2017. The forward arrow moves the capacity period by the same number of days, hence the From date is October 2 and the To date is October 10.

Example 3

You have defined the default capacity period as displayed below.



Upon opening the Capacity Data tab of the Resource Master Data window, the Capacity Period From field is the current date, for example, September 23, 2017. The To field is September 30, 2017 (calculated from October 1, the month start). The forward arrow moves the capacity period by the same number of days, hence the From date is October 1 and the To date is October 8.

Field/Checkbox	Activity/Description
	Example 4 You have defined the default capacity period as displayed below.  Upon opening the Capacity Data tab of the Resource Master Data window, the Capacity Period From field is the current date, for example, September 23, 2017. The To field is October 10, 2017 (calculated from September 30, the month end). The forward arrow moves the capacity period by the same number of days, hence the From date is October 11 and the To date is October 28. **Note** If upon opening the Capacity Data tab (or any other window containing the Capacity Period From... To fields) the current date is later than the To date by the set calculation, the capacity period displays results for the current date only.

3. To save the changes, choose OK.

2.5 Defining a Default Warehouse

You can set a default warehouse for a resource at three levels:

- Resource level - in the Resource Master Data window
- User level - in the User Defaults window
- Company level - in the General Settings window (Administration → System Initialization → General Settings → Resources tab)

The system takes the default warehouse according to the priority order above; for a new transaction, the system takes the default warehouse from the resource level. If a resource does not have a defined default warehouse at the resource level, it takes the default warehouse from the user level. If there is no default warehouse defined at the user level, it takes the default warehouse defined in the general settings.

2.6 Defining Resource Properties

You can define resource properties and use them for filtering purposes, for example, in reports.

Procedure

To define resource properties, proceed as follows:

1. From the SAP Business One Main Menu, choose Administration → Setup → Resources → Resource Properties. The Resource Properties - Setup window appears.

   By default, the fields are named Resource Master Data Property 1... 64.
2. To change the name field, click the line and enter a desired property name.
3. Choose Update.

2.7 Defining Resource Groups

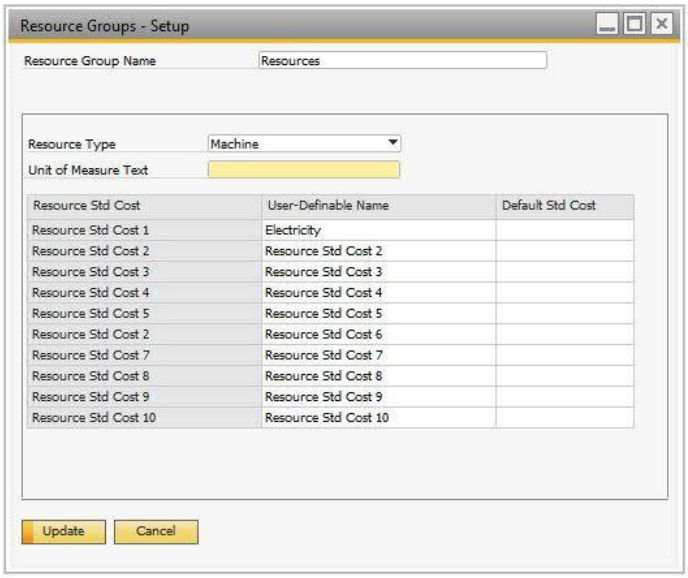
Whenever you create a resource, it belongs to a group. The default resource group is Resources. You can create more groups to classify your resources. Upon creation, a resource obtains setting defaults from its group. You can change these settings at the resource level in the Resource Master Data window.

Use the groups for analysis purposes, reports, evaluations, and to process resources together as a group.

Procedure

To create a resource group, proceed as follows:

1. From the SAP Business One Main Menu, choose Administration → Setup → Resources → Resource Groups. The Resource Groups - Setup window appears.



2. In the Resource Group Name field, enter the name of the group you want to create.
3. In the Resource Type field, select one of the following options:

- Machine - This type of resource can be linked to fixed assets.
- Labor - This type of resource can be linked to employees.
- Other - This type of resource cannot be linked to fixed assets or employees.

  The default option is Machine.
4. In the field Unit of Measure Text, enter the unit of measure used for this resource group.

5. In the Resource Std Cost table, you can define up to 10 components of the resource standard cost per the defined unit of measure.

   In the column, User-Definable Name, enter the desired name of the cost component, for example, "Electricity".

   In the column Default Std Cost, enter costs charged for one defined unit of measure.

   The names and default standard cost values will be copied into the resource master data if the resource belongs to this group.

6. Choose Update.

3 Working with Resource Master Data

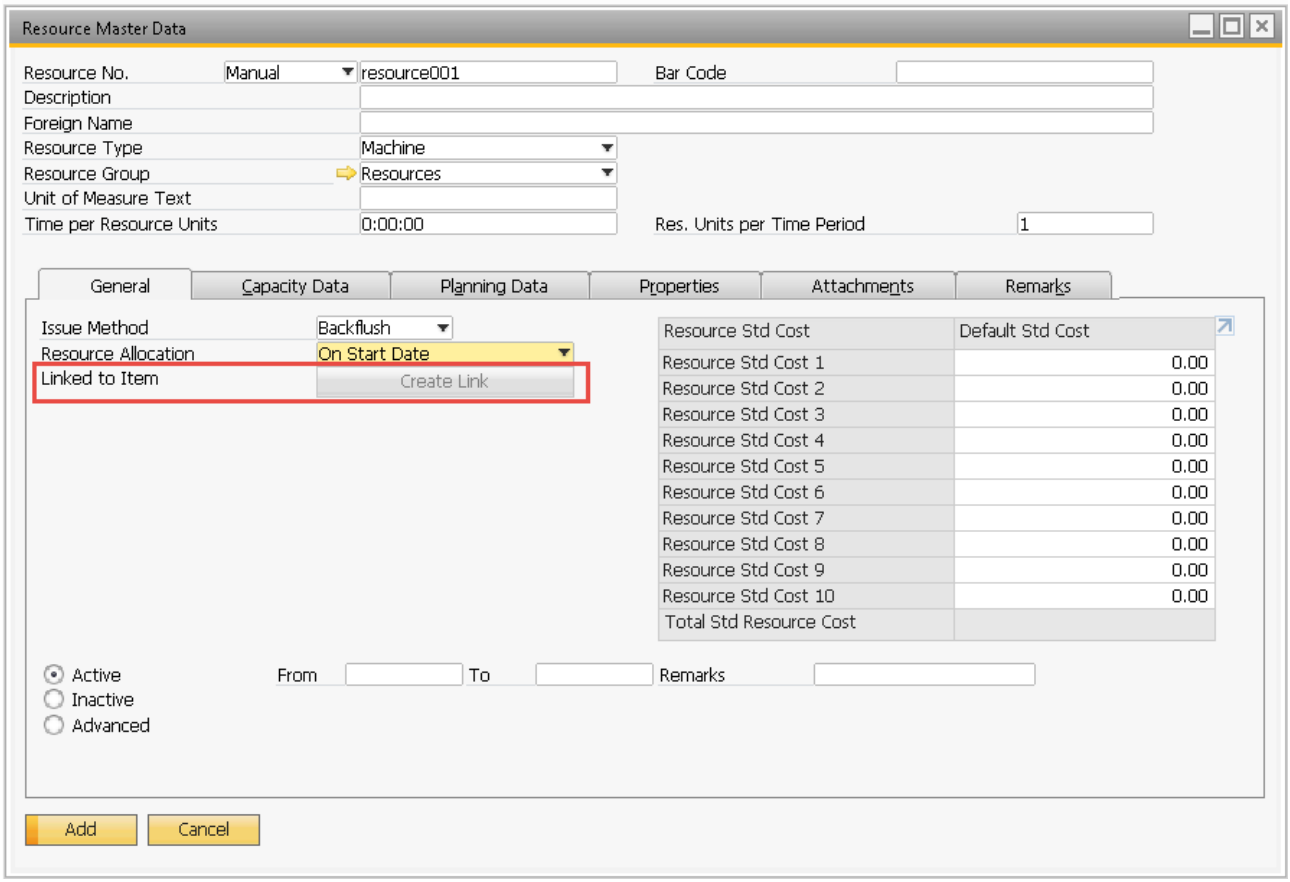
Use the resource master data to add, update, search and maintain resource data.

3.1 Creating Resource Master Data Records

Procedure

From the SAP Business One Main Menu, choose Resources → Resource Master Data.

1. The window appears in Find mode. Switch to Add mode.



2. Define the fields in the header area and on the tabs as described below and choose Add.

General Area (Header)

In the general area, define the following fields:

> **Note**
>
> Fields that are self-explanatory are not described in the table below:

Field/Checkbox	Activity/Description	Comments
Resource No.	Define a number (code) for the resource. The value of this field must be unique; other resources or items cannot have the same code.	
Bar Code	Enter a bar code for the resource. You can only enter one bar code per resource.	
Resource Type	From the dropdown list, select one of the following resource types: • Machine • Labor • Other The default value is defined by the selected resource group.	
Resource Group	Select the group to which you want to assign the resource. Note The resource draws default values from the resource group as described in Defining Resource Groups. You can update them at the resource level in this window.	
Unit of Measure Text	Enter a unit of measure for expressing resource capacity. For example, machine cycle, hour, or minute.	
Time per Resource Units	Enter the time per resource units in the `<hours:minutes:seconds>` format. This field is related to the Res. Units per Time Period field. Note Resource capacity is always expressed in quantity of units of measure; capacity time in this field is used to translate the capacity quantity into capacity time for reporting purposes only.	Example You have a machine that works in cycles. Each cycle takes 15 minutes and it can process 3 items in 1 cycle (3 capacity units within 15 minutes.) In Time per Resource Units enter 00:15:00, and in Res. Units per Time Period enter 3. Alternatively, you can define Time per Resource Unit as 00:05:00, and Res. Units per Time Period as 1. Note These definitions are used to calculate the
Res. Units per Time Period	Enter the number of resource units to which the Time per Resource Units field relates. The default value is 1. Example The resource is a circular saw. The unit of measure is a saw cycle. The time per resource units is 00:00:30, and the resource units per time period is 300. This means that in 30 seconds, the circular saw processes 300 items. For calculation purposes, the system then	

Field/Checkbox	Activity/Description	Comments
	divides the resource units per time period with the time per resource units.	Run Time value for resources included in a production order. You can leave these fields blank.

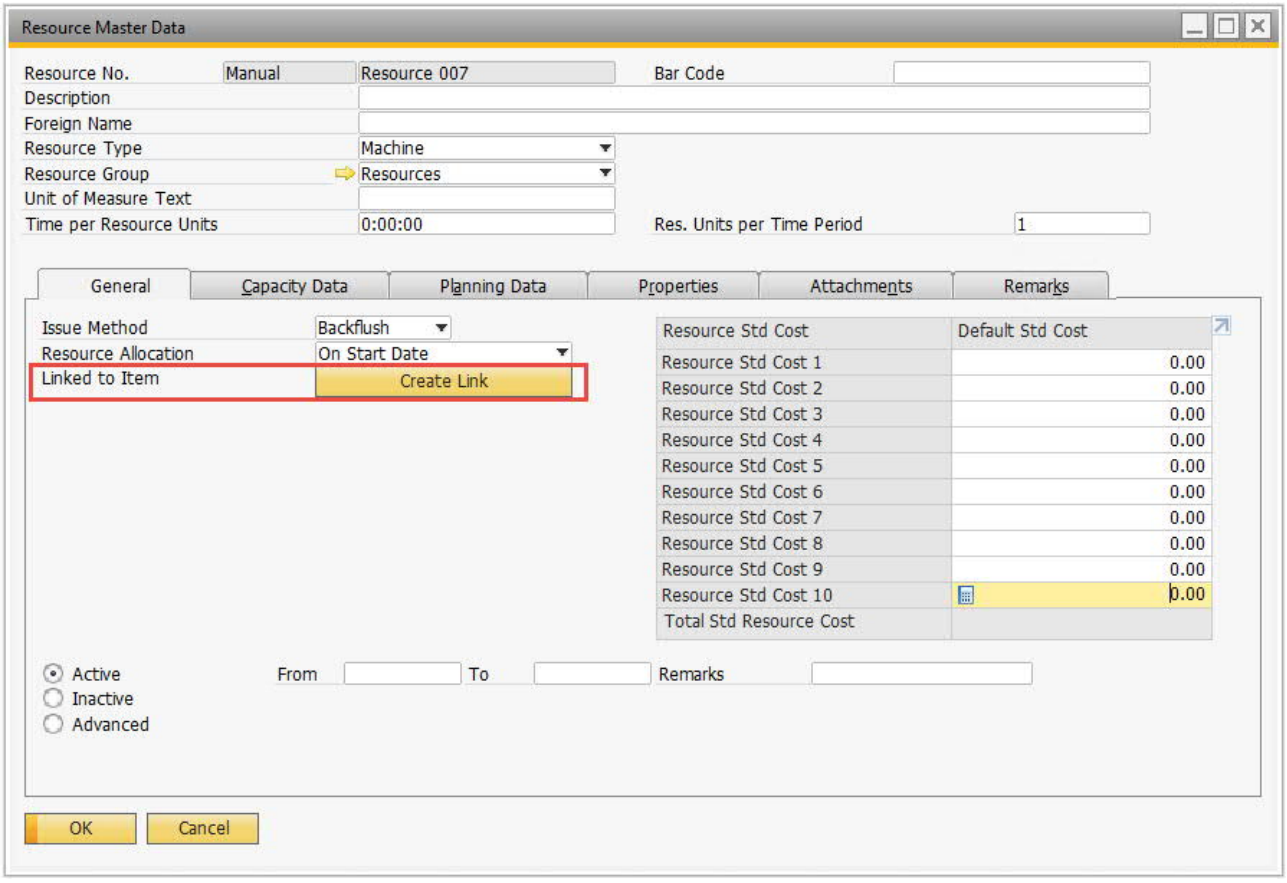
General Tab

On the General tab, view or define the following fields:

> **Note**
>
> Fields that are self-explanatory are not described in the table below:

Field/Checkbox	Activity/Description
Issue Method	Select one of the following issue methods: • Backflush - Upon receiving finished items on a production order, the resource capacity is automatically consumed, that is, the issue to production is then automatically issued. • Manual - Receipt of finished items on a production order does not impact the capacity of the resource. Resource consumption (issue to production) must be issued manually. The default option is Backflush.
Resource Allocation	From the dropdown list, choose one of the following options: • On Start Date - All the capacity of the resource is allocated to the start date of the production order. • On End Date - All the capacity of the resource is allocated to the end date of the production order regardless of the quantity of the Internal and Available capacities on that day. • Start Date Forwards - The capacity of the resource is allocated to the start date of the production order; however, if the Planned Qty of the production order is greater than the Single Run Capacity for the start date, the system allocates only as much capacity as there is Single Run Capacity defined for the start date and continues to allocate the remaining capacity to the day after the start date. The process continues forwards for each day until it allocates all the remaining Planned Qty. • End Date Backwards - The capacity of the resource is allocated to the end date of the production order; however, if the Planned Qty of the production order is greater than the Single Run Capacity for the end date, the system allocates only as much capacity as there is Single Run Capacity defined for the end date, and continues to allocate the remaining capacity to the day before the end date. The process continues backwards for each day until it reaches the current system date and allocates all the remaining Planned Qty to the current system date, regardless of how much Single Run Capacity is defined for that day. The default value is On Start Date. This field is later copied to the production order.
Create Link (button)	Choose Create Link when you need to link a resource to a non-inventory item. In doing so, you are allowed to purchase or sell resources as non-inventory items (for example, when your businesses are service based).

Field / Checkbox	Activity / Description
	On creating a new resource, the Create Link button is displayed. Choose the button, and a non-inventory item is automatically created and linked to the newly created resource. For more about the properties of the linked non-inventory item, see 3.4 Linking Resources to Non-Inventory Items.
Linked to Item	Displays the non-inventory item that is linked to this resource. The item code of the non-inventory item is the same as the resource code of the linked resource. To delete the link, delete the non-inventory item on the Item Mater Data window (Data → Remove). You cannot delete the link from the Resource Master Data window.
Resource Std. Cost	The field names and default values of each cost component are defined by the selected resource group. To change the values for this resource, enter them in the Default Std. Cost column. Consumption of resources on a production order automatically adds these separate resource costs to separate WIP and expense accrual accounts.
Active	Enter the range of dates to determine a validity period for the resource.
Inactive	Enter the range of dates to indicate the period for which you freeze the resource.
Advanced	Enter the range of dates to determine the following: • Active Range - a validity period for the resource • Inactive Range - the period for which you freeze the resource



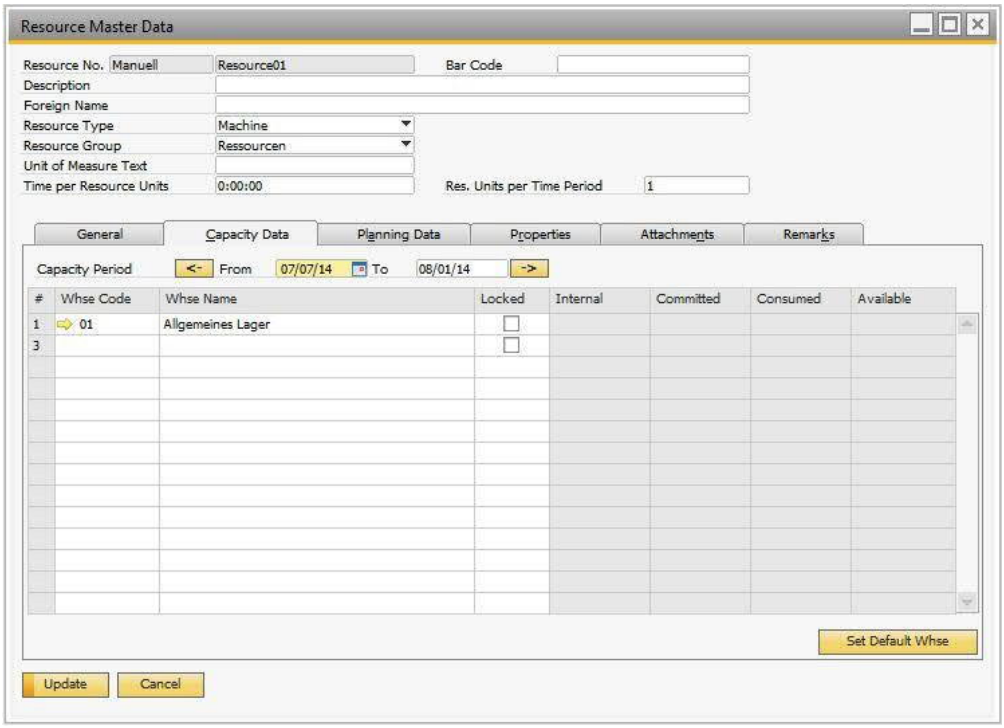
Capacity Data Tab

On the Capacity Data tab, you can view resource capacity for a desired period per warehouse.

1. Upon opening the window, the From date is always the current system date and the To date is defined by the default capacity period defined in the Resources tab of the General Settings window. Use the arrow buttons to shift between capacity periods.

   To view the capacity data for a different date range, enter the desired date range in the Capacity Period field and click anywhere in the table.

   > **Note**
   >
   > The capacity period is restricted to a maximum of one year.



2. View or define the following fields in the warehouse table:

Field / Checkbox	Activity / Description
Whse Code	To define an additional warehouse for the resource, select one from the choose from list in this field.
Locked	Selecting this checkbox locks the warehouse for the resource and prevents you from adding the resource from this warehouse to production orders. **Note** The setting of this field has no impact on the ability to enter or update capacity data.
Internal	The capacity that you set for a resource available in your warehouses or production areas. The capacity applies to the period specified on this tab. For more information, see 4.1 Setting Internal Resource Capacity.
Committed	The capacity that has not yet been issued and that is assigned to production orders of either Planned or Released status, and which has been allocated within the capacity period defined on this tab.

Field / Checkbox	Activity / Description
Available	This capacity is defined per warehouse within the specified capacity period as follows: Internal Capacity - Committed Capacity - Consumed Capacity
Set Default Whse	To set a default warehouse at the resource level, select the desired row and choose this button.

Note

Capacity data in the warehouse table are rounded according to the settings in SAP Business One Main Menu → Administration → System Initialization → General Settings → Display tab → Quantities field.

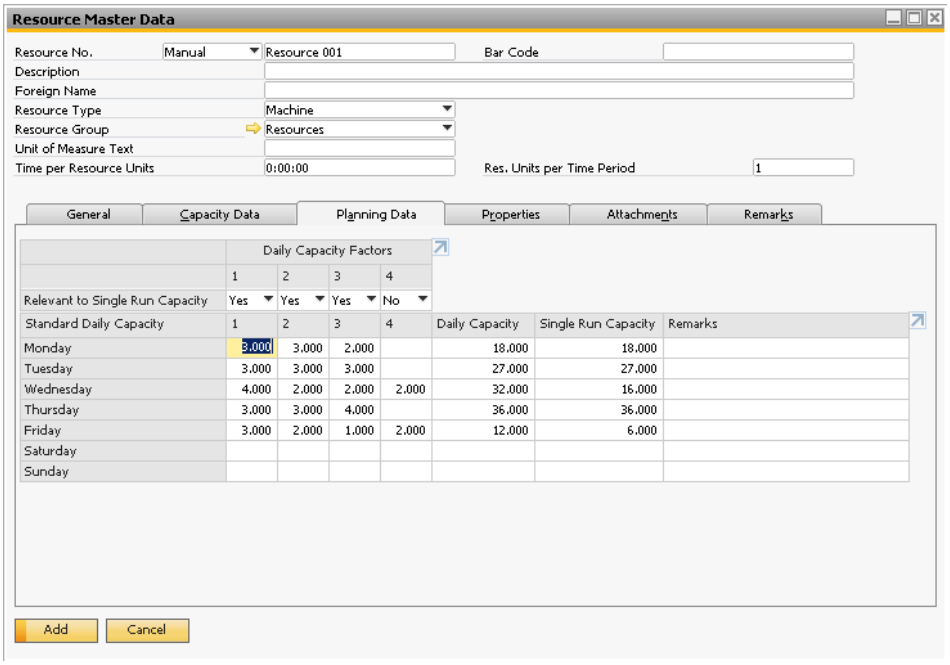
Note

To delete a row, right-click in the row and choose Delete Row. You can only delete a row which has zero capacity set from today into the future.

Planning Data Tab

On the Planning Data tab, you can plan daily internal capacity which you can later set as default values in the Resources - Set Daily Internal Capacity window.

1. For every day in the table, enter up to four daily capacity factors in numbers that determine the overall daily capacity of the resource. The total daily standard capacity is automatically calculated in the Daily Capacity field by multiplying the factors. Instead of entering daily factors, you can enter the daily capacity directly in the Daily Capacity field.



Example

The resource is a wood cutting machine and the unit of measure is machine hour. You have three wood cutting machines which can be operated eight hours a day. In the Daily Capacity Factors fields, enter numbers 3 and 8. In the Daily Capacity field, the total daily capacity of 24 hours is displayed.

2. Single Run Capacity is introduced on the assumption that a single production order will only be able to be produced on a single machine. It reflects the number of capacity hours a production order can consume on each working day.
3. Select Yes or No in Relevant to Single Run Capacity field to identify whether the factor is relevant to the calculation of Single Run Capacity which is automatically calculated by multiplying all relevant factors.

   Example

   The first daily capacity factor represents hours per shift, and the second factor represents shifts per day. The third factor may represent number of machines. The first two factors are tagged Yes in Relevant to Single Run Capacity. The calculation of Single Run Capacity on any one day would therefore be the multiplication the first and second factors.

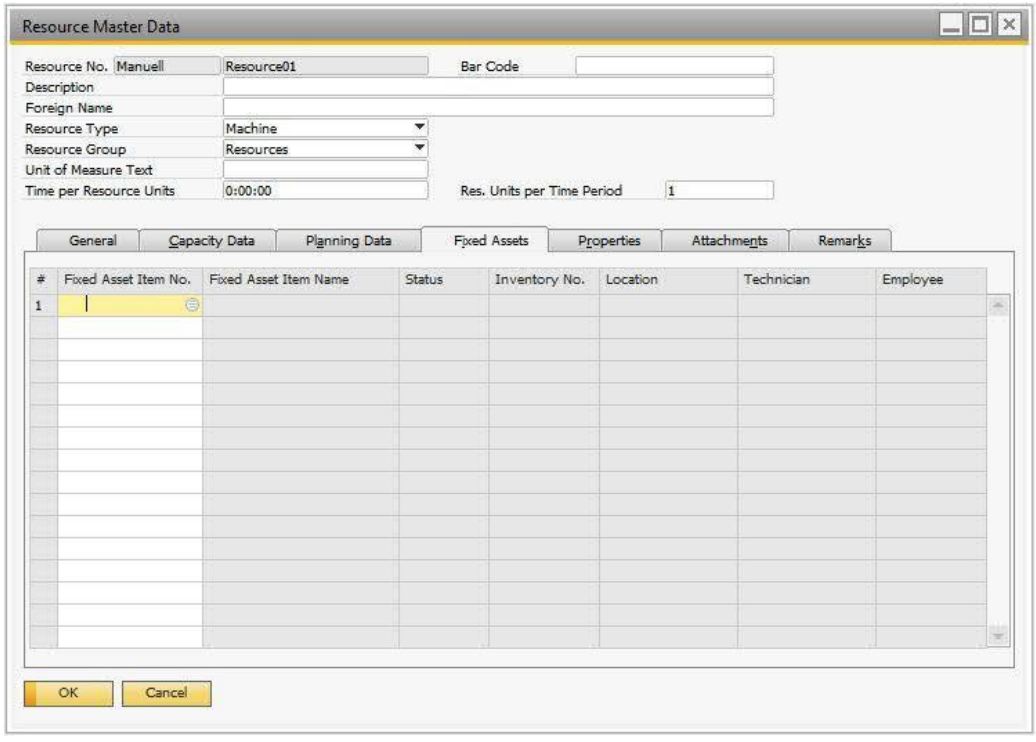
4. You can enter comments and remarks in the Remarks field.

