Inventory Management and Physical Inventory (MM-IM)

Release 4.6C
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Inventory Management and Physical Inventory (MM-IM)

Purpose
This component deals with the following tasks:

- Management of material stocks on a quantity and value basis
- Planning, Entry, and Documentation of all Goods Movements
- Carrying out the Physical Inventory [Page 155]

Features

Managing Stocks by Quantity
All transactions that bring about a change in stock are entered in real time, as are the stock updates resulting from these changes. You can obtain an overview of the current stock situation of any given material at any time. This, for example, applies to stocks that:

- Are located in the warehouse
- Have already been ordered, but have not yet been received
- Are located in the warehouse, but have already been reserved for production or a customer
- Are in quality inspection.

If a further subdivision by lots is required for a material, one batch per lot is possible. These batches are then managed individually in the stock.

Special Stocks
Inventory Management can manage various types of a company's own special stocks and externally owned special stocks separately from standard stock.

For more information on special stocks, refer to Managing Special Stocks [Ext.].

Managing Stocks By Value
The stocks are managed not only on a quantity basis but also by value. The system automatically updates the following data each time there is a goods movement:

- Quantity and value for Inventory Management
- Account assignment for cost accounting
- G/L accounts for financial accounting via automatic account assignment

The valuation area is the organizational level at which a material's stock value is managed. The valuation area can be plant level or company code level.

In Inventory Management, work is basically done at plant and storage location levels. When you enter a goods movement, you only have to enter the plant and the storage location of the goods. The system derives the company code from the plant via the valuation area.

For more information on managing material stocks by value, refer to MM Material Valuation [Ext.].
Planning, Entry, and Documentation of all Goods Movements

Goods movements include both "external" movements (goods receipts from external procurement, goods issues for sales orders) and "internal" movements (goods receipts from production, withdrawals of material for internal purposes, stock transfers, and transfer postings).

For each goods movement a document is created which is used by the system to update quantities and values and serves as proof of goods movements.

You can print goods receipt/issue slips to facilitate physical movements and monitor the individual stocks in the warehouse.
Integration of Inventory Management in the Logistics System

Use

Inventory Management is part of the Materials Management module and is fully integrated in the entire logistics system:

Material is procured from external or internal sources on the basis of the requirements determined by Material Requirements Planning. The delivery is entered in Inventory Management as a goods receipt. The material is stored (and managed under Inventory Management) until it is delivered to customers (Sales & Distribution), or is used for internal purposes (for example, for production).

During all transactions, Inventory Management accesses both master data (such as material master data) and transaction data (such as purchasing documents) shared by all Logistics components.

Features

Integration in Materials Management

As a component of Materials Management, Inventory Management is directly linked with Material Requirements Planning, Purchasing, and Invoice Verification.

Inventory Management provides information for MRP, which takes into account not only physical stocks but also planned movements (requirements, receipts).

When a material is ordered from a vendor, Inventory Management posts the delivery as a goods receipt with reference to the purchase order. The vendor invoice is processed later by Invoice...
Verification. Here, the quantities and values from the purchase order and the goods receipt document are checked to ensure that they match those in the invoice.

**Integration in Production Planning**

Inventory Management is closely linked to the Production Planning module:

- Inventory Management is responsible for staging of the components required for production orders
- The receipt of the finished products in the warehouse is posted in Inventory Management.

**Integration in Sales & Distribution**

As soon as you enter a sales order, you can initiate a dynamic availability check of stocks on hand.

When the delivery is created, the quantity to be delivered is marked as "Scheduled for delivery". It is deducted from the total stock when the goods issue is posted.

It is also possible to create sales order stocks.

**Integration in Quality Management**

In the case of a goods movement, the system determines whether the material is subject to an inspection operation. If so, a corresponding activity is initiated for the movement in the Quality Management system.

**Integration in Plant Maintenance**

Inventory Management is linked with Plant Maintenance as follows:

- It is possible to post goods movements with reference to equipment BOMs.
- It is possible to withdraw parts for maintenance orders.
- When serial number management is active, the individual serial numbers are entered in the case of every goods movement. Serial numbers are managed in the Plant Maintenance system.

**Integration in the Logistics Information System**

With the Inventory Controlling component, the Logistics Information System offers a tool for collecting, compressing, and evaluating inventory management data.

**Inventory Management and the Warehouse Management System**

The Inventory Management system can be extended by the **Warehouse Management system (LE-WM)** which manages storage bins in complex warehouse structures.

While Inventory Management manages the stocks by quantity and value, the **Warehouse Management** component reflects the special structure of a warehouse, and monitors the allocation of the storage bins and any transfer transactions in the warehouse.
Goods Movement

Definition
Transaction resulting in a change in stock.

Structure

- Goods receipt
  A goods receipt (GR) is a goods movement with which the receipt of goods from a vendor or from production is posted. A goods receipt leads to an increase in warehouse stock.
- Goods issue
  A goods issue (GI) is a goods movement with which a material withdrawal or material issue, a material consumption, or a shipment of goods to a customer is posted. A goods issue leads to a reduction in warehouse stock.
- Stock transfer
  A stock transfer is the removal of material from one storage location and its transfer to another storage location. Stock transfers can occur either within the same plant or between two plants.
- Transfer posting
  A transfer posting is a general term for stock transfers and changes in stock type or stock category of a material. It is irrelevant whether the posting occurs in conjunction with a physical movement or not. Examples of transfer postings are:
  - Transfer postings from material to material
  - Release from quality inspection stock
  - Transfer of consignment material into company's own stock
The Document Concept

Document Principle

Even in a computer-supported inventory management system, the accepted accounting principle of no posting without a document applies. According to the document principle, a document must be generated and stored in the system for every transaction/event that causes a change in stock.

When posting a goods movement in the SAP System, the following documents are created:

- **Material document**
  
  In the Inventory Management system, when a goods movement is posted, a material document is generated that serves as proof of the movement and as a source of information for any applications that follow.
  
  A material document consists of a header and at least one item. The header contains general data about the movement (for example, its date). Each item describes one movement.

- **Accounting document**
  
  If the movement is relevant for Financial Accounting (that is, if it leads to an update of the G/L accounts), an accounting document is created parallel to the material document.
  
  In some cases, several accounting documents are created for a single material document. This might be the case, for example, if you have two material document items with different plants that belong to different company codes.
  
  The G/L accounts involved in a goods movement are updated through an automatic account assignment.
  
  For goods receipts for purchase orders, goods movements for stock transport orders and consignment withdrawals, business partners may have different local currencies. Therefore, as well as the local currency, the accounting document must also contain another currency for processing and postings. For this purpose, accounting documents created as a result of these goods movements will automatically be managed in the local currency and in the document currency. You can switch between both currencies by choosing Settings → Currency display.

Changes to a Document

Once you have posted a goods movement, you can no longer change the document. You can only enter additional information in the document, such as the reference to the original document, or a comment on the event. If you want to reverse the movement or change the quantity of material moved, you must enter a new document.

Document Numbers

A material document is identified by a document number and the material document year. An accounting document is identified by the company code, the document number, and the fiscal year.

Usually, the material document number and the accounting document number are different.

The company code to which the accounting document is posted is derived from the valuation area defined for the plant.
The Document Concept

**Transaction/Event Types and Document Types**

In order to allow detailed document number assignment and systematic storage of documents in the document file, material documents are divided into transaction/event types, and accounting documents are divided into document types (see following table).

**Transaction/Event Types and Document Types for Goods Movements (Examples)**

<table>
<thead>
<tr>
<th>Goods movement</th>
<th>Tr./Ev. type</th>
<th>Doc. type</th>
</tr>
</thead>
<tbody>
<tr>
<td>Goods receipts for purchase orders</td>
<td>WE</td>
<td>WE or WN</td>
</tr>
<tr>
<td>Goods receipts for orders</td>
<td>WF</td>
<td>WE</td>
</tr>
<tr>
<td>Goods issues, transfer postings, other goods</td>
<td>WA</td>
<td>WA</td>
</tr>
<tr>
<td>Goods issues for deliveries</td>
<td>WL</td>
<td>WL</td>
</tr>
</tbody>
</table>

For each transaction/event type, a number range is defined for numbers to be assigned to the material documents. For each document type, a number range is defined for numbers to be assigned to the accounting documents.
The Movement Type Concept

What Is a Movement Type?

When you enter a goods movement in the system, you must enter a movement type to differentiate between the various goods movements. A movement type is a three-digit identification key for a goods movement. The following table contains examples of movement types.

Goods Movements and Movement Types

<table>
<thead>
<tr>
<th>Goods movement</th>
<th>Movement type</th>
</tr>
</thead>
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<tr>
<td>Goods receipt for a purchase order</td>
<td>101</td>
</tr>
<tr>
<td>Goods issue for a cost center</td>
<td>201</td>
</tr>
<tr>
<td>Release from quality inspection stock</td>
<td>321</td>
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</table>

Control Functions of the Movement Type

The movement type has important control functions in Inventory Management. For example, the movement type plays an important role in

- updating of quantity fields
- updating of stock and consumption accounts
- determining which fields are displayed during entry of a document in the system
Results of a Good Movement in the System

Use

When you enter a goods movement, you start the following chain of events in the system:

- A material document is generated, which is used as proof of the movement and as a source of information for any other applications involved.
- If the movement is relevant for Financial Accounting, one or more accounting documents are generated.
- The stock quantities of the material are updated.
- The stock values in the material master record are updated, as are the stock and consumption accounts.

Depending on the movement type, additional updates are carried out in participating applications. All updates are based on the information contained in the material document and the financial accounting document. For example, in the case of a goods issue for a cost center, the consumption values of the items are also updated.
Changing a Material Document

As discussed in section The Document Concept [Page 13], you can no longer change a document once it has been posted. If you made a typing error when entering a goods movement (for example, when you entered the quantity), you must reverse the movement with a so-called reversal document (see section Cancelling a Material Document [Page 19]).

Why Change a Material Document?

Although you cannot change a posted document, you can use the function "Change Material Document" to

- enter additional information for the document.
  
  If, for example, when you entered a goods receipt, you entered an unloading point that is not currently available, you can change the unloading point with this function.
  
  When you cancel a document or an item, you can also, for example, enter text in the original document explaining the cancellation. You can enter this text in the document header or in the item.

- print a goods receipt/issue slip for the document (see section Print Functions [Page 214])

Changing a Material Document

To change a material document, follow these steps:

1. From the Inventory Management menu, select Material document → Change. This takes you to the initial screen for this function.

2. Enter the material document number and the material document year. Then press ENTER.
   
   The item overview screen appears. It includes all items contained in the material document.
   
   You cannot change any data on the overview screen. You can change data on the header screen or the item detail screen only.

3. If you want to maintain header data, select Goto → More functions → Header. The screen for maintaining header data appears. On this screen, you can change the document header text.

4. If you want to change item data, select the desired item on the overview screen. The detail screen appears. On this screen, you can change the item text.

5. Select Goto → Overview to return to the overview screen. Post the changes you made.
Displaying a Material Document

Use

You can use this function if you know the number of the material document you want to display. Otherwise, you can display the list of material documents for a material by choosing Environment → List Displays → Material Documents (see Reporting in Inventory Management [Page 227]).

Activities

Choose the function for displaying a material document in the EnjoY transaction for goods movements (MIGO).
Cancelling a Material Document

Use
If you made a typing error or an input error (for example, wrong quantity or wrong movement type) while entering a material document, you must cancel the document, since you can no longer change this data.

Activities
You can reverse a goods movement in two ways:

- You can enter a reversal document that references the original document.
  
  The advantage of this procedure is that you can copy the items to be canceled from the original document. These items cannot be changed.
  
  **Value of the Posting:**
  
  Reversals of goods issues, transfer postings and goods receipts without reference in the system are posted with the value of the original document.
  
  Reversals of goods receipts with reference to a purchase order or production order are posted with the value specified in the purchase order / production order.
  
  Entering a Reversal Document with Reference to a Material Document [Page 20]

- You can enter a material document with the reversal movement type. In this case, you do not reference an already available material document. Instead, you enter all data manually.
  
  **Value of the Posting:**
  
  As there is no reference to a material document, the system re-determines the value of the posting. If the material price has changed, the new material price is used, for example, for a goods issue reversal.
  
  Entering a Material Document With a Reversal Movement Type [Page 21]

SAP recommends that, if possible, you enter a reversal document with reference to the original document since in that case the system proposes the items from the original document in the reversal document and can then create reports on the basis of these reversal documents. To analyze reversal documents, choose Environment → List displays → Cancelled mat. docs.
Entering a Reversal Document with Reference to a Material Document

To cancel a material document by entering a reversal document, follow these steps:

1. Select Material document → Cancel from the Inventory Management menu. This takes you to the initial screen for this function.
2. Enter the document number of the material document to be canceled, along with the material document year.
3. Press ENTER. The item selection list is displayed. The list contains all of the items of the document to be canceled.
4. Select the items you want to cancel.
   To cancel the entire document, select all of the items.
5. To go to the overview screen, select Goto → Overview. Post the document.

See also:  
Function: Copying Items From Other Material Documents [Page 22].
Entering a Material Document with a Reversal Movement Type

Use

You enter a reversal document without reference to a material document in the same way you entered the original material document, but using the reversal movement type. You can use this function to reverse partial quantities, for example.

Activities

For example, to reverse a goods issue for a cost center, you would follow the steps shown here:

You choose the same goods movement that was used in the original document. To reverse a goods issue, choose *Goods movement* → *Goods issue*. Enter the reversal movement type 202 and the data as required. You can then post the document.

You can also enter the reversal document with reference to one or more material documents (see *Function: Copying Items from Other Material Documents [Page 22]*). To do this, choose *Goods issue* → *Cancel w/reference* → *To mat. document*. 
Function: Copying Items From Other Material Documents

To reverse items from other material documents using the same reversal document, select Material document → Cancel ref.... A dialog box appears, in which you enter the document number(s) of the document(s) to be copied.

You can copy the items from the other material documents any of the following ways:

- Press ENTER. The item selection screen appears. On this screen, you can select the items to be copied.
- Select Copy. The overview screen appears.
- Select Copy + details. All of the items from the material documents entered are copied, and the detail screen of the first item appears.

You can select Edit → Cancel on the detail screen to skip the current item if you do not want to copy that item.
Copying a Material Document

If you want to copy items from an existing material document when you create a new document, you can use either of the two functions described in the following sections.

Copying a Material Document

To enter a new document by copying the items from another document, select Material document → Copy (from the Inventory Management menu).

As in the function Material document → Cancel, you enter the document number of the reference document on the initial screen. The items of the reference document are proposed on an item selection screen. All of the data for these selected items (for example, movement type, material, and quantity) is copied into the new document.

Entering a Material Document with Reference to Another Document

Use this function to copy items from one or more material documents when you enter a goods movement.

When you enter a goods movement (for example, a goods issue), select Goods movement (goods issue) → Create w.reference → To material doc... or Material document → Reference.

A dialog box appears in which you enter the document number(s) of the document(s) to be copied.

You can copy the items from the other material documents any of the following ways:

- Press ENTER. The item selection screen appears. On this screen, you can select the items to be copied.
- Choose Copy to adopt all of the items on the material documents entered. The overview screen appears.
- Choose Copy + details to adopt all of the items on the material documents entered. The detail screen of the first item appears.
  You can choose Edit → Cancel on the detail screen to skip the current item if you do not want to copy that item.
Goods Receipt/Issue Slip Numbers

Use

When you enter a material document or a delivery, you can enter a goods receipt/issue slip number (GR/GI slip number) in addition to the material document number.

The GR/GI slip number should only be used in those countries (Italy, for example) where it is required by law for goods that leave the plant and are transported on public roads.

In other countries the material document is usually sufficient, as this is printed on the GR/GI slip number in the standard system. External document numbers can be entered in the fields Material slip and Delivery note.

The GR/GI slip number can be assigned externally as well as internally. You can define different number ranges for each plant, storage location, and movement type.

Activities

Printing Goods Receipt/Issue Slips

In the standard system, the GR/GI slip number is not printed on GR/GI slips. If you want to print this number on GR/GI slips, you have two options of doing so:

- for standard goods receipt/issue slips, you can include the field for the GR/GI slip number in the SAPscript form
- you can call up the form MB_XAB using transaction MBXA. This form contains all of the data that is relevant to transport and can replace the standard GR/GI slip

If you replace the standard GR/GI slip,

- in Customizing for Inventory management, you have to assign a form version to the print report SAPLMBXA in print control
- you have to maintain a printer for user parameter GRD, so that the printout is carried out in the spool

Maintaining Goods Receipt/Issue Slip Numbers When Entering Goods Movements

The initial and header screens for goods movements contain the field GR/GI slip no. (goods receipt/issue slip number).

If assignment of GR/GI slip numbers is active in the plant, you can manually specify a GR/GI slip number when entering goods movements or deliveries. If you do not specify a number, the system assigns it automatically.
Serial Numbers in Goods Movements

Use
The R/3 System allows assignment of serial numbers to serialized materials. Numbers can be assigned internally (by the system) and externally (by the user).

Features

Maintaining Serial Numbers for a Goods Movement
If assignment of serial numbers is mandatory and you enter a goods movement, a dialog box will appear where you either enter your own serial number for each serialized material or have the system assign the numbers. For example, if you post three pieces of a material, you must enter three serial numbers (or have them assigned by the system).

If assignment of serial numbers is not mandatory, you can select Goto → Serial number from the detail screen for an item to maintain the serial numbers.

Stock Transfers
A stock transfer (plant to plant) of materials with serial number management is only possible if the same profile is assigned to the material in both plants.

Stock Transport Orders
For goods movements for stock transport orders with no involvement of the Shipping component, you must enter the serial numbers manually.

When goods movements for stock transport orders involve Shipping, note the following:

- When a goods issue is posted for a delivery, the serial numbers are taken from the delivery.
- When a goods receipt is posted for a delivery, the serial numbers are also taken from the delivery. If you enter the goods receipt referencing the purchase order and not the delivery, however, you must enter the serial numbers manually.

See also:
Serial Numbers in Physical Inventory [Page 180]
Serial Numbers in Inventory Management [Ext.]
Missing Parts Check

Use
A missing parts check is possible at the time of a goods receipt, other receipt, or transfer posting. If the missing parts check function is active in the plant, the system checks whether the material posted as a receipt is a missing part. If it is a missing part, the system issues a warning message and sends an e-mail to the MRP controller responsible in the plant.

Prerequisites
You have to activate the missing parts check function in Customizing for Inventory Management.

Features
There are two types of missing parts messages:

- non-summarized
  The MRP controller receives one e-mail for each material, containing a maximum of five MRP elements.

- summarized
  The MRP controller receives one mail for each material document and plant. This e-mail contains a list of the materials for which there are missing parts (missing part materials), but it does not contain any MRP elements.

You send these e-mails via the output function (output type MLFH).

By selecting Document → Execute, the MRP controller can access backorder processing of the missing part material in order to distribute the quantity received.
Goods Movements via Shipping

Use
If the standard goods receipt/issue slips in Inventory Management are not sufficient or if you want to plan picking, packing, and transportation in detail, you can post goods movements via the Shipping [Ext.] (LE-SHP) application component. The system takes into account all the points that are involved in shipping.

Prerequisites
To create a delivery via Shipping, the following data has to be maintained in the R/3 System (refer to Creating Outbound Deliveries [Ext.]):

- The plant data, sales organization, distribution channel, shipping point, and division
- The sales and distribution data in the material master
- The customer field in the central vendor master record, as the vendor for shipping is also the customer

Features
You can manage the following goods movements via Shipping:

- Goods issues for a delivery
- Stock transfers using stock transport orders
- Returns from the customer
- Return deliveries to vendors
- Returns for stock transport orders

You enter these goods movements from the Shipping menu (transaction code VL01N for Create Outbound Delivery with Reference to Order or transaction code VL01NO for Create Outbound Delivery Without Reference to Order). Goods movements via Shipping are represented in the system by the movement types 6XX. You can find an overview of all the movement types in the Implementation Guide (IMG) for Inventory Management in the step Copy/Change Movement Types.

In Materials Management, you can also enter the following deliveries in the background:

- Return deliveries to a vendor via Inventory Management → Material Document → Return Delivery or via the transaction for goods movements (MIGO) (also refer to Return Delivery [Page 107])
- Provide components for a subcontract order via Purchase Order → Reporting → SC Stocks per Vendor (also refer to Providing Components for Existing Purchase Orders [Ext.])
Goods Movements via Shipping

**Delivery Scheduling**

When you create deliveries via Shipping, you can plan the following activities using the functions of shipment scheduling (refer to Transportation and Delivery Scheduling [Ext.]):

- Material availability date
- Transportation planning date
- Loading date
- Goods issue date

The system takes into account the factory calendar of the issuing plant when it calculates the material availability date.

If you post a goods movement as a delivery, the system creates a delivery, but does not create a material document (refer to Goods Issue [Ext.]).
Material Block (Material Enqueue) for Goods Movements

Use

The system uses the material block to prevent more than one goods movement being posted at a time for the same material and thereby prevent inconsistencies between the stock quantities and the stock values.

There are two types of material block.

Exclusive Material Block

In this procedure, when the material master data is read for the first time for a goods movement, the plant data and the accounting data are locked exclusively up to the end of the goods movement posting. Another user cannot work with the material during this time. This ensures that the goods movement isvaluated correctly and that the stock quantities and values are updated correctly. The disadvantage of this procedure is the long locking time (from the time when the material master data is read for the first time during the entry of the goods movement up to the closing of the update posting).

Late Material Block

This procedure provides for optimization of the material block, as:

- The materials are no longer blocked exclusively, the only exception being when actual data is to be saved.
- The material is blocked exclusively at the latest time possible to keep the blocking time as short as possible.

The advantage of this procedure is that several users can enter goods movements at the same time.

The disadvantage of this procedure is that the material master record is read several times and, in the case of an outward movement, lock entries of other users in the ATP server must be taken into consideration. These additional accesses have a negative effect on performance.

Activities

In Customizing for Materials Management, you can set the material block by choosing General Settings. The configuration applies to all plants in a client.
Goods Receipt

Purpose
You use this component to post the receipt of goods from an external vendor or from production. A goods receipt leads to an increase in warehouse stock.

Features
The R/3 System distinguishes between the following types of goods receipts:
- Goods receipts with reference to a reservation
- Goods receipts with reference to an order
- Other goods receipts
Planning Goods Receipts

Use

The Inventory Management component can handle both planned goods receipts and unplanned goods receipts. Planning a goods receipt in advance means storing certain information that is important for the goods receipt before the actual goods receipt is posted, for example:

- What? (which material?)
- How much? (in which quantity?)
- When? (on which delivery date?)
- From where? (from which vendor or plant?)
- To where? (to which destination, into which stock?)

The goal of this planning is to simplify and accelerate the goods receipt process and to better organize the work at the goods receiving point, so that bottlenecks can be avoided, for example. Also, if goods receipts are planned, Materials Planning can monitor the stocks of ordered or manufactured materials and achieve an optimal inventory balance.

Unless receipts are planned, the system cannot track materials that have been ordered. Planned receipts, therefore, are crucial to regulating the level of inventory in the warehouse. Planned receipts are also important for determining whether you have received materials promised by vendors or in-house production. Without them, the system cannot establish a link between orders and received material.

Features

Depending on the source of information (that is, the document in which the data relevant to planning is stored), the system distinguishes between three types of planned goods receipts:

- planned goods receipts using purchase orders
  If you use the Purchasing component to order materials from a vendor, you do not have to plan goods receipts manually. The purchase orders created by MM Purchasing contain all of the information needed for planning the goods receipt.

- planned goods receipts using production orders
  If you plan production orders with the PP component, you do not need to plan goods receipts from production manually. The orders contain all information necessary to plan a goods receipt.

- planned goods receipts using reservations
  If your company does not have the MM Purchasing component or the PP Production Orders component, you enter reservations to plan goods receipts from the vendor or from production.

  Although reservations can be used to plan goods receipts, their main purpose is to plan goods issues (or withdrawals). Refer to Reservation [Page 136].
Planning Goods Receipts

**Monitoring Planned Goods Receipts**

The planned goods receipts are shown as follows in the output list for the stock overview and plant availability:

<table>
<thead>
<tr>
<th>Planning via...</th>
<th>Stock</th>
</tr>
</thead>
<tbody>
<tr>
<td>Purchase order</td>
<td>Open PO quantity (total)</td>
</tr>
<tr>
<td>Order</td>
<td>Open order quantity (total)</td>
</tr>
<tr>
<td>Reservation</td>
<td>Planned receipts</td>
</tr>
</tbody>
</table>

The documents used to plan goods receipts serve as reference documents for entering the goods movement.
Planning Goods Receipts Using Purchase Orders

Use
If you want to plan goods receipts using the Purchasing component, this component provides two sources of information for planning the receipt of ordered goods:

- the purchase order
- the shipping notification

Features

Information in a Purchase Order
When a purchase order is saved, the receipt of the ordered material is considered to be planned, because the purchase order contains all of the data relevant for the goods receipt, as follows:

Goods Receipt Indicator
This indicator specifies whether a goods receipt is expected to occur for this order item and, thus, whether the item is relevant for Inventory Management.

Vendor
The vendor from whom the goods were ordered is specified here.

Goods Receipt Message
The buyer can define in the purchase order that he/she is informed of every goods receipt. In the case of a goods receipt, he or she receives a corresponding MAIL message.

Material and Quantity
The ordered material and the quantity to be delivered, which are specified in the purchase order, are automatically proposed during entry of the goods receipt.

Underdelivery and Overdelivery Tolerances
The purchasing department can specify in the purchase order that the goods receipt may only be accepted if the delivered quantity lies within the overdelivery tolerance. If the quantity of goods received lies below the underdelivery tolerance, the system issues a warning message.

Planned Delivery Date or Week
Using reports to analyze the delivery dates or delivery weeks specified in the purchase orders, you can determine which deliveries are expected on a particular day, that is, what amount of work is expected at the goods receiving point, and which deliveries are not scheduled to arrive until later.

Latest Possible Delivery Date
For seasonal articles, you can define a date in the purchase order up to which a goods receipt will be accepted. If the goods are delivered after this date, the user receives a warning or an error message when entering the goods receipt.
Planning Goods Receipts Using Purchase Orders

Destination of the Goods

The purchasing department can order a material for the following destinations:

- warehouse
- consumption/usage

If material is intended for the warehouse, the orderer can define a storage location for it. This storage location is then automatically suggested by the system during entry of the goods receipt.

If material is intended for consumption/usage, it does not go into the warehouse but is instead passed on to the point at which it is needed. If, for example, a material was ordered for a cost center, it is delivered directly to the appropriate department.

You can recognize items to be posted directly to consumption by the fact that they have an account assignment category (for example, \(K\)) and an account assignment (for example, cost center). For items to be posted directly to consumption, the purchasing department can enter a recipient or an unloading point in the purchase order. Both specifications are automatically proposed by the system during entry of the goods receipt. Note that you can change the unloading point, but not the recipient.

The purchasing department can also order materials or services for which no material master record is defined. These are usually materials or services that are only purchased once (for example, material for paving a parking lot). The Purchasing department uses a text to describe the materials that do not have a material number and assigns materials to a material group, both of which are entered in the purchase order. These materials are not included in stock; instead, when they are received, they are posted to consumption.

Stock into Which the Goods Should be Posted

The purchasing department can specify in the purchase order whether the material should be inspected or posted directly into unrestricted-use stock.

If the Purchasing department has set the quality inspection indicator in the purchase order item, the system automatically suggests you post the material into quality inspection stock during entry of the goods receipt. At this point, it is still possible to change the indicator and post the material into unrestricted-use stock or into blocked stock. You can also post the material into quality inspection stock, even if the inspection indicator was not set in advance by the purchasing department.

Shipping Instructions

If the Purchasing department has specified any shipping instructions in the purchase order item, you must confirm compliance with these instructions at the time of the goods receipt.

Minimum Remaining Shelf Life

Purchasing can specify a minimum remaining shelf life in the purchase order which is different from the minimum remaining shelf life specified in the material master record.

If the expiration date check function is active, you must enter the shelf life expiration date or the production date of the material at the time of the goods receipt. The system then checks whether the remaining shelf life specified in the purchase order can be observed. If not, either a warning or an error message (depending how the system is configured) is issued.
Batch

If it is known, a batch can already be entered in the purchase order. Note that this batch cannot be changed when the goods receipt is entered.

When entering a goods receipt, you can also search for purchase orders using the following search criteria:

- Vendor
- Material
- Delivery date
- EAN/UPC code
- Material number used by vendor

Information Contained in the Shipping Notification

The shipping notification permits more precise planning of the delivery advised by the vendor. In the shipping notification, Purchasing can record the following data relevant for goods receipt:

- delivery date for each of the notified quantities
- means of transport (for example, truck registration number) When entering the goods receipt, you can search for this number
- bill of lading
- EAN/UPC code
- material number used by vendor
Planning Goods Receipts Using Orders

Use
If you use the Production Order component to plan production orders, this component provides a source of information for planning the receipt of goods manufactured in-house.

Features

Information in an Order
When an order is released, the receipt of the ordered material is considered to be planned, because the order contains all of the data relevant for the goods receipt, as follows:

Goods Receipt Indicator
The goods receipt indicator specifies whether a goods receipt is expected to occur for the order and, thus, whether the order is relevant for Inventory Management.

Plant
The plant specified in the order is the plant where the goods receipt occurs.

Material and Quantity
The material and the quantity manufactured are automatically proposed during entry of the goods receipt.

Underdelivery and Overdelivery Tolerances
Production or Material Requirements Planning can specify that the goods receipt may only be accepted if the delivered quantity lies within the overdelivery tolerance. If the delivered quantity is below the underdelivery tolerance, the system issues a warning message.

Planned Delivery Date
Using reports to analyze the delivery dates specified in the orders, you can determine which deliveries are expected on a particular day, that is, what amount of work is expected at the goods receiving point, and which deliveries are not scheduled to arrive until later.

Destination of the Goods
As in the case of an external purchase order, the following destinations can be defined for a manufactured material:

- warehouse
- consumption/usage

If material is intended for the warehouse, Production or Materials Requirement Planning can define a storage location for it. This storage location is then automatically suggested by the system during entry of the goods receipt.

If a material is intended for consumption/usage, the order contains an account assignment (for example, a cost center, project, sales order, etc.). For items to be posted directly to consumption/usage, Production or Material Requirements Planning, you can enter a recipient or an unloading point in the order. Both specifications are automatically proposed by the system.
during entry of the goods receipt. Note that you can change the unloading point, but not the recipient.

**Stock into Which the Goods Should be Posted**

Production can specify in the order whether the material should be inspected.

If the *quality inspection* indicator is set in the order, the system automatically proposes to post the material into quality inspection stock during entry of the goods receipt. At this point, it is still possible to change the indicator and post the material into unrestricted-use stock or into blocked stock. You can also post the material into quality inspection stock, even if the inspection indicator was not set in advance.
Planning Goods Receipts Using Reservations

Use

You enter reservations for planned receipts for either of the following reasons: to plan goods receipts from production if your company does not use the PP Production Orders component to plan goods receipts from vendors, if your company does not use the MM Purchasing component. These sorts of planned receipts can only be posted to the warehouse; they cannot be posted to consumption/usage.

Activities

To create a reservation, choose Reservation → Create from the Inventory Management menu. (See Create Reservation [Page 138]).
Goods Receipts for Purchase Orders

Use

If your company uses the MM Purchasing component, deliveries from vendors are most likely the result of purchase orders initiated by the purchasing department.

The purchase order is not only the document with which the purchasing department orders goods from the vendor; it is also an important planning and tracking tool for the following departments: Purchasing, Material Requirements Planning (MRP), Inventory Management, and Invoice Verification.

Features

Reference to a Purchase Order

If a material is delivered for a purchase order, it is important for all of the departments involved that the goods receipt entry in the system references this purchase order, for the following reasons:

- Goods receiving can check whether the delivery actually corresponds to the order.
- The system can propose data from the purchase order during entry of the goods receipt (for example, the material ordered, its quantity, and so on). This simplifies both data entry and checking (overdeliveries and underdeliveries).
- The delivery is marked in the purchase order history. This allows the Purchasing department to monitor the purchase order history and initiate reminder procedures in the event of a late delivery.
- The vendor invoice is checked against the ordered quantity and the delivered quantity.
- The goods receipt is valued on the basis of the purchase order price or the invoice price.

How do you find the correct purchase order?

The purchase order number is usually listed on the delivery note, which is attached to the ordered goods and passed on by the vendor to the goods receiving point.

If the purchase order number is not on the delivery note, you can search in the system for the purchase order that initiated the delivery using the material number or vendor number (see Entering a Goods Receipt for a Purchase Order [Page 41]).

Destination of the Goods

Warehouse

If material is intended for the warehouse, the orderer can define a storage location for it. This storage location is then automatically proposed by the system during entry of the goods receipt, and you can accept or change it. If no storage location is entered in the purchase order, you have to specify a storage location when you enter the goods receipt.

Goods receipts for the warehouse can be posted to three different stock types:

- To unrestricted-use stock
Goods Receipts for Purchase Orders

- To stock in quality inspection
- To blocked stock

You can define in the purchase order whether or not the material is to be posted to stock in quality inspection. However, at the time of goods receipt you decide to which stock type the material is posted.

Consumption

If the material is intended for consumption (order items with account assignments), the Purchasing department can specify a recipient or an unloading point. Both specifications are then automatically proposed by the system during entry of the goods receipt. You can still change the unloading point when you enter the goods receipt, but you cannot change the recipient.

Goods receipt blocked stock

You can conditionally accept a delivery. You record such deliveries in goods receipt blocked stock. Unlike goods receipts to the warehouse, the receipts posted to the goods receipt blocked stock are not yet part of the valuated stock.

For the most part, goods receipts into the warehouse and into consumption are posted using the same movement type (see Entering a Goods Receipt for a Purchase Order [Page 41]). Goods receipts into goods receipt blocked stock are explained in Goods Receipts into Goods Receipt Blocked Stock [Page 62].
Entering a Goods Receipt for a Purchase Order

Prerequisites
If you have received the delivery note from the vendor, and you have verified that the delivery was based on a purchase order, you can enter the goods receipt in the R/3 System.

Automatic Generation of Purchase Order at Goods Receipt
If you receive a delivery for which no purchase order exists, you can still post the goods receipt. In this case, the system generates an automatic purchase order at the vendor, if this has been set for each movement type in Customizing. The goods receipt is valuated at the price defined in the purchasing info record in the first instance. To do this, a purchasing organization must be assigned to the receiving plant. You cannot post movements into GR blocked stock with this function.

In the automatic generation of purchase order process, you can also verify an invoice immediately after the goods receipt is posted.

This function is useful if a vendor delivers urgently required material for which you could not enter a purchase order for time reasons.

You can only generate purchase orders automatically for valuated materials and for movement types for which you can enter goods receipts for purchase orders, for example, movement types 101 and 161. For a future release, SAP plans to include this function for non-valuated materials.

Return for Purchase Order
When you are posting a goods receipt for purchase order, you can also enter items that you want to return to the vendor. To do this, you no longer have to reference the purchase order with which the goods were originally delivered. From the item overview, choose Process → Without purchase order → Enter and enter the default values for the new item. Choose 161 (Return for purchase order) as the default value for the movement type. Enter the data for the returns item and post the document.

In Customizing, you can configure the system so that a purchase order is generated in the background for the returns items. This purchase order is required if you want to carry out invoice verification for the credit memos issued by the vendor for the returns.

Procedure
1. From the Inventory Management menu, choose Goods movement → Goods receipt → For purchase order → PO number known or PO number unknown.

This takes you to the initial screen for this function.
2. Enter the data on the initial screen:
   a. Enter the header data.
   b. Select the movement type.
Entering a Goods Receipt for a Purchase Order

If the quantity delivered is intended for the warehouse or for consumption/usage, select \textit{Movement type} \rightarrow \textit{PO to warehouse} (Movement type 101).

If the total quantity is to be posted to GR blocked stock, choose \textit{Movement type} \rightarrow \textit{PO to blocked stock} (see section \textit{Goods Receipts Into Goods Receipt Blocked Stock} [Page 62]).

c. Enter the purchase order number. In addition, you can enter the plant and a purchase order item, in order to restrict selection of the purchase order items.

If you selected \textit{PO number not known}, you can specify search criteria for the purchase orders on the initial screen. The system then displays a list of purchase orders. Select and copy the required purchase order items.

The item selection list is displayed. This list contains all of the purchase order items that satisfy the criteria entered.

3. Select the purchase order items to be copied. If necessary, you can change data in the selected items on this screen.

4. Copy (adopt) the selected items.

5. Post the document.
Entering a Goods Receipt for a Shipping Notification

If a shipping notification for a purchase order exists, you reference this shipping notification when entering the goods receipt. If you do not know the shipping notification number, you can search for it via the transport identification (such as the truck registration number).

To enter a goods receipt with reference to a shipping notification, proceed as follows:

1. From the Inventory Management menu, select Goods movement → Goods receipt → For purchase order → PO number not known. The initial screen of the function appears.
2. Enter the data on the initial screen:
   - If the quantity delivered is intended for the warehouse or for consumption/usage, select Movement type → PO to warehouse (Movement type 101).
   - If the total quantity is to be posted to GR blocked stock, choose Movement type → PO to blocked stock (see section Goods Receipts Into Goods Receipt Blocked Stock [Page 62]).
   - Enter the shipping notification number in the Delivery field.
   - The item selection list is displayed. This list contains all notified purchase order items. For each item, the system suggests the quantity that has been notified.
3. Select those purchase order items that you want to be copied into the material document.
   - If necessary, you can change data in the selected items on this screen.
4. Copy (adopt) the selected items.
5. Post the document.
Results of a Goods Receipt Posting

A goods receipt has the following results in the system:

Creation of a Material Document
When you post a goods receipt, the system automatically creates a material document which serves as proof of the goods movement.
You can display the material document (see Displaying a Material Document [Page 18]).

Creation of an Accounting Document
Parallel to the material document, the system creates an accounting document. The accounting document contains the posting lines (for the corresponding accounts) that are necessary for the movement.
From the screen displaying the material document, you can display the accounting document.

Creation of a Goods Receipt/Issue Slip
When you enter the goods receipt, you can print the goods receipt/issue slip (for example, goods receipt slip or pallet note) at the same time (see Print Functions [Page 214]).

Sending a Mail Message to Purchasing
If the GR message indicator has been set in the purchase order, the buyer automatically receives a message informing him of the delivery.

Stock Update
Which stocks are updated in the material master record depends on the destination of the goods:

- Goods receipt into the warehouse
  If the goods are destined for the warehouse, the system increases total valuated stock and the stock type (for example, the unrestricted-use stock) by the delivered quantity. The stock value is updated at the same time.

- Goods receipt into consumption
  If the goods are destined for consumption, only the consumption statistics are updated in the material master record.
  The system does not update the consumption statistics in the material master record, if you post goods movements using the special stock types Sales order stock and Project stock.

- Goods receipt into goods receipt blocked stock
  If the goods receipt is posted into goods receipt blocked stock (see also Goods Receipts Into Goods Receipt Blocked Stock [Page 62]), the stock level remains the same. The goods are recorded only in goods receipt blocked stock of the purchase order history.

- Goods receipt into a new storage location
  If you post goods into a storage location that does not yet exist for this material, the storage location data is automatically created in the material master record when the goods receipt is posted.
Note, however, that this is only true if automatic creation of storage location data is allowed for both the plant and the movement type in question in the Customizing system. If automatic creation is not allowed, you must add the new storage location to the material master record before you post a goods receipt to it.

**Update of G/L Accounts**

When the goods receipt is posted, the system automatically updates the G/L accounts by the value of the goods receipt (see also MM – Material Price Change [Ext.]).

Updates can also occur in other related applications. In the case of a goods receipt to consumption, for example, the account assignment object (such as a cost center, order, asset, etc.) is debited.

**Updates in the Purchase Order**

When a goods receipt is posted, the following purchasing data is updated:

- **Purchase order history**
  
  During goods receipt posting, a purchase order history record is automatically created. This record contains data essential for Purchasing, such as: the delivered quantity, the material document number and item, the movement type, and the posting date of the goods receipt.

- **Purchase order item**
  
  If the "delivery completed" indicator is set in the material document, the order item is considered closed, and the open purchase order quantity is set to zero.

**Other Updates**

Depending on the characteristics of the material, movement, and components used, additional updates are carried out in other components. For example, a goods receipt is relevant for:

- Entries to be made in the planning file or independent requirements reduction in materials planning
- Statistical data in Inventory Controlling
- Vendor evaluation data in Purchasing
- Transfer requirements and quanta in the Warehouse Management System
- Inspection lots in Quality Management
Underdeliveries, Overdeliveries, and Final Deliveries

Use

During entry of a goods receipt for a purchase order, the system proposes the item's open purchase order quantity as the quantity received. If the quantity delivered differs from the open order quantity, you can change the proposed quantity.

Whenever you enter a goods receipt item, the system compares the quantity delivered with the open order quantity. The R/3 System can therefore determine and report under or overdeliveries immediately.

What Is the Open Purchase Order Quantity?

The open purchase order quantity is the quantity still to be delivered for an order item. It is calculated as the difference between the quantity ordered and the quantity delivered to date. If the entire order quantity or more has already been delivered, the open purchase order quantity equals zero.

The open purchase order quantity is automatically adjusted whenever goods are received for an order item or when the order item is changed.

Underdeliveries

In the standard SAP System, underdeliveries are allowed. The system interprets the quantity received as a partial delivery and accepts it as such. The system issues a warning message indicating that there has been an underdelivery.

It is also possible to enter an underdelivery tolerance percentage in the order item. When a quantity of goods is received that lies within the underdelivery tolerance range, the quantity is interpreted as a partial delivery and is accepted as such. The system does not issue a warning message. If the quantity of goods received lies below the underdelivery tolerance, the system issues a warning message.

If the underdelivery is not a partial delivery but a final delivery, you have to set the "delivery completed" indicator.

In the Customizing system, you can define that the "delivery completed" indicator is set automatically if the underdelivery lies within the tolerance limits. In this case, the system interprets any underdeliveries within the tolerances as final deliveries.

Overdeliveries

In the standard SAP System, overdeliveries are not allowed. In the event of an overdelivery, the system issues an error message.

If overdeliveries are to be allowed, the following data can be maintained in the purchase order:

- Unlimited indicator
  
  If this indicator is set, overdeliveries of any size are allowed. The system does not issue any message.

- Overdelivery tolerance
In the purchase order, an overdelivery tolerance percentage can be specified. If a quantity of goods is received that is larger than the order quantity plus the overdelivery tolerance, it is not accepted by the system.

"Delivery completed" indicator

The "delivery completed" indicator specifies whether an purchase order item is considered closed. This means that no more goods receipts are expected for this item. If the "delivery completed" indicator is set, the open purchase order quantity becomes zero, even if the full quantity has not been delivered. It is still possible to post goods receipts of remaining quantities, but these no longer change the open purchase order quantity.

In Customizing for Inventory Management, you can define that the "delivery completed" indicator is set automatically in the order if:

- the total quantity was delivered
- the underdelivery or overdelivery lies within the tolerances

If an underdelivery lies outside the tolerances, you can set this indicator manually for the order item during entry of the goods receipt to indicate that delivery for the order item is to be considered complete.

If you enter a return delivery or reversal for an item whose "delivery completed" indicator has already been set, so that the delivered quantity falls below the underdelivery tolerance limit, the “delivery completed” indicator is automatically reset. In this case, the system issues a warning message informing you that the “delivery completed” indicator has been reset. If you are not expecting another delivery, you can reset the “delivery completed” indicator manually. After you do this, the system will no longer change the “delivery completed” indicator automatically.

The “delivery completed” indicator has the following effects:

- The purchase order item is considered closed, even though the total quantity may not have been delivered.
- Although a further delivery is not expected, it is still possible.
- At the time of the next goods receipt, the system suggests the item as unselected in the item selection list.
- The purchase order item can be deleted, even if the total quantity was not delivered.

Although the “delivery completed” indicator is not set, a purchase order item is still considered closed if the full quantity has been delivered. In this case, the “delivery completed” indicator is not required.
Several Goods Receipt Items Per Order Item

Use
If you post a goods receipt with reference to a purchase order, the system converts every selected order item into a goods receipt item. This means that exactly one goods receipt item is created for each order item.

In some cases, however, several goods receipt items may be required for an order item, for example if:

- The delivered material is to be placed into storage in several storage locations
- A partial quantity is to be posted to quality inspection
- The delivered quantity consists of several batches

The following two functions enable these cases to be handled in a single document:

- Distributing quantities
- Distributing quantities among storage locations or batches

Activities

Distribute Quantity
You use this function to post a partial quantity into quality inspection stock or into goods receipt blocked stock, for example.

To distribute an item’s quantity when you enter a goods receipt with the transaction for goods movements (MIGO), place the cursor on the required line and choose Distribute quantity. A dialog box is displayed in which you can distribute the quantity among several storage locations, stock types, or movement types. You can find out which quantity you have already distributed by choosing Check. The system displays this quantity in the Already distributed: field. If you have distributed the total quantity, you can copy your entries to the item overview by choosing Adopt.

Distributing Quantities Among Storage Locations or Batches
To distribute the delivered quantity among several storage locations or batches, you can use the storage location/batch selection list: In this selection list, you can distribute the quantity of order items among various storage locations or batches. The system creates a goods receipt item for every item on the list.

To distribute the quantity of an order item among various storage locations or batches, enter * in the Storage Location field. In the case of a material that is not handled in batches, the storage location selection list appears. In the case of a material that is handled in batches, the storage location selection list and batch selection list appear.

Storage Location Selection List
If the material is not handled in batches, the storage location selection list contains all of the storage locations at which the material is stored.
Storage Location and Batch Selection List

If the material is handled in batches, the selection list contains all of the batches of the material, with the respective storage location. If you enter a storage location and * in the Batch field, the selection list contains only the batches in the specified storage location.

Remember that the batch selection list does not work with special stocks.
Goods Receipts Using the Order Price Unit

Use

If the purchase order contains an order price unit that differs from the order unit (for example, order quantity in pieces, order price refers to kilos), you must enter the goods receipt in both units.

Entering the goods receipt quantity in both units of measure is important for three reasons:

- The goods receipt is valuated on the basis of the goods receipt quantity in the order price unit.
- Invoice verification is based on the goods receipt quantity in the order price unit.
- Entering the goods receipt in the order price quantity allows the system to immediately detect and report variances in the order price quantity during the goods receipt.