Fixed Assets

Depending on the resource type you have defined, you can associate it with fixed assets or employees.

If the resource type is Machine, on the Fixed Assets tab, you can associate fixed assets with the resource.

To do so, in the Fixed Asset Item No field, select a fixed asset from the choose from list. The remaining fields are then filled with the values from the relevant fields in the Asset Master Data window.



Note

- This tab is available only if the Enable Fixed Assets checkbox is selected, as described in Enabling Fixed Assets Functionality.
- One resource can be associated with multiple fixed assets, but one fixed asset can be associated with one resource only.

To delete a row, proceed as follows:

1. Select the desired row.
2. In the menu bar, choose Data → Remove.
3. A message appears informing you about the removal process. Choose Yes.

Properties Tab

On the Properties tab, you can assign properties to the resource.

Remarks Tab

On the Remarks tab, you can add text or an image to further describe the resource.

Attachments Tab

On the Attachments tab, you can add files related to the resource. Document formats include Word, Excel, .bmp files and other file extensions.

3.2 Updating Resource Master Data Records

Procedure

1. From the SAP Business One Main Menu, choose Resources → Resource Master Data.
2. In the Resource No. field, enter the complete or partial resource number and choose Find.
3. Modify the necessary fields and choose Update.
4. Choose Update to save the changes.

3.3 Deleting Resource Master Data Records

> **Caution**
>
> You can remove a resource only if all of the following apply:
>
> - It is not assigned to a document or a draft document.
> - It is not assigned to any open sales, purchasing or production documents.
> - The internal capacity of the resource for the current system date and later is zero.

Procedure

1. From the SAP Business One Main Menu, choose Resources → Resource Master Data.
2. In the Resource No. field, enter the complete or partial resource number and choose Find.
3. In the SAP Business One menu bar, choose Data → Remove.
   A system message appears informing you that this process is irreversible.
4. Choose Yes.

3.4 Linking Resources to Non-Inventory Items

By linking resources to non-inventory items, you can purchase and sell these resources in AP / AR order documents (via the existing non-inventory item functionality). This is especially helpful for service-based businesses.

Note that you first need to create a resource to link to a non-inventory item. To link a resource to a non-inventory item, follow the steps below:

1. Go to the Resource Master Data window and switch to Add mode; then enter the necessary information for the new resource.
2. Choose the Add button.
3. Find the newly created resource.
4. On the General tab, in the Linked to Item field, choose the Create Link button.
5. In the confirmation box, choose Yes to create a non-inventory item that will be linked to the resource.

   A linked item is created.

The linked non-inventory item is automatically created with the following properties:

- The Inventory Item checkbox on the Item Master Data is automatically deselected, since it is a non-inventory item that is created.
- The Item Code will be the same as the Resource Code.

  Note

  Currently it is not allowed to create a Resource Code with the same name as an existing Item Code. There is, therefore, no possibility that this Item Code already exists.
- The Item Description will be the same as the Resource Description. However, it can be manually changed when necessary.
- All warehouses (including drop-ship warehouses) associated with the resource will be automatically associated with both the non-inventory item and the resource. And any change to warehouse details, in either the item or the resource, will be updated in both places.
- The Valuation Method field for the item (on the Inventory Data tab) will be automatically set to Standard and to read only.
- The Item Cost field for the item (on the Inventory Data tab) will be automatically updated with the Total Std Resource Cost field value of the linked resource (on the General tab of the Resource Master Data window).
- The non-inventory item cannot be selected in the MRV document (just like all non-inventory items).

4 Working with Resource Capacity

4.1 Setting Internal Resource Capacity

You need to set the internal resource capacity for resources, so that the exact available capacity can be used as a measure against resource requirements in open production orders. Use the following options:

- To set or update daily internal capacity in a batch for a selected range of resources within a period of time, use the Resources - Set Daily Internal Capacities window, as described in section 4.1.1 Setting Internal Resource Capacities in a Batch (Set Daily Internal Capacities Window).
- To set or update internal capacity manually for one or more resources for specific days, use the Resource Capacity window, as described in section 4.1.2 Setting Daily Internal Resource Capacity for Specific Days Manually (Resource Capacity Window).

You can also use this window to view all types of capacities per a period of time (Internal, Committed, Consumed, or Available).

4.1.1 Setting Internal Resource Capacities in a Batch (Set Daily Internal Capacities Window)

Procedure

1. From the SAP Business One Main Menu, choose Resources → Set Daily Internal Capacities.

   > **Note**
   >
   > You can access this window from the Resource Capacity window by choosing the Set Daily Internal Capacities button. In this case, all the selection criteria fields inherit the values from the Resource Capacity window

2. The Capacity Period fields are defined by the initial settings for the default capacity period.

   Upon opening the window, the From date is always the current system date. The To date is defined by the default capacity period. Use the arrow buttons to shift between capacity periods. To define a different capacity period, enter the desired date range in the Capacity Period field and click outside the fields.

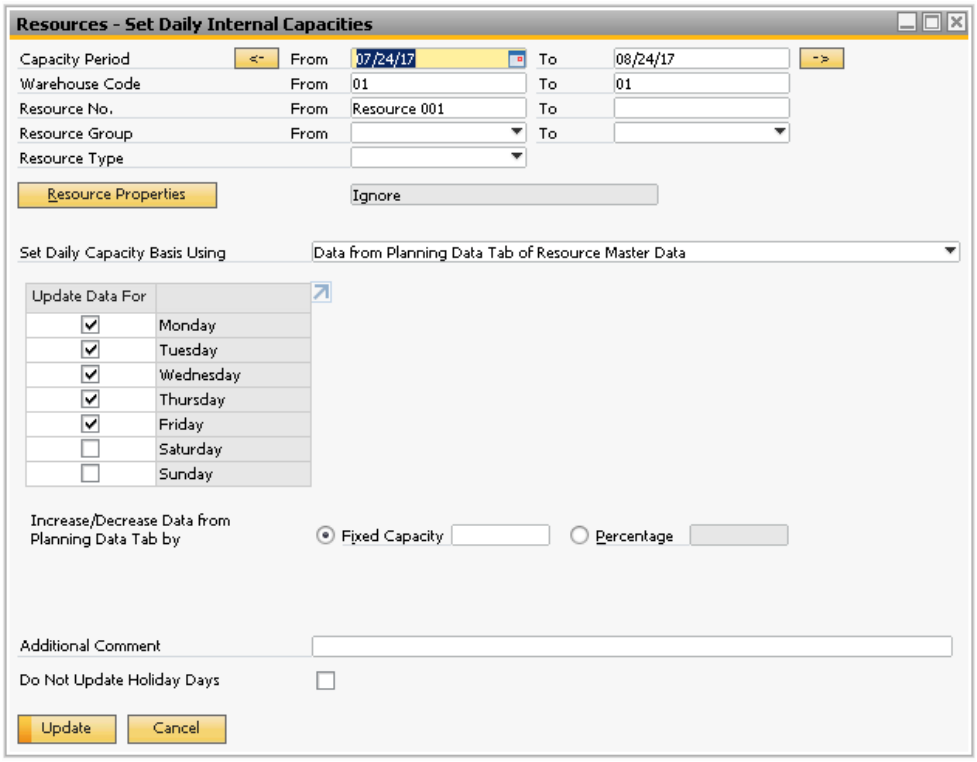
3. Define the range of the remaining selection criteria in the header area:
   - Warehouse Code
   - Resource No.
   - Resource Group
   - Resource Type
   - Resource Properties

   > **Note**
   >
   > If you leave any of the fields above blank, the system selects all data from the category.

4. In the Set Daily Capacity Basis Using field, select one of the following options:

> **Note**
>
> Depending on this selection, different fields in the window are enabled.

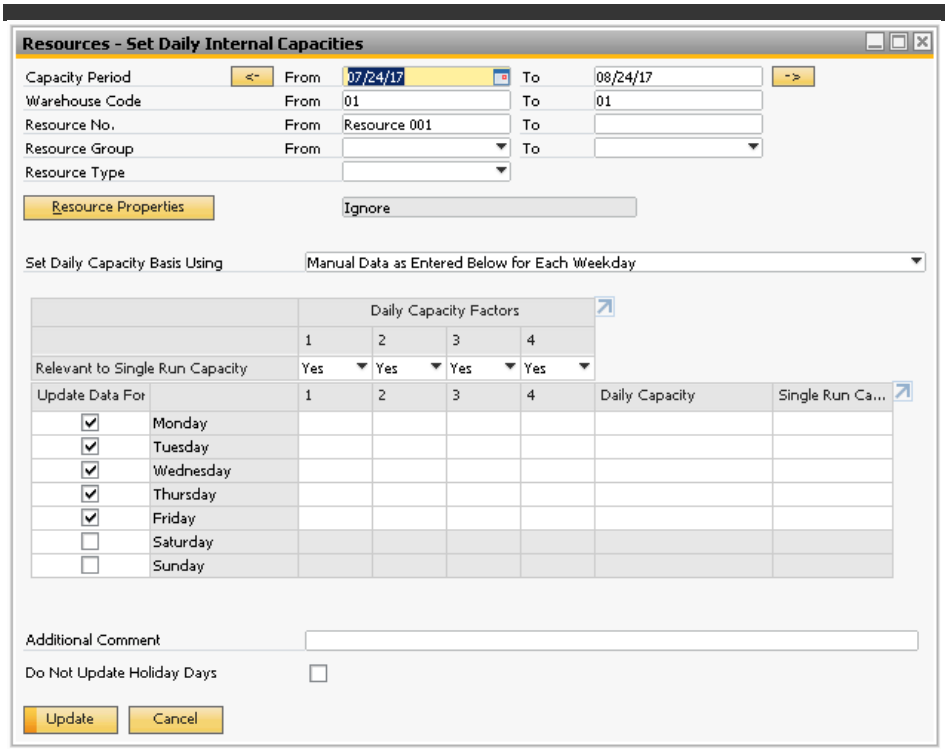
- Data from Planning Data Tab of Resource Master Data - Sets the internal capacity for the selected range of resources using the values specified on the Planning Data tab of the relevant resource master data record.



1. In the table area, in the Update Data For column, select the checkboxes for the days for which you want to update the internal capacity.
2. To modify the data from the Planning Data tab, in the Increase / Decrease Data from Planning Data Tab By field, select one of the following:
   - Fixed Amount - Enter the amount of resource units, positive or negative, by which you want to increase or decrease the data.
   - Percentage - Enter the percentage, positive or negative, by which you want to increase or decrease the data.

- Manual Data as Entered Below for Each Weekday - Sets the internal capacity for the selection of resources according to the data entered manually in this window.

1. In the table area, in the Update Data For column, select the checkboxes for the days for which you want to update internal capacity.
2. In the Daily Capacity Factors fields, enter up to four daily capacity factors in numbers that determine the overall daily capacity of the resource. The total daily standard capacity is automatically calculated in the Daily Capacity field by multiplying the factors. Instead of entering daily factors, you can enter the daily capacity directly in the Daily Capacity field.

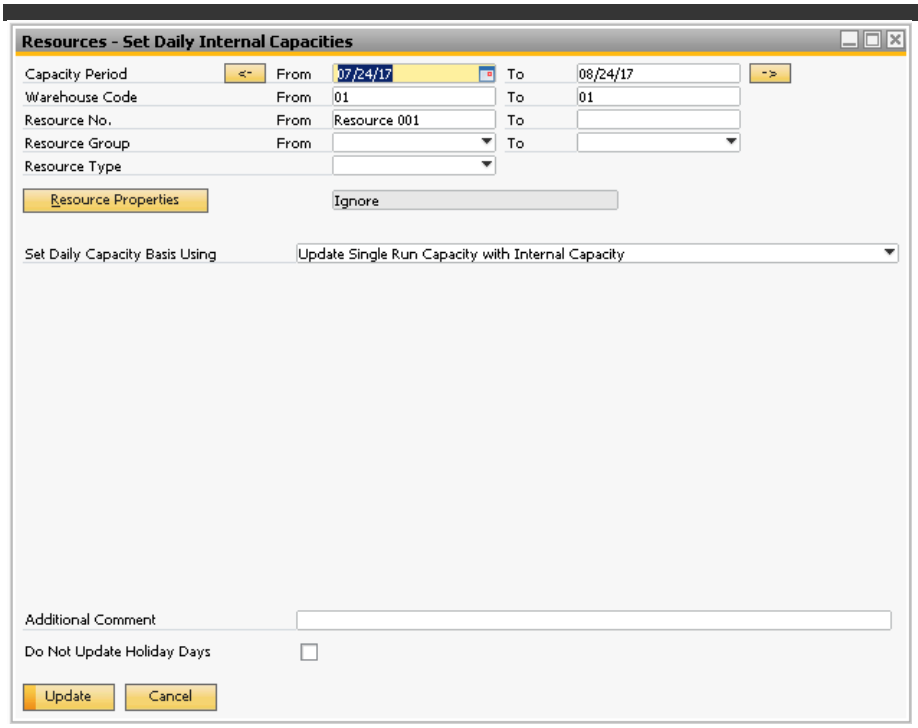


3. In the Additional Comment field, you can enter text which will be accessible from the Resource Capacity window. In the mentioned window, the data associated with this comment are displayed in blue.
4. If you do not want the capacity data to be applied to holiday days, select the Do Not Update Holiday Days checkbox.
5. Choose Update.

> **Note**
>
> To view capacity for a resource that you have defined here, use the Resource Capacity window. There you can update resource capacity for specific days manually.
>
> When you access this window from the Main Menu, the Capacity Period From...To values appear according to the rules defined in the General Settings window, and the remaining criteria are inherited from the last execution view

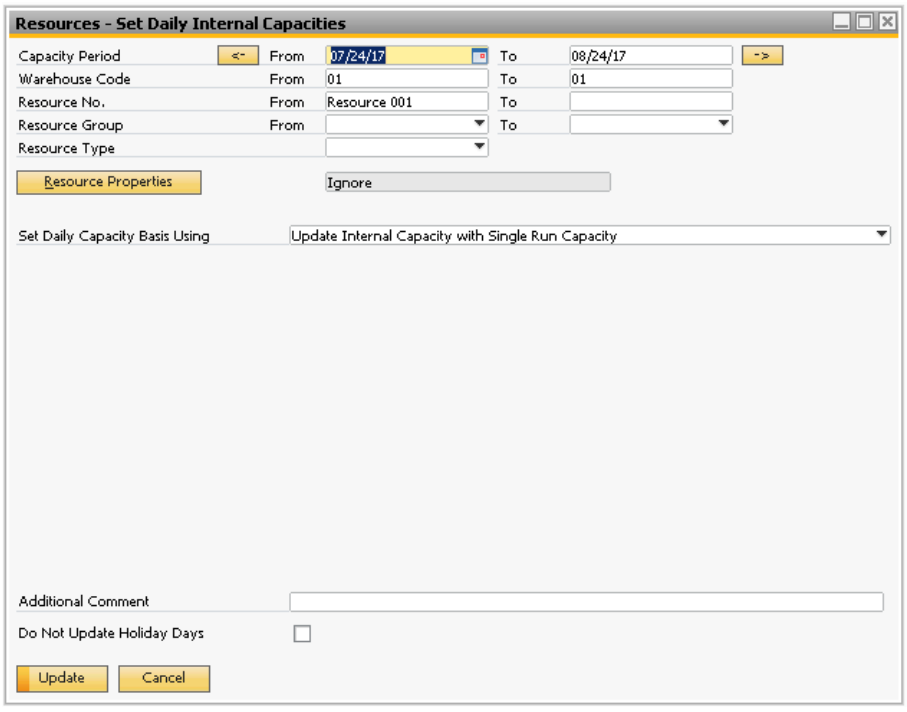
- Update Single Run Capacity with Internal Capacity

  When this option is selected and the Update button is pressed, the data held in the Single Run Capacity fields in the Resource Capacity window will be overridden with the values from the Internal Capacity fields, for the corresponding dates and the range of data selected in this window.



- Update Internal Capacity with Single Run Capacity

  When this option is selected and the Update button is pressed, the data held in the Internal Capacity fields in the Resource Capacity window will be overridden with the values from the Single Run Capacity fields, for the corresponding dates and the range of data selected in this window.

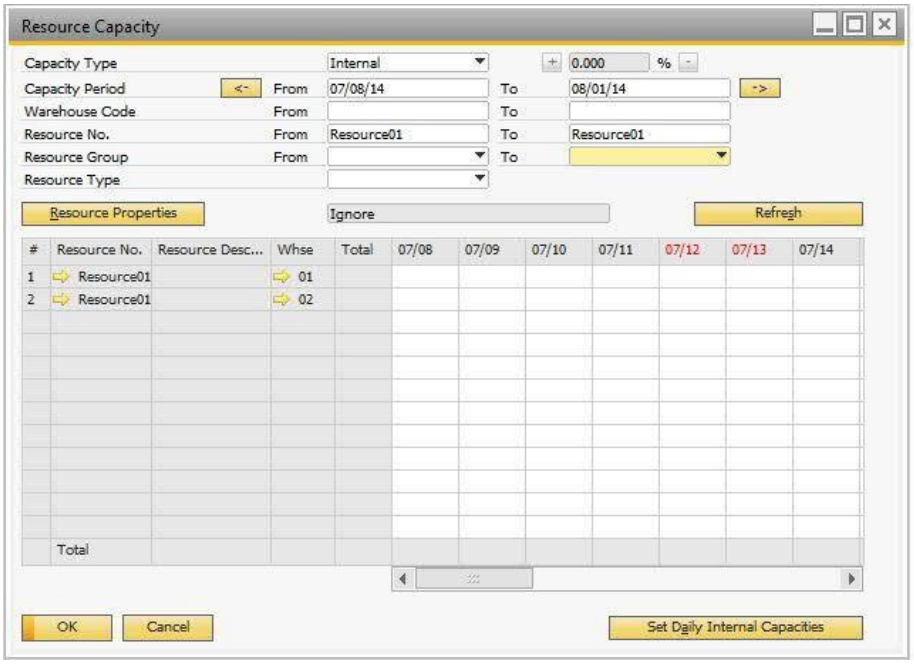


4.1.2 Setting Daily Internal Resource Capacity for Specific Days Manually (Resource Capacity Window)

Procedure

1. From the SAP Business One Main Menu, choose Resources → Resource Capacity. The Resource Capacity window appears.

> **Note**
>
> If you access this window from the Resource Master Data window, the selection criteria from the Resource Capacity window are copied to the Resource Capacity window and internal resource capacity data for All Warehouses is displayed.



2. In the Capacity Type field, select Internal.
3. The Period Capacity From and To fields are determined by the defined default capacity period. To shift between capacity periods, use the arrow buttons. To change the capacity period, enter the desired date range and choose Refresh.

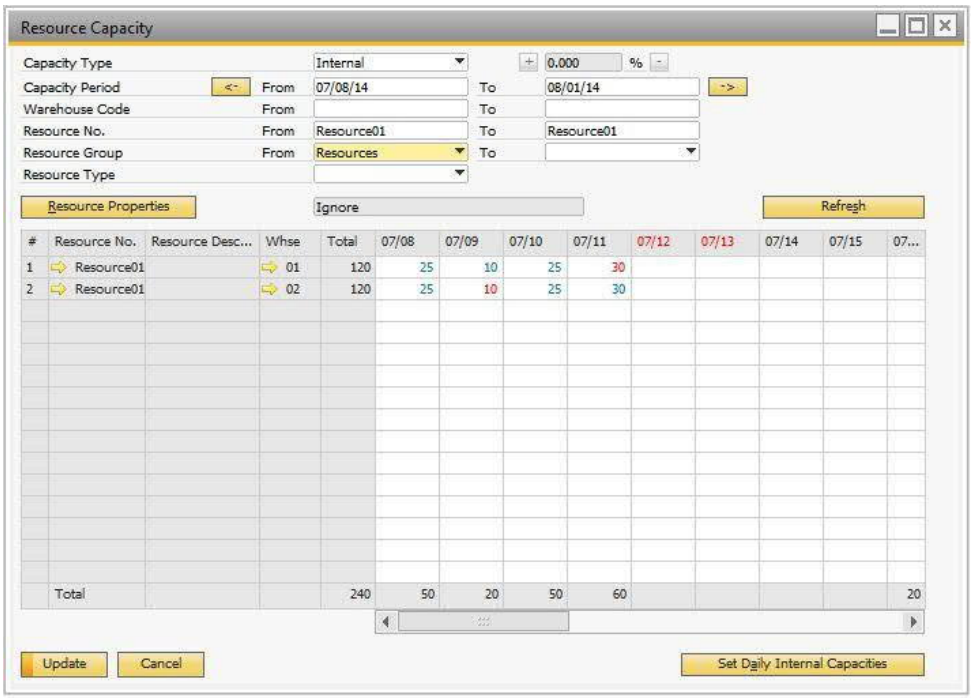
> **Note**
>
> The defined capacity period cannot be longer than one year.

4. Define the range of the remaining selection criteria in the general area, then choose Refresh:
   - Warehouse Code
   - Resource No.
   - Resource Group
   - Resource Type
   - Resource Properties
   - Resource Properties Status

Note

- If you leave any of the fields above blank, the system selects all data from the category.
- If there is already any internal capacity defined for this period, it is displayed in the table area.

To view data for each day in the table, scroll over the date fields, as displayed below:



5. In the desired date field, enter capacity for a resource. You can enter decimal values, too.

   You can repeat this for as many dates and resources as you need.

   ### Note

   Dates related to holiday days are displayed in red.

To decrease or increase values by 5%, press CTRL and select the desired rows in the table, then choose the Decrease/Increase Percentage buttons or enter a desired percentage value in the field (positive or negative).

6. To enter a comment, double-click a desired cell in the table and choose Edit Comment. Enter the comment and choose OK.

   Fields with comments added from the Resource Capacity window are displayed in red.

   Fields with comments added from the Resources - Set Daily Internal Capacity window are displayed in blue. You can edit those comments in this window, as well. In that case, the fields are no longer displayed in blue, but in red.

7. The following internal capacity totals related to the selection criteria are displayed in the table:
   - At the bottom of each column - displays the total internal capacity of the displayed items per date.
   - In the Total column - for each item, displays the total internal capacity for the defined capacity period.

   At the bottom of the Total column, the value of the summed totals is displayed.

8. To save the data, choose Update.

Note

If you access this window from the Main Menu, all selection criteria are inherited from the last execution view except the Capacity Period From... To field, which appears according to the definitions in the General Settings window. Choose Refresh to display the capacity data in the table.

4.1.2.1 Accessing Resource Capacity Window from Resource Master Data

If you access the Resource Capacity window from the Capacity Data tab of the Resource Master Data window, the selection criteria from the Capacity Data tab are copied to the Resource Capacity window. To access the Resource Capacity window from Resource Master Data, proceed as follows:

On the Capacity Data tab, right-click anywhere in the window and choose Internal Resource Capacity.

The Resource Capacity window opens with the following selection criteria copied from the Capacity Data tab:

All Warehouses, Capacity Period, and Resource No.

4.1.2.2 Accessing Resource Capacity Window from Production Order Window

You can access the Resource Capacity window from the Production Order window. To do so, in the resource line, click (Link Arrow) in the Available column. The Resource Capacity window opens with the following criteria:

- Capacity Type: All
- Capacity Period: Not defined
- Warehouse Code: Copied from the resource line of the production order

4.2 Viewing Resource Capacity

To view data for all capacity types for a resource within a desired capacity period, use the Capacity Data tab in the Resource Master Data window.

To view daily data for all capacity types for a selected range of resources within a desired capacity period, use the Resource Capacity window as described below.

4.2.1 Viewing Resource Capacity from Resource Capacity Window

Note

If you access this window from the Main Menu, all selection criteria are inherited from the last execution view except the Capacity Period From... To field, which appears according to the definitions in the General Settings window. Choose Refresh to display the capacity data in the table.

Procedure

1. From the SAP Business One Main Menu, choose Resources → Resource Capacity.
2. From the dropdown list in the Capacity Type field, select the desired option:
   - Internal - If you select this, you can also manually update the Internal capacity data.
   - Ordered - Ordered capacity displays the total quantity of the Qty (Inventory UoM) grid line field for the non-inventory item linked to this resource. (For more about resources linked to non-inventory items, see 3.4 Linking Resources to Non-Inventory Items), from the following documents:
     - Purchase orders with a document grid line field of Del. Date, which falls within the From-To period specified in the Capacity Period field.

       Note

       When the purchase order is copied to a GRPO or purchase invoice, the ordered capacity from the purchase order will be reduced by the drawn quantity. Meanwhile, the ordered capacity from the GRPO or purchase invoice will be increased by the drawn quantity.

       Also note that if a non-inventory item is linked to a resource, when a purchase order is copied to a GRPO, the quantity in the GRPO cannot be greater than the quantity in the purchase order.

     - GRPOs with a document grid line field of Actual Del. Date which falls within the From- To period specified in the Capacity Period field.

       Note

       When the GRPO is copied to a purchase invoice, the ordered capacity from the GRPO will remain unchanged. However, when the GRPO is copied to an A/P Return, the ordered capacity from the GRPO will be reduced by the drawn quantity.

       Non-based purchase invoices (and purchase invoices generated based on purchase quotations) with a document grid line field of Actual Del. Date which falls within the From-To period specified in the Capacity Period field.

       Note

       When the non-based purchase invoice is copied to an A/P Credit Memo, the ordered capacity from the purchase invoice will be reduced by the drawn quantity.