Variance Tolerances

In the Customizing system for Inventory Management, you can define two tolerances for variances in the order price quantity:

- Tolerance for an error message: if the variance is larger than this tolerance specified, the system issues an error message, and you cannot post the goods receipt.
- Tolerance for a warning message: if the variance reaches this tolerance specified, the system issues a warning message during entry of the goods receipt. However, you can still post the goods receipt. The buyer receives a message pointing out the discrepancy.

Activities

Assume you ordered a material in pieces (100 pieces), but the vendor calculates quantities in kilograms (because the material contains precious metals, for example). One piece weighs 4 kg and 1 kg costs $10 (currency USD). The total value of the ordered goods is therefore $4000.

When the goods arrive, they are counted and weighed at the goods receiving point. This process reveals that each piece weighs 4.4 kg. You post the goods receipt in the system (see Entering a Goods Receipt for a Purchase Order [Page 41]).

As an order price quantity, the system proposes the entered goods receipt quantity, converted with the conversion factor specified in the purchase order. In the example, the system proposes 400 kg for the 100 pieces.

Check the proposed quantity in the order price unit and correct it if the measured quantity differs from it. In the example, you would change the 400 kg to 440 kg. This corresponds to a variance of 10 % in the order price quantity.

Results of the Goods Receipt Posting

The delivered quantity is updated in the purchase order in both units of measure, and the value of the goods receipt (in this case, $4400) is recalculated on the basis of the correction. This is evident in the statistical data of the purchase order item.

See also:

Purchase Order Price Quantity Variance [Ext.]
Changing the Format of the Selection Screen

Use
At the time of a goods receipt for a purchase order, you may have to change the display format of the selection list in a way that allows you to maintain the following data:

- Vendor material (material number used by vendor)
- EAN number
- Shelf life expiration date/production date
- Reference document

Activities
From the initial screen, or selection screen, choose Edit → Format and the desired option.

The format “Shelf life expiration date” is only displayed if the shelf life expiration date check is active for the material.

Setting a User Parameter
If you always use one specific format, you can predefine it in the user parameter SIC. This parameter can be defined as follows:

- 00 format including material number (default)
- 01 format including vendor material
- 02 format including EAN
- 03 format including shelf life expiration date and date of production
- 04 format including reference document (material document in goods-receipt-based Invoice Verification)
Entering EAN/UPC

When entering a goods receipt for a purchase order, you can also enter an International Article Number/Universal Product Code (EAN/UPC) or copy it from the purchase order.

In the material master record, you can define one or more EANs/UPCs for each unit of measure. Numbers can be assigned both internally and externally.

It is not possible to enter a EAN/UPC for a purchase order item in the purchase order. However, the EAN/UPC for the order unit is stored in the purchase order.

When you enter a goods receipt for a purchase order, you can specify the following two EAN/UPC:

- **EAN for OUn (order unit)**
  
  At the time of a goods receipt for a purchase order, the system suggests the EAN/UPC for the order unit from the purchase order. If you enter a different EAN/UPC, the system checks whether this number already exists for the unit of measure in the material master record. If it does not exist, the system reacts as follows:

  - If numbers are assigned externally, the new EAN/UPC is created if it is valid.
  - If numbers are assigned internally, the system issues an error message.

- **EAN check**

  For checking purposes, you can enter another EAN/UPC for another unit of measure (suggestion: stockkeeping unit) in addition to the EAN/UPC for the order unit. If the EAN/UPC does not yet exist, the system creates it in the material master record provided that numbers are assigned externally.

You can maintain the EAN/UPC on the detail screen of an item or in the item selection list (format including EAN).
Entering a Freight Supplier

Use

When you enter a goods receipt for a purchase order, you can specify a freight supplier (also called freight vendor) that differs from the vendor in the purchase order. The system assigns the delivery costs to the vendor.

Prerequisites

- You can only enter a freight supplier if the condition type for delivery costs allows you to do so in Customizing for Purchasing, i.e. when the Vendor GR indicator is set.
- You can only enter a freight supplier if it is defined in the condition type in the purchase order.

Activities

On the detail screen for the item, choose Goto → Freight supplier.

A dialog box appears in which you can assign a freight supplier to the condition type.
Shelf Life Expiration Date Check

Use

You can check the shelf life of a material when you enter a goods receipt. You thereby ensure that you store only materials that are still usable.

Prerequisites

The shelf life is only checked if the following prerequisites are met:

- The minimum remaining shelf life is maintained in the material master record or in the purchase order. The minimum remaining shelf life is the minimum number of days for which the material must keep for the goods receipt to be accepted by the system.

- The shelf life expiration date check is active for the plant and movement type in Customizing for Inventory Management.

Features

Relevant Indicators in Material Master Record

In the material master record, the following indicators are relevant to the expiration date check:

- Minimum remaining shelf life in days
- Total shelf life in days
  - If you do not enter a total shelf life, enter the shelf life expiration date directly at the time of a goods movement.
  - If you do enter a total shelf life, enter the date of production at the time of a goods movement. The system automatically calculates the expiration date from the date of production plus total shelf life.

Both indicators are located in the storage data of the material master record.

Activities

Enter Shelf Life Expiration Date/Production Date

You can maintain the production date or shelf life expiration date in the detailed data for an item each time you enter a goods movement.
Shelf Life Expiration Date Check for Materials W/o Batch Mgmt Reqmt

Use
The following functions are supported when a material is not handled in batches:

- Entry and Check Upon Goods Receipt
- Printout on Goods Receipt/Issue Slip

Features

Entry and Check upon Goods Receipt
If the expiration date check function is active, you must enter the shelf life expiration date or the production date of the material at the time of the goods receipt.

Upon goods receipt, the system checks whether the remaining shelf life is sufficient to satisfy the remaining shelf life required in the purchase order or in the material master record. If it is not, the system issues a warning message or error message (depending on how the system is configured).

When you post the goods receipt, the shelf life expiration date is recorded in the material document.

Printout on Goods Receipt/Issue Slip
The expiration date is printed on the goods receipt/issue slip.

If the Warehouse Management system (LE-WM) is active, the expiration date is recorded in the transfer requirement, in the transfer order, and in the quant. In this case, the printed transfer order serves as a pallet note.
Expiration Date Check for Materials Handled in Batches

Use
If a material is handled in batches, the following functions are supported when the expiration date is checked:

- Entry and Check at Goods Receipt
- Printout on Goods Receipt/Issue Slip
- Analysis of Batches According to Shelf Life Expiration Date
- Batch Determination by Expiration Date upon Goods Issues

Features

Entry and Check at Goods Receipt
If the expiration date check function is active, you must enter the shelf life expiration date or production date of the batch at the time of the goods receipt.

Upon goods receipt, the system checks whether the remaining shelf life is sufficient to satisfy the remaining shelf life required in the purchase order or in the material master record. If it is not, the system issues a warning message or error message (depending on how the system is configured).

When you post the goods receipt, the shelf life expiration date is recorded in the material document and in the batch master record.

If the batch already exists, the system also checks whether the shelf life expiration date specified or determined at the time of the entry corresponds with the expiration date contained in the material master record. If the dates are different, the system issues either a warning message or error message (depending on how the system is set). If you post the goods receipt despite receiving a warning message, the system overwrites the old shelf life expiration date in the batch master record.

Printout on Goods Receipt/Issue Slip
The expiration date is printed on the goods receipt/issue slip.

Analysis of Batches According to Shelf Life Expiration Date
You can generate an expiration date list (SLED list), which contains the following data for each batch: remaining shelf life, shelf life expiration date, and quantity. To do this, choose Environment → Stock → Expiration date list from the Inventory Management menu.

Batch Determination by Expiration Date upon Goods Receipts
If you enter a goods issue in Inventory Management or a delivery in Sales and Distribution, you can use the batch determination function to select batches according to the shelf life expiration date.

If the Warehouse Management system (LE-WM) is active, the expiration date is recorded in the transfer requirement, in the transfer order, and in the quant. In this case, the printed transfer order serves as a pallet note. Batch determination can take place in Warehouse Management, Inventory Management, or Sales and Distribution.
Expiration Date Check for Materials Handled in Batches

See also:
Batch Determination [Page 203]
Goods Receipt of Non-Valuated Materials

Use
If the stock of a given material is only managed on a quantity basis, an account assignment must be defined in the purchase order. However, this account assignment does not result in the goods receipt being posted to consumption/usage. Instead, it results in the costs being debited to the account assignment object.

The goods receipt is posted to the warehouse stock, thus increasing the unrestricted-use stock of the material.

It is not possible to post goods receipts of non-valuated materials directly into consumption/usage. You have to post the goods receipt into the warehouse first and then enter a goods issue.
Shipping Instructions

Purchasing can specify packaging and shipping instructions in the order item. If compliance with shipping instructions is to be used as one of the criteria for vendor evaluation, it is necessary to check during goods receipt whether the vendor has complied with these instructions or not.

If the order item contains shipping instructions, a box will be displayed automatically during goods receipt where you can confirm compliance with the shipping instructions.

You can manually display this window by selecting \textit{Goto} \rightarrow \textit{More functions} \rightarrow \textit{Shipping instr.}... from the item’s detail screen.
Goods Receipt When Quality Management (QM) is Active

The SAP System differentiates between two different forms of quality management:

- Quality Management in Material Procurement
- Quality Management in Material Inspection

**Quality Management in Material Procurement**

If quality management is active for procurement, you can define in the material master record (Quality Management screen) that a certificate is required for the material.

If a certificate is required, the system displays a box during goods receipt for a purchase where you can confirm the receipt of a certificate.

**Quality Management in Material Inspection**

If an inspection at the time of goods receipt has been defined for the material, the system automatically creates an inspection lot when the goods receipt is posted. Quality Management uses this inspection lot to carry out the inspection.

For detailed information on the Quality Management system, see the QM Guide Inspection Process.
Goods Receipts into Goods Receipt Blocked Stock

Use

Material can flow directly from goods receipt into consumption/usage or into the warehouse. However, it may also be placed into a blocked stock area first.

Using the stock type, you can post the material into quality inspection stock or into blocked stock. In both cases, the material is already managed in the stock. Alternatively, the material can be conditionally accepted. Conditionally accepted deliveries for a purchase order are recorded in **goods receipt blocked stock** (GR blocked stock).

The quantity posted into goods receipt blocked stock is not added to the inventory or managed as part of the inventory. It is only recorded in the purchase order history.

You would use goods receipt blocked stock, for example, if the vendor's certificate for the delivered quantity were missing, or if you wanted to inspect a small quantity of the material before posting the actual goods receipt.

When the conditions for acceptance are met, the material can be accepted into stock (for example, into unrestricted-use stock). The goods receipt is not valuated until this point.

If the goods are to be returned to the vendor, instead, they can be taken directly from goods receipt blocked stock. Note, however, that a return delivery is possible even if the material was already posted into stock.
Posting a Goods Receipt into Goods Receipt Blocked Stock

When you post a goods receipt into goods receipt blocked stock, you must first decide whether you want to post the entire delivery or only specific items into goods receipt blocked stock.

Posting the Entire Delivery

To post all items of a purchase order into goods receipt blocked stock, proceed as described in the section Entering a Goods Receipt for a Purchase Order [Page 41], but use movement type PO to blocked stock (103) instead of movement type PO to warehouse (101).

All of the order items are posted into goods receipt blocked stock with movement type 103.

Since the material is not to be added to the inventory yet, do not enter a storage location.

Apart from these differences, you can follow the procedure described in the section Enter Goods Receipt for Purchase Order.

Posting Specific Items Only

You only want to post certain items rather than the whole delivery into goods receipt blocked stock.

If you only want to post certain items into goods receipt blocked stock, you post the goods receipt as described in “Entering a Goods Receipt for a Purchase Order” and enter the items as follows:

1. Choose Goods Movement → Goods Receipt → For Purchase Order.
2. Maintain the data on the initial screen. Select movement type 101 (PO to warehouse).
3. On the item selection list, deselect (that is, remove the check mark from) the items that you want to post into goods receipt blocked stock. For all other items, use movement type 101 (PO to warehouse). Note the item numbers of the order items you want to post into goods receipt blocked stock.
4. To enter new items, choose Goods receipt → Create w. reference → To purchase order.
5. A window appears. In the box, enter the following data:
   a) Movement type 103 (or select the movement type for Goods receipt for PO into blocked stock via the possible entries button)
   b) The purchase order number and the item numbers of the order items you want to post into goods receipt blocked stock.
6. Press ENTER. The new items are copied with movement type 103 into the item selection list. No storage location is specified for these items.
7. Process all selected items and post the material document.

Results of the Goods Receipt Posting

A goods receipt posting into goods receipt blocked stock has the following results:

- **Creation of the material document**
  
  If the entire delivery is posted into goods receipt blocked stock, the material document serves only as a log recording the arrival of the goods.
Posting a Goods Receipt into Goods Receipt Blocked Stock

For line items that are posted into goods receipt blocked stock no accounting-relevant posting lines are created. No accounting document is created.

- **Stock update**
  In a goods receipt into goods receipt blocked stock, neither total valued stock nor any of the stock types are updated. Goods receipt blocked stock is increased in the purchase order history.

- **Update of G/L accounts**
  No values are posted to accounts, since the actual goods receipt has not yet been entered.

- **Updates in the purchase order**
  However, the open purchase order quantity is **not** reduced by this quantity.
Displaying Goods Receipt Blocked Stock

Use

You can display goods receipt blocked stock from two viewpoints:

- Goods receipt blocked stock for a material (at plant level)
- Goods receipt blocked stock for a purchase order item

Activities

Displaying goods receipt blocked stock for a material

Choose Environment → Stock → Stock overview. From the basic list, you can call up the plant stocks, in which the GR blocked stock is also displayed.

Displaying goods receipt blocked stock for a purchase order item

Choose Environment → Information → Purchase order. In the display for the purchase order you have chosen, select an item and choose Item → Statistics → General.

By choosing Item → Statistics → PO history and then Views → Blocked stock you can display the purchase order history with respect to goods receipt blocked stock.
Releasing Material from Goods Receipt Blocked Stock

Once the conditions of acceptance for a delivery are met, the material can be released from goods receipt blocked stock, and its goods receipt can be posted into stock or consumption.

You can use either of the following two documents as a reference for the return delivery:

- **the material document** with which you posted the goods into goods receipt blocked stock
- **the purchase order** to which the goods receipt referred

**Using the Material Document**

When you use as a reference the material document that was created for posting the material into goods receipt blocked stock, the system proposes for release only those items from the material document that were posted into goods receipt blocked stock. Order items that were posted into goods receipt blocked stock with another material document are not proposed.

To release a material from goods receipt blocked stock using a material document, follow the steps shown here:

1. From the Inventory Management menu, choose **Material document → Release blocked stock**. The initial screen for the function is displayed.
2. On the initial screen, enter the number of the material document you want to reference, along with the material document year.
3. Press **ENTER**. The item selection list is displayed. The list contains all of the items from the material document that were posted into goods receipt blocked stock. The system gives the items movement type **105** (blocked stock to warehouse).
4. Select and edit the items you want to release. If items are intended for the warehouse, enter a storage location. Enter a stock type, if required.
5. Post the document.

**Using the Purchase Order**

If you use the purchase order as a reference, all of the order items that were posted into goods receipt blocked stock are proposed for release.

You enter the release from goods receipt blocked stock like a normal goods receipt for a purchase order, except that you use movement type **105** (*Blocked stock to warehouse*) instead of movement type **101** (*PO to warehouse*).

1. Select **Goods movement → Goods receipt → For purchase order**.
2. Maintain the data on the initial screen. Select movement type **105** (*Movement type → Blocked st. to whse*).
3. Press **ENTER**. The item selection list is displayed.
4. Select and edit the items you want to release. If items are intended for the warehouse, enter a storage location. Enter a stock type, if required.
5. Post the document.

**Results of the Goods Receipt Posting**

A release from goods receipt blocked stock has the following results:
• **creation of the material document**
  
  A material document is created as proof of the goods receipt. Since the goods receipt is valuated, an accounting document is also created.

• **stock update**
  
  In the purchase order history, goods receipt blocked stock is reduced by the received quantity. If the goods are intended for the warehouse, total valuated stock and the stock type to which the posting has been made are increased accordingly. If the purchase order item has an account assignment, consumption of the material is increased.

• **update of G/L accounts**
  
  The system valuates the items of the goods receipt the same way it valuates items procured through a purchase order.

• **updates in the purchase order**
  
  The release leads to an update of the purchase order history. The open purchase order quantity is reduced by the received quantity.
Goods Receipts for Orders

Use

If your company uses the PP Production Orders component, deliveries from production are the result of orders used as a basis for manufacturing the materials required.

The production order is not only the document on the basis of which a material is manufactured; it is also an important planning and tracking tool for the following departments: Materials Planning and Inventory Management.

Features

Reference to an Order

When material resulting from a production order is delivered, it is important for the departments involved that the goods receipt entry in the system reference this order, for the following reasons:

- Goods receiving can check whether the delivery actually corresponds to what has been planned.
- The system can propose data from the order during entry of the goods receipt (for example, the material produced, its quantity, and so on). This simplifies both the data entry and checking (overdeliveries and underdeliveries).
- The quantity delivered and the delivery date are updated in the order.

The order number is usually listed on the slip accompanying the delivered material. If it is not listed on the slip accompanying the delivered material, you can find the order pertaining to the delivery via the material number (see Entering a Goods Receipt for an Order [Page 70]).

Destination of the Goods

Finished goods can be posted either to the warehouse or consumption. Goods receipts into the warehouse and into consumption are posted with the same movement type.

Warehouse

If the material is intended for the warehouse, a storage location can be defined in the order. This storage location is then automatically proposed by the system during entry of the goods receipt, and you can accept or change it. If no storage location has been entered in the order, you must define a storage location when you enter the goods receipt.

Goods receipts for the warehouse can be posted to three different stock types:

- Unrestricted-use stock
- Stock in quality inspection
- Blocked stock

It can be defined in the order whether or not the material is to be posted to stock in quality inspection. However, at the time of goods receipt you decide to which stock type the material is posted.
Consumption

If the material is intended for consumption (order items with account assignments), a recipient or an unloading point can be specified in the order. Both specifications are then automatically proposed by the system during entry of the goods receipt. You can still change the unloading point when you enter the goods receipt, but you cannot change the recipient.
Entering a Goods Receipt for an Order

Prerequisites
If you have received the accompanying documents for the goods, and have verified that the delivery resulted from an order, you can enter the goods receipt.

Procedure
   The initial screen appears.
2. Enter the data required:
   a) Enter the header data.
      Document header data consists of general information about the material document.
   b) Choose the desired movement type.
      If the delivered quantity is intended for the warehouse or for consumption/usage, choose Movement type → Order to warehouse (movement type 101).
   c) Enter the order number. When you choose Goods receipt → Create w. reference → To order... from the menu, a dialog box appears in which you can enter criteria such as plant and material to find the appropriate order.
   d) Choose Continue. You obtain a list of orders corresponding to the entered criteria. In this list, you can select individual order items and adopt them using the Copy function.
      The item selection list appears. This list contains all of the items (materials) that satisfy the criteria entered. If you entered or selected only one order, the list contains only one item.
3. Select the items that you want to be copied into the material document.
   If necessary, you can change data in the selected items on this screen.
4. Copy (adopt) the selected items.
5. Post the document.

Result
A goods receipt for an order has similar effects in the R/3 System as those of a goods receipt for a purchase order (refer to Results of a Goods Receipt Posting [Page 44]).

The following data in the order is also updated when a goods receipt is posted:
- The goods receipt quantity is updated in the order as the quantity produced.
- The order status is set to fully delivered or to partially delivered.
Underdeliveries, Overdeliveries, and Final Deliveries

Use

During entry of a goods receipt for an order, the system proposes the open order quantity as the quantity received. If the quantity delivered differs from the open order quantity, you can change the proposed quantity. The system compares the quantity delivered with the open order quantity. The R/3 System can therefore determine and report under or overdeliveries immediately.

"Delivery Completed" Indicator

The "delivery completed" indicator specifies whether the delivery for an order is considered complete. This means that no more goods receipts of the material produced are expected for this order. The order then has the status fully delivered. If the "delivery completed" indicator is set, the open order quantity becomes zero, even if the full quantity has not been delivered. You can still post goods receipts for remaining quantities, but these no longer change the status.

The functions you can carry out for underdeliveries, overdeliveries, and final deliveries when you receive goods for an order are the same as those you can carry out when you receive goods for a purchase order (refer to Underdeliveries, Overdeliveries, and Final Deliveries [Page 46]).
Goods Receipt of By-Products

Use
The SAP System allows you to post receipts of planned by-products and unplanned by-products directly from an order or a network.

A by-product is a product that is created automatically during the production process of another item, the main product. For example, coke and tar are obtained as by-products in the production of gas.

Unplanned By-Products
If the by-product has not been planned in the order, you must enter the goods receipt manually.

Planned By-Products
A by-product can be planned in the order as a component with negative quantity. For this component, a reservation item is created automatically with movement type 531 (receipt of by-product). You can enter the goods receipt as follows:

- automatically during order completion confirmation
- manually with reference to the order or reservation
Entering an Unplanned Goods Receipt

1. From the Inventory Management menu, choose Goods movement → Goods receipt → Other.
   The initial screen for this function appears.

2. Enter the data on the initial screen:
   a. Enter the header data.
   b. Choose Movement type → Receipt → By-product → To unrestricted (531) or From network to unrestricted (581).
   c. Enter the default values (plant and, if required, storage location) for the individual items.

3. Choose Continue. The collective entry screen appears. On this screen, enter the individual items. You can enter the order or the network number representing the account assignment object for the movement.

4. Check data on the overview screen.

5. Post the document.
Entering a Planned Goods Receipt

**Prerequisites**

To enter the receipt of a planned by-product manually, you have to reference the order or the reservation when you enter the goods movement. This will cause the order and the reservation to be updated.

You can enter the goods receipt as follows:

- together with the goods issue of the components
- by means of a separate posting

**Entering Goods Receipt Together With Goods Issue of Components**

1. From the Inventory Management menu, select *Goods movement → Goods issue*. The initial screen for this function appears.
2. Enter the data on the initial screen:
   a. Enter the header data.
   b. Choose *Goods issue → Create w. reference → To order... or To reservation...*
      
      A dialog box appears in which you can enter the order number or the reservation number. In the *By-products* field, enter the value 1, so that the system also takes the by-products reservation items into account.
3. The system displays the item selection list for the order or the reservation. The list comprises several pages containing
   - the by-product items (movement type 531)
   - the component items (movement type 261)
   
   On each page, select, edit, and adopt (copy) the required items.
4. Check data on the overview screen.
5. Post the document.

**Entering Goods Receipt Separately**

1. From the Inventory Management menu, select *Goods movement → Goods receipt → Other*. The initial screen for this function appears.
2. Enter the data on the initial screen:
   a. Enter the header data.
   b. Choose *Goods receipt → Create w. reference → To order... or To reservation...*
      
      A dialog box appears in which you can enter the order number or the reservation number. In the *By-products* field, enter the value 2, so that the system only selects the by-products reservation items.
3. The system displays the item selection list for the order or the reservation. The list only contains the by-product items (movement type 531).

   On each page, select, edit, and adopt (copy) the desired items.

4. Check data on the overview screen.

5. Post the document.
Other Goods Receipts

Use
In addition to the goods receipts described previously, you can enter goods receipts without referencing another document. You enter such goods receipts by selecting *Goods movement → Goods receipt → Other.*

Features
You can enter the following types of goods receipts this way:

- **initial entry of stock balances**
  Using this goods movement, you can transfer book inventory balances from an existing system to the R/3 System when you first implement the *Inventory Management* component.