   - Committed

     Generally, this field displays the resource capacities that are committed to production orders. However, if there are resources linked to non-inventory items, it may also contain the total quantity of the Qty (Inventory UoM) grid line field for the non-inventory item linked to this resource, from open Sales Orders.

     (For more about resources linked to non-inventory items, see 3.4 Linking Resources to Non-Inventory Items.)

     Note

     When the sales order is copied to a sales delivery or A/R invoice, the committed capacity from the sales order will be reduced by the drawn quantity. Meanwhile, the consumed capacity will be increased for delivery and A/R invoice.

   - Consumed

     Generally, this field displays the resource capacities that are consumed by production orders. However, if there are resources linked to non-inventory items, it may also contain the total quantity of the Qty (Inventory UoM) grid line field for the non-inventory item linked to this resource, from the following documents:

     - A/R deliveries with a document grid line field of Actual Del. Date, which falls within the From-To period specified in the Capacity Period field.

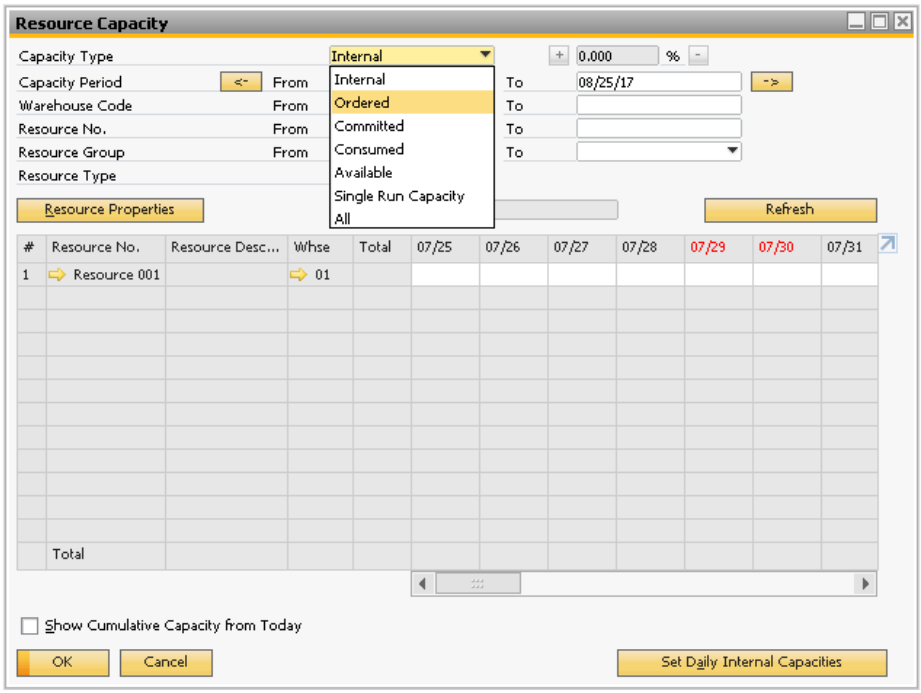
       (For more about resources linked to non-inventory items, see 3.4 Linking Resources to Non-Inventory Items)

> **Note**
>
> When the A/R delivery is copied to an A/R invoice, the consumed capacity remains unchanged. However, if the delivery is copied to a Return, the consumed capacity is reduced by the drawn quantity.

- Non-based A/R invoices (including A/R invoices copied from sales quotations) with a document grid line field of Actual Del. Date which falls within the From-To period specified in the Capacity Period field.

> **Note**
>
> When the non-based A/R invoice is copied to an A/R credit memo, the consumed capacity is reduced by the drawn quantity.

- Available
- Single Run Capacity - If you select this, you can also manually update the Single Run Capacity data.
- All - If you select this, all these capacity types are displayed simultaneously. In the collapsed view, only the Internal capacity is visible. In the expanded view, all these capacity types are visible, and the Internal capacity and Single Run Capacity can be both manually updated.



3. The Period Capacity From and To fields are determined by the defined default capacity period. Upon opening the window, the From date is the current system date. To shift between capacity periods, use the arrow buttons. To change the capacity period, enter the desired date range and choose Refresh.
4. Define the range of the remaining selection criteria in the header area:
   - Warehouse Code
   - Resource No.
   - Resource Group
   - Resource Type
   - Resource Properties

   > **Note**
   >
   > If you leave any of the fields above blank, the system selects all data from the category.

   Choose Refresh.

The capacity data for the defined selection criteria are displayed in the table area.

5. To view data for each day in the table, scroll to the right over the date columns.

> **Note**
>
> For Internal resource capacity type, the following applies:
>
> - Capacity data with comments added from the Resource Capacity window are displayed in blue.
> - Capacity data with comments added from the Resources - Set Daily Internal Resource Capacity window are displayed in red.
>
> To view the comments, hover over the field.

6. To view cumulative quantities of the selected capacity type, select the Show Cumulative Capacity from Today checkbox. The capacity quantities accumulate with each day starting from the current system date, regardless of the Capacity Period you are viewing. Data for days prior to the current system date are in this case blank.

> **Note**
>
> If you are viewing the Internal capacity type, the fields in the table are read-only; you cannot update the internal capacity if the Show Cumulative Capacity from Today checkbox is selected.

Example 1 - Show Cumulative Capacity from Today

- You are viewing Available capacity for a resource for a period of 5 days. The From date is the current system date, July 12. The following information is displayed in the table when the Show Cumulative Capacity from Today checkbox is deselected.

Capacity Type	July 12	July 13	July 14	July 15	July 16
Available	5	5	7	5	6

- You are viewing Available capacity for the same resource, for the same period. However, now the Show Cumulative Capacity from Today checkbox is selected.

Capacity Type	July 12	July 13	July 14	July 15	July 16
Available	5	10 (5+5)	17 (5 + 5 + 7)	22 (5 + 5 + 7 + 5)	28 (5 + 5 + 7 + 5 + 6)

Example 2 - Show Cumulative Capacity from Today

You are viewing Available capacity for a resource for a period of 7 days. The From date is July 10, the current date is the current system date, July 12. The following information is displayed in the table when the Show Cumulative Capacity from Today checkbox is selected.

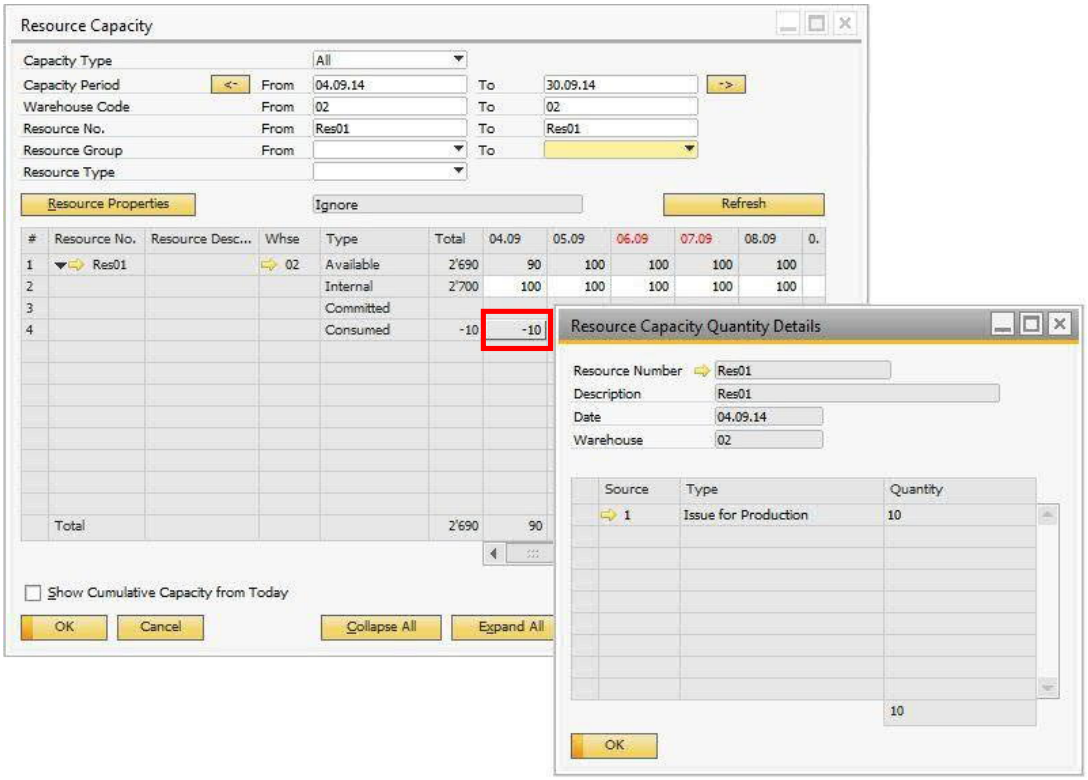
Capacity Type	July 10	July 11	July 12	July 13	July 14	July 15	July 16
Available			5	10 (5+5)	17 (5 + 5 + 7)	22 (5 + 5 + 7 + 5)	28 (5 + 5 + 7 + 5 + 6)

Example 3 - Show Cumulative Capacity from Today

You are viewing Available capacity for a resource for a period of 3 days. The From date is July 14, the current date is the current system date, July 12. The following information is displayed in the table when the Show Cumulative Capacity from Today checkbox is selected.

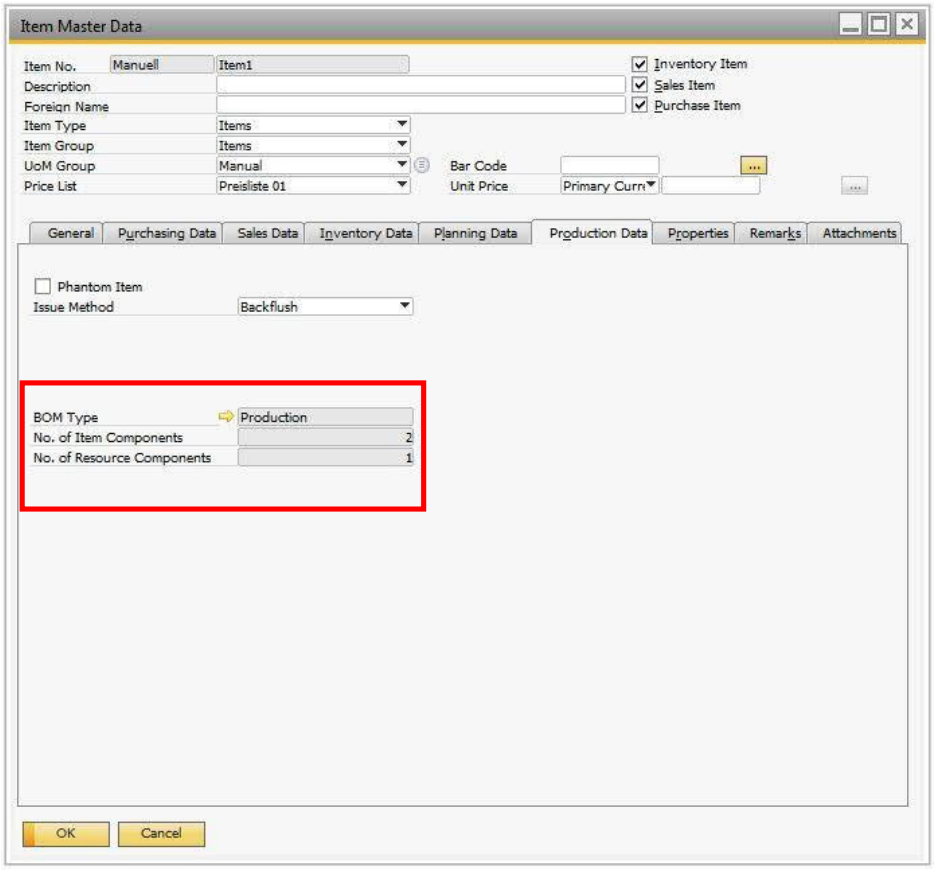
Capacity Type	July 14	July 15	July 16
Available	17 (5 + 5 + 7)	22 (5 + 5 + 7 + 5)	28 (5 + 5 + 7 + 5 + 6)

7. If you are viewing All capacity types in collapsed view, the quantities in resource rows display the Available capacity type. Choose the Expand All button, to switch to the expanded view and display all capacity type rows.
   - In the Internal capacity type row, if you have defined internal capacities for the defined period, the relevant quantities are displayed. You can update the internal capacity for any of the dates displayed, and view or add comments.
   - In the Ordered, Committed and Consumed capacity type rows, the cells which contain values appear as push buttons. Click them to see the relevant source documents related to the committed or the consumed quantity of the resource.



5 Defining Production Data in Item Master Data

The Production Data tab is available on the Item Master Data window to help streamline BOM and resource management.



To access this tab, from the SAP Business One Main Menu, choose Inventory → Item Master Data → Production tab.

View or define the following:

Field / Checkbox	Description / Activity
Phantom Item	**Note** This checkbox has been moved from the General tab to the Production Data tab. Defines the item as a phantom; a phantom item is an item type in BOM that has an engineering or structure function only. Phantom items do not represent a physical component or a subassembly, thus they are defined as non-inventory items.
Issue Method	**Note** This checkbox has been moved from the General tab to the Production Data tab.

	Select one of the following issue methods: • Backflush - after you report the completion of the parent item, the components are automatically issued to the production order. • Manual - the components are manually issued to the production order, regardless of the issue of the product. **Note** You cannot use the Backflush method for items managed by serials or batches.
BOM Type	This field indicates if the item is associated with a BOM as a parent item. The field is blank if the item is not associated with any BOM. Otherwise, the following values are possible: • Assembly - The item is associated with an assembly BOM. • Sales - The item is associated with a sales BOM. • Production - The item is associated with a production order. To open the related BOM, click  (Link Arrow).
No. of Item Components	Displays the number of item components that are currently included in this item's BOM.
No. of Resource Components	Shows the number of resource components that are currently included in this item's BOM.

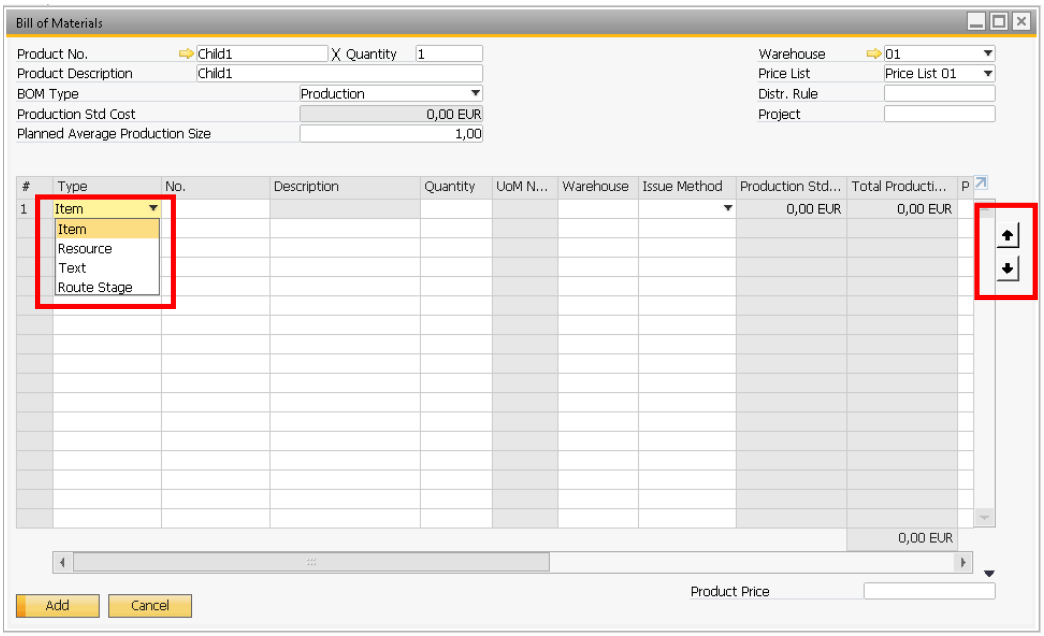
6 Bill of Materials Handling

6.1 Bill of Materials Window

The BOM has a hierarchical arrangement of components. Enter all the child items, raw materials, resources, or even route stages required to assemble and produce the finished product.

In the Bill of Materials window, Route Stage can be selected in the Type table field, to allow route stage association of BoM lines. The Route Sequence field will then be displayed in the table to indicate the order by which the route states will be performed.

1. From the SAP Business One Main Menu, choose Production → Bill of Materials.



2. View or define the fields in the Bill of Materials grid:

Field	Activity/Description
Type	From the dropdown menu, select one of the following options: • Item - Select this to define an item component. • Resource - Select this to define a resource component. • Text - Select this to enter text. With this option, all the remaining fields in the line are disabled. • Route Stage - To add a route stage line. With a Route Stage type line, a route stage code would be entered in the No. field of this line.
No.	From the choose from list, select an item for the Item type line, or a resource for the Resource type line. Values from relevant fields in the item master data or resource master data records are copied into the remaining fields in the line.

Field	Activity/Description
Route Sequence	Displays the sequence number that is assigned to each route stage. The sequence indicates the precise order in which the routing stages must be performed during the production process. This field will not be visible by default. The value of this field is automatically populated by the system upon the creation of lines with a line Type set to Route Stage. The pull-down list will contain a list of all the other route sequence numbers that currently exist in this Bill of Materials grid. No other numbers can be entered. Selecting another Route Sequence number in this field results in it being assigned to the current route stage, and all other route stages move up or down accordingly.
Quantity	Enter the quantity of the item or resource component required to produce the quantity (defined in the Bill of Materials header field) of the parent item. **Note** For resource components, the value cannot be negative.
Additional Quantity	Enter additional quantity for an item or a resource component. The value from this field is then copied into the Additional Quantity field in the production order document. The quantity is added to the total planned quantity of items and resources and the total planned time in the production order, regardless of the quantity of the parent item produced. **Example** Planned Qty of the parent (in the production order header) = 2 Base Qty of the resource = 4 Additional Quantity of the resource = 1 Planned Qty of the resource = 2*4+1 **Note** o The system allows items or resources with a Manual issue method to have the Base Qty of zero and the Additional Quantity of a number greater than zero. o With resources and items with a Backflush issue method, the entire additional quantity is consumed upon the completion of the first parent item. For example, if in one production order you plan to produce 10 parent items, the additional quantity is consumed upon the completion of the first parent item. o The Additional Quantity for by-product lines is always zero.
WIP Account	This account is used to post the value of resource and item components that are in the process of production. In the choose from list, select an account from the list of accounts. When the BOM is used in a production order, the value from this field is copied into the WIP Account field of the production order and is later used in the Account Code field in the issue from production document. However, if this field is left blank for item or resource component lines, the Account Code field in the issue for production document defaults to the WIP Account associated through the document settings options. For more information, see section 7.6 Document Settings and WIP Account.

Field	Activity/Description
Waiting Days	Displays the period of time, presented in days, to wait after the completion of the route stage. This field will not be visible by default. As soon as a Route Stage type line is created, you can manually enter the number of waiting days.
Up/Down Arrows	You can change the presentation sequence of the component lines. To do so, select the desired component line and click or to move it up or down.

Note

Some fields are not displayed by default. To define which fields should be displayed, click (Form Settings) in the toolbar.

Note

A resource can be a component of a phantom item.

Note

You can choose to filter and view specific types of lines in the grid. To view only resource and route stage type lines, right-click on the Bill of Materials, and select Display Route Stages and Display Resources. The following options are all selected by default, and you can deselect them according to your needs:

- Display Route Stages
- Display Items
- Display Resources
- Display Texts

In addition, you can also choose to filter type lines by pressing the following shortcut keys:

- Press Ctrl + Shift + 1, and route stages lines will be hidden.
- Press Ctrl + Shift + 2, and item lines will be hidden.
- Press Ctrl + Shift + 3, and resource lines will be hidden.
- Press Ctrl + Shift + 4, and text lines will be hidden.

6.2 Managing Bill of Materials (BOMs)

Using the bill of materials management functionality, you can change, add, or delete components of all types from BOMs in a batch. Additionally, you can change the header fields of several BOMs at once or delete batches of BOMs.

Note

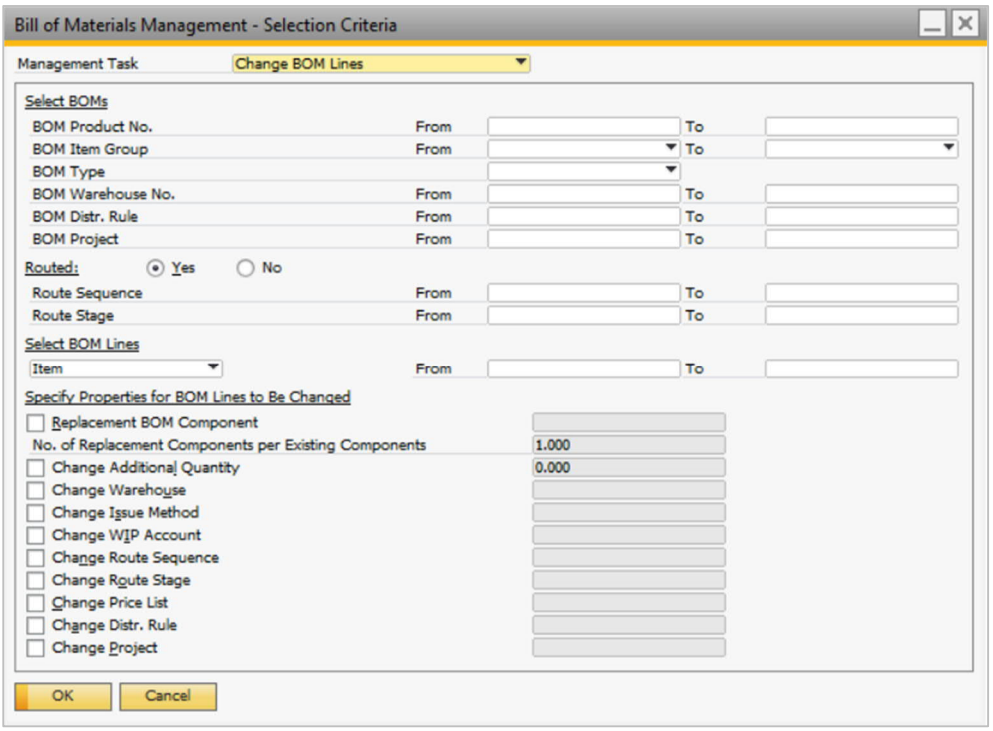
If an error occurs during the execution of replacing, adding, or deleting components or headers, none of the selected BOMs are updated.

6.2.1 Changing BOM Components

You can replace component lines of a BOM with different components or update existing ones, for example, the quantity, issue method, route sequence, route stage, and so on.

Procedure

1. From the SAP Business One Main Menu, choose Production → Bill of Materials Management. The Bill of Materials Management - Selection Criteria window appears.

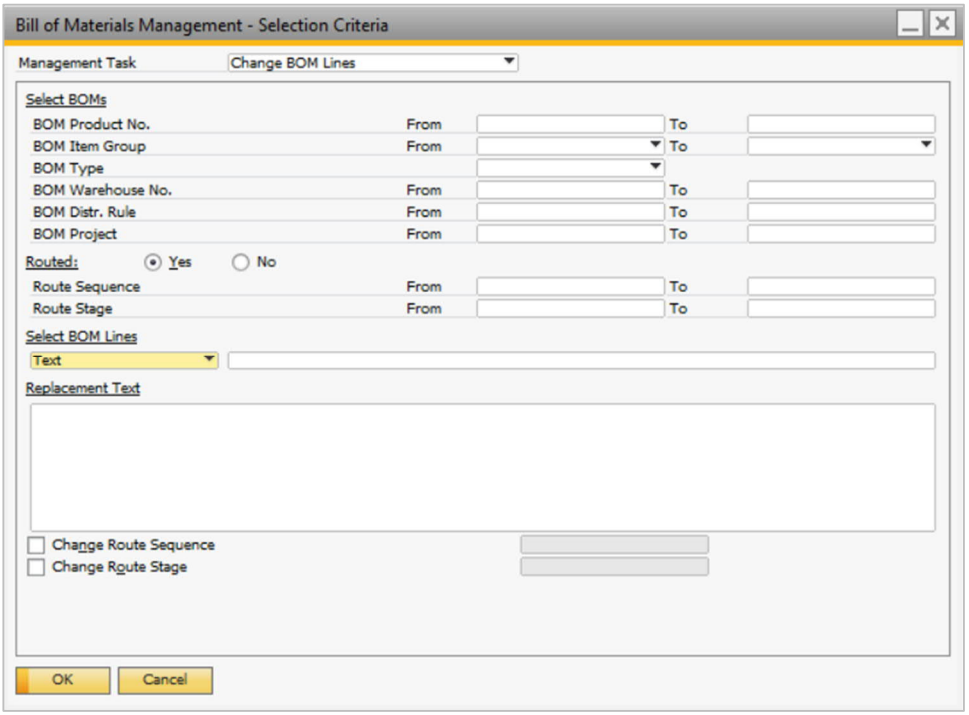


2. From the Management Task dropdown list, select Change BOM Lines.
3. In the Select BOMs section, define the range of BOMs for which you want to replace or change components.
4. In the Routed section, proceed as follows:
   - Select Yes if you want to change components for BOMs that contain at least one Route Stage.

     If you are using routed BOMs, you must specify at least one of the following fields:
     - Route Sequence - Enter a positive integer in the From and To fields to specify the route sequence range.
     - Route Stage - From the choose from list in the From and To fields, specify the route stage range.

     Note:

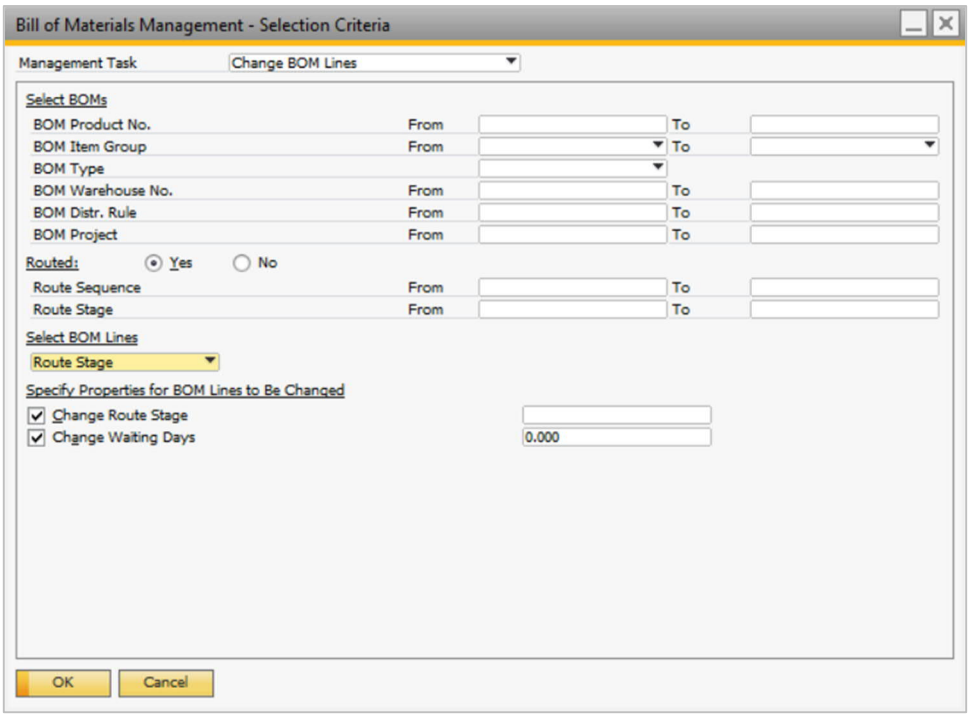
     Only the selected routed BOM lines will be processed and only lines belonging to specified route stage range will be affected.
   - Select No if you want to change components for BOMs that do not contain a Route Stage.
5. In the Select BOM Lines section, select one of the following:
   - Item - In the From and To fields, define the range of the item components in the selected BOMs you want to change or replace.
   - Resource - In the From and To fields, define the range of the resource components in the selected BOMs you want to change or replace.
   - Text - Enter at least part of the text which you want to replace. In the Replacement Text field enter the new text and move to Step 6, as the fields relevant to items and resources in the BOMs are not available in the window.



- Route Stage - In the Specify Properties for BOM Lines to Be Changed section, perform the following and then proceed to step 7:
  - To change the route stage, select the Change Route Stage checkbox and select the route stage code from the choose from list. All selected route stages will be updated with the newly entered route stage code.

> **Note:**
>
> Changing the route stage will update all lines associated with the selected route stage lines.

  - To change the waiting days for the route stage, select the Change Waiting Days checkbox and enter a value for the number of days.



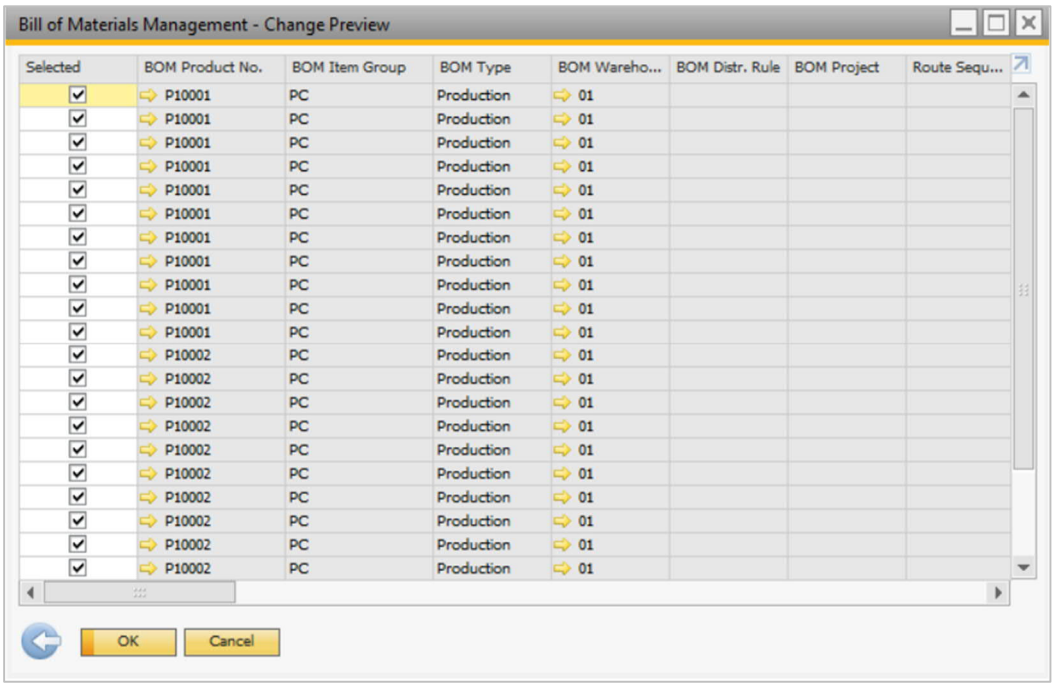
6. In the Specify Properties for BOM Lines to Be Changed section, proceed as follows:
   - If you want to replace the selected components with a different one, select the Replacement BOM Component checkbox. In the choose from list, define the replacement component and define the number of replacement components per existing components.

     Example

     You defined a range of BOMs in which you want to replace every Resource A and every Resource B with two units of Resource C. In each BOM, the system will replace every unit of Resource A with two units of Resource C. It will also replace every unit of Resource B with two units of Resource C.
   - If you want to change parameters for the selected components or for the replacement component, select one or more of the following checkboxes and specify the desired values:
     - Change Additional Quantity
     - Change Warehouse
     - Change Issue Method
     - Change WIP Account
     - Change Route Sequence
     - Change Route Stage
     - Change Price List
     - Change Distr. Rule
     - Change Project
7. Choose OK.

   The Bill of Materials Management - Change Preview window appears.
8. The Selected checkbox is selected for each BOM in which the system is about to change the component. If you do not want to change the component in a BOM, deselect the relevant checkbox.

   Each parameter displays a column with the existing value and a column with the replacement value.
9. To execute the task, choose OK.

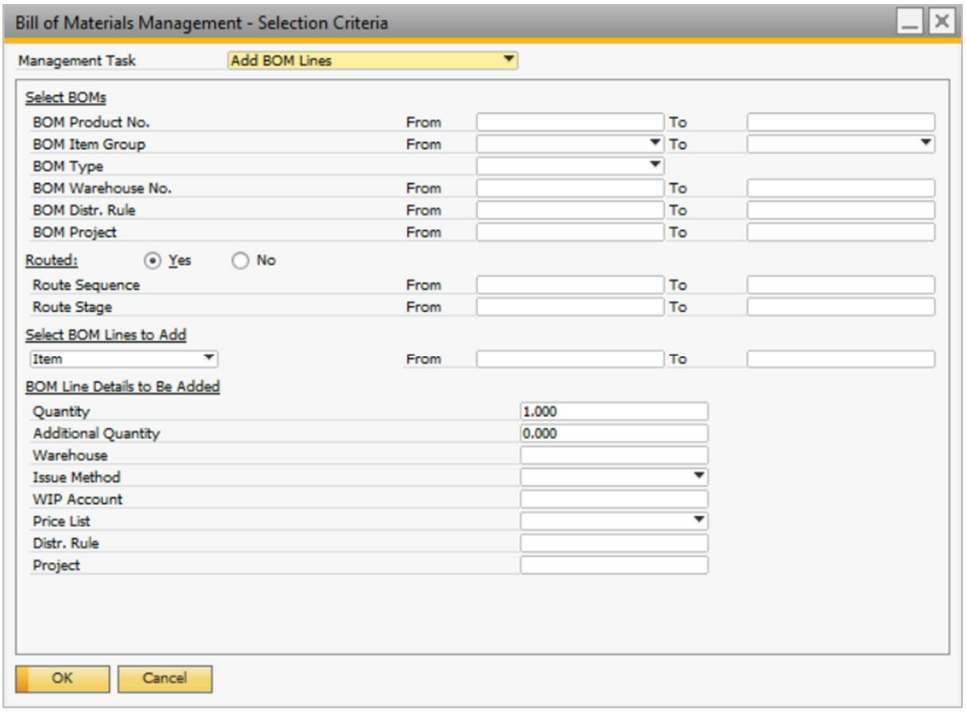


6.2.2 Adding BOM Components

You can add components of all three types to a desired range of BOMs.

Procedure

1. From the SAP Business One Main Menu, choose Production → Bill of Materials Management. The Bill of Materials Management - Selection Criteria window appears.



2. From the Management Task dropdown list, select Add BOM Lines.
3. In the Select BOMs section, define the range of BOMs for which you want to add a component.
4. In the Routed section, proceed as follows:
   - Select Yes if you want to change components for BOMs that contain at least one Route Stage.

     If you are using routed BOMs, you must specify at least one of the following fields:
     - Route Sequence - Enter a positive integer in the From and To fields to specify the route sequence range.
     - Route Stage - From the choose from list in the From and To fields, specify the route stage range.

     Note:

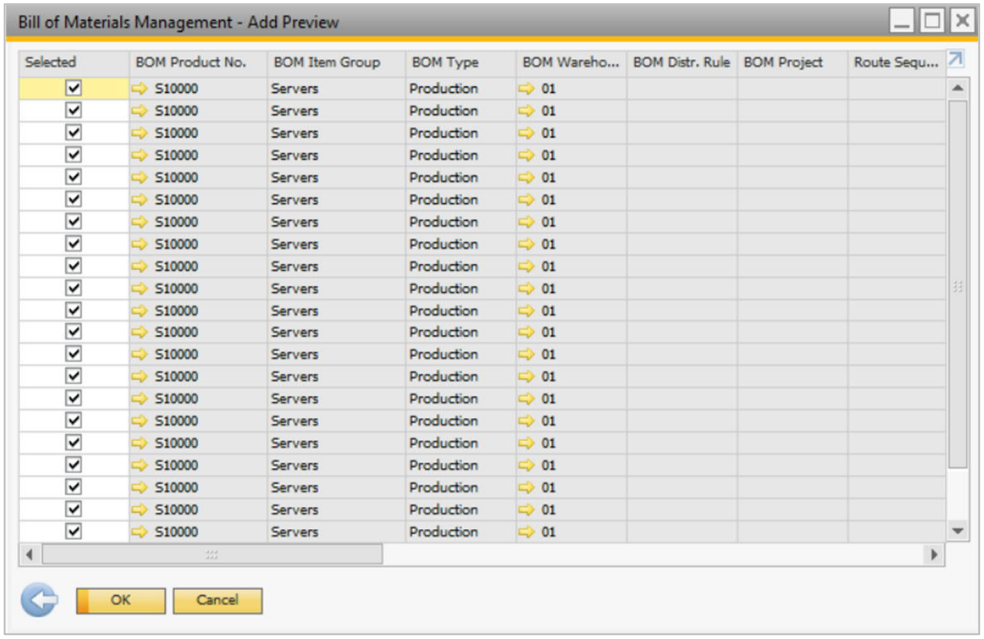
     Lines will only be added to routed BOMs.

     Note:

     If only the Route Stage field is specified, a line will be added to each selected route stage, even if the route stage is repeated in a particular BOM. For example, if a route stage appears three times in a BOM, three lines will be added to the BOM.
   - Select No if you want to change components for Bill of Materials that do not contain any Route Stage.
5. In the Select BOM Lines to Add section, select one of the following:
   - Item - In the From and To fields, define the range of the item components you want to add to the selected BOMs.
   - Resource - In the From and To fields, define the range of the resource components you want to add to the selected BOMs.
   - Text - Enter text in the Text to Be Added section and move to Step 6, as the fields relevant to items and resources in the BOMs are not available in the window.
6. In the BOM Line Details to Be Added section, define the following fields:
   - Quantity
   - Additional Quantity

- Warehouse
- Issue Method
- WIP Account
- Price List
- Distr. Rule
- Project

7. Choose OK. The Bill of Materials Management - Add Preview window appears.

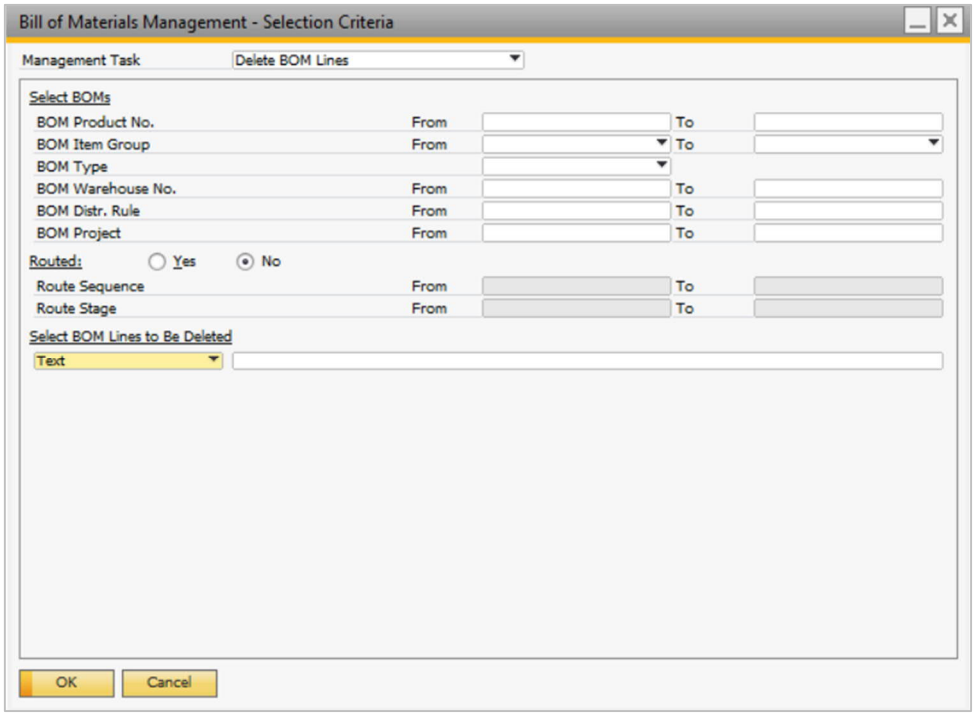


8. The Selected checkbox is selected for each BOM to which the system is about to add the component. If you do not want to add the component to a BOM, deselect the relevant checkbox.
9. To execute the task, choose OK.

6.2.3 Deleting BOM Components

Procedure

1. From the SAP Business One Main Menu, choose Production → Bill of Materials Management. The Bill of Materials Management - Selection Criteria window appears.



From the Management Task dropdown list, select Delete BOM Lines.

2. In the Select BOMs section, define the range of BOMs for which you want to delete components.
3. In the Routed section, proceed as follows:
   - Select Yes if you want to change components for BOMs that contain at least one Route Stage.

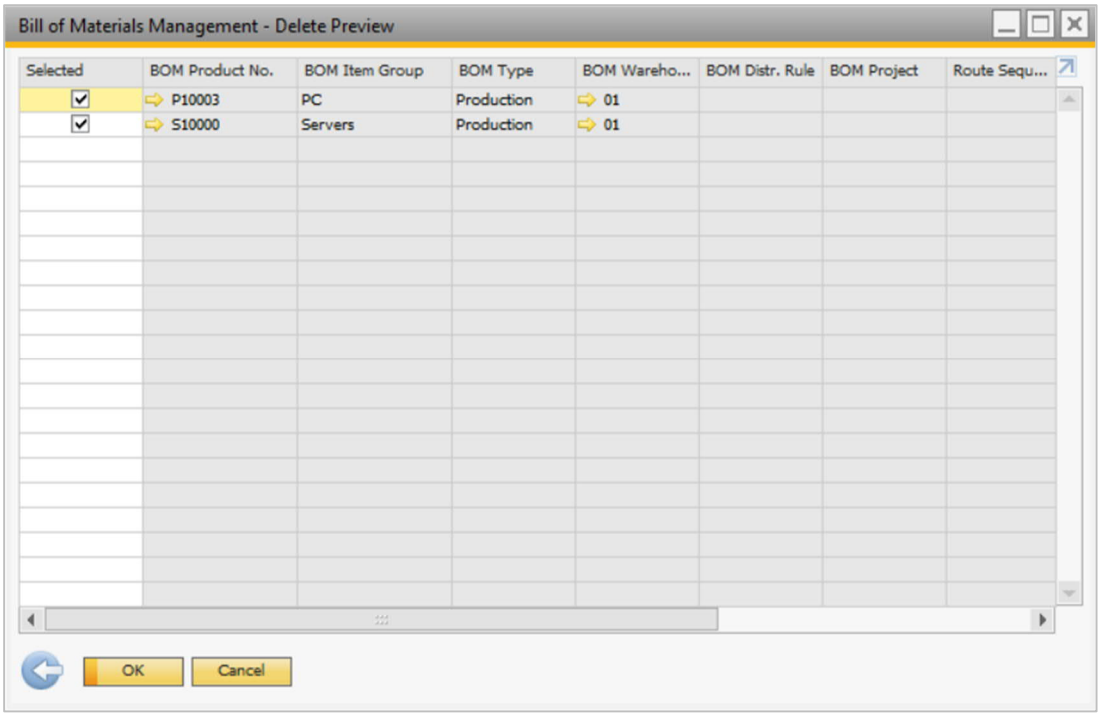
     If you are using routed BOMs, you must specify at least one of the following fields:
     - Route Sequence - Enter a positive integer in the From and To fields to specify the route sequence range.
     - Route Stage - From the choose from list in the From and To fields, specify the route stage range.

     Note:

     Lines will only be deleted according to the selected criteria for routed BOMs.
   - Select No if you want to change components for Bill of Materials that do not contain any Route Stage.
4. In the Select BOM Lines to Be Deleted field, select one of the following:
   - Item - In the From and To fields, define the range of the item components you want to delete from the selected BOMs.

- Resource - In the From and To fields, define the range of the resource components you want to delete from the selected BOMs.
- Text - Enter at least part of the text line you want to delete.
- Route Stage - All lines associated with selected route stages will be deleted.

5. Choose OK. The window Bill of Materials Management - Delete Preview appears.



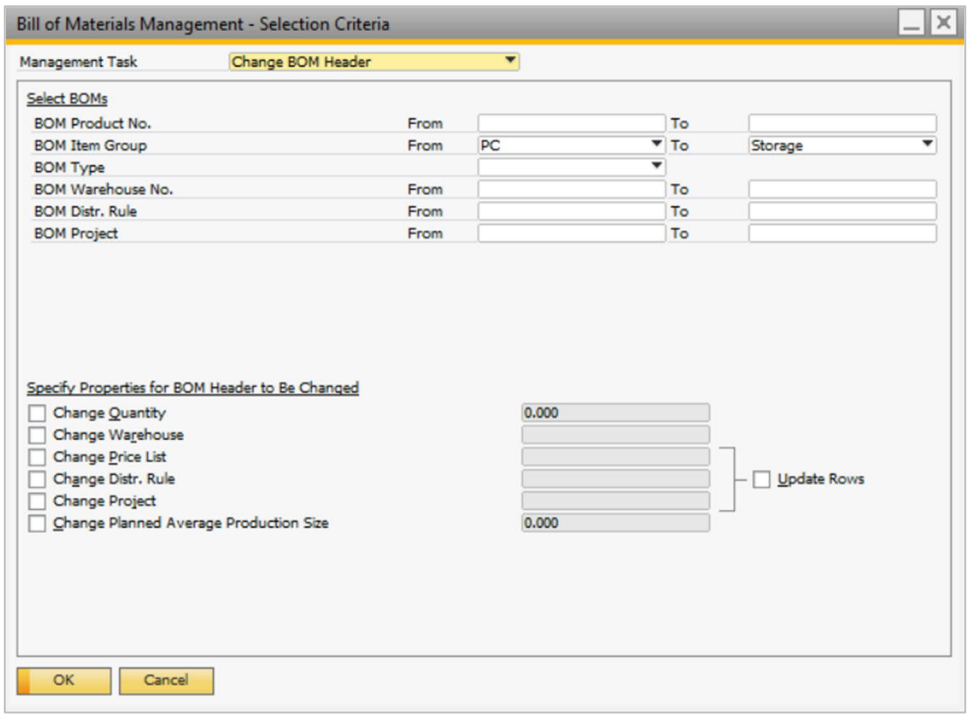
6. The Selected checkbox is selected for each BOM in which the system is about to delete the component line. If you do not want to delete the component in a BOM, deselect the relevant checkbox.
7. To execute the task, choose OK.

6.2.4 Changing BOM Headers

You can update the header fields of several BOM all at once. In addition, you have the option to apply the newly defined header fields such as Price List, Distr. Rule and Project to all rows.

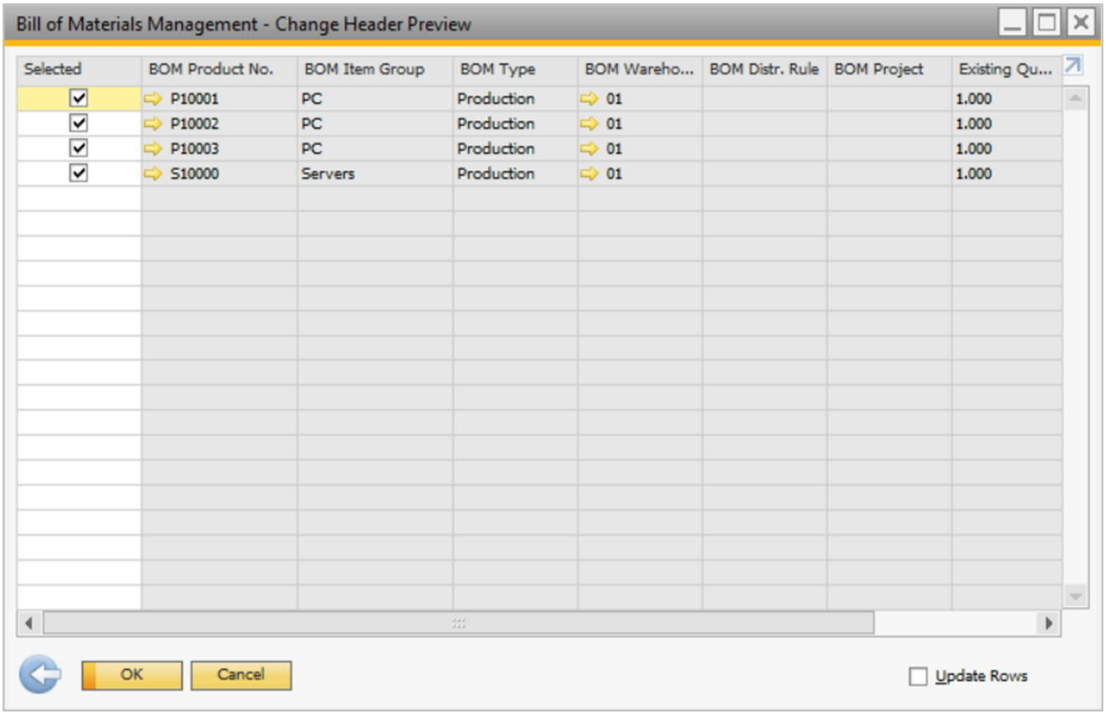
Procedure

1. From the SAP Business One Main Menu, choose Production → Bill of Materials Management. The Bill of Materials Management - Selection Criteria window appears.



2. From the Management Task dropdown list, select Change BOM Header.
3. In the Select BOMs section, define the range of BOMs for which you want to update the header data.
4. In the Specify Properties for BOM Header to Be Changed section, select one or more of the following checkboxes and specify the desired values:
   - Change Quantity
   - Change Warehouse
   - Change Price List
   - Change Distr. Rule
   - Change Project
   - Change Planned Average Production Size
5. If necessary, you can select Update Rows to apply the newly defined value of Price List, Distr. Rule, and Project to all rows in the selected BOMs.
6. Choose OK.

   The Bill of Materials Management - Change Header Preview window appears.



7. The Selected checkbox is selected for each BOM in which the system is about to change the header. If you do not want to change the header in a BOM, deselect the relevant checkbox.

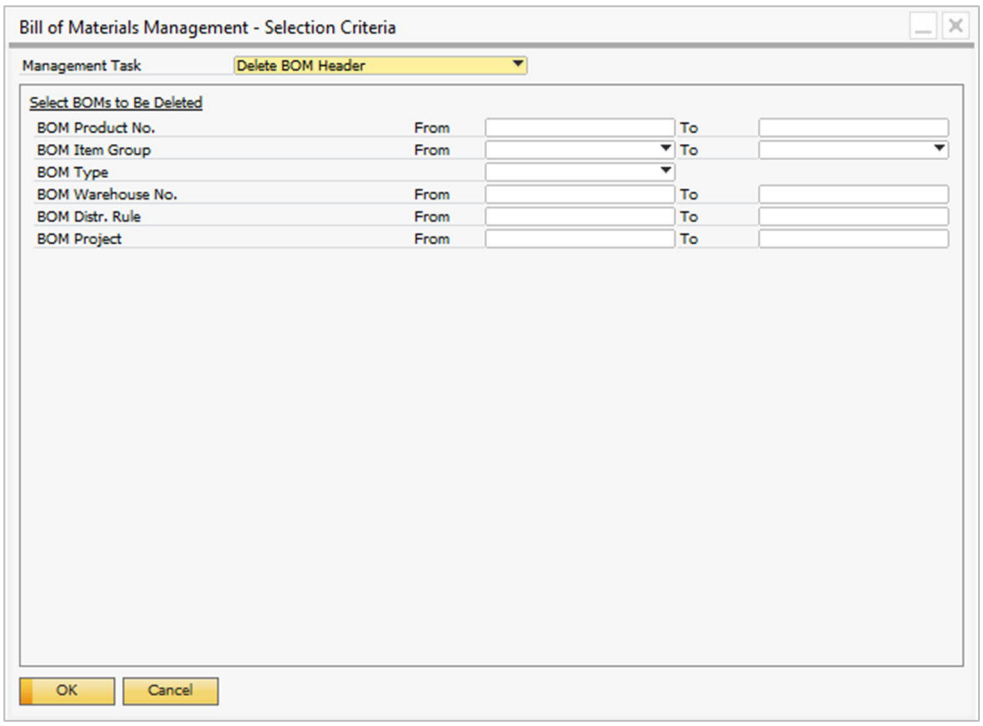
   Each parameter displays a column with the existing value and a column with the replacement value.