- **external goods receipts without a purchase order**
  If your company does not use the MM Purchasing component, you enter an external receipt as a miscellaneous goods receipt. You can plan such a movement with a reservation.

- **internal goods receipts without a production order**
  If your company does not use the PP Production Orders component, you enter a receipt from production as a miscellaneous (other) goods receipt. You can plan such a movement with a reservation.

- **goods receipts of by-products**
  Goods receipts of by-products can also be entered as miscellaneous goods receipts (see *Receipt of By-Products* [Page 72]).

- **deliveries free of charge**
  If you receive a delivery from a vendor free of charge for which no purchase order was placed, you must enter the receipt of the goods as a miscellaneous (other) goods receipt.

- **returns from the customer**
  Even without a returns delivery, you can post returns from a customer into blocked stock returns.
Initial Entry of Inventory Data

Use

You must carry out an initial entry of stock balances when implementing the R/3 System in order to transfer physical warehouse stocks or book inventories from an existing system into the R/3 System as book inventories. No physical movements actually take place. The initial entry of stock balances can be carried out for the following three stock types:

- Unrestricted-use stock
- Stock in quality inspection
- Blocked stock

If the stocks are to be transferred from a legacy system, the initial entry of stock balances for large volumes of data is carried out via the Data Transfer Workbench (see MM Goods Movements: Data Transfer Workbench [Ext.]).

You can also carry out the initial entry of stock balances manually.

Activities

You use the following movement types to enter an initial entry of stock balances manually:

- Unrestricted-use stock (561)
- Stock in quality inspection (563)
- Blocked stock (565)

The quantity taken over into book inventories is posted to the appropriate stock and increases the total valued stock of the material.
Entering an External Goods Receipt Without a Purchase Order

Prerequisites

If your company does not use the Purchasing component, you cannot reference a purchase order from the R/3 System when entering a goods receipt. In this case, you enter the external goods receipt as a miscellaneous (other) goods receipt.

You can plan this type of movement with a reservation (see Planned Goods Receipts using Reservations [Page 38]).

Procedure

1. From the Inventory Management menu, choose Goods movement → Goods receipt → Other.
2. Enter the data on the initial screen:
   a. Enter the header data.
   b. Choose the movement type Receipt → W/o purchase order and select the desired stock type.
   c. Enter a plant and, if necessary, a storage location as defaults for the items in the document.
3. Maintain the data on the collective entry screen:
   a. If required, enter a vendor.
   b. Enter the items.
4. Check data on the overview screen.
5. Post the document.

Result

The delivered quantity is posted into the appropriate stock and increases the total valued stock of the material.
Entering an Internal Goods Receipt Without a Production Order

Prerequisites

If your company does not use the PP-Production Orders component, you cannot reference a purchase order from the R/3 System when entering a goods receipt. In this case, you enter the internal goods receipt as a miscellaneous (other) goods receipt.

You can plan this type of movement with a reservation (see Planned Goods Receipts using Reservations [Page 38]).

Procedure

1. From the Inventory Management menu, choose Goods movement → Goods receipt → Other.
2. Enter the data on the initial screen:
   a. Enter the header data.
   b. Choose the movement type Receipt → W/o production order and choose the required stock type.
   c. Enter a plant and, if necessary, a storage location as defaults for the items in the document.
3. Maintain the data on the collective entry screen:
   a. Check account assignment data. If necessary, enter the order number representing the account assignment for the goods movement.
   b. Enter the items.
4. Check data on the overview screen.
5. Post the document.

Result

The delivered quantity is posted into the appropriate stock and increases the total valuated stock of the material.
Entering a Goods Receipt With Reference to a Reservation

Prerequisites
If the external or internal goods receipt has been planned with a reservation, you can link the goods receipt to the reservation.

Procedure
1. From the Inventory Management menu, choose Goods movement → Goods receipt → Other.
2. Enter the data on the initial screen:
   a. Enter the header data.
   b. You do not need to enter the movement type or the plant, because these values are copied automatically from the reservation.
3. Choose Other goods receipts → Create w.reference → To reservation....
   A dialog box appears for selecting the reservation. Depending on whether you know the reservation number or not, proceed as follows:

   **Entering a Reservation Directly**
   If you know the reservation number, you can enter it. You can also enter a reservation item number.

   **Searching for a Reservation**
   If you do not know the reservation number, you can search for it by entering selection criteria in the dialog box (for example, material number and plant).
   The system displays the list of selected items. You can select and adopt (copy) the desired items.

   **Extended selection**
   If you set the Extended sel. indicator, the system displays a dialog box in which you can enter selection criteria and default values for the items of the selected reservation.
   You can also enter a percentage of the total quantity to be processed.
4. Process the items of the selected reservation as follows:
   a. Choose Continue to access the item selection screen. On this screen, you can select and process the items to be copied.
   b. You can use the Copy function to automatically copy all of the selected reservation items. The overview screen appears.
5. Check the data on the overview screen and post the document.
Entering a Delivery Free of Charge

Use
If you receive a delivery free of charge from the vendor, you must first determine whether a purchase order was created for it or not.
A delivery free of charge increases both total valuated and unrestricted-use stock of the material.

Activities

Entering a Delivery Free of Charge with Reference to a Purchase Order
If the Purchasing component ordered a material with a price of zero and specified in the purchase order that no invoice is expected for the delivery, you post the goods receipt with reference to the purchase order.

Entering a Delivery Free of Charge Without Reference to a Purchase Order
If you receive a delivery from a vendor free of charge for which no purchase order was placed, you post the receipt of the goods as a miscellaneous (other) goods receipt.

Choose Goods movement → Goods receipt → Other. Enter the data as required and choose movement type 511. When you process the items, the system prompts you, for every item, to maintain a text for the delivery free of charge on the detail screen. This entry is mandatory, since without a purchase order there is no other way of entering information about the delivery.
Entering a Customer Return

Use

If a customer returns goods, you must first determine whether or not a returns delivery exists for the returns in the Sales (SD-SLS) component. You then enter the return with or without a returns delivery.

Since returns from the customer are usually examined, the quantity returned is first posted to blocked stock returns. As is the case with goods receipt blocked stock, blocked stock returns are neither valuated nor do they count as unrestricted-use stock.

If an examination proves that the returned quantity should be taken over into unrestricted-use stock, you enter the transfer to unrestricted-use stock in a second step. It is at that time that the valuation of the goods receipt occurs.

Activities

Entering Returns with a Returns Delivery

If a returns delivery exists, the return should be posted in the Sales (SD-SLS) component, not in the Inventory Management component.

Depending on how Customizing for Sales is configured (the movement type is configured in the step Define Schedule Line Category), the delivery is posted to the following stock:

- Blocked stock returns (non-valuated, not unrestricted-use) (movement type 651)
- Unrestricted-use stock (movement type 653)
- Quality inspection stock (movement type 655)
- Blocked stock (movement type 657)

If the given quantity is posted to blocked stock returns first, you can make a manual goods movement posting in the Inventory Management component to transfer the quantity to valuated stock.

Entering Returns with a Returns Delivery

If no returns delivery has been entered for the return because the return is unexpected or because your company does not use the Sales (SD-SLS) component, you can only post the return to returned blocked stock in the Inventory Management component as a miscellaneous (other) goods receipt. Choose the movement type 451 (Returns from customer without Shipping).

If blocked stock returns are to be transferred into your company’s own stock, you enter the transfer as a transfer posting. Choose movement type 453 (to unrestricted-use stock), 457 (to stock in quality inspection stock), or 459 (to blocked stock).

See also:

Returns [Ext.]
Goods Issue

Purpose
Using this component, you can post a material withdrawal, a material issue, or a shipment of goods to a customer (without the involvement of the SD Shipping component). A goods issue leads to a reduction in warehouse stock.

Features
The Inventory Management system supports the following types of goods issues:

- Withdrawal of material for production orders
- Scrapping and withdrawal of material for sampling
- Return deliveries to vendors
- Other types of internal staging of material
- Deliveries to vendors without the involvement of the SD Shipping component
Goods Issues - General

Purpose
Companies usually distinguish between various types of goods issues, each of which is handled in the R/3 System as follows:

Stock Scheduled for Delivery
Withdrawal, picking, and shipping of goods to customers are carried out in the Sales & Distribution (SD) component and are dealt with in detail in the document SD Shipping Guide. They are not dealt with in this section.

The Inventory Management system provides two movement types for posting goods issues to customers if your company does not use the SD module. These are the movement types “Consumption to sales order” and “Consumption to sales”.

Material Withdrawals for Production Orders
Inventory Management provides for the staging of components for production. You enter withdrawals for production as goods issues with reference to the production orders for which the components are required.

Other Types of Internal Staging of Material
Materials can be withdrawn not only for production but also for other purposes (for example, for cost center, CO order, maintenance order, or asset).

Return Deliveries to Vendors
Return deliveries to vendors are entered with the function Material document → Return delivery or with the function Goods receipt → For purchase order.

Scraping/Sampling
If a material is no longer usable, it must be scrapped. Scraping of a material is entered in the R/3 System as a goods issue. The withdrawal of samples must also be entered as a goods issue.

This section explains the following goods issues:

- Material withdrawals for production orders
- Other types of internal staging of material
- Scraping/sampling

Process Flow

Entering a Goods Issue with/Without Reference Document
Before entering a goods issue, you have to find out whether any reference document or data exists in the system.

When you enter a goods receipt, you can reference:

- Reservations
- Production orders
• Bills of material

If a reference document (reservation/order) exists, it is important to enter the goods issue with reference to this document, for the following reasons:

• The goods issuing department can check whether what was requested is actually issued.

• During entry of goods issue, the system can suggest data from the reference document (for example, account assignment, requested material, quantity, etc.). This simplifies both data entry and checking (overdeliveries and underdeliveries) when entering a goods issue.

• After a withdrawal, the quantity withdrawn is updated in the reference document and the reserved quantity is reduced accordingly. Thus, Inventory Management can monitor the withdrawal process and Materials Planning can update the stock/requirements list.

⚠️ If you do not reference the corresponding reference document during the goods issue, the reservation remains open and the requested quantity remains reserved, although the request no longer really exists. Consequently, available stock in Materials Planning no longer corresponds to the stock actually available!

How do you find the reference document?

If you do not know the number of the reference document, you can find it in the system using the material number or the account assignment.

**Entering a Goods Issue Using Storage Location/Batch Selection and Stock Determination**

If you do not know the storage location or batch number when you enter a goods issue, or you want to withdraw materials from various storage locations and stocks according to a particular stock determination strategy, the R/3 System can support you using the following functions:

• [Storage Location and Batch Selection](Page 101)
• [Stock Determination](Page 208)
Goods Issue Without Reference

Goods Issue Without Reference

If no reference document exists, because the goods issue has not been planned (for example, urgent request of a material), you enter the goods issue without reference. If you want to issue components of a bill of material, you can reference the relevant BOM (refer to Goods Issue With Reference to a Bill of Material [Page 95]).

Entering Goods Issue Without Reference [Page 87]
Entering Material Scrapping [Page 89]
Drawing of a Sample [Page 90]
Entering Goods Issue Without Reference

Entering a goods receipt without referencing a document involves the following steps:

1. Select Goods movement → Goods issue from the Inventory Management menu. The initial screen for this function appears.

2. Enter the data on the initial screen:
   a. Enter the header data.
   b. Select Movement type → Consumption and the desired option.
   c. Enter a plant and, if necessary, a storage location, as defaults for the items in the document.

3. Press ENTER. The collective entry screen appears. Here you enter the account assignment and the individual items (refer to Maintaining Account Assignment Data [Page 88]).

4. Check data on the overview screen.

5. Post the document.
Maintaining Account Assignment Data

Depending on the movement type and the system setting, the system provides different account assignment fields in the upper part of the screen. The following table shows which fields you have to maintain for each movement type (Movement type column) in the standard system.

### Entry of Account Assignment Data

<table>
<thead>
<tr>
<th>MvT</th>
<th>Consumption for...</th>
<th>Data to be entered</th>
</tr>
</thead>
<tbody>
<tr>
<td>201</td>
<td>Cost center</td>
<td>Cost center</td>
</tr>
<tr>
<td>221</td>
<td>Project</td>
<td>WBS element/networks</td>
</tr>
<tr>
<td>231</td>
<td>Sales order</td>
<td>Sales order no., sales order item</td>
</tr>
<tr>
<td>241</td>
<td>Asset</td>
<td>Main asset number, asset sub-number</td>
</tr>
<tr>
<td>251</td>
<td>Sales</td>
<td>Cost center</td>
</tr>
<tr>
<td>261</td>
<td>Order</td>
<td>Order number</td>
</tr>
<tr>
<td>281</td>
<td>Network</td>
<td>Network or operation</td>
</tr>
<tr>
<td>291</td>
<td>All account assignments</td>
<td>Any account assignment</td>
</tr>
</tbody>
</table>

You can enter additional account assignment data in the other fields, or this additional data is copied automatically from the account assignment object.

When you select movement type 291 (Consumption → All acct assignments, the system displays fields for various account assignment objects.

The G/L account to which the goods movement is posted is determined by the system through automatic account assignment. You need not enter a G/L account unless you want to post the goods movement to a different account.

The account assignment data that you enter is used for every item.

By selecting Edit → Default values, you can enter new account assignment data for additional items. By selecting Edit → New item or Edit → New items, you can enter new items with a different account assignment on either the detail screen or the collective entry screen.
Entering Material for Scapping

Use
You might scrap a material if you cannot use it any more, for example because:

- the quality has been reduced due to long storage time
- it is out of date
- the material has been destroyed (for example, a container of crystal glasses falls off the forklift during transport). You have to enter this as a scrapping.

In the R/3 System, you post a scrapping like a goods issue without reference.

Features
You can scrap materials from the stock types below:

- unrestricted-use stock
- quality inspection stock
- blocked stock

A scrapping has the following results in the system:

- the relevant stock is reduced
- the value of the scrapped material is posted from the stock account to a scrap account
- the costs of the scrapped material are assigned to the cost center specified.

The value used is the value from the material master record at the time of the posting.

Activities
From the Inventory Management menu, choose Goods movement → Goods issue and post the scrapping using the required movement type.
Drawing of a Sample

Drawing of a Sample

Drawing a sample is a goods movement that has usually to do with quality inspection. Often, only a small subset of the total quantity in quality inspection stock is actually inspected. The result of this inspection is then used as a basis for the usage decision that determines further processing of the entire amount.

If you want to ensure that the quantity inspected is removed from stock, you can draw a sample. This type of sampling can be destructive, that is, you can no longer use the material after the inspection. In this case, then, sampling is the same as scrapping the material.

If the material is actually still usable after the inspection, you can post it back into stock (using a reversal posting).

You can draw a sample from the following types of stock:

- Unrestricted-use stock
- Quality inspection stock
- Blocked stock

To draw a sample, proceed as follows:

1. From the Inventory Management menu, select Goods movement → Goods issue.
2. Enter the data on the initial screen:
   a. Enter the header data.
   b. Select the movement type Issue → To sampling plus the desired stock type.
   c. Enter the plant and storage location.
3. Maintain the data on the collective entry screen:
   a. Enter the cost center to be debited. If the material is being inspected because it is an external delivery, you can enter the purchase order number and the item number to which the sample refers, for information purposes.
   b. Enter the items.
4. Check the data on the overview screen and post the document.

The results of this posting are the same as the results of scrapping a material.

⚠️

If inspection processing is active for a material, quality inspection of the material is carried out in the Quality Management system. Please note that issues from quality inspection stock are not carried out in the Inventory Management system but in the framework of inspection processing.
Goods Issue With Reference to a Reservation

To enter a goods issue with reference to a reservation proceed as follows:

1. From the Inventory Management menu, select Goods movement → Goods issue. This takes you to the initial screen for this function.

2. On the initial screen, enter the header data.
   
   You need not enter the movement type or the plant, as these are automatically copied from the reservation.

3. To reference the reservation, select Goods issue → Create w.reference → To reservation.... A box for selecting the reservation appears.
   
   Refer to Searching for a Reservation Number [Page 92]

4. Adopt (copy) the desired reservation items.
   
   The account assignment specified in the reservation is automatically used in the goods issue items.
   
   If no account was entered in the reservation, the system determines the accounts to which postings are to be made through automatic account determination.
   
   If an account was entered manually in the reservation, the system uses this account from the reservation as the offsetting entry for the inventory posting.

5. Check data on the overview screen.

6. Post the document.

Final Issue for Reservations

If you issue the total reserved quantity for a reservation item, the final issue indicator is set automatically in the reservation item when you post the goods issue.

If you issue only a partial quantity for a reservation item but want the item to be considered completed, you have to set the final issue indicator manually either in the reservation or at the time of the goods issue. You can set or reset this indicator on the collective entry screen or on the detail screen.
Searching for a Reservation Number

If you do not know the reservation number, you can search for it using various selection criteria (for example, material number and plant).

The system displays the list of selected reservation items. Here you can select the reservation items to be processed. This list contains all items that satisfy the selection criteria entered. The following items will not be included in the list:

- items for which movements are not yet allowed
- items marked for deletion

Items already fully issued are not preselected.

Extended selection

If you set the Ext. sel. indicator, the system displays a window in which you can enter selection criteria (plant, requirement date) and default values (storage location, "final issue" status) for the items of the selected reservations.

Adopting (Copying) Items

There are several ways to adopt (copy) the items of the reservations selected:

- When you select Continue, the item selection screen is displayed. On this screen, you can select and process the items to be copied.
- Choose Copy (adopt) to adopt all of the items entered. The overview screen appears.
- Choose Copy (adopt) + Detail to adopt all of the items entered. The detail screen for the first item appears.
  
  If the item currently displayed on the detail screen is not one that you want to be copied, you can skip that item by selecting Cancel.
Goods Issue with Reference to an Order

Use

When withdrawing components for an order, the system distinguishes between the following types of goods issues:

Planned Goods Issue (for Reservation/Order)

With this type of withdrawal the system automatically creates a reservation for the components planned in the order. When you enter the goods issue, you can reference the order or the reservation. The system determines all components to be withdrawn.

Unplanned Goods Issue

With this type of withdrawal, it is determined during the production process that an additional material or an additional quantity of a component already withdrawn is required for an order. This withdrawal is unplanned because there is no reservation to be referenced. You enter this withdrawal as a goods issue without reference (see section Goods Issue Without Reference [Page 86]).

Backflush

This type of withdrawal means that the components are already available at the production site. They are physically consumed during the production process. However, the quantity consumed is not reported until it is known how much has been actually consumed, that is not until order completion confirmation. For these components, you need not enter a goods movement in the Inventory Management system.
Entering a Goods Issue With Reference to an Order

Prerequisites
You enter a goods issue for an order by referencing the relevant order or reservation. To reference the order, proceed as follows:

Procedure
1. From the Inventory Management menu, select Goods movement → Goods issue.
   This takes you to the initial screen for this function.
2. On the initial screen, enter the header data.
   You need not enter the movement type or the plant, as these are automatically copied from the order.
3. Choose Goods issue → Create w.reference → To order....
   A dialog box for selecting the reservation appears.
   If you know the order number, enter it directly. Using the By-products indicator, you can simultaneously post the goods receipt of planned by-products (refer to Goods Receipt of By-Products [Page 72]). Using the Choose transaction/event (Ch.trans/event) indicator, you can display all transactions/events for an order and choose the transaction/events for which you want to post a goods issue.
   If you do not know the order number, you can search for the corresponding reservation using various selection criteria (refer to Searching for a Reservation Number [Page 92]).
4. Copy (adopt) the desired items.
5. Check data on the overview screen.
6. Post the document.
Goods Issue With Reference to a Bill of Material

To withdraw all components of a bill of material (production BOM or equipment BOM), you can reference the relevant bill of material. In this case, all of the components in the BOM are automatically copied for goods issue.

Entering Goods Issue With Reference to a Bill of Material

To enter a goods issue with reference to a bill of material, proceed as follows:

1. From the Inventory Management menu, select **Goods movement** → **Goods issue**. This takes you to the initial screen for this function.
2. Enter the data on the initial screen:
   a. Enter the header data.
   b. Select **Movement type** → **Consumption** plus the desired movement type.
   c. Enter a plant and, if necessary, a storage location, as defaults for the items in the document.
3. Select **Goods issue** → **Create w.reference** → **To BOM**. A dialog box appears in which you enter the BOM.
   - The BOM application is usually suggested automatically by the system.
   - Enter a material or a piece of equipment. If you do not enter an alternative BOM, the system automatically determines an alternative on the basis of the application specified.
   - Enter a quantity. On the basis of this quantity, the system calculates the quantity to be withdrawn for the individual components.
4. There are several ways to adopt (copy) the component items:
   a. When you select **Continue**, the item selection screen is displayed. On this screen, you can select and process the items to be copied.
   b. Choose **Copy** (adopt) to adopt all of the items entered. The overview screen appears.
   c. Choose **Copy** (adopt) + **Detail** to adopt all of the items entered. The detail screen for the first item appears.
      - If the item currently displayed on the detail screen is not one that you want to be copied, you can skip that item by selecting **Cancel**.
5. Check data on the overview screen.
6. Post the document.
Results of a Goods Issue Posting

A goods issue has the following results in the system:

- Material document is created
- Accounting document is created
- Goods receipt/issue slip is created
- Stock update
- Update of G/L accounts
- Consumption update
- Reservation update
- Order update
- Update in other applications
- Transfer requirement is created when the Warehouse Management System (LE - WM) is connected
- Inspection lot is created when QM is connected

Creation of a Material Document

When you post a goods issue, the system automatically creates a material document which serves as proof of the goods movement.

You can display the material document (see Displaying a Material Document [Page 18]).

Creation of an Accounting Document

Parallel to the material document, the system creates an accounting document. The accounting document contains the posting lines (for the corresponding accounts) that are necessary for the movement.

From the screen displaying the material document, you can display the accounting document.

Creation of a Goods Receipt/Issue Slip

When you enter the goods issue, you can print the goods issue slip at the same time (refer to Print Functions [Page 214]).

Stock Update

The following stocks are reduced by the issued quantity:

- Total valuated stock
- Unrestricted-use stock
- Reserved stock if the goods issue is entered with reference to a reservation or an order.

From the point of view of Materials Planning, available stock remains unchanged when posting a planned goods issue because the quantity withdrawn was reserved and therefore no longer available anyway. When posting a goods issue without reference to a reservation or an order, available stock is reduced accordingly from the point of view of Materials Planning.
The stocks are updated both at plant level and at storage location level.

**Update of G/L Accounts**

When the goods issue is posted, the system automatically creates posting lines on the accounts of the accounting system. For more information, refer to the [MM-Material Price Change](Ext) component.

**Consumption Update**

In addition to causing an inventory update in the material master record, a goods issue posting causes an update of the consumption statistics if the material is planned with MRP.

You can see the consumption statistics when you display plant stock availability or the material master record.

MRP uses the consumption statistics of a material for creating forecasts. In doing so, MRP distinguishes between planned and unplanned withdrawals.

If the withdrawal is planned, total consumption is updated. If the withdrawal is unplanned, both total consumption and unplanned consumption are updated.

The system does not update the consumption statistics in the material master record, if you post goods movements using the special stock types *Sales order stock* and *Project stock*.

**Reservation Update**

With a goods issue that references a reservation or a sales order, the quantity withdrawn is updated in the reservation item. The reservation item is completed when the total reservation quantity has been withdrawn or when the final issue indicator is set manually at goods issue.