8. To execute the task, choose OK.

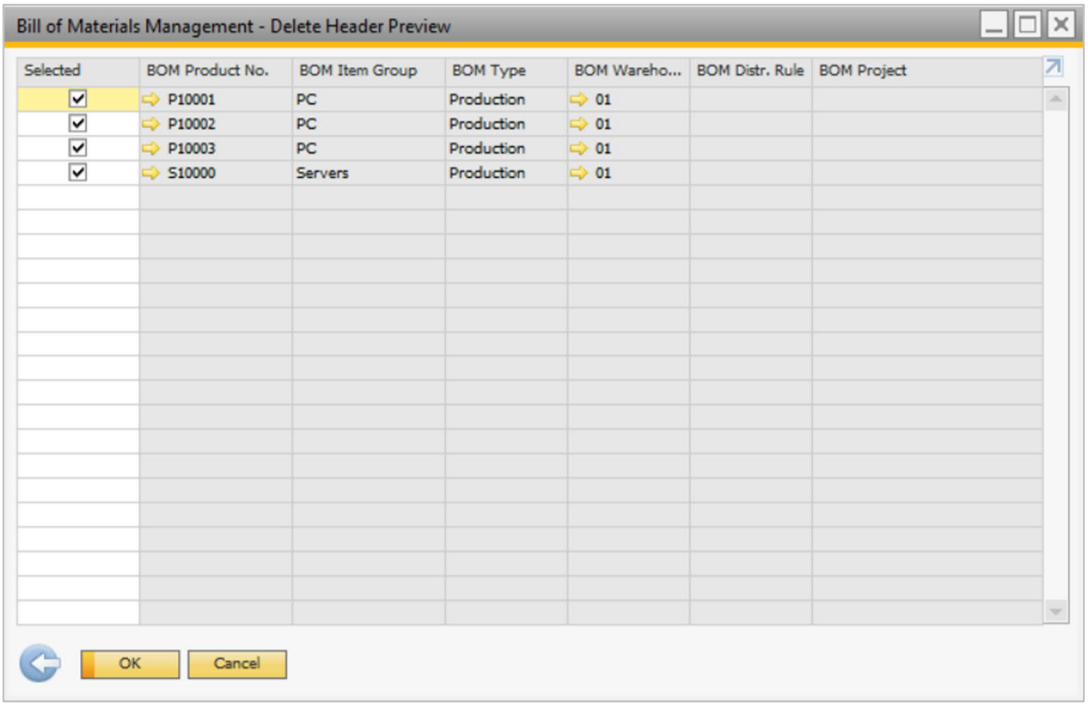
6.2.5 Deleting BOMs

Procedure

1. From the SAP Business One Main Menu, choose Production → Bill of Materials Management. The Bill of Materials Management - Selection Criteria window appears.



2. From the Management Task dropdown list, select Delete BOM Header.
3. In the Select BOMs to Be Deleted section, define the range of BOMs that you want to delete.
4. Choose OK. The Bill of Materials Management - Delete Header Preview window appears.



5. The Selected checkbox is selected for each BOM that the system is about to delete. If you do not want to delete the BOM, deselect the relevant checkbox.

6. To execute the task, choose OK.

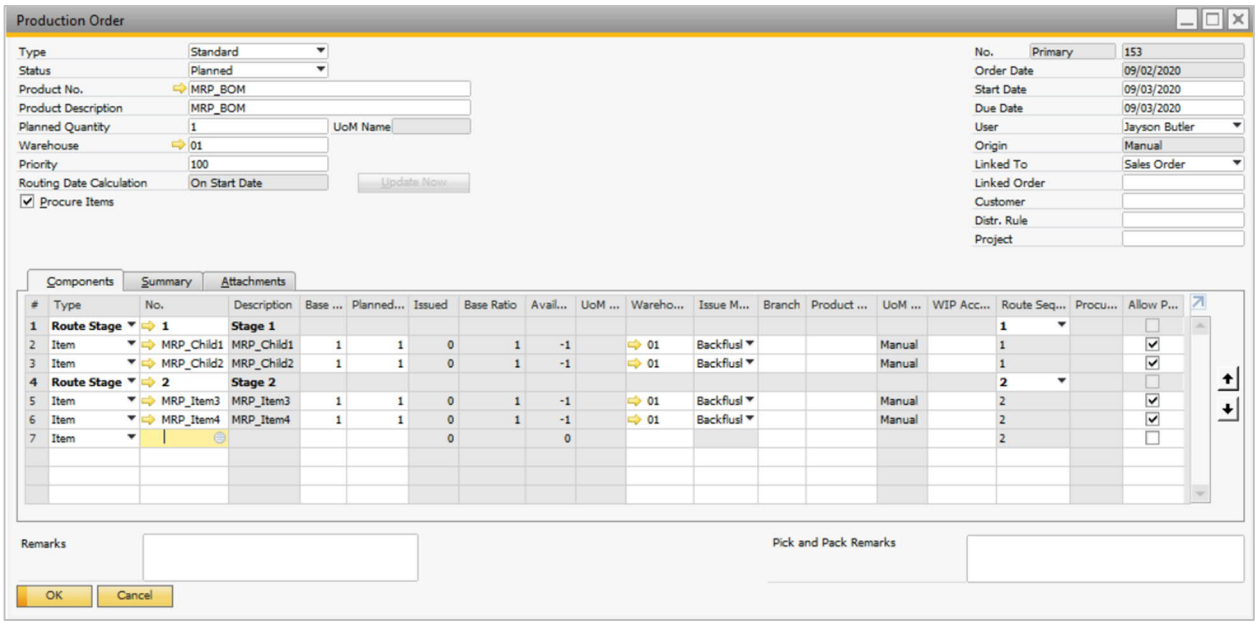
7 Working with Production Orders

As in Bill of Materials Handling, the Route Stage in the Type filed allows route stage association of all production order lines. In addition, it will facilitate a simple filtering ability of any combination of production order line types.

7.1 Production Order Window

Procedure

1. From the SAP Business One Main Menu, choose Production → Production Order.



2. View or update the following fields in the general area:

> **Note**
>
> Fields that are self-explanatory are not described in the table below.

Field	Activity/Description
Type	Choose one of the following production order types: • Standard (default) - to produce a regular production item, using a Production Bill of Materials • Special - to produce and repair items that could be any inventory item

Field	Activity/Description
	• Disassembly - to dismantle a parent item to its components, using a Production Bill of Materials
Status	Choose a production order status as follows: • Planned - initial production order status • Released - you release the production order to the shop floor for work; status at which receipts and issues are transacted • Closed- you close the production order when all transactions have been completed. Note You can still edit several fields after a production order is closed, such as the Remarks field, user-defined fields, referenced documents, and attachments. • Canceled - production order is removed from the list before the production process starts
Product No.	Enter the parent item for the Standard and Disassembly production orders. • Choose to display the parent list of the Bill of Materials. • Choose New to define a new Bill of Materials. For the Special production order type, select the item from the items list.
Priority	Displays the degree of importance of a production order, indicated by integer numbers. The default value is 100. You can manually change the number here. The smaller the number, the more important the production order.
Routing Date Calculation	Determines how the resource allocation will occur. This field contains a list of the following options: • On Start Date • On End Date • Start Date Forwards • End Date Backwards For a production order that has at least one route stage, the value of this field will be automatically copied to the Resource Allocation field in the table. In addition, changing values in this field may affect the calculation of Required Days, Start Date and End Date for Resource type lines in the grid. For details about how the calculation is affected, see 7.3 Calculating Required Days and Total Days, and 7.4 Start Date / End Date Calculation Algorithm.
Procure Items	Select this checkbox to allow procurement documents to be created from the production order and all existing item type component rows in the production order.
Update Now (button)	This button lets you update the resource allocation method that applies to the current production order. For a routed production order that has a Routing Date Calculation set to either Start Date Forwards or End Date Backwards, the button is highlighted in red for you to click when one of the following happens: • You manually change the Start Date in the header of the production order. • You manually change the Due Date in the header of the production order.

Field	Activity/Description
	• You change the Routing Date Calculation field value to either Start Date Forwards or End Date Backwards. • You change the Product No. or Planned Qty. of the production order. • You change the Resource No. or the Planned Qty. • You add or delete a resource type line. • You add or delete a route stage. • You change the sequence of route stages. • The association between the route stage and resources is changed. For example, you move Resource 1 from Route Stage 1 to Route Stage 2. For more about the results that come with clicking Update Now, and how selecting different options may update different fields, see 7.2 Managing Resource Allocation in Production Orders.
Start Date (header)	Displays the start date of the production. By default, this date is the same as Order Date. You can change it manually, which may affect Due Date.
Due Date	This date displays the planned completion date of the production, and is, by default, calculated based on Start Date and the lead time of the parent item. You can change this date manually.
Origin	Indicates how the production order was created: • MRP – a result of the MRP report recommendation • Manual – entered by an authorized user • Sales Order – created automatically based on a sales order
Linked To	From the dropdown list, specify if the production order is linked to a sales order or production order. The Sales Order option is displayed by default. If a production order procurement document was created using the Procurement Confirmation Wizard, this field displays the base document type (Sales Order or Production Order).
Linked Order	Choose the relevant sales or production order linked to this production order. If a production order procurement document was created using the Procurement Confirmation Wizard, this field displays a link arrow to the base document.

3. View or update the following fields on the Components tab:

   Note

   - Fields that are self-explanatory are not described in the table below.
   - Some of the fields are not visible by default. Use (Form Settings) in the toolbar to define which fields you want displayed.

Field	Activity/Description
Type	You can select one of the following options:

Field	Activity/Description
	• Item - This is the default option. The remaining fields for the Item option are populated by default from the BOM window associated with the parent item or from the Item Master Data window. • Resource - When this option is selected, you can select a desired resource from the choose from list in the No. field. The remaining fields for the Resource option are populated by default from the BOM window associated with the parent item or from the Resource Master Data window. • Text - Select this option to add text in the line; the remaining fields merge into one. The text is added automatically from the corresponding line in the Bill of Materials window associated with the parent item, or you can define it manually in this window. • Route Stage - Select this option for a routed production order. The remaining fields for the Route Stage option are populated by default from the BOM associated with the parent item, or you can define them manually. With a Route Stage line, a route stage code would be entered in the No. field of this line.
No. and Description	These fields were originally Item No. and Item Description. **Note** If the production order has a Route Stage line, then in the No. field, the route stage code would be displayed. If necessary, you can manually select another route stage code here. **Note** You can use a parent item as a component item in Special type production orders. Production orders with a parent item as the component item are not included in MRP calculations and serial and batch number transactions reports.
Base Qty	Quantity of the components necessary to produce the bill of materials for one parent product. The value is copied from the Bill of Materials window. You can update this field if necessary. **Note** The Base Qty value of a resource component cannot be less than zero.
Planned Qty	For each component line, the value of this field is calculated according to the following formula: (Planned Quantity of the parent * Base Qty of the component) + Additional Qty of the component
Additional Qty	The value is copied from the Additional Qty field in the Bill of Materials window; however, you can change it manually in the production order.

Field	Activity/Description
	Note Only components of the Manual issue method can have zero Base Qty and the Additional Quantity larger than zero. The additional quantity for by-products is always zero.
Available	For resources, this field displays the total resource availability for the warehouse populated on the production order line. Click (Link Arrow) to update the internal capacity of the resource for the mentioned warehouse in the Resource Capacity window. After you update the internal capacity and return to the production order, the value of this field is refreshed.
WIP Account	If the production order lines are populated with components from a BOM, the account defined in the WIP Account field of the BOM for the relevant component populates this field. If the WIP Account field for the relevant component is blank in the BOM, this account is blank, too. You can manually update the account in this field before the production order closure. The value of this field is then copied into the Account Code field of the issue for production. If you leave this field blank, the related WIP Account applies according to the definitions in the Document Settings window. For more information, see section 7.6 Document Settings and WIP Account.
Start Date	Displays the earliest date on which the component is needed in the production process. By default, this date is copied from the Start Date field on the header. You can change it manually; however, the date cannot be earlier than the start date on the header. As for a production order that has route stages, the Start Date for the first Route Stage type line (included in the calculation) is set to the production order header Start Date. And by default, the Start Date for the next Route Stage type line is the same as the calculated End Date of the previous route stage. You can manually change the Route Stage type line Start Date to any date that falls between or is equal to the production order header Start Date and Due Date. For more about how Start Date is calculated, see 7.4 Start Date / End Date Calculation Algorithm.
End Date	Displays the latest date by which a component needs to be used in the production process. By default, this date is the same as Due Date on the header of the production order. You can change it manually; however, it cannot be later than the due date on the header. You can manually change the Route Stage type line End Date to any date that falls between or is equal to the production order header Start Date and Due Date.

Field	Activity/Description
	For more about how End Date is calculated, see 7.4 Start Date / End Date Calculation Algorithm.
Required Days	Displays the number of days required for a specific Resource to complete the Planned Qty. of a particular route stage. This field will be automatically calculated for a production order that has at least one route stage, one resource line, and whose Routing Date Calculation field is either Start Date Forwards or End Date Backwards. The calculation of this field is based on Routing Date Calculation status and Single Run Capacity of the resources. For more details, please see 7.3 Calculating Required Days and Total Days.
Waiting Days	Displays a period of time (in days) to wait after the completion of the route stage. This field is not visible by default. As soon as a Route Stage type line is created, you can manually enter the number of waiting days.
Total Days	Displays the number of days needed to complete one route stage and start the next route stage. It is the sum of Required Days and Waiting Days.
Resource Allocation	The value of this field is taken from the relevant Resource Master Data window. If needed, you can update it manually. However, for a production order that has route stages, the value of this field (for all Resource type lines) is taken from the Routing Date Calculation field in the general area of the production order, and it cannot be edited. The following options are available: • On Start Date - The capacity of the resource is allocated to the start date of the production order. This means that the value of the resource capacity in the Planned Qty field is counted as Committed capacity on the start date of the production order. • On End Date - The capacity of the resource is allocated to the end date of the production order. This means that the value of the resource capacity in the Planned Qty field is counted as Committed capacity on the end date of the production order. • Start Date Forwards - The capacity of the resource is allocated to the start date when it is assigned to the production order; however, if the Planned Qty is greater than the Single Run Capacity for the start date, the system allocates only as much capacity as there is Single Run Capacity defined for the start date and continues to allocate the remaining capacity to the day after the start date. The process continues forwards for each day until it allocates all the remaining Planned Qty. • End Date Backwards - The capacity of the resource is allocated to the end date when it is assigned to the production order; however, if the Planned Qty is greater than the Single Run Capacity for the end date, the system allocates only as much capacity as there is Single Run Capacity defined for the end date and continues to allocate the remaining capacity to the day before the end date. The process continues backwards for each day until it reaches the current system date and allocates all the remaining Planned Qty

Field	Activity/Description
	to the current system date regardless of how much Single Run Capacity is defined for that day. Note With resource allocation of Start Date Forwards and End Date Backwards, the system takes into account the Single Run Capacity, not the Internal capacity or the Available one. This means that if there are more production orders with the same start date or end date, the resource allocation is run against the Single Run Capacity for each production separately; it does not take into account whether there are already production orders which might have consumed the Internal capacity for that day. Note o The triggers for running the resource allocation process are the same as the triggers for clicking the Update Now button. For details, see Update Now (button) field descriptions above, or 7.2 Managing Resource Allocation in Production Orders. o Updating the internal capacity does not trigger resource allocation, hence, if you have updated the internal capacity and want the system to run the resource allocation process to update the allocated amounts, you need to update the production order as described above.
Calculation Proportion	Displays the percentage of resource capacity that will be consumed in a particular route stage. The value must be between 0 to 100% (default). • If the Routing Date Calculation field value is Start Date Forwards, you only need to modify the calculation proportion for the first route stage, if necessary. For other route stages, this field will be automatically calculated. • If the Routing Date Calculation field value is End Date Backwards, you only need to modify the calculation proportion for the last route stage, if necessary. For other route stages, this field will be automatically calculated. After you have changed the field value in either of the above two scenarios, choose the Update Now button to apply it to the calculation of Start Date / End Date and Required Days. If a production order is not routed (i.e., if it does not have any assigned route stages), then Calculation Proportion can be set independently for each resource line.
Production Time	Displays the quantity of the resource included in the production order expressed in time. The Production Time is calculated according to the following formula: Base Qty of the resource * Planned Qty of the parent item * (Time per Resource Unit / Resource Units per Time)
Additional Time	Displays the additional quantity of the resource needed to complete the production order, expressed in time. Additional Time is calculated according to the following formula: Additional Qty * Time per Resource Units / Resource Units per Time

Field	Activity/Description
Run Time	Displays the total of the Production Time and Additional Time.
Route Sequence	Displays the sequence number that is assigned to each route stage. The sequence indicates the precise order in which the route stages must be performed during the production process. This field will not be visible by default. It is visible only when there are route stages involved in the production order. The value of this field is automatically populated by the system upon the creation of a Route Stage type line. The pull-down list will contain a list of all the other route sequence numbers that currently exist in this Production Order grid. No other numbers can be entered. The selection of another existing route sequence number in this field will switch all the lines associated with the current route sequence with all the lines associated with the selected route sequence.
Procurement Doc.	Displays the document number of a procurement document generated from this line using the Procurement Confirmation Wizard. Note: This field is only relevant to item type components and is non-editable.
Allow Procurmt. Doc.	If the checkbox in this field is selected, the item type component is available for selection in the Procurement Confirmation Wizard. After you update or add a production order with this checkbox selected for one or more item type components, the Procurement Confirmation Wizard automatically opens and displays the Product No. and Product Description from the production order. Note: This field is only relevant to item type components and is editable.
Status	Displays the line status for Item, Resource, or Route Stages. This field must be enabled using Form Settings. The following options are available in the drop-down list of this field: • Planned • In Progress • Complete • For production orders without route stages, changing a status may affect the following operations: • A line with Complete status is read-only and cannot be deleted. • You can change the Complete status back to Planned or In Progress, unless the production order is Closed or Canceled. • When the Issued quantity is less than the Planned Qty., if you change to Complete status, you have the option to reduce Planned Qty. and update it with Issued quantity. • For routed production orders, besides the above-mentioned scenarios, changing a status may additionally affect the following operations:

Field	Activity/Description
	• Upon a status change on Route Stage, all components belonging to that route stage will have the Status field automatically set according to the Route Stage status. • When using Routing Date Calculation feature, route stages with Complete status are considered to be stages with zero duration, and thus are not counted in the calculation. However, if there is any open quantity on the Resource row of such route stages, commitment of this resource still occurs.
Up and Down arrows	Use the Up and Down arrows to raise or lower a selected component line similarly as in the Bill of Materials window.

Note

You can choose to filter and view specific types of lines in the table. To view only resource and route stage type lines, right click on the Bill of Material, and select Display Route Stages and Display Resources. The following options are all checked by default, you can deselect them as required:

- Display Route Stages
- Display Items
- Display Resources
- Display Texts

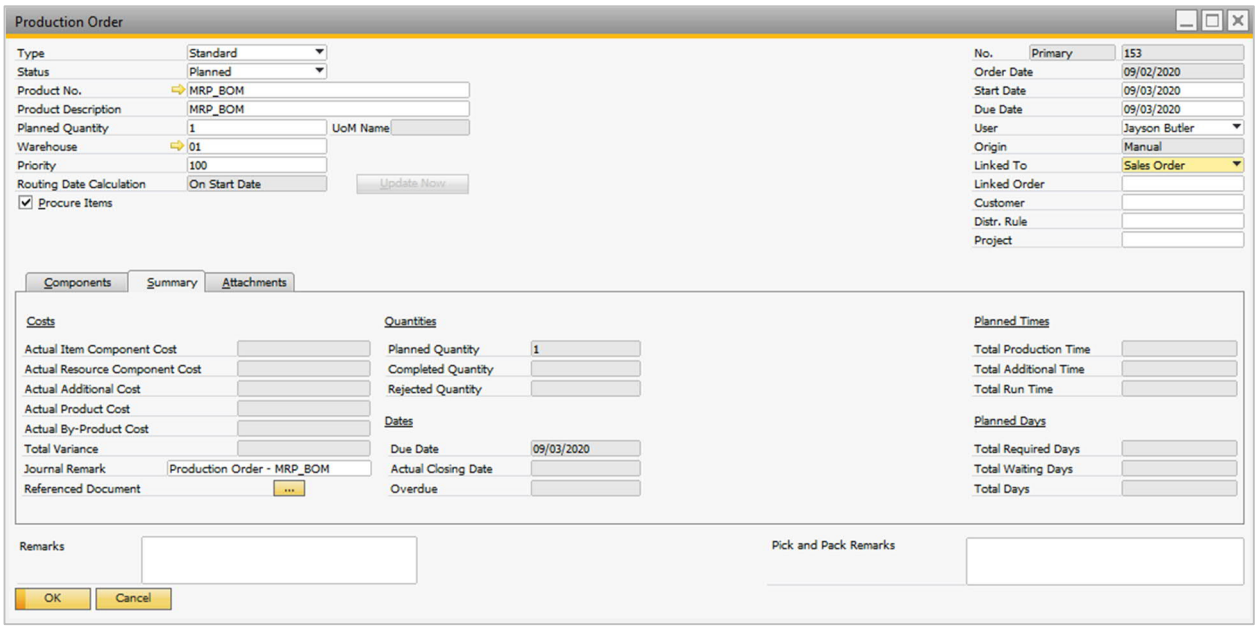
In addition, you can also choose to filter type lines by pressing below shortcut keys:

- Press Ctrl + Shift + 1, and route stages lines will be hidden.
- Press Ctrl + Shift + 2, and item lines will be hidden.
- Press Ctrl + Shift + 3, and resource lines will be hidden.
- Press Ctrl + Shift + 4, and text lines will be hidden.

4. View or update the following fields on the Summary tab:

Field	Activity/Description
Actual Item Component Cost	Total value of all item components (not including non-inventory components) issued for the production order. **Note** Any item component which has been returned through the return components functionality in the Receipt from Production window reduces the Actual Item Component Cost value by its cost.
Actual Resource Component Cost	Records the cost of all resource components which have been issued for production. **Note** You cannot return resources in the Receipt from Production window.

Field	Activity/Description
Actual Additional Cost	The cost of all non-inventory item components which have been issued for production.
Actual Product Cost	The cost of all received parent items, including any rejected items but excluding the received by-products.
Actual By-Product Cost	Records the cost of all by-product items which have been received from production, including any rejected by-products. Click (Link Arrow) to open the Inventory Posting List window and view the relevant cost breakdown for the posted by-products.
Total Variance	Displays the sum of costs of all parent items and by-products reduced by the sum of item costs, resource costs, and additional costs. The following formula applies: (Parent Cost + By-Product Cost) - (Item Cost + Resource Cost + Additional Cost) Click (Link Arrow) to open the Variance Report window and view the contribution of each production component to the final production variance. The value in the Variance column shows the cumulated variance per specific component. The sum of all component variances matches the amount in Total Variance field. **Note** Prerequisites for opening the Variance Report are the following: o Use Perpetual Inventory is selected in Administration → System Initialization → Company Details → Basic Initialization tab. o There is at least one Issue for Production or Receipt from Production transaction.
Total Production Time, Total Additional Time, Total Run Time	Display the corresponding fields on the Components tab for the resource with the longest Total Time. For a production order with at least one Route Stage type line, the following will be displayed: • Total Production Time Displays the sum of all the Production Time values from the production order Route Stage type lines only. • Total Additional Time Displays the sum of all the “Additional Time” values from the production order Route Stage type lines only. • Total Run Time Displays the sum of Total Production Time and Total Additional Time.
Total Required Days	Displays the sum of the Required Days values from the production order Route Stage type lines.
Total Waiting Days	Displays the sum of the Waiting Days values from the production order Route Stage type lines.
Total Days	Displays the sum of Total Required Days and Total Waiting Days.



Note

Parent items associated with sales or assembly BOMs cannot be used as a production order component.

Note

Before creating a transfer request, a components transfer, a pick list, or an issue for production, you can filter which components will be used in these documents by filling the Selection Criteria window. To do this, right-click the production order and choose one of the following options, according to your needs:

- Issue Components
- Transfer Request
- Component Transfer
- Generate Pick List
- View Pick Lists

Note that Issue Components will only be displayed once the following conditions have been met:

- The Status of the production order is Released.
- The Issue Method for components is Manual.

Note

Instead of clicking (Link Arrow), you can additionally right click on a production order to view Inventory Posting List information of below categories in one report:

- Actual Item Component Cost
- Actual Resource Component Cost
- Actual Product Cost
- Actual By-Product Cost

Note

Referenced Document functionality (also known as Offline Document Linking) is enhanced to allow linking between a production order and other documents. For more details about Offline Document Linking, you may refer to Note 2273995.

7.2 Managing Resource Allocation in Production Orders

Resource allocation determines how and when resources will be assigned in order to produce the finished products. You can manually change resource allocation methods in production orders according to your needs.

Generally, your production orders can be classified into the following types:

- Routed production order - a production order with at least one route stage (by default copied from relative Bill of Materials). The finished product can be produced by following certain route stages.
- Non-routed production order - a production order without any route stages. The finished products can be produced without considering the production stages.

Resource allocation for these two types of production orders may differ under different conditions. Usually, for a non-routed production order, the default for the Resource Allocation field value for Resources type lines are taken from the Resource Master Data of the specified resource. While for a routed production order, the value is copied from the Routing Date Calculation header field of the production order, and is read only in the grid. However, the Resource Allocation field value may change under certain scenarios. The following will focus on describing these scenarios, and how the resource allocation changes.

For the non-routed production order, you may manually change the Resource Allocation field when necessary. Besides that, (for example, regarding routed orders) you are able to change the field value if the Update Now button beside Routing Date Calculation is clicked.

If the Routing Date Calculation field is set to Start Date Forwards or End Date Backwards, the Update Now button is highlighted in red when one of the following happens:

- You manually change the Start Date in the header of the production order.
- You manually change the Due Date in the header of the production order.
- You change the Routing Date Calculation field value.
- You change the Product No. or Planned Qty. of the production order.
- You change the Resource No. or the Planned Qty.
- You add or delete a resource type line.
- You add or delete a route stage.
- You change the sequence of route stages.
- The association between the route stage and resources is changed. For example, you move Resource 1 from Route Stage 1 to Route Stage 2.

The Update Now button lets you update the resource allocation method that applies to the current production order. Upon clicking it, the following will occur:

- For a non-routed production order, once you click Update Now, you can choose to update the Start Date and End Date of Item and Resource type lines and the Resource Allocation field for all Resource type lines, or only the Routing Date Calculation field.

No matter which option you select, when you create a new Resource type line subsequently, the default Resource Allocation field value in the grid will be taken from the Resource Allocation field from Resource Master Data of a specified resource.

- For a routed production order whose Routing Date Calculation field value is On Start Date or On End Date, you can choose to update the Start Date and End Date of Item and Resource type lines and the Resource Allocation field for all Resource type lines, or update only the Routing Date Calculation field.

  No matter which option you select, when you create a new Resource type line subsequently, the Resource Allocation field value in the grid will be taken from the Resource Allocation field from Resource Master Data of a specified resource.

- For a routed production order whose Routing Date Calculation field value is Start Date Forwards or End Date Backwards, you can choose to update the Resource Allocation field value with that of the Routing Date Calculation field for all Resource type lines, and at the same time, update the Start Date and End Date for all Resource type lines, or not to update either of them.

  No matter which option you select, when you create a new Resource type line subsequently, the Resource Allocation field value in the grid will be taken from the Routing Date Calculation header field of the production order.

7.3 Calculating Required Days and Total Days

Required Days, Waiting Days and Total Days are periods of time measured in days that are used by resource components in each route stage. That is, these days will be calculated only for Resource type lines for routed production orders. Required days are the number of days needed to complete a route stage. Waiting days are the number of days needed after the production of one route stage, and before the start of the next route stage.

In addition to displaying the Required Days on the Production Order, the calculation allocates the resources to the Resource Capacity window as per the calculated Required Days and the Start Date and End Date of the Production Order line.

Required Days and Total Days are automatically calculated based on the routing date calculation (resource allocation method) that is applied to the order. while Waiting Days are usually manually entered according to real production scenarios. For each route stage, their relations are: Total Days = Required Days + Waiting Days.

Only when the Routing Date Calculation field value is either Start Date Forward or End Date Backwards, will the automatic calculation of Required Days begin. The following describes how the calculation of Required Days proceeds.

> **Note**
>
> The calculation algorithm of Required Days is set up based on the assumption that a single production order can be produced on a single machine. So only Single Run Capacity rather than Daily Internal Capacity counts in this calculation.

- When the Routing Date Calculation field value is Start Date Forwards
  - If Planned Qty. < Single Run Capacity (of the start date) for a Resource line, then the Required Days field value will be Planned Qty. / Single Run Capacity, and the calculation stops here. This Required Days value will be the percentage of the Single Run Capacity of the resource that is allocated on the start date.
  - If Planned Qty. > Single Run Capacity (of the start date) for a Resource line, then the system allocates only as much resource capacity as there is Single Run Capacity defined for the start date and continues to allocate the remaining capacity to the day after the start date. The process continues forwards for each day until it allocates all the remaining Planned Qty.

Example

This is one route stage of a production order. Resource 1 and Resource 2 are used in production of this stage. The resource capacity data are as follows:

Date	1/1/2017	1/2/2017	1/3/2017	1/4/2017
Resource 1				
Single Run Capacity	18	6	6	5
Resource 2				
Single Run Capacity	15	3	3	4

The production order header Start Date is 1/1/2017, and header Due Date is 1/2/2017. The Resource Allocation is Start Day Forwards. The Planned Qty. is 15 for Resource 1, and 20 for Resource 2. Then the Required Days value for this route stage is calculated as follows:

	Planned Qty.	1/1/2017	1/2/2017	1/3/2017	Required Days
Resource 1	15	15			15/18 = 0.83
Resource 2	20	15	3	2	2 + 2/3 = 2.67

So the Required Days value for this route stage is 2.67. If you manually enter the Waiting Days value of 1.10, then the Total Days value will be 3.77 (Total Days = Required Days + Waiting Days). The End Date for this route stage will then be set to Start Date + 3.77 days = 1/4/2017. If this is the only route stage on the Production Order, the header Due Date will be set to 1/4/2017.

- When Routing Date Calculation field value is End Date Backwards
  - If Planned Qty. < Single Run Capacity (of the end date) for a Resource line, then the Required Days field value will be Planned Qty / Single Run Capacity, and the calculation stops here.
  - If Planned Qty. > Single Run Capacity (of the end date) for a Resource line, then the system allocates only as much capacity as there is Single Run Capacity defined for the end date and continues to allocate the remaining capacity to the day before the end date. The process continues forwards for each day until it allocates all the remaining Planned Qty.

7.4 Start Date / End Date Calculation Algorithm

Start date and end date display, respectively, the earliest and the latest date when the component is needed in the production process. By default, the start date is copied from the Start Date field in the header area, and the end date is the same as the Due Date field. The start date and the end date are only valid for a routed production order, where there is at least one route stage.

When necessary, you can change the start date and end date manually, within the range of the start date and due date in the header area.

For a production order that has route stages, there is an algorithm that automatically calculates the start date and end date of each route stage. The algorithm is explained in detail as follows.

Note

This automatic calculation algorithm applies only to routed production orders, that is, production orders that have at least one route stage and that have a Routing Date Calculation of Start Date Forwards or End Date Backwards.

The automatic calculation algorithm starts only when automatic resource allocation is triggered, that is, the Routing Date Calculation field is set to either Start Date Forwards or End Date Backwards. For each route stage, Total Days are used in the automatic calculation, as follows: End Date = Start Date + Total Days (integer number).

The following is a description of the calculation algorithm.

- Routing Date Calculation field value is set to Start Date Forwards

  The start day of the first route stage is the same as the production order Start Date in the header area. For the first route stage, the actual resource capacity that can be consumed equals the single run capacity multiplied by the Calculation Proportion of this stage for the first day only.

  For the first route stage, the end day is calculated by adding to the start day the integer value of Total Days. However, for all Resource type lines in the first stage, the end date is calculated by adding to the start day the integer number of Required Days.

  The end day for one route stage is automatically set as the start day of the next route stage. If there are no further route stages, the end day will be the same as the production order Due Date in the header area. If there is a further route stage, the end day will be calculated by adding to the start day the integer value of new Total Days, the total of the remaining total days (from the previous stage) and total days (of the current stage). The calculation continues as such for the next route stage.

Example

Suppose there is a production order that uses 2 resources in 2 route stages. Resource 1 and Resource 2 are used in each route stage. The Single Run Capacity values of these 2 resources are as follows:

Date	1/1/2017	1/2/2017	1/3/2017	1/4/2017	1/5/2017	1/6/2017
Resource 1						
Single Run Capacity	20	6	6	16	18	18
Resource 2						
Single Run Capacity	15	3	4	14	15	15

The general information of the production order is:

Start Date	1/1/2017
Due Date	1/8/2017
Resource Allocation	Start Date Forwards

Then, according to the above calculation algorithm, together with the one mentioned in 7.3 Calculating Required Days and Total Days, the Start Date, End Date and Required Days information will be as follows:

	Planned Qty.	Required Days	1/1/2017	1/2/2017	1/3/2017	1/4/2017	1/5/2017
Stage 1							

		Planned Qty.	Required Days	1/1/2017	1/2/2017	1/3/2017	1/4/2017	1/5/2017
	Resource 1	15	15 / 20 = 0.75	15				
	Resource 2	20	2 + 2 / 4 = 2.5	15	3	2		
	Required Days		2.5					
	Waiting Days		1					
	Total Days		3.5					
	Integer Part of Total Days		3					
	Start Date		1/1/2017					
	End Date		1/4/2017					
	Calculation Proportion for Stage 2		3.5 - 3 = 0.5					
Stage 2								
	Resource 1	14	1 + 6 / 18 = 1.34				16 * (1 - 0.5) = 8	6
	Resource 2	19	1 + 12 / 15 = 1.8				14 * (1 - 0.5) = 7	12
	Required Days		1.8					
	Waiting Days		1					
	Total Days		2.8					
	Integer Part of Total Days		2					
	Start Date		1/4/2017					
	End Date		1/6/2017					

- Routing Date Calculation field value is set to End Date Backwards

  The end day of the last route stage is the same as the production order Due Date in the header area. For the last route stage, the actual resource capacity that can be consumed equals the single run capacity multiplied by the Calculation Proportion of this stage. This actual capacity will be used in the Required Days calculation.

  For the last route stage, the start date is the end day minus the integer number of Total Days. However, for all Resource type lines in the first stage, the start date is the end day minus the integer number of the Required Days.

  The start day for one route stage is automatically set as the end day of the previous route stage. If there are no further route stages, the start day will be the same as the production order Start Date in the header area. If

there is a further route stage, the start day will be the end day minus the integer number of new Total Days, the total of the remaining total days (from the next stage) and total days (of the current stage). The calculation continues as such for the previous route stage.

Example

Suppose there is a production order that uses 2 resources in 2 route stages. Resource 1 and Resource 2 are used in each route stage. The Single Run Capacity values of these 2 resources are as follows:

Date	1/1/2017	1/2/2017	1/3/2017	1/4/2017	1/5/2017	1/6/2017
Resource 1						
Single Run Capacity	20	6	6	16	18	20
Resource 2						
Single Run Capacity	15	3	4	14	15	15

The general information of the production order is:

Start Date	1/1/2017
Due Date	1/6/2017
Resource Allocation	End Date Backwards

Then, according to the above calculation algorithm, together with the one mentioned in 7.3 Calculating Required Days and Total Days, the Start Date, End Date and Required Days information will be as follows:

		Planned Qty.	Required Days	1/1/2017	1/2/2017	1/3/2017	1/4/2017	1/5/2017	1/6/2017
Stage 2									
	Resource 1	15	15 / 20 = 0.75						15
	Resource 2	18	1 + 3 / 15 = 1.2					3	15
	Required Days		1.2						
	Waiting Days		1						
	Total Days		2.2						
	Integer Part of Total Days		2						
	End Date		1/6/2017						
	Start Date		1/4/2017						
	Calculation Proportion		2.2 - 2 = 0.2						
Stage 1									
	Resource 1	20	2 + 1.2 / 6 = 2.2		1.2	6	16 * (1 - 0.2) = 12.8		

		Planned Qty.	Required Days	1/1/2017	1/2/2017	1/3/2017	1/4/2017	1/5/2017	1/6/2017
	Resource 2	18	2 + 2.8 / 3 = 2.93		2.8	4	14 * (1 - 0.2) = 11.2		
	Required Days		2.93						
	Waiting Days		1						
	Total Days		3.93						
	Integer Part of Total Days		3						
	End Date		1/4/2017						
	Start Date		1/1/2017						

Note

If the Routing Date Calculation is End Date Backwards, and the calculated Start Date is earlier than the current system date, then the production order start date will be automatically changed to Current System Date, and any resource capacity that would have been allocated to a date earlier than the current system date will be allocated to the Current System Date.

Note

The Internal Capacity data from the Resource Capacity window will always be ignored when allocating resources for production orders (both routed and non-routed). A production order will only consider the Single Run Capacity data from the Resource Capacity window.

7.5 Recalculate Route Stage Dates

When necessary, you can recalculate start and end dates from a specific route stage. When you do this, you can either change the Start Date or End Date of the route stage from which you want to recalculate, or not. The start or end dates of subsequent route stages will be automatically updated.

To recalculate from a specific route stage, right click on that route stage, and select Recalculate Route Stage Dates option.

7.6 By-Product Handling in Production Orders and Production Processes

By-product item components are inventory item components entered with a negative quantity in the Bill of Materials and Production Order windows.

- The Manual issue method for by-products is available in addition to the Backflush issue method, and by-products are then displayed in receipts from production. The ability to receive by-products with the Manual issue method enables you to manage them with the Serial/Batches valuation method.

- Upon receiving a by-product in the receipt from production, you can define its cost in the Unit Price field.
- By-products can be rejected in the receipt from production document; rejection of a by-product has no impact on the posting behind nor on the Rejected Quantity field on the Summary tab of the Production Order window.

  Note

  Non-inventory items and resources cannot be by-products.

7.7 Change of Valuation Method of Item Included in Open Production Order

An item's valuation method cannot be changed if the item is a parent item included in an open production order.

7.8 Disassembly Production Order

Resources cannot be included in a disassembly production order. When a BOM automatically populates a disassembly production order, the resource lines are omitted. You cannot change Production Order Type to Disassembly as long as the production order contains resource components.

7.9 User-Defined Fields (UDF) Handling

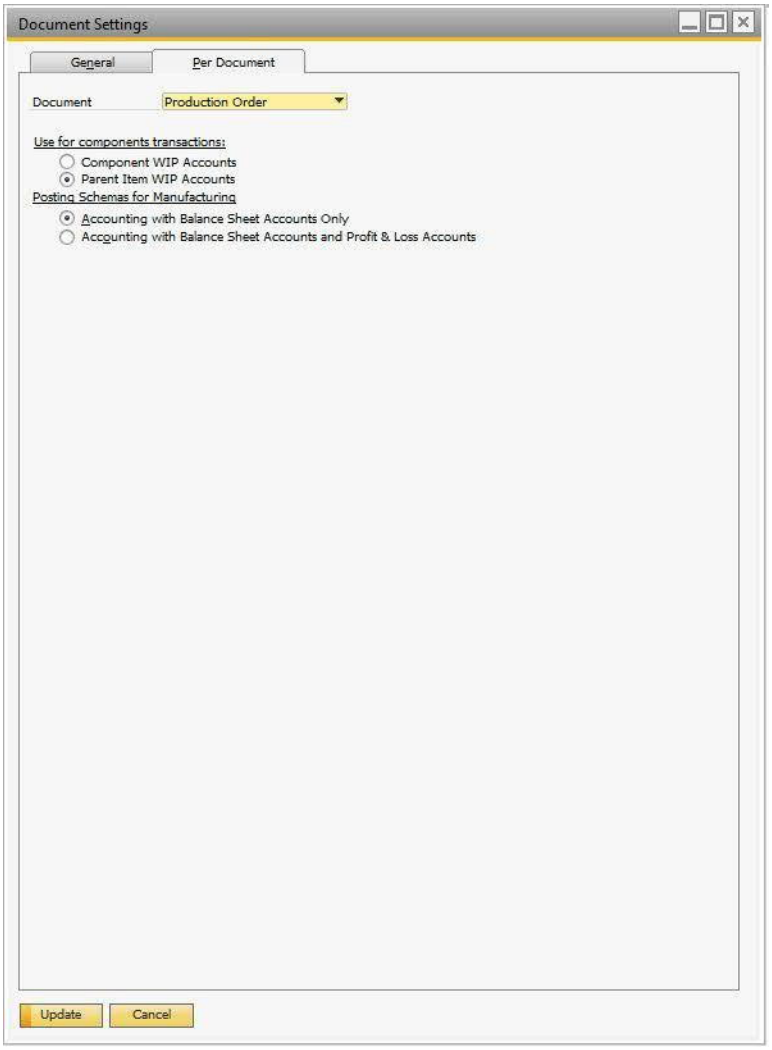
If a UDF field with the same name and same type exists in both the Bill of Materials window component table and on the Production Order window table, then on entry of the parent item into a production order, the values of the UDF fields from the Bill of Materials window are copied into the corresponding UDF fields in the Production Order window.

By setting a UDF field in the Bill of Materials window to hold a link to a file, you cause that link to be copied into the corresponding UDF field in the Production Order window. This feature is important as a means of handling attachments such as manufacturing plans or other documents.

7.10 Document Settings and WIP Account

You can decide whether you want the costs of components in the production order to be posted to the WIP account of the parent item or to the WIP account defined for each component.

To do so, from the SAP Business One Main Menu, choose Administration → System Initialization → Document Settings.



In the Document Settings window for the production order document, in the Use for Components Transactions section, choose one of the following options:

- Component WIP Accounts - Uses the component WIP accounts throughout the production process. For example, if a parent item consists of a child item Item01 and a resource Res01, the default accounts are used as displayed below.

Component	Default WIP Account	Comment
Item01	Depending on the definition in the Set G/L Accounts By field on the Inventory tab of the Item Master Data window of the component item, the WIP Inventory account defined at the warehouse, item group, or item level is used. Note If advanced G/L account determination rules are defined for the warehouse, item group, or	If you define a different account in the WIP Account field of the Production Order window for this item component, then the defined account is used as the WIP account. (The value from the WIP Account field of the Bill of Materials window is copied into the production order; however, if no account is defined in the bill of materials, then the WIP Account field in the production order is left blank.)

Component	Default WIP Account	Comment
	the item component in question, other WIP Inventory accounts may be used.	
Res01	The Resource WIP account defined on the Resources tab of the G/L Account Determination window applies, unless an advanced G/L account rule requires a different Resource WIP account.	If you define a different account in the WIP Account field of the Production Order window for this resource component, then the defined account is used as the WIP account. (The value from the WIP Account field of the Bill of Materials window is copied into the production order; however, if no account is defined in the bill of materials, then the WIP Account field in the production order is left blank.)

- Parent Item WIP Accounts - Uses the parent WIP account as the WIP account for the journal entries of the component transactions (both for item and resource components) throughout the production process. The parent item is defined in the bill of materials that was selected in the production order.

  For example, if a parent item consists of a child item Item01 and a resource Res01, the default accounts are used as displayed below.

Component	Default WIP Account	Comment
Item01	Depending on the definition in the Set G/L Accounts By field on the Inventory tab of the Item Master Data window of the parent item, the WIP Inventory account defined at the warehouse, item group, or item level is used. **Note** If advanced G/L account determination rules are defined for the warehouse, item group, or the parent item in question, other WIP Inventory accounts may be used.	If you define a different account in the WIP Account field of the Production Order window for this item or resource component, then the defined account is used as the WIP account. (The value from the WIP Account field of the Bill of Materials window is copied into the production order; however, if no account is defined in the bill of materials, then the WIP Account field in the production order is left blank.)
Res01		

7.11 Closing Production Order and Handling Components Cost

Upon the closing of the production order, a journal entry is created automatically in which all WIP accounts used during the production process are zeroed down; the value from the WIP accounts is transferred to the WIP Inventory Variance account of the parent item.

> **Note**
>
> If an interim WIP consolidation mapping is defined for a WIP account, the WIP account is zeroed down and the value is transferred to the defined interim WIP account. This process may continue if further interim WIP accounts are defined. The last interim WIP account in the chain of interim WIP account mapping is then zeroed down and the value is transferred to the WIP Variance account of the parent item. For more information on the interim WIP consolidation mapping, see section 10 Interim WIP Consolidation Account Mapping.

Before posting the journal entry behind the production closure, a check is made to verify if the total component cost equals the total cost of the received parent items and its by-products. If there is a difference, it is transferred from the WIP Inventory Variance account of the parent item back to the Inventory account of the parent item.

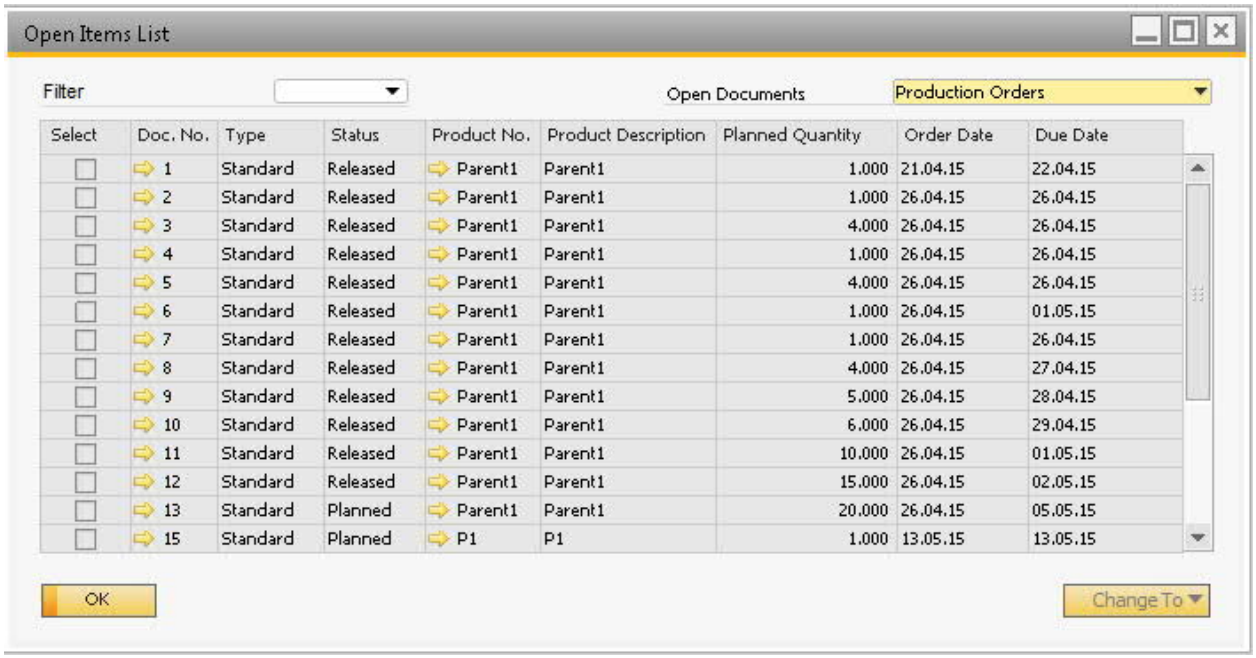
However, this applies only if the following two conditions are met:

- The parent item is managed by a valuation method other than Standard.
- The parent item's quantity in the inventory is greater than zero; it has not been sold out before the production order closure.

7.12 Changing Production Order Status in Batch

It is always important to regularly close production orders. And more than often, it is necessary to change production order status from Planned to Released, or vice versa. To facilitate the efficiency in doing these tasks, a batch update functionality is available to allow you to select and change the status of multiple production orders.

To access this function, go to Production -> Production Reports -> Open Items List, and in Open Documents drop-down list, select Production Orders.



Select	Doc. No.	Type	Status	Product No.	Product Description	Planned Quantity	Order Date	Due Date
☐	1	Standard	Released	Parent1	Parent1	1.000	21.04.15	22.04.15
☐	2	Standard	Released	Parent1	Parent1	1.000	26.04.15	26.04.15
☐	3	Standard	Released	Parent1	Parent1	4.000	26.04.15	26.04.15
☐	4	Standard	Released	Parent1	Parent1	1.000	26.04.15	26.04.15
☐	5	Standard	Released	Parent1	Parent1	4.000	26.04.15	26.04.15
☐	6	Standard	Released	Parent1	Parent1	1.000	26.04.15	01.05.15
☐	7	Standard	Released	Parent1	Parent1	1.000	26.04.15	26.04.15
☐	8	Standard	Released	Parent1	Parent1	4.000	26.04.15	27.04.15
☐	9	Standard	Released	Parent1	Parent1	5.000	26.04.15	28.04.15
☐	10	Standard	Released	Parent1	Parent1	6.000	26.04.15	29.04.15
☐	11	Standard	Released	Parent1	Parent1	10.000	26.04.15	01.05.15
☐	12	Standard	Released	Parent1	Parent1	15.000	26.04.15	02.05.15
☐	13	Standard	Planned	Parent1	Parent1	20.000	26.04.15	05.05.15
☐	15	Standard	Planned	P1	P1	1.000	13.05.15	13.05.15

You can filter production orders by selecting an option in the drop-down list in the Filter field. There are the following options here:

- Released - select this option, and all production orders with Release status will be displayed.

  You can select the orders you want to handle, and change their status to:

  - Released
  - Canceled

  > **Note**
  >
  > Select the production orders by selecting the checkboxes in the Select field. You can select the checkbox one by one, or you can select a range of production orders by selecting the first required production order and then shift-selecting the last one required in the range.

- Planned - select this option, and all production orders with Planned status will be displayed.

  You can select the orders you want to handle, and change their status to:

  - Planned
  - Closed
  - Canceled

  > **Note**

If, apart from any scenario explicitly mentioned above, the status of any individual production order cannot be changed, then on attempting to change the status, the production orders which could not be updated will remain in the list, with their Select field.

7.13 Pick and Pack Production Manager

By selecting to manage production orders and applying additional selection criteria, the Pick Pack and Production Manager can function as a basic production manager console.