**Order Update**

In the case of a goods issue with reference to an order, the quantities withdrawn for the components are updated in the order.

**Update in Other Applications**

Updates can also occur in other related applications. For example, in the case of a goods issue for internal consumption the point of consumption (such as cost center, order, asset) is debited.

**Creation of a Transfer Requirement when the Warehouse Management System (*LE - WM*) Is Connected**

If the storage location is managed with the Warehouse Management system (*LE-WM*), the goods issue posting creates a quant at the goods issue interim storage area, as well as a transfer requirement, which starts an action in the Warehouse Management system.

**Creation of an Inspection Lot When QM is Connected**

If inspection processing is active in the Quality Management system (*QM*), an inspection lot is created at the time of goods issue. The Quality Management system uses this inspection lot to carry out the inspection.
Availability Check

Use

There are two types of availability check:

- Availability check for the various stock types in Inventory Management
- Check for the available stocks in Materials Planning (MRP)

Availability check of the stock types is carried out automatically and cannot be manually set in the system. Non-availability results in an error message.

The available stocks check in MRP is activated in the material master record and can be configured in Customizing for MRP (refer to Net Requirements Calculation [Ext.]).

Your system administrator can define:

- Whether an availability check is to be carried out
- Whether non-availability is to result in a warning message or an error message

In Customizing for Inventory Management, you can configure the dynamic availability check for goods movements. In the step Define Checking Rule, you determine for each checking rule which stocks, receipts, and issues should be included in the availability overview (transaction code CO09).

Remember that the system does not update the consumption statistics in the material master record if you post goods movements using the special stock types Sales order stock and Project stock.

Features

Checking Availability of Stock Types

For every material movement, the system automatically performs an availability check of the stock types if this has been defined for a material. The availability check prevents the book inventory balance of the various physical stock types (for example, unrestricted-use stock) from becoming negative.

If several withdrawals of material are entered in a single document (for example, for different account assignments), the system checks the availability of the material for each item entered. It checks whether the desired quantity can be withdrawn. The system takes into account those items of the document that have already been entered, but not yet posted.

If there is not enough stock to cover the withdrawal, the system issues an error message.

The availability check includes the stock in question at plant, storage-location, and special-stocks level, for the current month and, if necessary, for the previous month. Different stocks are checked, depending on the movement type:

- In the case of a withdrawal for consumption, unrestricted-use stock is checked.
- In the case of a release from stock in quality inspection, quality inspection stock is checked.
In the case of consumption of consignment material, consignment stock for unrestricted use is checked.

Checking Available Stocks

In addition to checking the various types of physical stock, you can also check available stock from a Materials Planning perspective. With this type of availability check, you can, for example, prevent a quantity already reserved from being used for another purpose.

There are 100 pieces of a material in unrestricted-use stock. 70 pieces of these 100 have been reserved for a particular requirement date.

You want to withdraw 50 pieces for a different purpose. If the availability check is active, depending on how the system is set, you will receive:

- A warning message
- An error message
- No message

See also:

Availability Check for Materials [Ext.]
Material Requirements Planning [Ext.]
MM - Consumption-Based Planning [Ext.]
Dynamic Stock Balance Display

When entering a goods movement, you can display the stock that is relevant for that movement. So, when you enter a goods issue item, you can check for yourself how much of that stock is in the warehouse and can be withdrawn. Please note that the availability display takes into account the quantity entered in the item, that is, only the remaining stock is displayed.

The stocks that are displayed during dynamic stock display vary according to the movement type. Only stocks that are relevant to the movement are displayed.

To call the dynamic stock balance display from the detail screen of an item, select Goto → More functions → Movable quantity.... A box appears in which the stocks relevant for this movement are displayed.
Storage Location and Batch Selection

Use
If you do not know the storage location or batch number when you enter a goods issue, or if the required quantity is to be taken from various storage locations or batches, you can use the storage location and batch selection function.

- Storage location selection
- Batch selection

Depending on whether the material is handled in batches, either just the storage location selection list or the storage location and batch selection list are displayed.

Integration
The R/3 System can also use automatic functions to determine storage locations and batches:

- Stock determination
- Batch Determination

When stock determination is active, the storage location selection list is not displayed. Stocks are determined via a stock determination strategy that you must have defined in advance (refer to Stock Determination [Page 208]).

If batch determination is active, the system will display the screen for batch determination instead of the batch selection list for materials handled in batches (refer to Batch Determination [Page 203]).

When both batch determination and stock determination are active, the stocks from which material is withdrawn depends on how batch determination and stock determination have been configured. You define this in the relevant search strategies.

Activities

Storage Location Selection List
If the material is not handled in batches, the storage location selection list contains all of the storage locations at which the material is stored.

To display this list, enter * in the Storage location field for the item in question.

Storage Location and Batch Selection List
If the material is handled in batches, the selection list contains all of the batches of the material, with the respective storage location.

To display this list, enter * in the Storage location field. Alternatively, you can enter a storage location and enter * in the Batch field. The list is limited to batches belonging to the specified storage location.
Storage Location and Batch Selection

Sorting the List and Automatic Quantity Distribution Proposal

You can sort the resulting list according to various criteria, as follows:

- By stock quantity, in ascending or descending order
- By the first in first out (FIFO) principle or by the last in first out (LIFO) principle (for batch list only)
- By the shelf life expiration date (for batch list only)

The system automatically proposes a distribution of the quantity to be withdrawn according to the selected sort criterion. You can still change the proposed distribution manually.

Using Parameter IDs for Your Specifications

You can maintain the following values in the parameter ID MB_SORT as a specification for a sort criterion.

- ABST: Quantity in descending order
- AUFS: Quantity in ascending order
- FIFO: First in first out
- LIFO: Last in first out
- FIFV: Shelf life expiration date in ascending order
- LIFV: Shelf life expiration date in descending order

Working with the Storage Location and Batch Selection List

Displaying the List

Enter * in the Storage location field for an item. If the material is handled in batches, you can, as an alternative, enter a storage location in the Storage location field and * in the Batch field.

The system suggests distributing the requirement quantity.

Accepting the Proposed Distribution

To accept the proposed distribution, select Back. The system creates a goods issue item for every selected line of the list.

Re-distributing the Proposed Quantity

If you wish to distribute the quantity differently, you can do so manually or have the system propose a different distribution.

Distributing the Quantity Manually

To distribute the quantity manually, proceed as follows:

1. Select the items (storage locations/batches) you want to process and deselect those that you do not want to use.
2. Enter the quantity for every item selected. Make sure you take the available stock (last column on the right) and the quantity to be distributed (Targ. qty field) into account.
3. Select Back to adopt the selected items as goods issue items.
   
   You can cancel the manual distribution and request the system to create a new distribution proposal by selecting Edit → Reapportion.

**Having the System Propose a Different Distribution**

To have the system create a new distribution proposal, proceed as follows:

1. Select Proposal and the desired sort criterion (for example, Quantity ascending).
   
   A dialog box appears, in which you inform the system whether you want to keep the current distribution.
   
   a) If you choose Yes only the items on the list are re-sorted. The system does not propose a redistribution of the quantity.
   
   b) To have the system re-sort the items and propose a new distribution of the target quantity according to the new criterion, select no.

2. Select Back to adopt the selected items as goods issue items.
Reversing a Planned Goods Issue

If a material movement that was entered with reference to a reservation is reversed (or if the quantity withdrawn is returned, for example because it is not needed until later), you can enter the reversal (or return) with reference to either of the following two documents:

- the material document with which the goods issue was posted
- the reservation

In both cases, the system references the reservation during reversal; the "old" reservation is re-activated and the open required quantity in the reservation is increased by the quantity reversed.

If you enter the reversal without referencing the material document or the reservation, the quantity in the reservation is still considered withdrawn, meaning that the request no longer exists.

Referencing the Material Document

If during the reversal you reference the material document with which the goods issue was posted, the system proposes for reversal only the quantity withdrawn with this material document.

See also:
Cancelling a Material Document [Page 19]

Referencing the Reservation

If during the reversal you reference the reservation, the system proposes for reversal the total quantity withdrawn to-date, even if several withdrawals (material documents) were posted for the reservation.

See also:
Entering a Reversal or Return With Reference to a Reservation [Page 106]

Results of a Cancellation/Reversal

Regardless of whether you reference the material document or the reservation, all of the updates carried out during the goods issue posting are reversed as a result of a reversal. The most important results of a reversal for a reservation are listed here:

- A material document (reversal document) is created. This document serves as proof of the reversal.
- An accounting document is created. This document contains the account postings that are necessary for the reversal.
- The following stocks are increased due to the reversal:
  - total valued stock
  - unrestricted-use stock
  - reserved stock
The consumption of the material is reduced by the quantity reversed.

The following updates occur in the reservation item:
- The quantity withdrawn is reduced by the quantity reversed.
- If the reservation item was marked as completely issued, the final issue indicator is reset.

Reservations that have been deleted cannot be reactivated. If you post a reversal for a material that is still needed, but the reservation was already deleted, you must enter a new reservation manually.
Entering a Reversal or Return With Reference to a Reservation

You enter a reversal or a return with reference to a reservation as follows:

1. From the Inventory Management menu, select *Goods movement* → *Goods issue*. On the initial screen, select *Goods issue* → *Reverse w.reference* → *To reservation*...

2. A dialog box appears. Enter the reservation or search for the reservation as described in the section *Goods Issue With Reference to a Reservation* [Page 91].

3. If you entered the reservation number, or if only one reservation exists for the search criteria entered, the item selection list appears.

   If several reservations exist for the search criteria entered, the list of reservations that can be cancelled appears. On this list, the quantity that can be reversed is displayed for every reservation item. When you select a reservation, the item selection list appears, on which all of the items that can be cancelled are proposed with the quantity withdrawn to-date.

4. On the item selection list, select the items you want to process. If you do not want to reverse the entire quantity withdrawn, change the quantity.

   If no storage location was specified in the reservation item, you must enter the storage location from which the goods were withdrawn.

5. Check the data on the overview screen.

6. Post the document.
Return Delivery

Use
If you want to return delivered goods to the vendor for some reason (for example, due to poor quality or because they are damaged), you can use this function to return the goods, even if you have already posted the goods receipt.

If the vendor sends you a substitute delivery after you have returned goods, you can reference the return delivery when you post the goods receipt.

Integration

Return Delivery via Shipping
When you post a return delivery, you can use the functions of the Shipping (LE-SHP) application component (for example, picking and packing, as well as detailed shipping papers and delivery notes). You can post a return delivery via Shipping from the following stock types:

- Unrestricted-use stock
- Quality inspection stock
- Blocked stock
- Goods receipt blocked stock

You can use return deliveries via Shipping for standard purchase orders, purchase orders with account assignment and material number, and purchase orders with special stocks. Refer to Goods Movements via Shipping [Page 27].

Prerequisites
When you enter a return delivery, you should reference the purchase order or the material document, so that the system can:

- Suggest data to simplify data input (for example, the storage location)
- Check that the returned quantity does not exceed the delivered quantity
- Reduce the quantity delivered to date
- Reverse other updates that occurred (for example, for a goods receipt into consumption) when the goods receipt was entered

Before you enter a return delivery with reference to a purchase order, you have to determine whether the goods were posted to stock or to consumption, or whether they were posted into goods receipt blocked stock. If you posted the goods to a particular stock type at goods receipt (for example, quality inspection stock), you have to return them from the same stock type.

Activities

Posting a Return Delivery with Reference to the Material Document
Choose the Enjoy transaction MIGO for posting goods movements.
Return Delivery

Enter the number of the material document and the material document year. If you do not know the number of the material document, you can also enter the delivery note number in the Delivery note input field.

If you want to return the material via the Shipping application component, set the Via delivery indicator in the header data to create a delivery in Shipping.

Posting a Return Delivery with Reference to the Purchase Order

Choose the Enjoy transaction MIGO for posting goods movements. Enter the purchase order. In goods-receipt-based invoice verification, the system displays all the GR items. Choose the items that you want to return, specify the quantities, and choose movement type 122.

Posting a New Goods Receipt with Reference to a Return Delivery

If you receive a substitute delivery after you have returned goods to a vendor, it is advisable to reference the associated return delivery by using a reverse posting when you post the new goods receipt. This enables the system to suggest and update the data for this particular business process. This is particularly important in goods-receipt-based invoice verification, so that the link between the goods receipt, the return delivery, and the invoice remains intact (see also Subsequent Delivery [Page 112]).

The table below shows which reversal movement types you can use to reference the associated return delivery.

<table>
<thead>
<tr>
<th>Goods receipt</th>
<th>Return Delivery</th>
<th>Substitute delivery</th>
</tr>
</thead>
<tbody>
<tr>
<td>101</td>
<td>122</td>
<td>123</td>
</tr>
<tr>
<td>103</td>
<td>124</td>
<td>125</td>
</tr>
<tr>
<td>105</td>
<td>122</td>
<td>123</td>
</tr>
</tbody>
</table>

For example, if you posted the goods into goods receipt blocked stock using movement type 103, you return them using movement type 124 (return delivery from goods receipt blocked stock). To post the substitute delivery back into goods receipt blocked stock, you do not use movement type 103, but reverse the material document for the return delivery. The system automatically suggests movement type 125, which maintains the link between the goods receipt, the return delivery, and the invoice.
Return Deliveries from Warehouse or Consumption

Use

If you posted a goods receipt with reference to a purchase order into unrestricted-use stock, you can use this function to return the material to the vendor.

Activities

You can use either of the following two documents as a reference:

- The material document with which you posted the goods receipt
  In this case, the items are assigned with the movement type 122 (return delivery to vendor).

- The purchase order that is linked with the goods receipt
  In this case, choose movement type 122.

Post the goods receipt as described in the section Return Delivery [Page 107].

Results of the Return Delivery Posting

- Material document is created
  The system creates a material document for the return delivery. You can print this document as a return delivery slip. Since the return delivery is valuated, the system also creates an accounting document.

- Stock and G/L accounts are updated
  In the case of a return delivery, the system reverses all stock and G/L account updates that occurred during the goods receipt posting.

- Purchase order is updated
  The system cancels the updates posted as a result of the goods receipt. The open purchase order quantity is increased by the returned quantity.
Return Deliveries from Goods Receipt Blocked Stock

Use

If you accepted the goods conditionally, i.e. by posting them to goods receipt blocked stock, you enter the return delivery with movement type 124 (return delivery from GR blocked stock) instead of movement type 122 (return delivery to vendor).

Activities

You can use either of the following two documents as a reference:

- The material document with which you posted the goods receipt into goods receipt blocked stock
  
  In this case, the items are assigned with movement type 124.

- The purchase order to which the goods receipt referred
  
  In this case, choose movement type 124.

Post the goods receipt as described in the section Return Delivery [Page 107].

Results of the Return Delivery Posting

Since the goods in goods receipt blocked stock are not yet part of the company's own stock and are not valued, the return delivery simply reduces goods receipt blocked stock in the purchase order history.

The system creates a material document, which serves as proof of the return delivery.
Return Delivery in Goods-Receipt-Based Invoice Verification

Use
When GR-based invoice verification has been defined, every goods receipt is settled separately. This means that an invoice always refers to a material document. When you want to return material, you therefore have to reference the material document that you used to post the goods receipt.

Prerequisites
If the invoice for a goods receipt has already been entered, but you reverse the goods receipt or return the goods, you have to ensure that

- either the relevant invoice is canceled as well
- or another goods receipt which refers to the same invoice is posted.

In Customizing for Inventory Management, you can define for every movement type whether a GR reversal or a return delivery is allowed when GR-based invoice verification has been defined, even though the relevant invoice has already been entered.

If a GR reversal or a return delivery is not allowed, you must cancel the invoice before entering the reversal of the goods receipt or the return delivery.

If a GR reversal or a return delivery is allowed, you can post the material document and cancel the invoice later. If you do not want to cancel the invoice, you can enter the next goods receipt with reference to the return delivery or the reversal document so that the link to the invoice remains intact.

Activities

Posting a Goods Receipt with Reference to a Return Delivery
Proceed as described in the section Return Deliveries [Page 107]

Posting a Goods Receipt with Reference to a Reversal Document
Proceed as described in the section Cancelling a Material Document [Page 19]
Subsequent Delivery

Use

In goods-receipt-based invoice verification, you can post goods receipts as subsequent deliveries for previous goods receipts by referencing the original goods receipt document. In this process, the system copies the original reference document number (MSEG-LFBNR) to the new material document, thereby maintaining the link between the goods receipts and the corresponding invoice.

Subsequent deliveries are useful, if, for example:

- You reverse a goods receipt after you have entered the corresponding invoice and then want to post another goods receipt
- You post a return delivery and want to enter the next goods receipt with reference to the return delivery document so that the link with the invoice remains intact.

Features

You can use the subsequent delivery function for the following business transactions:

- Goods receipt (movement type 101)
  - In this case, you post a further goods receipt for a purchase order (for example, in the case of partial deliveries or additional deliveries).

- Return delivery (movement type 122)
  - In this case, you post another goods receipt after you have entered a return delivery (also refer to Return Delivery [Page 107]).

- Reversal of goods receipt (movement type 102)
  - In this case, you post another goods receipt after you have reversed a goods receipt.

Activities

To post a subsequent delivery, call up the Enjoy transaction MIGO for posting goods movements and choose Subsequent delivery.
Stock Transfer and Transfer Posting

Purpose
You can use this component to remove materials from storage in one storage location and place them in another storage location. Stock transfers can occur either within one plant or between two plants or company codes.

Features
A transfer posting usually refers to a change in a material's stock (for example, release from quality inspection, accepting consignment material). In a transfer posting, the material can remain in its original storage bin or be transferred.

Stock transfers and transfer postings are used to represent organizational-relevant transfers within the company (for example, decentralized storage).
Transfer Postings and Stock Transfers: Overview

Levels for Stock Transfers
In a company, goods movements do not only occur in the form of goods receipts and goods issues. Depending on the organization of the company (for example, decentralized storage) and its sales policy, internal stock transfers might also be necessary.

Stock transfers can occur at three different levels:
- Stock transfer from company code to company code
- Stock transfer from plant to plant
- From storage location to storage location (in the plant)

Stock Transfer from Company Code to Company Code
A stock transfer from company code to company code corresponds to a stock transfer from plant to plant, with both plants belonging to different company codes.

Stock Transfer From Plant to Plant
A stock transfer from plant to plant not only leads to a change in stock quantity in both plants; if both plants are assigned to different valuation areas, an accounting document is also created.

This type of stock transfer can only be carried out from unrestricted-use stock of the issuing plant to unrestricted-use stock of the receiving plant.

Stock transfers from plant to plant are relevant for Material Planning, since Materials Planning operates at plant level.

From Storage Location to Storage Location (in the Plant)
A stock transfer from storage location to storage location in the same plant simply causes an update of the stock quantities in both storage locations. The stock value remains unchanged, and the event is not relevant for accounting.

A stock transfer from storage location to storage location is possible for all stock types.

Transfer Postings and Stock Transfers: Differences
You can post both stock transfers and transfer postings in the R/3 System. Transfer postings differ from stock transfers in that transfer postings are not connected with a physical goods movement. They usually involve a change in stock type, batch number, or material number.

An example of transfer posting is the release from inspection into the company's own stock.

Stock Transfer Procedures
There are three different procedures for carrying out a stock transfer:
- Stock transfer via stock transfer posting using one-step procedure
- Stock transfer via stock transfer posting using two-step procedure
- Stock transfer using stock transport order
For more information on stock transfers or stock transfer orders, see Stock Transfer Using a Stock Transfer Order [Ext.].

One-Step Procedure Versus Two-Step Procedure
Both stock transfers and transfer postings consist of a “goods issue” from an issuing point and a “goods receipt” at a receiving point. You can post a stock transfer from storage location to storage location or from plant to plant either in one step or in two steps.

The advantage of the one-step procedure is that you enter a single transaction in the system. The two-step procedure, on the other hand, allows you to monitor the stocks in transit. After the goods issue is posted at the issuing point, the stock appears “in stock transfer” at the receiving point and is managed as such in the system.

The two-step procedure is also required if users have authorizations only for their own plants.

⚠️
To carry out a stock transfer from plant to plant for a material that is subject to split valuation at the receiving point, you have to use the one-step procedure or a stock transport order.

Stock Transfers and Transfer Postings Using the Stock Determination Function
If you want to withdraw material for transfer postings and stock transfers from various storage locations and stocks according to a particular strategy, the R/3 System can support you using Stock Determination [Page 208].

Material Documents for Stock Transfers

One-Step Procedure
During a one-step stock transfer, the system creates two material document items for every item you enter:

- An item for the removal from storage at the issuing point
- An item for placement into storage at the receiving point

Two-Step Procedure
During a two-step stock transfer, two material documents are created:

- Upon the removal from storage at the issuing point, the system creates a material document. For every item you enter, two material document items are created, namely:
  - An item for the removal from storage at the issuing point
  - An item for the placement into stock in transfer at the receiving point
- Upon placement into storage at the receiving point, the system again creates a material document. For every item you enter, only one material document item is created, because the quantity is only transferred from stock in transfer into unrestricted-use stock at the receiving point.
Planning Stock Transfers and Transfer Postings via Reservations

Use

You can plan stock transfers using stock transfer reservations. Stock transfer reservations are reservations that plan the goods issue from the issuing point. Stock transfer reservations are intended for one-step stock transfers only. They cannot be used for transfer postings, because transfer postings are not planned in advance. Stock transfer reservations can also be created automatically by MRP.

The reserved quantity is managed in the unrestricted-use stock and in the reserved stock of the issuing point. In MRP, the reserved quantity reduces available stock in the issuing plant.

Activities

You enter a stock transfer reservation like a standard reservation (refer to Reservations [Page 136]).
Stock Transfers From Storage Location to Storage Location

Use
A stock transfer from storage location to storage location takes place within a plant. It is usually posted without value, since the transferred material is managed in the same plant and therefore with the same valuation data as before. If the material is subject to split valuation, and the valuation type of the material changes due to the stock transfer, the system also creates an accounting document during the stock transfer.

Activities
You can enter this stock transfer using either the one-step procedure or the two-step procedure, whereby you can only plan the one-step procedure with a reservation.
The One-Step Procedure Without a Reservation: Storage Location

Use
This stock transfer procedure reduces the corresponding stock type at the issuing storage location and increases the same stock type at the receiving storage location. At plant level, the stock level does not change, except that the stock is distributed differently among the storage locations in the plant. The system does not create an accounting document for the material document.

Activities
Choose the relevant movement type to enter the transfer posting, for example, 311 (Transfer posting of unrestricted use stocks from one storage location to another). Maintain the data as required and save the document.

If the receiving storage location does not yet exist in the material master record, it is automatically created, provided that automatic creation of storage locations is allowed in this plant.
The One-Step Procedure With a Reservation: Storage Location

Use

This stock transfer procedure reduces unrestricted-use stock and reserved stock at the issuing storage location and increases the same stock at the receiving storage location. At plant level, the stock level does not change, except that the stock is distributed differently among the storage locations in the plant. The system does not create an accounting document for the material document. The quantity becomes available again for Materials Planning.

Activities

You enter the transfer posting with reference to the reservation. Enter the reservation number or search for the reservation using the material number or the plant and the receiving storage location. Maintain the data as required and save the document.