To use the Pick Pick and Production Manager to view and process production orders, perform the following:

1. From the SAP Business One Main Menu, choose Main Menu → Inventory → Pick and Pack → Pick Pack and Production Manager.
2. In the Status field, choose the status in which the Pick Pack and Production Manager window opens (open, released, or picked).
3. In the Group By/View field, specify how rows in the Pick Pack and Production Manager are grouped (if Open is selected in the Status field) or how the pick list lines are displayed (if Released or Picked is selected in the Status field).
4. In the Manage field, select the Production Orders checkbox.
5. In the range-type fields, specify conditions to filter the production orders you want to manage. The following filter conditions are available by default, depending on the status of the production orders you selected:

Field	Activity/Description
Production Order No. From... To ...	Filters the production order number.
Delivery/Due Date From... To	Filters the End Date field on the production order.
Customer From... To ...	Filters the customer number.
Fulfillment % 0.000...100.000	Filters the fulfillment percent (enter values between 0 and 100).
Item From... To ...	Filters the item numbers.
Pick List No. From... To...	Filters the pick list numbers.

To display additional fields to filter by, from the dropdown list, choose the relevant field and specify conditions in the From and To fields.

7.14 Creating Procurement Documents Directly from Production Orders

You can use the Procurement Confirmation Wizard to automatically create one or several procurement documents, such as purchase quotations, purchase orders, or production orders, directly from one or several production orders. Procurement documents created using this function can include part or all of the items from the base production documents.

Prerequisites

- You are authorized to create production orders, purchase orders, purchase requests, and purchase quotations.
- You have created a production order that contains item type components and selected the Procure Items checkbox. Alternatively, you have selected the Procure Items checkbox for an existing production order.

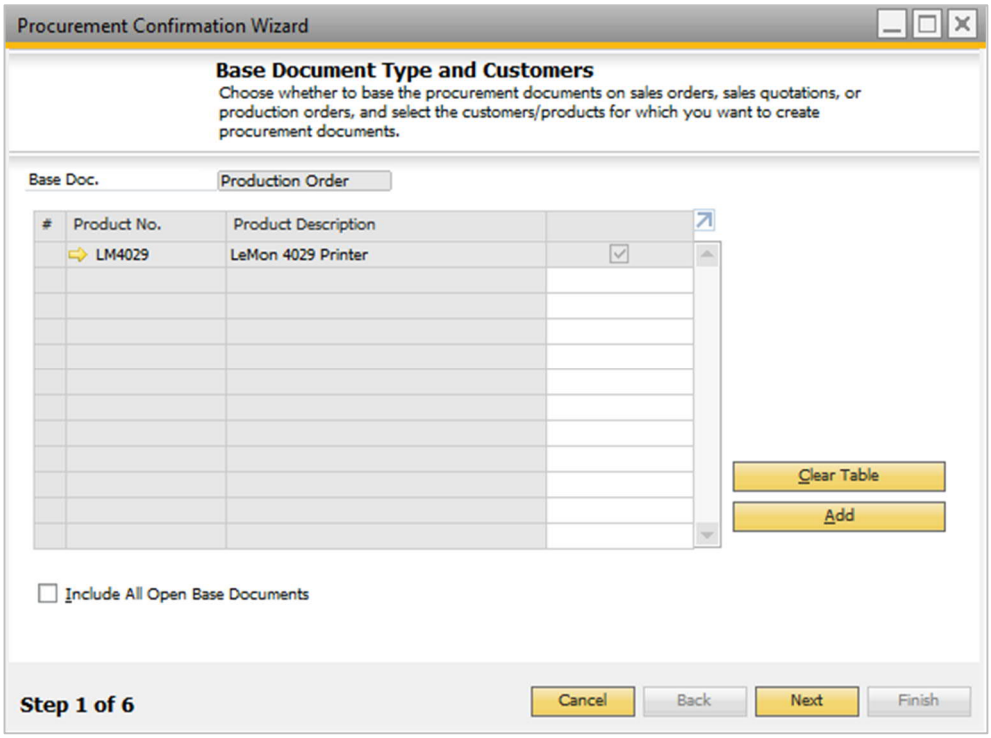
Procedure

To create a purchase order, purchase quotation, or purchase request based on a production order, or to procure components on a production order, perform the following:

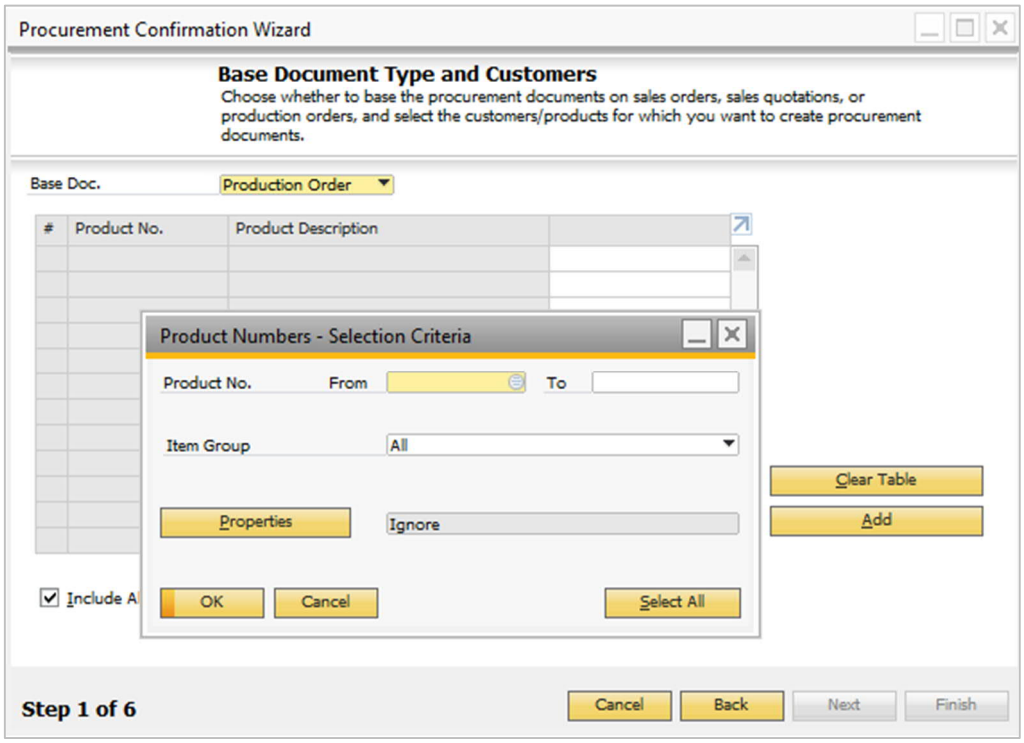
1. Create or update a production order as described above and choose the Add or Update button.

   The Procurement Confirmation Wizard is displayed (at Step 1 of 6: Base Document Type and Customers window) with the Production Order option automatically selected in the Base Doc. field. Additionally, the

Product No. and Product Description fields are automatically displayed based on the production order; selecting the link arrow next to the Product No. field will display the list of relevant items in the Bill of Materials window or Item Master Data window (depending on whether the Open Item Master Data Instead of Bill of Materials of a BOM Item When Selecting Link Arrow option is selected in Administration → General Settings → Inventory tab → Items tab). The checkbox next to the Product No. field indicates whether the Product No. is selected to be included in the wizard.

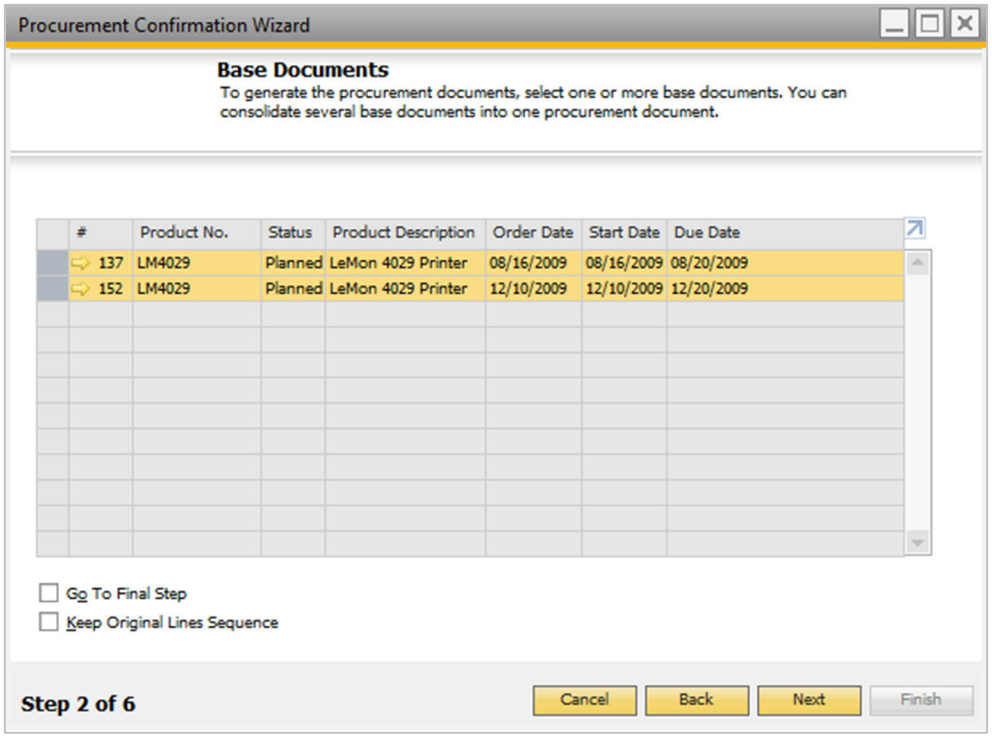


If you already have item type components with the Allow Procurmt. Doc. checkbox selected in a production order, you can run the wizard from scratch (Production → Procurement Confirmation Wizard) and choose the Add button in Step 1. In the Product Numbers – Selection Criteria window, you can enter the item number or item range. Alternatively, choose items based on item group or properties. Only items which are associated with a production type BOM and for which the Allow Procurmt. Doc. checkbox is selected are displayed. If necessary, you can deselect the checkbox next to a product number to exclude it from the procurement documents.

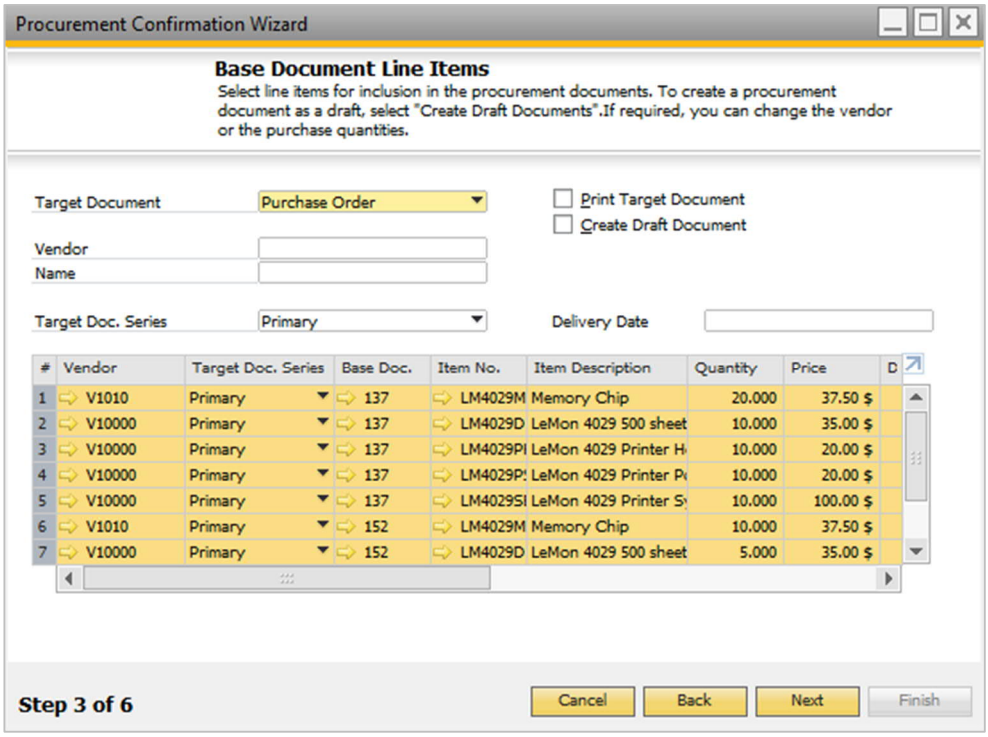


Choose the Next button.

2. In the Base Documents window, select one of more base documents from which you want to generate the procurement documents and choose the Next button.



3. In the Base Document Line Items window, from the dropdown list in the Target Document field, select one of the following options as the target document type: Purchase Order, Purchase Quotation, Purchase Request, or Production Order.



\

The table displays the production order lines for which procurement document creation has been allowed (in other words, the Allow Procurmt. Doc. checkbox is selected) in the specified production orders. You may change the line items for inclusion in the procurement documents.

If you chose a purchase order, purchase request, or purchase quotation as the target document, if an item has a preferred vendor assigned to it, this vendor is already entered in the line. If required, change the vendor code. If a preferred vendor is not assigned to the item, you are asked to enter a vendor code.

- To specify the same vendor for all items, enter the vendor code in the Vendor field of the wizard body.
- To specify the vendor for each item individually, enter the vendor code in the Vendor column of the table.

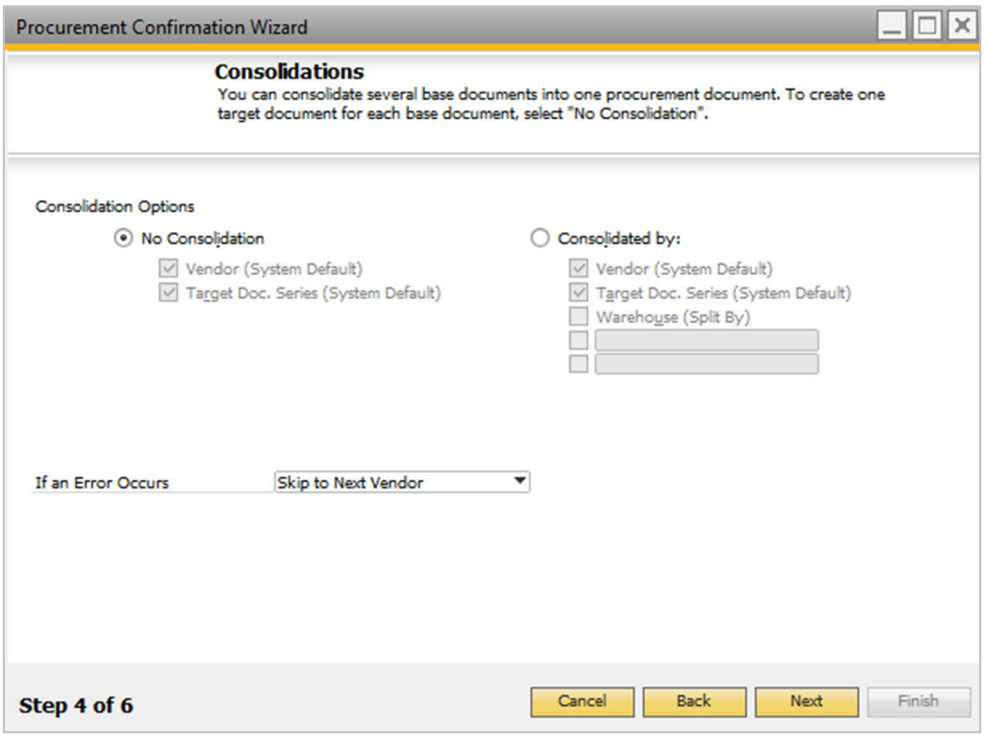
To create the procurement document as a draft, select the Create Draft Document checkbox.

Choose the Next button.

4. In the Consolidations window, specify whether to consolidate several production orders into one procurement document and which consolidation options apply.

To do the following:	Choose:
Create one procurement document for each production order	No Consolidation System behavior depends on the target document type. • For Purchase Order: The documents are grouped by vendor and target document series. • For Purchase Quotation: The documents are grouped by vendor and target document series.

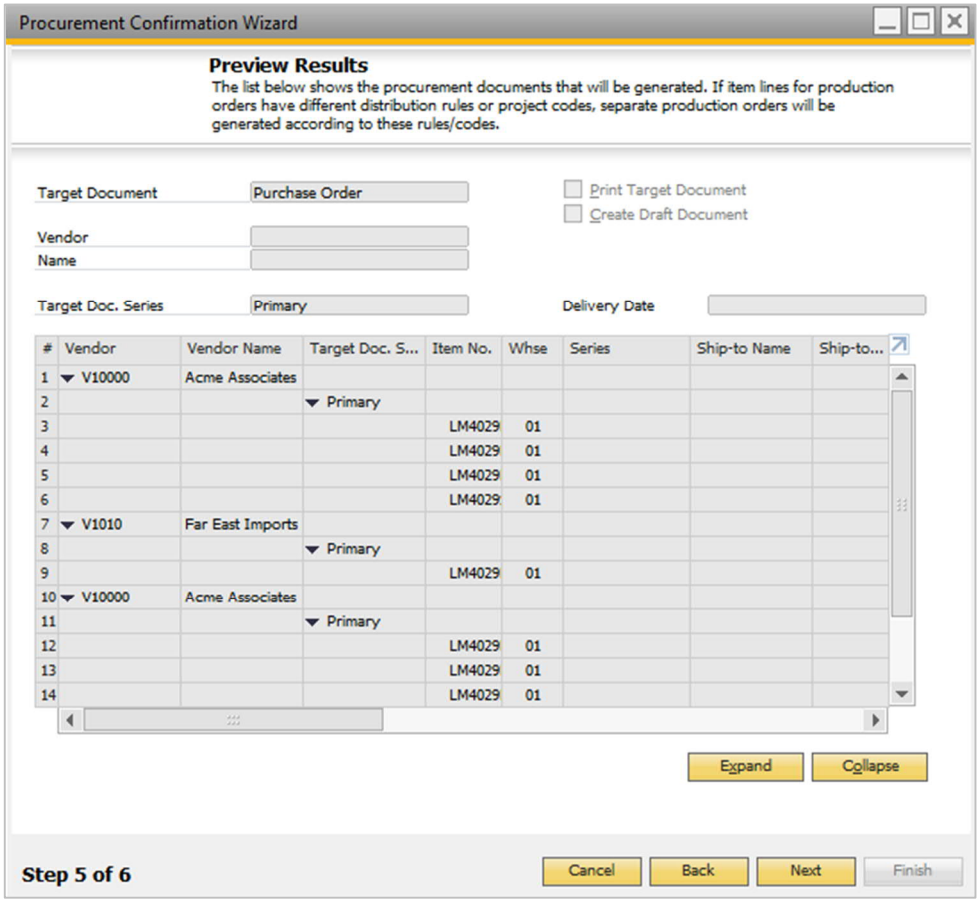
To do the following:	Choose:
	• For Purchase Request: The documents are grouped by requester and target document series. • For Production Order: The documents are grouped by item and target document series.
Create one procurement document for each production order	Consolidated By and select the relevant option: • Vendor (System Default) The documents are grouped by vendor, that is, one purchase order is created per vendor. This setting cannot be changed. • Warehouse (Split) The documents are grouped by the warehouse that is used to ship the items. That is, if items are sold from different warehouses, one purchase order is created per warehouse. • Other You can specify additional grouping criteria, such as the delivery date or shipping type.



Choose the Next button.

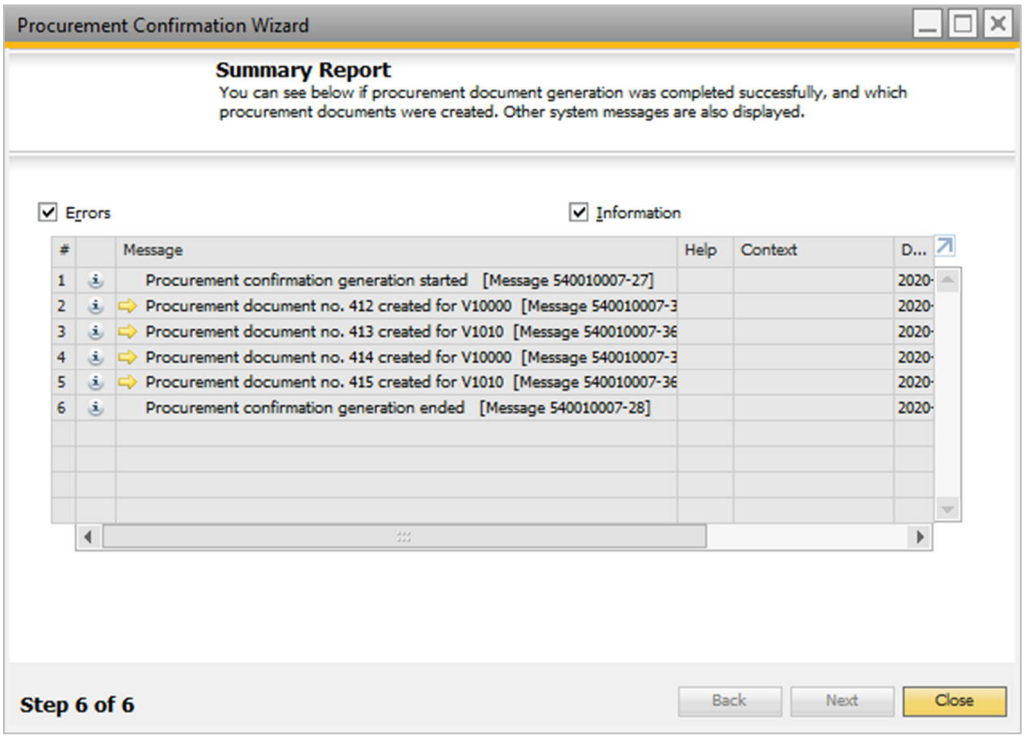
5. Specify the system response to errors that may occur in the document generation process. To do so, make a selection in the If an Error Occurs field and choose the Next button.

6. The Preview Results window appears. It displays all production orders that will be created grouped by the system default values and the consolidations options you selected.



7. To generate the documents, choose the Next button.

The system creates the relevant documents and displays a summary report of all documents that were created and any errors that occurred.



Results

All procurement documents created by the wizard are linked to the base documents. The procurement document will be displayed in the production order in the Procurement Doc. field; you can choose the link arrow in this field to open the related procurement document.

For purchase order, purchase quotation, and purchase request procurement documents created by the wizard, the Base Type field will display Production Order. You can select the Base Document icon in the toolbar of such documents to open the corresponding production order base document.

The relationship maps for the base production orders will display the related procurement documents. Likewise, relationship maps for the procurement documents will display the related base production orders.

8 Issue for Production

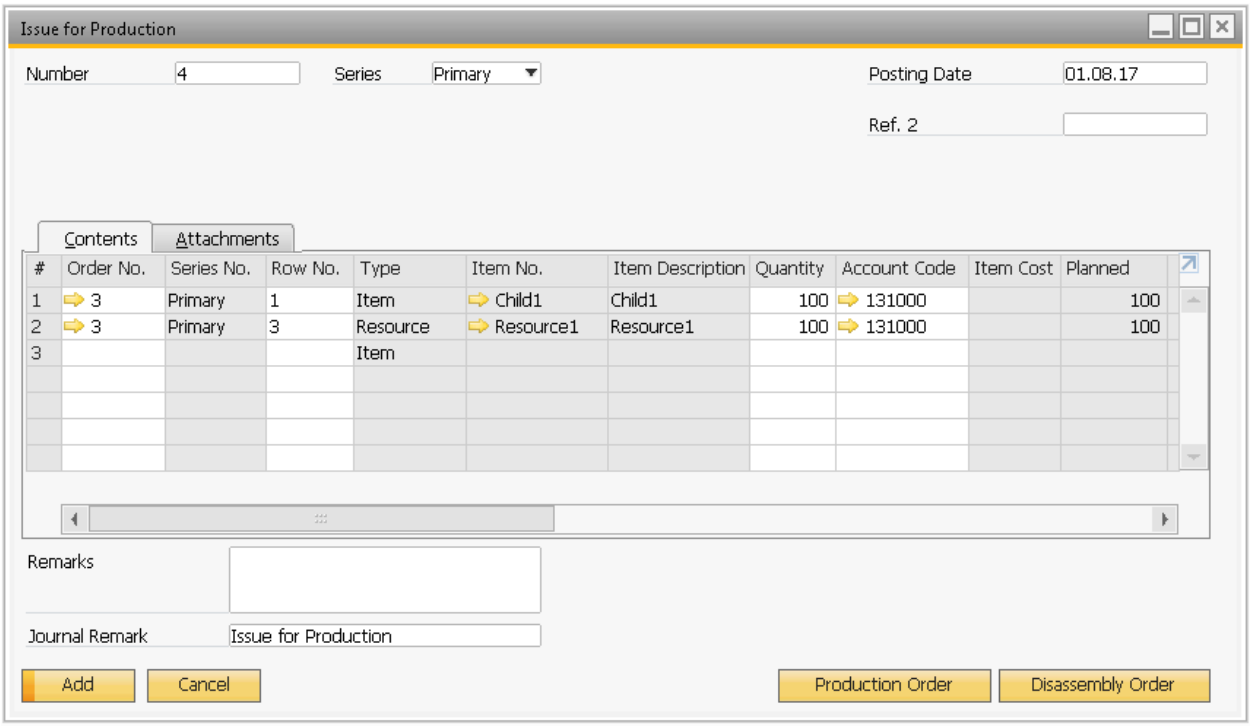
The following enhancements have been made to the Issue for Production window:

Some routing related fields, such as Route Stage, Route Sequence and Stage Description, are now included in the table for reference. They will be displayed only when a routed production order is selected for issuing.

8.1 Issue for Production Window

Procedure

1. From the SAP Business One Main Menu, choose Production → Issue for Production.



2. View the following fields:

Field	Activity/Description
Type	For each item or resource component, the value of this field, as well as of the remaining fields, is copied from the Production Order window. The remaining fields are also inherited from the production order; however, for resources the following fields are blank and not editable: • Vendor Catalog No. • Bin Location Allocation

Field	Activity/Description
	• In Stock • Committed • Ordered • Minimum Inventory Level - Displays zero. • Available • Inventory UoM - Displays Yes. • UoM Code • Items per Unit • UoM Group
Account Code	For both resource and item components, the value from the WIP Account field of the production order is copied into this field unless no WIP account is defined in the production order. In such a case, it is defined according to the definitions in the Document Settings window. For more information, see section 7.6 Document Settings and WIP Account. **Note** If you update the Whse field in the Issue for Production window, this field is updated accordingly.
Item Cost	This field displays the total standard cost value posted in respect of the resource after the issue for production document is added.
Distribution Rule, Project Code	For each component, the values of these fields are taken from the relevant fields of the Production Order window.

8.2 Posting Behind Issue for Production

When you add an issue for production, in addition to posting expenses for items, in the same journal entry you also post resource expenses. The resource expenses are transferred from the resource expense account to the related resource WIP account. The total value posted for each resource unit equals Total Std Resource Cost as defined in the Resource Master Data window. The actual posting itself is split across up to ten resource expense accounts as defined by the advanced G/L account determination rules or the G/L account determination and the WIP account that is defined in the Account Code field of the Issue for Production window.

Example

- An ExampleResource has a Total Std Resource Cost of 100 per unit which is split between Resource Std Cost 1 = 60 and Resource Std Cost 2 = 40.

Resource No.	Total Std Resource Cost	Std Cost Expense 1	Std Cost Expense 2

ExampleResource	100	60	40

- The journal entry in respect of the resource component consumption of 10 resource units is as displayed in the table below.

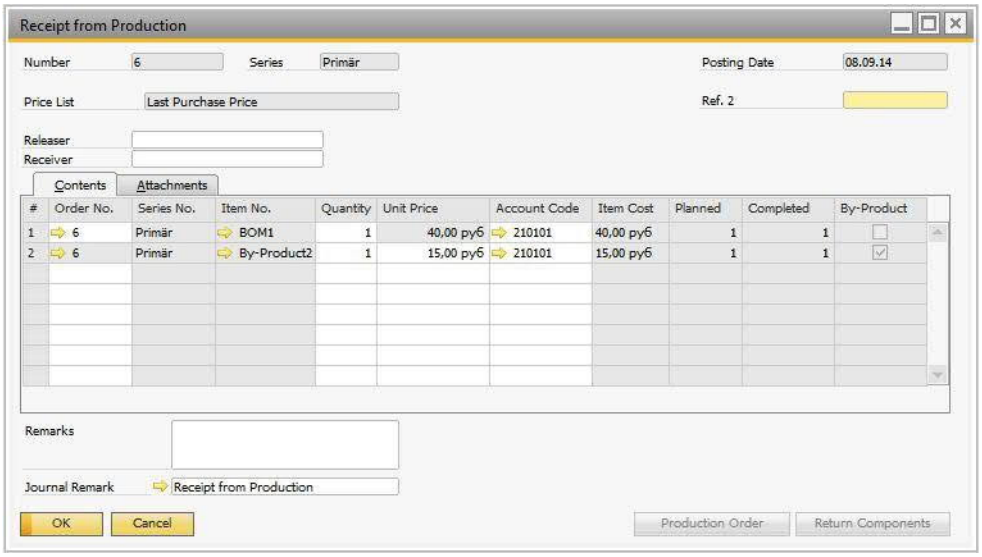
Account	Debit	Credit
Std Cost Expense 1		600
Std Cost Expense 2		400
WIP Account	1000	

This posting is added to the posting of any other item and resource component within a single journal entry created upon adding the issue for production. The total value that is posted to all the resource WIP accounts is added cumulatively to the Actual Resource Component Cost field on the Summary tab of the production order whenever an issue for production is added.

9 Receipt from Production

Procedure

1. From the SAP Business One Main Menu, choose Production → Receipt from Production.



2. View or update the following fields:

Field	Activity/Description
By-Product	In addition to displaying the parent item, the receipt from production now displays the by-products as well. If an item is a by-product, the checkbox for this field is selected. **Note** o You cannot delete by-products with the Backflush issue method, only those with the Manual issue method. o Backflush by-products have their quantity set to read-only and it is proportional to the quantity of the parent produced, but you can update the quantity for by- products with Manual issue method.
Unit Price	Displays the current cost of the by-product. You can update this field manually, unless the by- product has the Standard valuation method. The value in this field is used for posting the inventory value of the by-product in the journal entry behind the receipt from production.
Quantity	• For by-products with the Backflush issue method, you cannot update this field. However, if you update the quantity of the parent item, the value in this field updates proportionally.

Field	Activity/Description
	• For by-products with the Manual issue method, you can update this field manually. Updating the parent item's quantity does not affect this field.
Item Cost	After adding the receipt from production, this field displays the following: • For by-products, the cost of the by-product which has been posted in the journal entry behind the receipt from production. • For parent items, the cost of the parent item which has been posted in the journal entry behind the receipt from production.

Note

When returning item components, the Account Code field is by default populated with the value of the WIP Account field in the corresponding production order. If that field is blank, then the system applies the appropriate WIP account according to the definitions in the Document Settings window.

9.1 Backflush Components Handling and Impact of Additional Quantity

The following applies when processing Backflush components:

- Backflush components are always automatically consumed in proportion to the quantity of the parent item which is currently being received in the receipt from production.
- The consumption of Backflush components which are to be processed together with a receipt from production of the parent item is recorded in a separate journal entry linked to an issue from production document. The Remarks field of this issue for production reads that the document has been automatically generated to handle Backflush components related to a specific receipt from production.
- If Additional Qty has been specified for a Backflush component, it is automatically consumed on the first receipt of the parent item from the production order in addition to the regular proportional receipt of components.

10 Interim WIP Consolidation Account Mapping

This functionality enables businesses to automatically identify sub-assembly costs on closing a production order without the need to use nested BOMs and separate production orders for subcomponents.

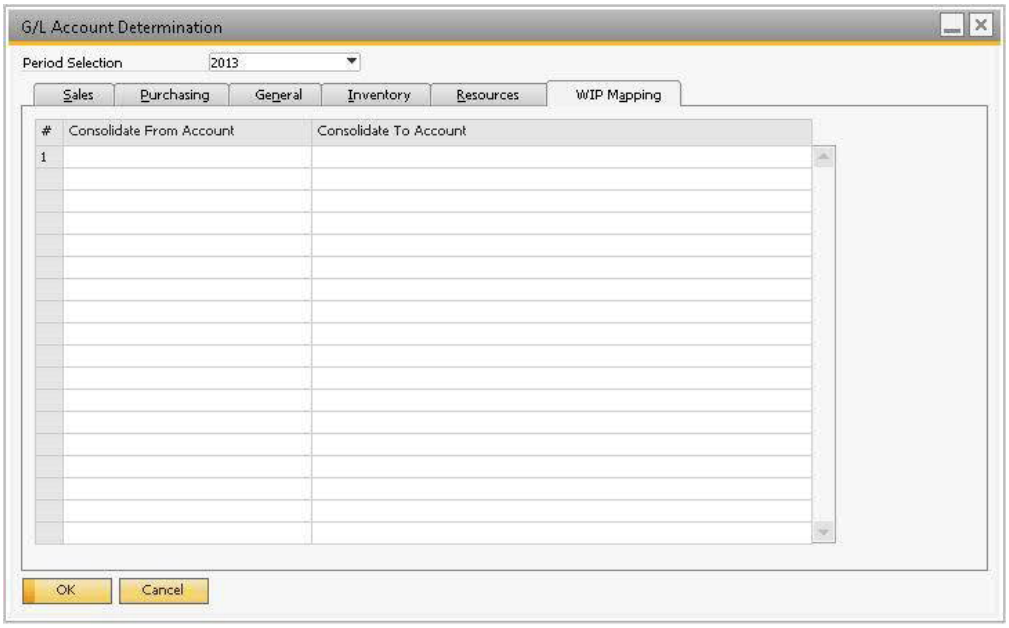
Example

You produce bicycles and you want to identify the cost of bicycle parts at various stages of the production order. A bicycle wheel is made up of a number of components whose costs add up to the cost of the wheel. In addition to identifying the overall cost of the bicycle, you need to identify the cost of the wheel which would normally not be identified. Using the combination of WIP account settings and the interim WIP consolidation matrix, you can track the cost of the sub-assemblies through the chart of accounts.

This functionality provides mapping for multiple WIP accounts such that upon the closing of a production order, the WIP account postings for sub-assembly components are all zeroed down and transferred to a single sub-assembly interim WIP account. For example, to contain the total wheel cost, and then the sub-assembly, interim WIP accounts are zeroed down and their values are transferred to the WIP Inventory Variance account. If there is any difference between the value posted to the WIP Inventory Variance account and the value of the received parent items and its by-products, it is posted back to the Inventory account of the parent item according to the enhancements regarding the production order closing. The mapping matrix allows multiple levels of mapping.

Procedure

1. From the SAP Business One Main Menu, choose Administration → Setup → Production.



2. In the Consolidate From Account (left-hand side) column, select a WIP account from which the value will be transferred. In the Consolidate To Account (right-hand side) column, select an interim WIP account to which you want to transfer the value.

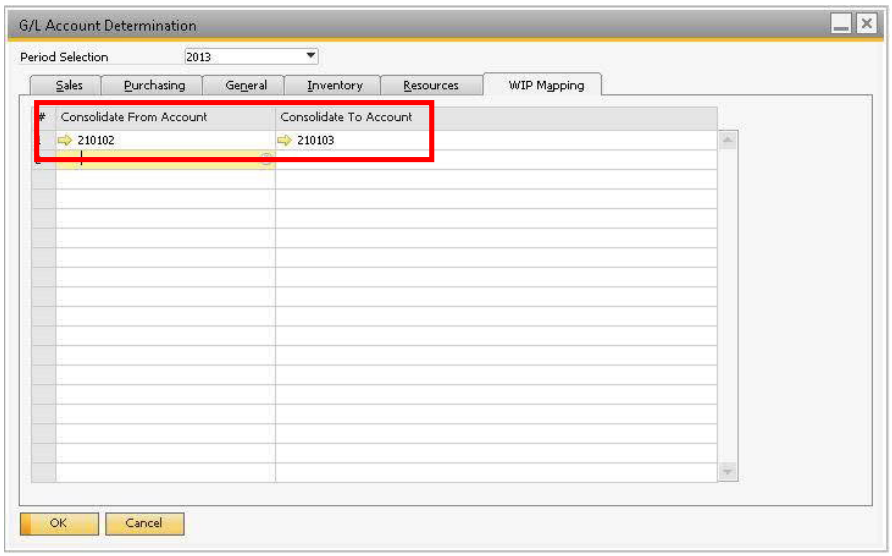
   Note

   - If an account in the right-hand side column is also separately defined in the left-hand side column, then its value will be zeroed down and transferred to the account in the Consolidate To Account column.
   - You cannot define one account in the Consolidate From Account more than once.
   - Any WIP account or interim WIP account which is not included in the mapping matrix will have its value automatically transferred to the WIP Variance account of the parent item and subsequently to the relevant Inventory account.

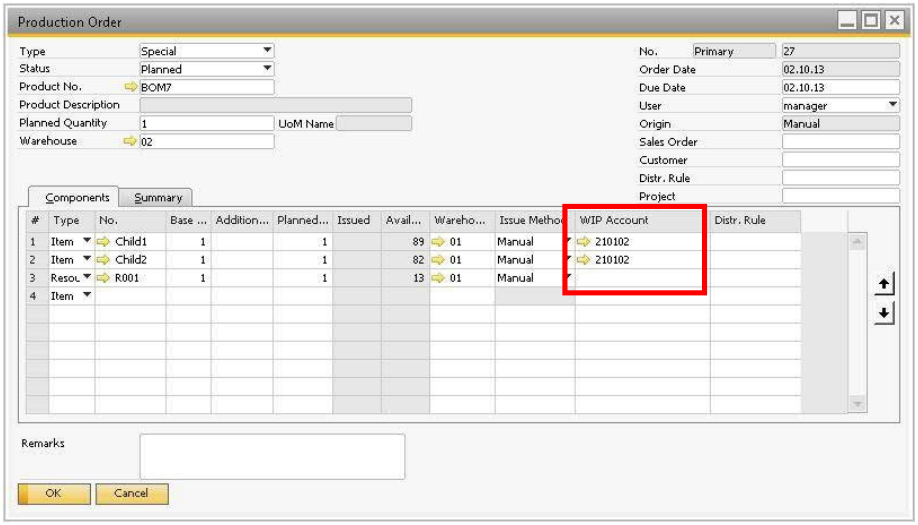
3. To save the settings, choose Update.

   Example

   1. You define interim WIP consolidation mapping as displayed below.

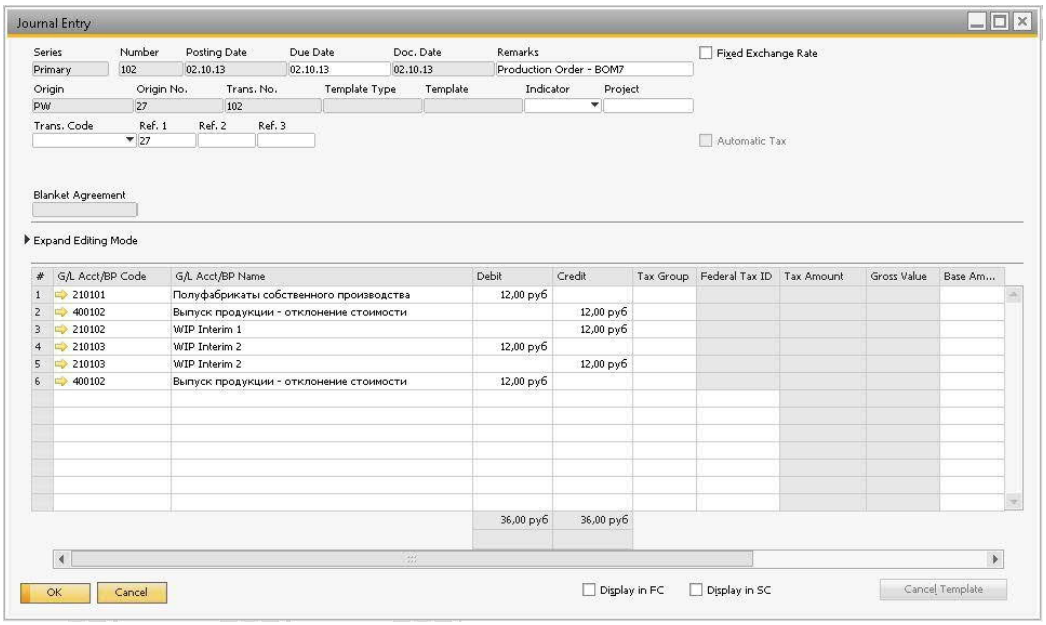


   2. You open a production order as displayed below.



The Child1 and Child2 items use WIP account 210102, which is included in the WIP consolidation mapping matrix.

3. You issue all the components. In the journal entry created behind, the values for Child1 and Child2 are credited from the Inventory account and debited to the WIP account 210102. The value for R001 is credited from the relevant standard cost expense accounts and debited to the WIP account 210102.
4. You report the production order's completion. The journal entry created behind credits the WIP Inventory account (defined for the parent item) with the parent item cost and debits the Inventory account.
5. You close the production order. The journal entry created behind closing the production order does the following:
   - Zeroes down the WIP account 210102 and transfers the value to the interim WIP account 210103 according to the WIP consolidation settings.
   - Zeroes down the interim WIP account 210103 and transfers the amount to the WIP Variance account.



   - If there is a difference between the value transferred to the WIP Variance account and the value of the received parent item and its by-product, it is posted to the Inventory of the parent item.

11 Tracing Serial and Batches in the Production Process

The forward and reverse batches and serials trace reports allows you to determine the production and distribution details for specific batches and serials.

You can use the forward batches and serials trace report to track and trace the complete supply details of any batch or serial item to production and customers. Based on the batch and serial numbers, you can forward the trace to production and customers from the supply details. For example, in the case of product recall, you can quickly identify the customers who were supplied.

You can use the reverse batches and serials trace report to track and trace the complete source details of any batch or serial item from production and suppliers. Based on the batch and serial numbers, you can reverse the trace back to production and suppliers with source details in the production and purchasing documents. For example, in the case of product recall, you can quickly identify the suppliers.

> **Note**
>
> The report is available only for companies using the perpetual inventory system.

11.1 Forward and Reverse Batches and Serials Trace Report

To generate the forward or reverse batches and serials trace report, perform the following:

1. In the SAP Business One Main Menu, choose Inventory → Inventory Reports → Forward Batches and Serials Trace Report or Forward Batches and Serials Trace Report.

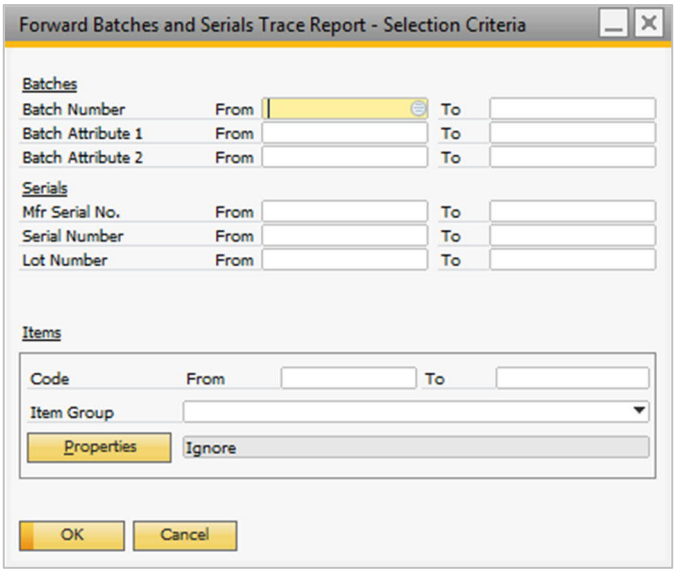
   > **Note**
   >
   > Apart from accessing the forward and reverse batches and serial reports from the Inventory Reports menu, you can also run the reports by right-clicking any batch or serial number and choosing Forward Batch / Serial Trace Report in the following windows:
   >
   > - Serial /Batch Number Transactions Report window
   > - Serial / Batch Number Selection window
   > - Serial / Batch Number Details window
   > - Batches and Serials Inventory Audit Report window
   > - Serial Number / Batch Management – Update / Complete window
   > - Forward Batches and Serials Trace Report window
   > - Reverse Batches and Serials Trace Report window

2. In the Forward / Reverse Batches and Serials Trace Report - Selection Criteria window, in the range-type fields, specify conditions to filter the batch or serial items you want to include in the report. The following filter conditions are available:

Field	Activity/Description
Batch No. From...To	Define the range of the batch numbers which you want to include in the report. You can define further criteria for the defined batches using the Batch Attribute 1 From...To and Batch Attribute 2 From... To fields.
Serial Number From... To	Define the range of the serial numbers which you want to include in the report using the Serial Number field. You can define further criteria for the defined serial numbers using the following fields: • Mfr Serial No. • Lot Number
Code From... To	Specify the range of item codes you wish to include in the report. You can further define items using the dropdown list in the Item Group field and defining properties by choosing the Properties button.

Note

You must enter at least one batch number or serial number or item code.



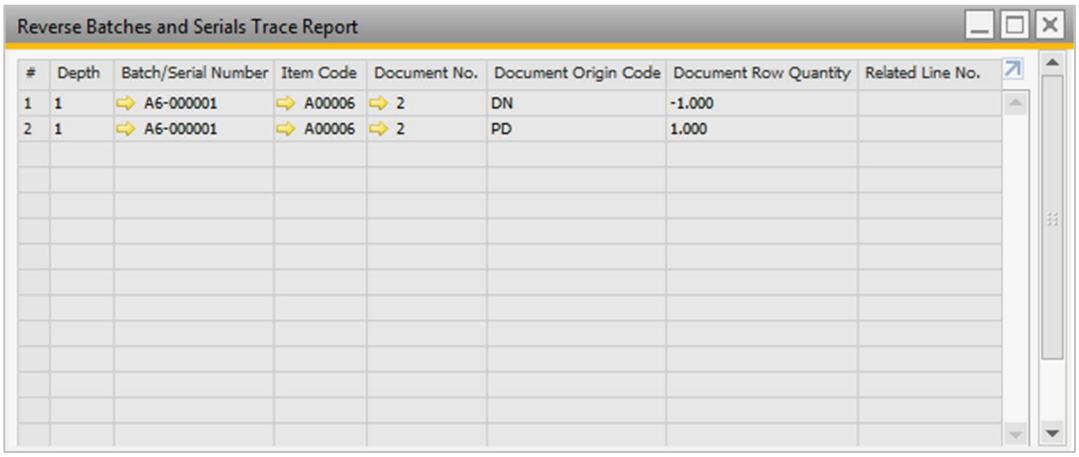
3. Choose the OK button.

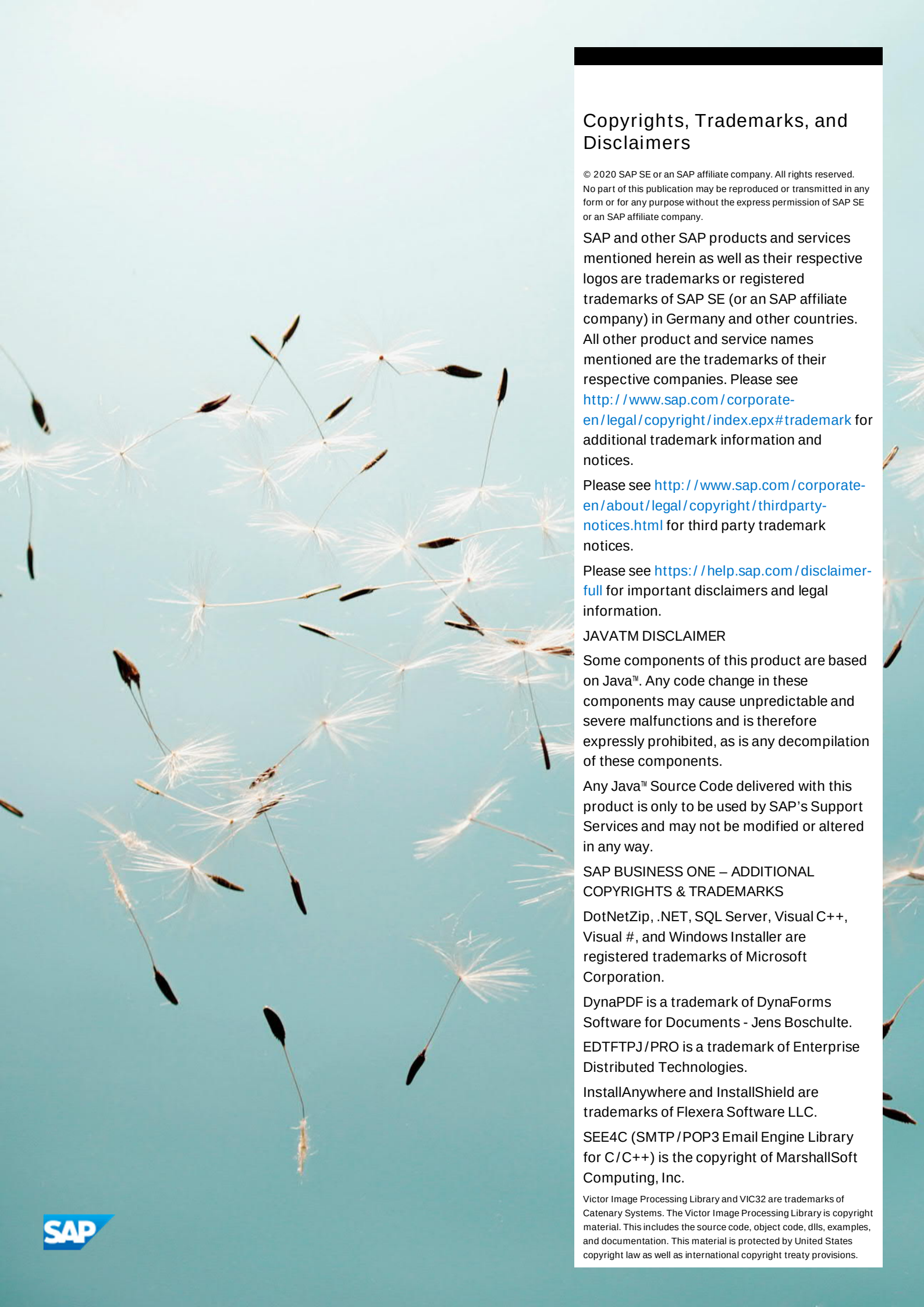
   The system displays either the Forward Batches and Serials Trace Report or window or the Reverse Batches and Serials Trace Report window.

   The report displays the following fields:

Field	Activity/Description
Depth	Displays the hierarchical levels of the inbound and outbound inventory transactions by the selected batch/serial numbers.

Field	Activity/Description
	Note If you right click and choose Highlight Related Document Lines, you can check whether the selected batch/serial numbers are consumed by their parent items or any by-products from depth 1 downwards to the next depths.
Serial Number	Displays all the available batch and serial numbers.
Item Code	Displays the item code.
Document No.	Displays the document number, which can be both inventory receipt documents and inventory issue documents.
Document Origin Code	Displays the document type.
Document Row Quantity	Displays the inventory quantity for this row. The quantity is accumulated when an inbound transaction results in an increase, which is displayed as a positive value.





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