If the receiving storage location does not yet exist in the material master record, it is automatically created, provided that automatic creation of storage locations is allowed in this plant.
Two-Step Procedure - Storage Location

Use

Posting a stock transfer in two steps involves the following:

- In the first step, you enter the removal from storage at the issuing storage location.
- In the second step, you enter the placement into storage at the receiving storage location.

In the two-step procedure, you can only transfer material from the unrestricted-use stock of the issuing storage location into the unrestricted-use stock of the receiving storage location. Reservations are not possible with this procedure.

After posting the removal from storage, the quantity is deducted from the issuing storage location. The quantity is managed in the stock at the receiving storage location (not in unrestricted-use stock, but in stock in transfer). Also at plant level, the quantity is not available for unrestricted use.

When the goods are actually received at the receiving storage location, the quantity is taken over from stock in transfer into unrestricted-use stock.

Damage During Transportation

Damage that occurs during transport and that leads to scrapping of the goods must be reported in the system, so that the transfer stock can be corrected accordingly. You can do this in two ways:

- You reverse the removal from storage from the issuing storage location and then post the goods for scrapping. (Refer to Entering Material for Scrapping [Page 89].)
- Alternatively, you can post the placement of the entire quantity into storage at the receiving storage location and then post the goods for scrapping.
Which method you select is not important for valuation of the scrapped quantity, since the material is not valuated at storage location level.
Removal From Storage at Issuing Storage Location

Use
Posting the removal from storage changes the stock situation in the following way:

- Plant stock situation:
  Unrestricted-use stock is reduced by the posted quantity because the goods are in transit at the moment and are therefore managed as stock in transfer.

- Stock situation in issuing storage location:
  The quantity has been deducted from unrestricted-use stock.

- Stock situation in receiving storage location
  The quantity is already managed in stock, but is not yet available for unrestricted use. It is contained in the stock in transfer at storage location level.

Since the stock transfer occurs within the plant, no accounting document is created in addition to the material document.

Activities
Choose the relevant movement type to enter the transfer posting for removing the material from storage (movement type 313). Maintain the data as required and save the document.
Placement Into Storage at Receiving Storage Location

Use
You have the option of entering the placement into storage at the receiving storage location with or without reference to stock removal document.

Posting the placement into storage changes the stock situation in the following way:

- Plant stock:
  The transferred quantity is now part of unrestricted-use stock.

- Stock in the receiving storage location:
  The quantity from stock in transfer has been posted into unrestricted-use stock.

Since the stock transfer occurs within the plant, no accounting document is created in addition to the material document.

Activities

Placement Into Storage With Reference to the Stock Removal Document
If you know the material document with which the removal from storage was posted, you can enter the placement into storage by choosing Material Document → Place in Storage. Refer to the number of the stock removal document. The system suggests all items of the stock removal document for placement into storage. Maintain the data as required and save the document.

Placement Into Storage Without Reference to the Stock Removal Document
Choose the relevant movement type to enter the transfer posting for placing the material into storage (movement type 315). Maintain the data as required and save the document. The transferred quantity is posted from the stock in transfer to the unrestricted-use stock in the receiving storage location.
Stock Transfer From Plant to Plant

A stock transfer from plant to plant generally takes place within a company code. It can, however, also take place between two company codes, if the plants are assigned to different valuation areas, which belong to different company codes.

Unlike a stock transfer from storage location to storage location, a stock transfer from plant to plant affects both accounting and Materials Planning, as follows:

- **Accounting**
  
  Accounting is affected if both plants are assigned to different valuation areas. This means that a stock transfer leads not only to a quantity update but also to a value update (stock value, G/L accounts). Thus, parallel to the material document for stock transfer, an accounting document is created.

- **Materials Planning**

  Materials Planning is affected because a change of plant stock is taken into account by Materials Planning.

You can enter this stock transfer using either the one-step procedure or the two-step procedure, whereby only the one-step procedure can be planned with a reservation.

Using the One-Step Procedure Without a Reservation [Page 125]
Using the One-Step Procedure With a Reservation [Page 126]
Using the Two-Step Procedure [Page 127]

You can only post a plant-to-plant stock transfer in one step if you have the relevant authorization in both plants.

For split-valuated materials, a plant-to-plant stock transfer in two steps is not possible for technical reasons. In this case, you have to enter the stock transfer using either the one-step procedure or a stock transfer order.
Using the One-Step Procedure Without a Reservation - Plant

Procedure


2. Enter the data on the initial screen:
   a. Enter the header data.
   b. Select movement type Transfer posting → Plant to plant → Rem.fm/pl.in storage.
   c. Enter the issuing plant and the issuing storage location as default values for the individual items.

3. Maintain the data on the collective entry screen:
   a. Enter the receiving plant and the receiving storage location. The plant must already exist in this material's master record. If the storage location does not yet exist in the material master record, it is automatically created (provided that automatic creation of storage locations is allowed in this plant).
   b. Enter the items. For each item, you can still change the issuing plant and the issuing storage location.

4. Check the data on the overview screen and post the document.

The stock transfer reduces unrestricted-use stock in the issuing plant and increases the same stock in the receiving plant. Parallel to the material document, an accounting document is created.
Using the One-Step Procedure With a Reservation - Plant

Procedure


2. Enter the data on the initial screen:
   a. Enter the header data.
   b. Select Transfer posting → Create w.reference → To reservation.... A box appears for selecting the reservation.
      Enter the reservation number or search for the reservation using selection criteria (material number or receiving plant and receiving storage location).

3. Select the items that you want to process and, If necessary, change the data suggested from the reservation.

4. Check the data on the overview screen and post the document.

The stock transfer reduces total valuated stock, unrestricted-use stock, and reserved stock in the issuing plant and increases the total valuated stock and the unrestricted-use stock in the receiving plant. An accounting document is created. The quantity becomes available again for Materials Planning.
Two-Step Procedure - Plant

Use

If you post a stock transfer from plant to plant using the two-step procedure, you post the removal from storage at the issuing plant first. After you post the removal from storage, the quantity being transferred is managed in stock in transfer at the receiving plant. It is not yet part of unrestricted-use stock, however.

You post the placement into storage at the receiving plant in a second step. Only then is the event completed and the transferred quantity part of unrestricted-use stock.

Possible reasons for carrying out the a stock transfer in two steps may be: The plants are located at quite a distance from each other and the goods are in transit for a prolonged period of time; or there is one employee responsible at each plant, and each can only post movements for his/her own plant.

What if the Goods Are Damaged During Transport?

Damage that occurs during transport and that leads to scrapping of the goods must be reported in the system, so that the transfer stock can be corrected accordingly. There are two ways of doing this:

- You reverse the removal from storage from the issuing plant and then post the goods for scrapping. Refer to Entering Material for Scrapping [Page 89].
- Alternatively, you can post the placement of the entire quantity into storage at the receiving plant and then post the goods for scrapping.

It is important that the scrapped quantity does not remain in stock in transfer, but is reported in the system as scrapped.
Entering the Removal From Storage At the Issuing Plant

You enter the removal from storage at the issuing plant as follows:

2. Enter the data on the initial screen:
   a. Enter the header data.
   b. Select the movement type Transfer posting → Plant to plant → Rem.fm.stor. to plant.
   c. Enter the issuing plant and the issuing storage location as default values for the individual items.
3. Maintain the data on the collective entry screen:
   a. Enter the receiving plant in this field. The plant must already exist in this material's master record. For the removal from storage, entry of the receiving storage location is not necessary. The storage location is not defined until the placement of the material into storage.
   b. Enter the items. For each item, you can still change the issuing plant and the issuing storage location.
4. Check the data on the overview screen and post the document.

Stock Situation After Removal From Storage

The posting of the removal from storage has the following effects on the stock situation:

- **Stock in the issuing plant (0001):**
  The quantity has been deducted from total valuated stock and from unrestricted-use stock in the issuing plant and the issuing storage location.

- **Stock in the receiving plant (0002):**
  The quantity is already managed in total valuated stock in the receiving plant, but is not yet available for unrestricted use. It is in stock in transfer, at plant level. At this time, the receiving storage location is not yet known to the system.

If the plants belong to different valuation areas, an accounting document is created parallel to the material document for the removal from storage, because the stock is transferred from one plant into another.
Entering the Placement Into Storage At the Receiving Plant

You have the option of entering the placement into storage at the receiving plant with or without reference to stock removal document.

Placement Into Storage With Reference to the Stock Removal Document

If you know the material document with which the removal from storage was posted, you can enter the placement into storage as follows:

2. On the initial screen, enter the number of the document with which the removal from storage was posted (stock removal document) and - if required - a storage location. The system suggests all items of the reference document for placement into storage.
3. Copy the desired items.
4. Post the document.

Placement Into Storage Without Reference to the Stock Removal Document

You enter the placement into storage without reference to the stock removal document as follows:

2. Enter the data on the initial screen:
   a. Enter the header data.
   b. Select the movement type Transfer posting → Plant to plant → Pl.in stor. in plant.
   c. Enter the receiving plant and the receiving storage location, as defaults for the items.
3. Enter items on the collective entry screen. You do not need to enter the issuing plant, because the transferred quantity is simply transferred from the stock in transfer to the unrestricted-use stock of the receiving plant.
4. If you want to check the amount of stock in transfer for a particular item, select the item and then select Goto → More functions → Movable quantity.
5. Check the data on the overview screen and post the document.

Stock Situation After Placement Into Storage

Posting the placement into storage has the following effects on the stock situation:

- **Stock in the receiving plant:**
  
  In the receiving plant, the quantity has been transferred from stock in transfer to unrestricted-use stock. It is also managed in unrestricted-use stock at the receiving storage location.

Since the transfer posting from stock in transfer to unrestricted-use stock occurs within the plant, an accounting document is not created in addition to the material document.
Stock Transfer from Company Code to Company Code

Use

You post a stock transfer from company code to company code the same way as you post a Stock Transfer from Plant to Plant [Page 124], except that both plants belong to different company codes.

You can enter this stock transfer using the one-step or the two-step procedure.

During the stock transfer, two accounting documents are created in addition to the material document:

- An accounting document for the removal from storage at the issuing company code
- An accounting document for the placement into storage at the receiving company code

The stock posting is offset against a company code clearing account.

To display the value of the cross-company-code stock in transit with a report, choose Environment → Stock → Stock in transit Cc.

Stock transfers from company code to company code can be carried out using stock transport orders. For information on stock transport orders, refer to Stock Transfer Using a Stock Transport Order [Ext.].
Transfer Postings From Material to Material

If a material changes over time in such a way that it no longer corresponds to the features defined in the material master record, but to the features of a different material number, you have to carry out a transfer posting from material to material. This is often the case in the chemical and pharmaceuticals industry, for example.

A transfer posting from material to material results in the transferred quantity being managed under a different material number. A material master record must already exist for the receiving material.

In order to carry out a transfer posting from material to material both materials must be managed in the same stockkeeping unit.

Such a transfer posting is always carried out in one step and without advance planning. The posting can only be carried out from the unrestricted-use stock of the issuing material into the unrestricted-use stock of the receiving material.

Entering a Transfer Posting From Material to Material

To enter a transfer posting from material to material, proceed as follows:

1. From the Inventory Management menu, select Goods movement → Transfer posting.
2. Enter the data on the initial screen:
   a. Enter the header data.
   b. Select the movement type Transfer posting → Material to material.
3. Maintain the data on the collective entry screen:
   a. Enter the number of the receiving material. Enter a plant and a storage location only if you simultaneously want to post the stock to another plant or storage location. If the receiving material is handled in batches, the system prompts you to enter a batch.
   b. Enter the items. For each item, you can still change the plant and the issuing storage location.
4. Check the data on the overview screen and post the document.

Results

The transferred quantity is deducted from unrestricted-use stock of the issuing material and posted into unrestricted-use stock of the receiving material.

For every item you enter, two material document items are created:

- an item for the issuing material
- an item for the receiving material

Parallel to the material document, an accounting document is created. The issuing material master record determines the value of the transfer posting.
Entering a Transfer Posting From Stock to Stock

Procedure

2. Enter the data on the initial screen:
   a. Enter the header data.
   b. Select the movement type Transfer posting → Stock to stock or Reverse tfr. posting → Stock to stock plus the required stock types.
3. Maintain the data on the collective entry screen:
   a. Only enter a receiving storage location if the material should be stored in another storage location.
   b. Enter the items.
4. Check the data on the overview screen and post the document.

See also: General Information on Stock Types [Page 134]
General Information on Stock Types

There are three types of stock in Inventory Management. Each of these stock types indicates whether the material concerned can currently be used.

- Unrestricted-use stock
- Quality inspection stock
- Blocked stock

When Batch Management is active, a further stock type is supported: restricted-use stock (refer to Batch Status Management [Page 194]).

At the time of goods receipt, you decide the type of stock to which a given quantity is to be posted. The stock type is relevant for the determination of available stock in Materials Planning (MRP) and for the withdrawal of materials in Inventory Management (refer to Availability Check [Page 98]).

Withdrawals

You can post withdrawals for consumption from unrestricted-use stock only. You can only withdraw materials from stock in quality inspection or blocked stock for random sampling purposes or for scrapping. Stock quantities of such stocks may also be reduced as a result of inventory difference postings.
Transfer Postings

If the utilization of a material changes, you have to carry out transfer postings between the various stock types. An example of a transfer posting is the release of a given quantity from stock in quality inspection. This means that the quantity is transferred from stock in quality inspection to unrestricted-use stock.

If inspection processing in the Quality Management System is active for a material, you cannot post any issues from stock in quality inspection in Inventory Management. These movements can only be carried out within inspection processing.

If you posted a specific quantity into blocked stock at the time of goods receipt, you can either post this quantity directly into unrestricted-use stock, or first post it into stock in quality inspection and then transfer it into unrestricted-use stock after it has been inspected.

Selection of Movement Type for Transfer Posting

The following movement types are used for transfer postings:

- Blocked stock to stock in quality inspection (349)
- Blocked stock to unrestricted-use stock (343)
- Stock in quality inspection to unrestricted-use stock (321)

The reverse movements are defined as reversal transfer postings.
Reservation

Purpose

With this component, you make a request to the warehouse to keep materials ready for withdrawal at a later date and for a certain purpose. This simplifies and accelerates the goods receipt process.

A reservation for goods issue can be requested by various departments for various account assignment objects (such as cost center, order, asset, etc.).

Features

The purpose of a reservation is to ensure that a material will be available when it is needed. It also serves to simplify and accelerate the goods issue process and prepare the tasks at the point of goods issue.

It is also important that reservations are taken into account by Material Requirements Planning (MRP), which means that required materials are procured in time if they are out of stock.

Planning a Goods Issue

You can handle both planned goods issues and unplanned goods issues.

You can also use reservations to plan goods receipts and stock transfers (see Planning Goods Receipts [Page 31] and Planning Stock Transfers and Transfer Postings [Page 116]). This section deals only with reservations for goods issues.

Information in a Reservation

In a reservation, information is stored that is relevant for the goods issue and for materials planning, for example:

- What? (which material?)
- How much? (in which quantity?)
- When? (for which requirement date?)
- From where? (from which plant or warehouse?)
- To where? (to which recipient or customer?)

A reservation document consists of a header and at least one item. The header contains general data about the reservation (creator, movement type, account assignment). The items describe individual planned movements (material, quantity, requirement date).

You can create a reservation for exactly one purpose only; that is, in a reservation, you can only enter one movement type and one account assignment object (for example, a cost center).
Reservation Level
The system makes reservations at plant or storage-location level. For materials handled in batches, you can also create reservations at batch level.

Manual and Automatic Reservations
The R/3 System supports manual and automatic reservations. Manual reservations are entered directly by the user. Automatic reservations are generated automatically by the R/3 System. There are two types of automatic reservations:

- **Reservations for orders, networks, WBS elements:**
  When an order, a network, or a project is created, the components from the warehouse are reserved automatically.

- **Stock transfer reservations:**
  If reorder point planning is used at storage location level and the available stock on hand falls below the reorder point, the system generates a stock transfer reservation in the plant for the replenishment quantity.

You cannot manually process automatic reservations. For example, it is not possible to change reservations for an order directly. You have to change the components in the order. The system then updates the reservation automatically.

What are the Results of a Reservation?
When a reservation is entered, the following events occur in the system:

- The system creates a reservation document, which serves as proof of the request.
- In the material master record, total stock and unrestricted-use stock of the material remain unchanged. Reserved stock is increased by the reserved quantity.
- In MRP, available stock is reduced by the reserved quantity. This is visible in the current stock/requirements list. The reservation causes an entry to be made in the requirements planning file.

Displaying Reserved Stock
There are two functions available for displaying reserved stock (also refer to Reporting in Inventory Management [Page 227]):

- **Stock overview at plant level:**
  When you use this function, the system displays the total reserved stock for the material at plant level. From the stock overview, you can choose Environment → Reservations to display a list of the reservations for the material.

- **Current stock/requirements list:**
  When you use this function, the system lists all of the open reservations for the material at plant level, along with the reserved quantity for each.
Creating a Reservation

1. Choose Reservation → Create.
   The initial screen appears.

2. Enter the following data:
   a. Base date
   b. Movement type
   c. plant

3. Choose Continue.
   The collective entry screen appears.

   **Enter an Account Assignment**
   The upper part of the screen contains the header data for the reservation. Depending on the movement type, you must maintain different account assignment fields (for example, cost center, order, or asset).

   Some of the account assignment fields (for example, G/L account) need not be maintained manually. The relevant information is automatically copied from the account assignment object.

   **Enter a G/L Account**
   If the G/L account field is available, you can enter a G/L account used as the offsetting entry for the inventory posting (usually a consumption account).

   a. If you do not enter an account, the system will automatically determine the G/L account when the goods movement is entered.
   b. If you enter an account, automatic account determination does not take place when the goods movement is entered. The system uses the G/L account entered in the reservation.

   **Enter Items**
   In the lower part of the screen, you can enter several items. If you need to enter more items in the reservation, you can choose Edit → New items to enter additional items.

   **Availability Check**
   If an availability check has been defined for the material or for the movement type, the system performs this check for each item. If a material will not be available on the requirement date, the system issues either a warning or an error message, depending on the corresponding setting.

4. Check data on the overview screen.

5. Post the reservation.
Creating a Reservation Using a Reference Document

Prerequisites
You use this function to copy items from an existing reservation when entering a new reservation. When doing this, you can:

- change the account assignment and the base date
- select and change the items to be adopted (copied)
- enter new items

Procedure
1. Choose Reservation → Create.
   The initial screen appears.
2. Enter the base date of the new reservation.
   Enter a movement type only if you want a movement type that differs from the movement type of the reservation to be copied.
   Enter the number of the reservation to be copied in the Reservation field (under Ref.).
   You can also choose Reservation → Create w. reference → To reference. A dialog box is displayed where you enter the base date and the reference reservation.
3. Choose Continue.
   The item selection screen is displayed. The list contains all items from the reference reservation.
4. If necessary, change the account assignment.
5. Select the items to be copied to the new reservation. You can edit the items directly on the item selection list.
6. To adopt the selected items, choose Edit → Item(s) → Adopt.
   The overview screen appears.
7. Post the new reservation.
Displaying a Reservation

Use
You can display reservations in the following ways. You can:

- Display an individual reservation
- Display a list of all reservations

Activities

Displaying an Individual Reservation
Choose Reservation → Display.

Display a List of All Reservations
Choose Reservation → Reservation list (report RM07RESL).
For more information, see the report documentation.
Processing Reservations

Changing Header Data

By selecting Goto → Header, you can display the header data screen where you can change the base date and the account assignment.

Entering New Items (on Detail Screen)

If you do not want to enter a new item on the Collective processing screen, but rather directly on the detail screen, select Edit → New item.

Once you have entered the new item, you can display the detail screen for entry of the next new item by selecting Edit → New item.

If you want to enter all of the items directly on the detail screen instead of on the collective entry screen, you can call the New item function directly from the initial screen. When you do this, you first receive a box in which you enter the account assignment data. Choose Continue to go the detail screen for entry of the first item.

Entering New Items (on Collective Processing Screen)

To enter several new items at once on the collective processing screen, choose Edit → New items.

Alternatively, you can select Goto → Collective process.. The collective processing screen appears, and you can enter new items, but the items already entered are also listed. For those items, you cannot change the material number or the plant.

Deleting an Item

If a material no longer needs to be withdrawn, or if you entered an incorrect material number or plant, you can delete the item.

1. On the collective processing screen, choose the item to be deleted.
2. Choose Edit → More functions → Delete item.

Changing an Item on Detail Screen

To display or change detailed information about an item (for example, its quantity in the various units of measure, or its account assignment), select an item.

- If you only entered one item for the reservation, the detail screen for that item immediately appears.
- If you entered more than one item, a dialog box appears in which you enter the number of the required item.

On the detail screen, you can change all of the item data (for example, the requirement date). You cannot change the material number or the plant.
Changing Default Values for New Items

You use this function to enter new items for a different requirement date or for another plant.

Choose Edit → Default values.... A dialog box appears in which you define the new default values.
Changing a Reservation

Use
You can change a manual reservation at any time, even if the reserved quantity has already been withdrawn.
You cannot process automatic reservations.

This section begins by describing the general procedure for changing a reservation. It then goes on to explain several change functions.

How Can I Change a Reservation?

1. Choose Reservation → Change.
2. On the initial screen, enter the reservation number. If you do not know the reservation number, you can search for it using the Possible entries button.
   The collective processing screen for the reservation appears.
3. You can change the data (for example, quantity or storage location) directly on the collective processing screen. Alternatively, you can select one particular item and change the data on the detail screen.
4. Post the changes.

Which Data Can I Change?

- change general item data (for example, storage location, batch, recipient)
- change the requirement date for one item or for all items
- change the quantity of a reservation item if you need more or less than the quantity reserved until now
- set or reset various indicators (final issue indicator, Movement allowed indicator)
- check the availability of the material for the base date specified
- delete items
- enter new items

Constraints

- You cannot change the account assignment data (for example, cost center or order). If the account assignment is incorrect, you must delete the reservation and enter a new reservation.
- You cannot change the material number or the plant for an item. If either of these entries is incorrect, you must delete the item and enter a new item.

Availability Check

If you change data relevant to materials planning (for example, quantity, storage location, requirement date), the system automatically performs a new availability check, if this has been defined for the material or for the movement type.
Changing a Reservation

If you do not change any data relevant to materials planning, you can still initiate the availability check manually.
Changing the Requirement Date

Use

You can change the requirement date for individual items or for all items of the reservation. You change the requirement date for a certain item on the detail screen. You change the requirement date for all items by changing the base date in the header.

Activities

1. Choose Goto → Header.
2. Change the base date.
3. Choose Continue.
   In the Check requirement dates dialog box, the system proposes a new requirement date for all the items. You can still change the requirement date of any item in this box if you want.
4. Choose Continue. The system adopts the new requirement date for all items.
5. Choose Goto → Overview.
   The overview screen appears.
6. Post the changes.
Changing the Quantity

Use

You can change the requirement (or required) quantity of an item at any time.

You can change the quantity on the collective processing screen or on the detail screen. On the detail screen, the required quantity (in the stockkeeping unit) and the quantity withdrawn to-date are also displayed.

If you change the quantity for a reservation item and do not reset the “final issue” indicator, this item will be suggested as deselected when you enter the goods movement (see Changing the Final Issue Indicator [Page 148]).
Changing the Movement Allowed Indicator

Use

If you specified that movements are not yet allowed for the reservation items when you entered the reservation (for example, because the requirement date is in the far future), you must set the Movement allowed indicator before you can post the first goods issue for the reservation item.

Activities

You have various options of setting or resetting the Movement allowed indicator:

- You can use the reservations management program to set the indicator automatically (see Functions of the Reservations Management Program [Page 152]).
- You can set or reset the indicator manually for individual items on the collective processing screen (M column) or on the detail screen (Mvt. allowed field).
- To set or reset the indicator for all items, choose Edit → More functions → For all items → Movement on/off on the collective processing screen. The system automatically sets the indicator for all of the items (or resets it if it has already been set).
Changing the Final Issue Indicator

Use

The final issue indicator is used to mark a reservation item as completed. It is set automatically during goods issue posting if the entire reserved quantity is withdrawn.

If the indicator is set for a reservation item, this item will no longer be suggested as selected for the goods issue.

Activities

If you want a reservation item to be considered completed by a particular goods issue despite the fact that the entire quantity was not issued, you can manually set the final issue indicator when you enter the goods issue item.

Entering goods issues with reference to a reservation is explained in detail in Goods issues [Page 83].

There are other situations in which you can manually change the final issue indicator in the reservation, namely:

- If a reservation item was completed by a partial withdrawal, but the final issue indicator was not set when the goods issue was entered, you can set the final issue indicator directly in the reservation.

- If a reservation item has already been marked as completed, but you want to reserve an additional quantity, reset the indicator, so that the item will be appear as selected when the goods issue is entered.

You can set or reset the final issue indicator for an item directly on the collective processing screen (Fls column) or on the detail screen (Final issue field).
Checking Availability

Use
If you change MRP-relevant data, the system automatically checks whether the material will be available on the requirement date. If you have not changed any MRP-relevant data, you can manually initiate the availability check.

Activities

- To perform the availability check for a particular item, choose Edit → More functions → Check availability from the detail screen.

- To perform the availability check for all items, choose Edit → More functions → For all items → Check availability from the collective processing screen.

If the material is not available on the requirement date, the system issues either a warning or an error message, depending on how Customizing is configured.
Deleting an Item

Use

If a material is no longer to be withdrawn, or if you entered an incorrect material number or incorrect plant, you can delete the reservation item.

Activities

1. Choose the item that is to be deleted.

2. Choose Edit → More functions → Delete item, or select the column D (deleted).
   This marks the item for deletion. Although the item still appears in the list, it can no longer be changed.

3. Post the change.
Managing Reservations

Use

Management of reservations involves the following:

- deletion of the reservation file
- mass changes of reservations

Deletion of the reservation file

You should regularly delete completed, old, or unnecessary reservations to keep the reservation file from becoming too big. Reservations are deleted as follows:

1. Reservation items that are completed or that are in the system longer than a certain number of days are marked for deletion by the reservations management program.

2. If all of the items of a reservation are marked for deletion, the reservation is physically removed from the file.

Bulk Change of Reservations

When you enter reservations for which movements are not yet allowed, you must set the Movement allowed indicator so that you can post goods movements for these reservation items. It is possible to make this change for all reservation items whose requirement date is in the near future (for example, within the next 10 days).

Selecting Reservations To Be Processed

You can limit the list of reservations to be processed by entering various selection criteria, as follows:

- reservation number (defining a range is allowed)
- base date (To date)
- account assignment

This function cannot be used to manage automatic reservations which were created for an order. You can only do this via the maintenance functionality of the order.
Functions of the Reservations Management Program

Use
The management program RM07RVER carries out the following activities:

- Marking items for deletion
- Deleting reservations
- Allowing movements for reservation items

Marking Items for Deletion
The reservations management program sets the deletion indicator for reservation items:

- that are completed (final issue indicator has been set)
- whose requirement date is earlier than the date calculated by the system

Consequently, old or unnecessary reservations that no longer represent an "actual" request are deleted (for example, because the material was withdrawn without the reservation being referenced during the goods issue posting).

Calculating the Deletion Date
To allow the system to calculate a date for the deletion of the reservations, you must enter a base date on the selection screen. The system calculates the deletion date using the base date you enter minus a predefined number of days (in the standard SAP System: 30 days).

You enter 10. 01 as a base date. In this case, all reservation items whose requirement date is on or before 09.01 are marked for deletion.

Deleting Reservations
If all of the items of a reservation are marked for deletion, the entire reservation is removed from the file.

It is possible to delete only those reservations that were entered for a certain account assignment (for example, a cost center or an order). To do so, enter the account assignment as a selection criterion.

Allowing Movements for Reservation Items
The reservations management program sets the Movement allowed indicator for all items whose requirement date falls within a certain period. For these items, goods movements are allowed.

Calculating the Period
To enable the system to calculate a period for allowing movements, you must enter a base date on the selection screen. The system calculates the period using the base date you enter plus a predefined number of days (in the standard SAP System: 10 days).
You enter 10/01 as a base date. In this case, movements are allowed for all items whose requirement date is before 10/12.

The default number of days (30 days for the deletion indicator, 10 days for the Movement allowed indicator) can be changed by the system administrator in Customizing for Inventory Management.
Running the Reservations Management Program

1. Choose Reservation → Manage.
   
   The Reservations Management selection screen is displayed.

2. Enter a range for the reservations to be processed. You can also narrow down the number of reservations to be processed by entering an account assignment as a selection criterion.
   
   Enter the base date:
   
   a. Only reservations whose base date is on or before the date entered are taken into account.
   
   b. Using the base date, the system calculates the date for deletion of the reservation items and the period for allowing movements.
      
      Select the actions to be carried out (for example, Set deletion indicator/delete reservation or Allow goods movement).
      
      If the Only completed items indicator is set, only items that are completely issued or marked as completed are marked for deletion.
      
      If you run the program as a test run, you obtain a list of all reservations and reservation items with the changes to be carried out. You can make the changes by choosing List → Save.
      
      If you do not run the program as a test run, the changes are carried out immediately. A log of the changes that are carried out is only issued if you selected the issue log indicator.

3. Choose Program → Execute to run the reservations management program.

   Depending on the function you selected, one of the following collective processing screens will be displayed:
   
   a. collective processing screen for the reservations to be deleted
   
   b. collective processing screen for the reservation items to be changed
      
      If you selected both functions, the collective processing screen for the reservations to be deleted is displayed. Choose Goto → Reservation items to be changed to display the screen for the items to be changed
      
      On the collective processing screen, select the required reservations or reservation items.


   The list of the selected reservations or reservation items is displayed.

5. Choose List → Save to delete the reservations or set the Movement allowed indicator.
Physical Inventory

Purpose
This component allows you to carry out a physical inventory of your company’s warehouse stocks for balance sheet purposes. Various procedures can be implemented for this.

Features
In the R/3 System, physical inventory can be carried out both for a company’s own stock and for special stock. Inventory for a company’s stock and for special stocks (such as, consignment stock at customer, external consignment stock from vendor or returnable packaging) must be taken separately (in different physical inventory documents), however.

Furthermore, the stock can be divided into stock types. In the standard system, a physical inventory can be carried out for the following stock types:

- Unrestricted-use stock in the warehouse
- Quality inspection stock
- Blocked stock

If batch status management is active, the first stock type covers both unrestricted-use stock and restricted-use stock.

Inventory of all stock types mentioned can be taken in a single transaction. For the materials to be inventoried, one item is created in the physical inventory document for every stock type.

Physical inventory takes place at storage location level. A separate physical inventory document is created for every storage location.

If a material does not exist in a storage location, this means that no goods movement has ever taken place for the material in the storage location. The material, therefore, has never had any stock in this storage location. The material does not exist at stock management level in the storage location. It is therefore not possible to carry out a physical inventory for the material in this storage location.

This is not to be confused with a material for which a goods movement has taken place and for which the stock balance is currently zero. A physical inventory must be carried out in this case, since storage location data is not deleted when the stock balance is zero.

Physical Inventory Procedures
The R/3 System supports the following physical inventory procedures:

- Periodic inventory
- Continuous inventory
- Cycle counting
- Inventory sampling
Physical Inventory

Periodic Inventory
In a periodic inventory, all stocks of the company are physically counted on the balance sheet key date. In this case, every material must be counted. During counting, the entire warehouse must be blocked for material movements.

Continuous Inventory
In the continuous inventory procedure, stocks are counted continuously during the entire fiscal year. In this case, it is important to ensure that every material is physically counted at least once during the year.

Cycle Counting
Cycle counting is a method of physical inventory where inventory is counted at regular intervals within a fiscal year. These intervals (or cycles) depend on the cycle counting indicator set for the materials.

The Cycle Counting Method of Physical Inventory [Page 189] allows fast-moving items to be counted more frequently than slow-moving items.

Inventory Sampling
In MM Inventory Sampling [Ext.] randomly selected stocks of the company are physically counted on the balance sheet key date. If the variances between the result of the count and the book inventory balance are small enough, it is presumed that the book inventory balances for the other stocks are correct.

Updating the Logistics Information System (LIS)
The physical inventory is connected to the Logistics Information System (LIS). When inventory differences are updated in the LIS, they are displayed both on a quantity and on a value basis. The physical inventory items are aggregated at inventory number level, plant level, storage location level, and material level. If you need more detailed information on the inventory differences in the LIS, you can access the list of inventory differences directly from the LIS and continue the analysis at item level.

Constraints
The posting of physical inventory differences is subject to certain time constraints:

- The posting period is automatically set during counting. Therefore, the inventory difference must be posted to the same period or - if postings to the previous period are allowed - in the following period.

- The fiscal year is set by specifying a planned count date when creating a physical inventory document. All subsequent postings to this document must take place in this fiscal year and/or in the first period of the following fiscal year, if postings to the previous period are allowed.
Physical Inventory Process

Purpose
Regardless of the physical inventory method, the process of physical inventory can be divided into three phases:

1. Physical Inventory Preparation [Page 159]
   - Create a physical inventory document.
   - Blocking Materials for Posting
   - Print and distribute the physical inventory document.

2. Physical Inventory Count [Page 160]
   - Counting stocks
   - Entering the result of the count on the physical inventory document printout

3. Physical Inventory Analysis [Page 161]
   - Entering the result of the count into the system
   - Initiating a recount, if necessary
   - Posting inventory differences

Process Flow
The physical inventory procedure is carried out in three steps:

1. Creating a Physical Inventory Document
2. Entering the Physical Inventory Count
3. Posting inventory differences

You can also group together individual phases and carry them out in a single step, as follows:

- posting the physical inventory count without reference to a physical inventory document
  In this step, the following are combined:
  – a physical inventory document is created.
  – the count is posted.

- posting the physical inventory count and inventory differences
  If a physical inventory document exists, the following are combined in this step:
  – the count is posted.
  – any inventory differences are posted.

- posting the physical inventory count without reference to a physical inventory document
  In this step, the following are combined:
  – a physical inventory document is created
  – the count is posted
Physical Inventory Process

– any inventory differences are posted

Monitoring the Inventory Status

To monitor physical inventory processing, each physical inventory document records the inventory steps that have been carried out. This information is contained in the item data and the document header.

- **Inventory history in the item data**
  
  The inventory history informs you which steps have been carried out for the item.

- **Document header**
  
  In the document header, the fields *Count status, Adjustment status* and *Delete status* specify whether some or all of the items have been counted, posted (inventory differences), or deleted.

You can also display statistics for the physical inventory document; the statistics list how many document items are open, counted, posted (inventory differences), recounted, or deleted.

Result

When you post the inventory differences, the system adjusts the book inventory values and book values so that they correspond with the actual stocks and stock values.
Physical Inventory Preparation

Purpose
To ensure that the physical inventory count goes smoothly, you have to carry out a number of steps in preparation.

Process Flow
1. Create a physical inventory document.
   A physical inventory document contains, among other things, the following data:
   - the plant and storage location in which the count is to take place
   - when the count is to take place
   - which materials are to be counted
   - for material handled in batches: which batches are to be counted
   - in the case of split valuation: which sub-stocks are to be counted
   - which stock types are to be counted
2. Blocking Materials for Posting
   Due to the delay between a material movement and the posting of that movement, there is a short-term discrepancy between actual warehouse stock and book inventory. To avoid such a discrepancy during physical inventory, it is recommended that you block the materials for posting during the physical inventory. You can set a posting block two ways:
   - You block the relevant materials when you enter the physical inventory document. This is recommended if you create the physical inventory document immediately before the count.
   - You block the relevant materials later by changing the posted physical inventory document. This is recommended if you do not create the physical inventory document immediately before the count.
   The posting block is automatically cancelled when you post the counting results for the physical inventory document.
3. Print and distribute the physical inventory document.
   You must print out the physical inventory document for the physical inventory count and pass it on to the people responsible for doing the counting.
Physical Inventory Count

Purpose
During the inventory count, all the materials being inventoried are counted and entered physically.

Process Flow
1. The stocks are counted for individually for the materials in a physical inventory document.
2. The count results are written on the printout of the physical inventory document.
3. The printout is then directed back to the person responsible, so that he or she can enter the count into the system and analyze it.
Physical Inventory Analysis

Purpose
During the physical inventory analysis, you enter the count results in the system, determine whether a recount is necessary if there are any discrepancies, and post the inventory differences.

Process Flow

1. Entering the count results in the system
   After the count has been taken, you must enter the results of the count into the system. You enter the counted stocks for every item of a physical inventory document.
   If non-SAP programs are used to carry out the inventory count, you can import the count data into the R/3 System using the following functions:
   - Using batch input for entering count results
   - Transfer PDC (Portable Data Capture) inventory count data

2. Initiating a recount
   It is possible to initiate recounts for individual items on a physical inventory document. This is recommended if you suspect that an error was made during counting. When you initiate a recount, a new physical inventory document is created.

3. Posting inventory differences
   If the physical inventory is different from the book inventory, you must correct the book inventory balance by posting the differences. This step ends the physical inventory.

Result
When you post the physical inventory difference, the system creates a material document that records the adjusted stock balances and an accounting document that contains the necessary account activities.
Examples of Physical Inventory Documents

Material A

For material A, in one storage location, you have your company's own stock and consignment stock belonging to vendors 7 and 8. For material A, you want to inventory the unrestricted-use stock belonging to your own company and consignment stock. To do this, you create the following physical inventory documents:

1. Document: plant 0001, storage location 0001, special stock A

<table>
<thead>
<tr>
<th>Item</th>
<th>Material</th>
<th>Stock type</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>A</td>
<td>1</td>
</tr>
</tbody>
</table>

2. Document: plant 0001, storage location 0001, special stock K, vendor 7

<table>
<thead>
<tr>
<th>Item</th>
<th>Material</th>
<th>Stock type</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>A</td>
<td>1</td>
</tr>
</tbody>
</table>

3. Document: plant 0001, storage location 0001, special stock K, vendor 8

<table>
<thead>
<tr>
<th>Item</th>
<th>Material</th>
<th>Stock type</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>A</td>
<td>1</td>
</tr>
</tbody>
</table>

Material B

You place material B in storage locations 0001 and 0002. For material B, you want to inventory the unrestricted-use company's own stock and the company's own stock in quality inspection. To do this, you create the following physical inventory documents:

1. Document: plant 0001, storage location 0001, special stock B

<table>
<thead>
<tr>
<th>Item</th>
<th>Material</th>
<th>Stock type</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>B</td>
<td>1</td>
</tr>
<tr>
<td>2</td>
<td>B</td>
<td>2</td>
</tr>
</tbody>
</table>

2. Document: plant 0002, storage location 0001, special stock B

<table>
<thead>
<tr>
<th>Item</th>
<th>Material</th>
<th>Stock type</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>B</td>
<td>1</td>
</tr>
<tr>
<td>2</td>
<td>B</td>
<td>2</td>
</tr>
</tbody>
</table>
Examples of Physical Inventory Documents
Carrying Out the Physical Inventory

Use

The following topics describe how to perform each of the physical inventory tasks in the R/3 System:
Creating Physical Inventory Documents

Use
There are two methods of creating a physical inventory document, as follows:

- Creating Single Documents

  In this case, you explicitly specify the materials to be counted. This method is recommended if you want to take inventory of only a few materials.

- Creating Sessions

  In this case, you enter the criteria that should determine which materials are to be inventoried in which plants and storage locations. The system then creates a physical inventory document for each plant and storage location with the materials that fulfill the criteria. This method is recommended if you want to take inventory of a lot of materials (refer to Managing Sessions [Page 179]).

Grouping Physical Inventory Documents by Physical Inventory Number

Above the physical inventory document number, there is a physical inventory number. You can use this to group physical inventory documents that belong together organizationally in order to manage them more efficiently. This allows you to display the physical inventory documents for a particular month or department directly without having to search the list of inventory differences.

You issue physical inventory numbers when creating and changing physical inventory documents. To do this, enter a number or term of your choice on the initial screen or in the Physical inventory number field in the physical inventory document header.

Creating Single Documents


2. Enter the data required. Choose Edit → New items to display the item screen.

3. Enter the materials that are to be inventoried.

4. To post the document, choose Phys. inventory doc. → Post. The system confirms the posting and displays the number of the physical inventory document.

Creating Sessions

1. Choose Sessions → Create phys.inv.docs →

   Without special stock for physical inventory of company's own stock
   → Own special stock for physical inventory of own special stocks
   → Externally owned special stock for physical inventory of external special stock

   The initial screen appears.

2. Enter the data required.

3. Choose Program → Execute from the menu. The system creates a session. A list appears with all of the items that are to be inventoried according to your selection. The system issues a message with the name of the session created.
Creating Physical Inventory Documents

For more information on creating sessions, refer to the respective report documentation.
Changing Physical Inventory Documents

You can make the following changes to a physical inventory document:

- In the document header
  - change the planned count date
  - set or remove the posting block
  - freeze the book inventory balance
  - create or change the physical inventory number

- In an item still to be counted
  - change the stock type
  - change the count unit of measure
  - set the deletion indicator

- Enter new items, provided no count has taken place
- Delete the document

Please note when deleting:

- If you set the deletion indicator for an item, the item remains in the document but cannot be processed. This will unblock the material.

- If you delete a document, it is physically deleted if there are no inventory difference postings for its items. If a difference has been posted, the document is proof of the posting. Therefore, it is simply flagged for deletion. This means it can then be displayed, but no longer processed. The document is physically deleted when the next reorganization program is run.

To change a physical inventory document, proceed as follows:

1. Select *Physical inventory document* → *Change* from the physical inventory menu. The initial screen appears.
2. On the initial screen, enter the number of the physical inventory document.
   - To make changes to the document header, select *Goto* → *Header*. Make the change and save with *Physical inventory document* → *Post*.
   - To make changes to an item, select *Goto* → *Collective processing*. Make the change and save with *Physical inventory document* → *Post*.
   - To add a new item, select *Goto* → *New items*. Enter the items and save with *Physical inventory document* → *Post*.
   - To delete the document, select *Document* → *More functions* → *Delete*. 
Blocking Materials for Posting

There are two ways to block materials for posting for the duration of the physical inventory count:

- Blocking when Creating
- Blocking Later

Blocking when Creating

To block the materials of a physical inventory document when you create the document, do the following:

- When creating an individual physical inventory document, select the *Posting block* field on the initial screen.
- When creating a session, select the *Posting block* field on the selection screen.

Blocking Later

You can block materials later either for an individual physical inventory document or (using sessions) for several physical inventory documents. To do this, proceed as follows:

- **individual processing**
  a. From the inventory screen, select *Physical inventory document* → *Change*. The initial screen appears.
  b. On the initial screen, enter the number of the physical inventory document. Since the posting block is specified in the document header, select *Goto* → *Header* from the menu. The header data screen appears.
  c. On the header data screen, select the *Posting block* field.
  d. Post the document by selecting *Physical inventory document* → *Post* from the menu.

- **session processing**
  a. From the Physical Inventory menu, select *Sessions* → *Block material*. The criterion screen appears.
  b. On the criterion screen, enter the number of the physical inventory document (or a range of physical inventory document numbers), and select the *Posting block* field.
  c. Select *Program* → *Execute* from the menu. The system creates a session. A list appears with all of the physical inventory documents that are to be blocked according to your selection. The system displays a message with the name of the session.
Printing Physical Inventory Documents

To print physical inventory documents, proceed as follows

1. From the inventory screen, select Document→Print. The criterion screen appears.

2. On the criterion screen, enter the criteria that should determine which physical inventory documents are to be printed.

   The fields Physical inventory documents and Physical inventory items are used to limit the printout according to the status of the physical inventory documents or items.

3. Choose Program→Execute. If you selected a field in the Status selection area, a window appears in which you can limit the printout according to the status of the documents or the items.

   Select which statuses you want to print.

4. Select Program→Execute from the menu. A window appears in which you can enter the defaults for the printout.

5. To print the physical inventory document, press F13=Print.
Entering the Physical Inventory Count

After the count has been performed, you must enter the results of the count into the system. As well as the standard procedure (refer to Physical Inventory Process [Page 157]), the R/3 System enables you to enter the result of the count for a material for which no physical inventory document has been created. In this case, a physical inventory document is automatically created upon entry of the result of the count.

Thus, there are two methods for entering a physical inventory count, as follows:

- entering the count with reference to a physical inventory document
- entering the count without reference to a physical inventory document

Furthermore, it is possible to change an already entered physical inventory count. This might be necessary, for example, if an error is made during entry, or if you receive a correction for a count without a recount having taken place.

**Entering the Count with Reference**

To enter a physical inventory count with reference to a physical inventory document, proceed as follows:

1. From the Physical Inventory menu, select Inventory count → Enter. The initial screen appears.
2. On the initial screen, enter the number of the physical inventory document. Select Goto → Collective processing from the menu to display the item screen of the physical inventory count.
3. On the item screen, enter the counted quantities into the Quantity column. If necessary, enter the unit of measure in which the count was carried out in the UnE field.

   ![Warning]
   
   If a quantity of zero was counted for an item, enter this by selecting the ZC (zero count) column. It is not sufficient to enter 0 in the Quantity in column, because the system interprets a zero as "not yet counted."
4. To post the count, select Inventory count → Post from the menu.

**Entering the Count Without Reference**

To enter a physical inventory count without reference to a physical inventory document, proceed as follows

1. From the Physical Inventory menu, select Inventory count → Enter without document reference. The initial screen appears.
2. On the initial screen, enter the plant and the storage location from which the count originates. Select Edit → New items from the menu to display the item screen of the physical inventory count.
3. Enter the materials, the stock types, and the counted quantities.
4. To post the count, select *Inventory count* → *Post* from the menu. A new physical inventory document is created during posting, and the system displays the message *Count entered for physical inventory document nn.*
Freezing the Book Inventory Balance

If you have not completed your inventory count, you can freeze the book inventory balance in the physical inventory document. This is to prevent the book inventory balance, which is relevant for physical inventory, from being changed by any movements. These could otherwise lead to incorrect inventory differences.

You have physically counted all items in a physical inventory document, but have not yet entered the count results in the system for all items. For one of these items, the book inventory balance is 100 pieces. 90 pieces were counted, corresponding to a difference of 10 pieces.

You freeze the book inventory balance of 100 pieces in the physical inventory document.

Before you enter the count, a goods receipt of 20 pieces is posted. The current book inventory balance is now 120 pieces. For the physical inventory document, the book inventory balance of 100 pieces continues to be relevant, however.

If the inventory balance had not been frozen, there would have been a difference of 30 pieces for the item.

In the Customizing system of Inventory Management, you specify whether the freezing of book inventory balances in the storage location is allowed.

From the Physical Inventory menu, you can freeze the book inventory balance using the following functions:

- *Physical inventory document* → *Create* (initial screen)
- *Inventory count* → *Change* (Header)
- *Sessions* → *Freeze book inventory* (Batch input)
Setting Zero Count

If a quantity of zero was counted for an item, enter this by selecting the ZC (zero count) column. It is not sufficient to enter 0 in the Quantity in column, because the system interprets a zero as "not yet counted."

Setting Zero Count Automatically

When entering inventory counts with reference to a physical inventory document which contains many items with a stock balance of zero, it is possible to set “zero count” automatically for all items not counted.

Consequently, you only need to enter the quantity counted for inventory items with stock. You no longer need to set the indicator Zero count for every single item with zero stock.

Procedure

1. First enter the count results for those items with a stock balance other than zero.
2. Then select Edit → Set zero count.
   The zero count indicator is set automatically for each item that has not been counted.
3. Save your count results.

You can also use a batch input report for setting this indicator. To do this, select Sessions → Set zero count.
Changing a Physical Inventory Count

Changing a Physical Inventory Count

To change a physical inventory count, you proceed exactly as you would for entering a physical inventory count, with one difference. On the item screen, the Quantity in column is already filled. Overtype the entry with the corrected quantity, then post the document.

If you have initiated a recount for an item, you can no longer change the physical inventory count. The quantity determined during recounting can only be entered in the physical inventory document for the recount.
Initiating a Recount

To initiate a recount, proceed as follows:

1. From the Physical Inventory menu, select Physical inventory document → Recount. The initial screen appears.

2. On the initial screen, enter the physical inventory document for which you want to initiate a recount. By specifying a threshold value, you can limit the number of items in the recount to only those which display a larger difference than the threshold value. Select Goto → Overview to obtain a list of the document items.

3. Select the items for which you want a recount.

4. Select Physical inventory document → Post from the menu. A new physical inventory document is created that contains the selected items. The system confirms the posting and displays the number of the physical inventory document.

The recounted items are deactivated in the original document and can no longer be processed via this document.
Posting Inventory Differences

Use

There are various options for posting inventory differences depending on the processing status of the physical inventory transaction.

- **Posting differences** after the count has been posted
  
  A physical inventory document has already been created, and the count has already been posted. You only have to post the inventory differences.

- **Posting the count and inventory differences** simultaneously after the physical inventory document has been created
  
  A physical inventory document has been created, but the count has not yet been posted. The count results are available. You enter the count and post the differences in one step.

- **Entering the count without a document reference**
  
  You have a count result without reference; that is, no physical inventory document has yet been created for this physical inventory transaction. You create a physical inventory document, enter the count, and post the differences in one step.

Prerequisites

⚠️

The posting of physical inventory differences is subject to certain time constraints:

The posting period is automatically set during counting. Therefore, the inventory difference must be posted to the same period or - if postings to the previous period are allowed - in the following period.

The fiscal year is set by specifying a planned count date when creating a physical inventory document. All subsequent postings to this document must take place in this fiscal year and/or in the first period of the following fiscal year, if postings to the previous period are allowed.

You can give a reason for the inventory difference for each item. For example, you can specify that a physical inventory difference resulted because of theft.

In Customizing for Inventory Management, you can define the following value tolerances for posting inventory differences for a user group:

- maximum amount per physical inventory document
- maximum amount per document item

If the amount of a document exceeds the document tolerance defined for the user group, the user is not allowed to post any inventory differences for this document.

If the total value of the document is less than the document tolerance, but some items exceed the maximum amount per item, the user is not allowed to post any differences for these items. However, other items can be processed by the user.
Posting Differences After the Count Has Been Posted

1. Choose Difference → Post.
   The initial screen appears.

2. On the initial screen, enter the number of the physical inventory document.
   By entering a value in the Threshold value field, you can control that, on the following overview screen, all of the differences that are smaller than or the same as the threshold value are preselected.

3. Choose Continue.
   An overview appears with the items whose difference is larger than the threshold value so that differences are to be posted.
   (Since the inventory difference is calculated as the quantity counted minus the book inventory balance, it can be a negative number. The threshold value is independent of the sign. Thus, for a threshold value of 100, all differences that are not between -100 and +100 are listed.)

4. On the overview screen, you can deselect items and select further items.

5. Choose Difference → Post
   The items whose difference is smaller than the threshold value and the items that you selected in the overview are balanced.

Posting the Count and Differences Simultaneously

1. Choose Difference → Count/difference.
   The initial screen appears.

2. On the initial screen, enter the number of the physical inventory document.

3. Choose Goto → Collective processing.
   The collective processing screen for the physical inventory count is displayed.

4. On the collective processing screen, enter the counted quantities in the Quantity column.
   If necessary, enter the unit of measure in which the count was performed in the UnE field.

   !

   If a quantity of zero was counted for an item, enter this by selecting the ZC (zero count) column. It is not sufficient to enter 0 in the Quantity in column, because the system interprets a zero as "not yet counted."

5. Choose Difference → Post

Entering the Count Without a Document Reference

1. Choose Difference → Enter w/o doc. ref.
   The initial screen appears.

2. Specify the plant and storage location for which the count result is available.

3. Choose Edit → New items.
Posting Inventory Differences

4. On the item screen, enter the counted materials, along with their stock types and quantities.

⚠️

If a quantity of zero was counted for an item, enter this by selecting the ZC (zero count) column. It is not sufficient to enter 0 in the Quantity in column, because the system interprets a zero as "not yet counted".

5. Choose Difference → Post.

Result

After the inventory differences have been posted successfully, the system issues the message:

Diff. for I-document nn posted with M-document mm.

When you post the physical inventory difference, the system creates a material document that records the adjusted stock balances and an accounting document that contains the necessary account activities.
Managing Sessions

Use

If you want to carry out a transaction for many objects (for example, create physical inventory documents for many materials), the R/3 System can automatically execute it according to your specifications.

One advantage of this procedure is that you save monotonous entry time. Another is that a session can be processed at various times, allowing your system administrator to better utilize the capacities of the computer.

Features

This process consists of two parts:

1. You create a session for the objects in question.
2. The session is "processed". The session is "processed," meaning the system carries out the transaction for every object.

In physical inventory, work with sessions is supported for the following functions:

- creating a physical inventory document (see Creating Physical Inventory Documents [Page 165])
- blocking material (see Block Materials for Posting [Page 168])
- entering the count or transferring PDC count data (*)
- freezing the book inventory balance (see Freezing the Book Inventory Balance [Page 172])
- setting zero count automatically (see Setting Zero Count [Page 173])
- posting differences (see Posting Differences [Page 176])
- posting the count and differences (*)
- posting the physical inventory document, the count, and the differences (*)

The functions marked with an asterisk (*) cannot be carried out by the R/3 System alone, since the system does not know the count results. These functions are used to transfer physical inventory data into the R/3 System if the count was carried out with another system.
Serial Numbers in Physical Inventory

Use
When carrying out a physical inventory for materials that have serial numbers, you can enter the serial numbers while you are entering the results of the physical inventory count.

This is possible for the following transactions/events:

- Entering the physical inventory count (MI04)
- Entering the physical inventory count without reference to a document (MI09)
- Entering the count and posting differences in one step (MI08)
- Creating a physical inventory document, entering the count, and posting differences in one step (MI10)
- Changing the physical inventory count (MI05)

Prerequisites
Physical inventory with serial numbers is carried out for all materials that require serial numbers. You have to make the following settings for this:

- In the material master record, a serial number profile must be entered in which the indicator for serial number use is configured so that serial numbers have to be assigned for the serialization procedure MMSL (maintaining goods receipt and goods issue documents).
- The stock check indicator in the serial number profile should be configured so that an error message appears when there are inconsistencies in Inventory Management.

You maintain the basic settings for the serial numbers in the step Serial Number Profiles in Customizing for Serial Number Management.

You can configure serial number management for physical inventory in the Settings for Physical Inventory step in Customizing for Inventory Management.

Features
You cannot enter the serial numbers first and then deduce the counted quantity from that number. Inspection lot comparison (stock type 2) with serial numbers is not supported.

Activities

Entering and Editing Serial Numbers
When entering or changing a count, you can edit the serial numbers entered for every item from collective processing or the overview by choosing Edit → Change serial number. To do this, place the cursor on the line number whose serial numbers you want to change.

Displaying Serial Numbers
You can display the serial numbers from the display of the physical inventory document item. Choose Goto → Serial numbers.
Solving Problems with the Status Management of Serial Numbers

If a serial number is not correctly assigned to an individual material because the serial number and the serialized material are assigned to two different stock types, you cannot post inventory differences.

If, for example, you mix up the serial number when you transfer a serialized material between two storage locations, the serial number is assigned to one storage location while the serialized material pertaining to it is located in the other storage location. In this case, the system does not allow you to post the inventory difference for this item and issues an error message.

To enable you to post the inventory difference, you have to create a new physical inventory document via a recount for the item concerned. Choose Phys. inventory doc. → Recount. After you create the new physical inventory document, you can carry out a transfer posting for the serialized material so that the serial number assignment is consistent again.

You can obtain an overview of the items for which you have initiated a recount by going to the inventory history of the original document. If you do not require information on the inventory history, you can proceed as follows:

Delete from the physical inventory document the item that cannot be posted. Carry out a transfer posting for the serialized material. Create a new physical inventory document for the serialized material you have transferred.

Difference Posting for Serial Numbers only

Even if you did not determine differences in stock during the count, the system may still determine differences for the relevant serial numbers in a stock type. This occurs when the available serial numbers differ from the counted serial numbers. The system may therefore post differences for the serial numbers concerned only.

See also:

Serial Numbers in Inventory Management [Ext.]
Information on Physical Inventory

As well as providing a wide range of options for carrying out an inventory of your stocks, the physical inventory functions in the R/3 System allow you to obtain an overview of the progress of the physical inventory for each material at each stage of the process - from creating the physical inventory document to posting the physical inventory differences.

With all the functions listed, you only call up data that is stored in the system. You cannot change any data.

The following functions in the physical inventory menu provide information on the physical inventory:

- Displaying the physical inventory documents for a material (RM07IMAT)
  Choose Environment → Phys. inv. doc. for mat.

- Displaying the physical inventory data for a material (RM07IINV)
  Choose Environment → Phys. in. data for mat.

- Displaying the physical inventory overview (RM07IDOC)
  Choose Environment → Physical inv. overview.

- Displaying the physical inventory list (RM07IDIF)
  Choose Environment → Physical inv. list

- Displaying the list of physical inventory differences (RM07IDIF)
  Choose Difference → List of differences

- Displaying changes to physical inventory documents (RM07ICDD)
  Choose Environment → Changes to phys. inv. doc.

- Displaying a Physical Inventory History
  When you display or change a physical inventory document, you can display the physical inventory history for every physical inventory item. Choose Goto → Physical inventory. history.

The documentation for each report contains detailed information on evaluation options. You can also call up additional functions from the Environment menu.

- Displaying material documents for a material
- Displaying a material document for a physical inventory document
- Displaying a stock overview for a material
- Displaying the material master record
- Displaying archived documents
Account Activity During Posting of Inventory Differences

The account activity during posting of the inventory differences depends on which stock was inventoried:

- company’s own stock
- consignment stock from vendor
Inventory Differences in Company’s Own Stock

When you post inventory differences, the material master record is changed, total stock is automatically adjusted to the counted quantity. From the accounting point of view, this corresponds to a goods receipt or goods issue, meaning that when the inventory difference is posted, the stock account is debited or credited:

- If the counted quantity is smaller than the book inventory balance, the stock account is credited with the following value, inventory difference x price. The offsetting entry is made in the "Expense from physical inventory" account.
- If the counted quantity is greater than the book inventory balance, the stock account is debited with the value of the inventory difference x price. The offsetting entry is made to the "Income from physical inventory" account.

Since the amount posted is calculated on the basis of the current standard or moving average price, posting inventory differences does not lead to a price change.
Example of Inventory Difference in Own Stock

The following graphic shows an example of a material with a standard price and a material with a moving average price.

<table>
<thead>
<tr>
<th>Material master</th>
<th>Material A</th>
<th>Material master</th>
<th>Material B</th>
</tr>
</thead>
<tbody>
<tr>
<td>Standard</td>
<td>10</td>
<td>Mov.av.price</td>
<td>10</td>
</tr>
<tr>
<td>Total stock</td>
<td>100</td>
<td>Total stock</td>
<td>100</td>
</tr>
<tr>
<td>Total value</td>
<td>1000</td>
<td>Total value</td>
<td>1000</td>
</tr>
</tbody>
</table>

**Posted inventory count**

- Material A: 80
- Material B: 110

**Post inventory differences:**

- Stock account for Material: 200 -
- Expense from: 200 +
- Stock account for Material: 100 +
- Income from: 100 -

<table>
<thead>
<tr>
<th>Material master</th>
<th>Material A</th>
<th>Material master</th>
<th>Material B</th>
</tr>
</thead>
<tbody>
<tr>
<td>Standard</td>
<td>10</td>
<td>MA price</td>
<td>10</td>
</tr>
<tr>
<td>Total stock</td>
<td>80</td>
<td>Total stock</td>
<td>110</td>
</tr>
<tr>
<td>Total value</td>
<td>800</td>
<td>Total value</td>
<td>1100</td>
</tr>
</tbody>
</table>
Inventory Differences in Consignment Stock

When you post inventory differences, the material master record is changed, the vendor consignment stock is automatically adjusted to the counted quantity. Since this stock type is not managed by value, from the accounting point of view, there is no posting.

An accounting document is still created, however. This is due to the way the R/3 System interprets the difference:

**Counted Stock Smaller than Book Inventory Balance**

If the counted consignment stock is smaller than the book inventory balance, the system assumes that the difference was withdrawn from consignment stock and did not "disappear" until afterwards. The inventory difference is posted as a withdrawal and the withdrawal has to be paid to the vendor. When you post inventory differences, that's why the same account movements take place as those that take place when you carry out a transfer posting from consignment stock to your company's own stock, with the exception that the amount that was posted to the stock account is posted to the "Expenditure from inventory differences" account.

**Counted Stock Greater than Book Inventory Balance**

If the counted consignment stock is greater than the book inventory balance, the system assumes that larger withdrawals were posted from consignment stores than actually occurred. Thus, the inventory difference is posted as a withdrawal reversal. Since withdrawals are posted to the "Payables from consignment stores" account, postings must be made to this account when the inventory difference is posted.

Consequently, the postings made are the exact opposite of those made in the case of "counted stock smaller than the book inventory balance".
Example of Inventory Difference in Consignment Stock

The following graphic shows an example of a material valued at standard price.

Since 20 pieces are missing in consignment storage, the "Payables from consignment stores" account is posted with the amount of 20 pieces x $11/piece = $220. Due to the variance between the consignment price and the price from the material master record, the offsetting entry is divided as follows: the value from the difference quantity x the price variance (20 pieces x $1.00) is posted to the "expenditure from consumption" account and the remaining amount is posted to the "expenditure from physical inventory" account.

For a material with a moving average price, postings are only made to the "Payables for consignment stores" and "Expense from physical inventory" accounts.
Cycle Counting Method of Physical Inventory

Use

Cycle counting is a method of physical inventory whereby inventory is counted at regular intervals within a fiscal year. These intervals depend on the cycle counting indicator set for the material.

Cycle Counting allows you to count fast-moving items more frequently than slow-moving items, for example.

General Procedure

Mark all materials that are to be included in cycle counting with a cycle counting indicator in the material master record (storage data). The cycle counting indicator is used to group the materials together into various cycle counting categories (for example, A, B, C, and D). In Customizing for Inventory Management, you can define for each category the time intervals at which the materials are to be counted.

You can use the program ABC Cycle Counting Analysis (RMCBIN00) to perform an analysis. In this analysis, the system assigns the materials to the individual categories according to consumption or requirements. You can also specify whether this analysis is to consider only the materials with cycle counting indicator or all materials. The cycle counting indicator in the material master records can be updated automatically by this program.

For the planning of cycle counting, run the program Create physical inventory documents for cycle counting (RM07ICN1). This program checks all cycle counting materials to determine whether a physical inventory is due to be carried out.

For more information on programs used for cycle counting, see the relevant report documentation.

You can create physical inventory documents for the following stock types, as well as unrestricted-use stock (stock type 1):

- quality inspection stock
- blocked stock

The system calculates the planned count date for all stock types as follows:

Date of last physical inventory of unrestricted-use stock + predefined interval

If a material needs to be counted, use the program to create a batch input session for creating physical inventory documents. To create the physical inventory documents, process the batch input session.

When the inventory differences are posted, the actual count date is recorded in the physical inventory data of the material as the date of the last physical inventory.
Activities

Marking Materials for Cycle Counting

This step is only required if you perform cycle counting for the first time or if you want to update the cycle counting indicators.

In the material master record (storage data), maintain the cycle counting indicator for all the materials that are to be included in cycle counting.

You can set the indicator in one of the following two ways:

- manually in the material master record. To do this, choose Material → Change from the Material Master menu.
- automatically using ABC analysis To do this, choose Special procedures → Cycle counting → Set CC indicator from the Physical Inventory menu.

Creating Physical Inventory Documents for Cycle Counting

1. From the Physical Inventory menu, select Special procedures → Cycle counting → Create physical inventory documents.

2. Enter the data required.

3. Carry out the evaluation.

4. Choose Edit → Generate session to create the batch input session.

5. Select System → Services → Batch input → Edit from the menu to process the session.

6. Carry out the physical inventory for the physical inventory documents created.
Batch Handling

Use

The structure of the material master record allows you to manage stocks of a material by value at plant level or company-code level and by quantity down to storage-location level. Under certain conditions, you may need to make further subdivisions for a material and manage batches.

Certain materials’ features cannot always be guaranteed to be exactly alike in production. For example, you cannot guarantee that a certain color will always have the same shade. Minor differences between production lots cannot be avoided. You need to be able to uniquely identify the individual production lots of the same material and manage them separately in inventory.

Materials that require such precise identification, for example pharmaceutical products, are identified and managed in stock not only according to material number, but also according to batch number.

With batch handling, you can manage not only production lots from in-house production, but also production lots from vendors as separate entities.

It is possible to supplement standard batch management with batch status management.

Features

What Is a Material Handled in Batches?

Before you can manage batches of a material in stock, you must first specify in the material master record that the material is to be managed in batches for the specified plant. To do this, you must set the batch management requirement indicator in the material master record (for example, in the Purchasing or Storage view).

Level of Batch Number Assignment

If a material is subject to management in batches, every quantity of that material must be assigned to a batch. Each batch of a material is identified by a unique batch number, under which it is managed. This number is either entered by the user (external number assignment) or assigned automatically by the system.

You can define number assignment for batches at various levels:

- Uniquely at client level for a material
- Uniquely at material level
- Uniquely at plant level

In the standard R/3 System, numbers are assigned to the individual materials at plant level.

Structure of Batch Data

For every batch, there are two types of data:

- General data on the batch (for example, shelf life expiry date, date of the last goods receipt), which is defined in the master batch. The master batch applies to all storage locations in which the batch is located. No stocks are managed at this level.
Inventory Management and Physical Inventory (MM-IM)  
SAP AG

Batch Handling

- Stock data, which is managed separately for every storage location in which the batch is located. For example, if the batch C1 of a material is spread across two different storage locations, the stock quantity is tracked for each storage location.

Must the Batch Exist Before the First Goods Receipt?

Both the master batch and the stock data for the batch are created automatically during the first goods receipt. Thus, you do not need to create this data manually.

However, if you want to define specific data for a batch, such as the shelf life expiration date, you have to manually maintain the batch data.

What Sorts of Batch Stocks Are There?

The following stocks are managed separately at batch level:

- Unrestricted-use stock
- Restricted-use stock
- Quality inspection stock
- Blocked stock
- Stock in transfer
- Blocked stock returns

Working with Materials Handled in Batches

When you enter goods movements for materials handled in batches, you must enter the batch number in addition to the material number. If you do not know the batch number, you can search for the batch using the required characteristics.

See also:

LO – Batch Management [Ext.]
MM Material Valuation [Ext.]
Working with Batches

Use

When working with materials handled in batches, note the following:

- Entering a batch
  Partial stock of a batch material must always be assigned to a batch. Consequently, for any goods movement you post (such as a goods receipt, goods issue, or transfer posting) you must include a batch number. If several batches of a material are moved, you must enter one material document item per batch.

- Master data
  Two types of master data exist for every batch in the warehouse, namely:
  - General data for the batch at plant level, material level, or client level (master batch)
  - Stock data for the batch at storage location level

- Stock types
  The following stock types are managed at batch level:
  - Unrestricted-use stock
  - Quality inspection stock
  - Blocked stock
  - Restricted-use stock (only with batch status management)
  - Stock in transfer (for stock transfers between storage locations)
  - Blocked stock returns

  All other stock types for the material are managed on a cumulative basis at storage-location or plant level.

- Searching for a batch
  If you do not know the batch number for a goods movement (for example, a goods issue), you can use a help function to display the list of available batches for a material (enter * in the Storage location or Batch field).

  When you issue goods, you can search for batches according to various search strategies (refer to Storage Location and Batch Selection [Page 101] and Batch Determination [Page 203]).
Batch Status Management

Use
Standard batch handling can be supplemented by batch status management. Batch status management can be activated in the Customizing system.

In batch status management, the system differentiates between two different statuses: A batch can either have the status *unrestricted use* or the status *restricted use*. The status is stored centrally as part of the batch and is used as a batch characteristic in classification, which, in turn, is responsible for batch selection in batch determination.

Features
In Inventory Management, the status is first set to *unrestricted use* upon receipt of a new batch. A batch can only be given the status *restricted use* in the following instances:

- Quality Management specifies the status *restricted use* in its usage decision.
- You set the status to *restricted use* using the Change batch function.

Upon a goods movement, the status of a batch is specified in the RU (restricted use) column on the collective entry screen.

Upon a withdrawal, the system issues a warning or an error message (depending on the configuration) if the batch to be withdrawn is restricted (part of the restricted-use stock).

Stock Types
Depending on whether a batch is unrestricted or restricted, the relevant stock is managed as unrestricted-use stock or restricted-use stock. It is not possible to have both unrestricted-use stock and restricted-use stock for the same batch.

If a partial quantity of an unrestricted batch is to be managed as a restricted batch, you must transfer this partial quantity to another batch (using a transfer posting).

In addition to the unrestricted-use stock or restricted-use stock, you can also have quality inspection stocks and blocked stocks for a batch.

Activities

Changing the Status of a Batch
To change the status of a batch, proceed as follows:

1. From the Material Master menu, choose Batch → Change.
2. On the initial screen, enter the batch data.
3. Select or deselect the indicator restricted-use.

Results of Changing the Status
A posting is made which transfers the stock of the given batch from the unrestricted-use stock to the restricted-use stock or vice versa.

At the same time a material document is created.
Goods Receipts of Batch Material

Use
Goods receipts of batch material differ from other goods receipts in that you must enter the batch number for every item.

With a goods receipt for a purchase order assigned to an account, it is not necessary to enter a batch number. If a batch where-used list is active, however, you can enter a batch number to allow you to track the receipt and consumption of the batch via the batch where-used list.

Features

Update of Batch Data in the Batch Master Record
- If the batch does not yet exist for the plant, it is automatically created.
- If the batch already exists for the plant, the new quantity is simply posted as a receipt in the specified storage location.

When posting a goods receipt, the system updates the following data in the batch master record:

Goods Receipt Date
In a goods receipt with reference to a purchase order or an order, the goods receipt date (the posting date) and the vendor are recorded in the general data of the batch.

The goods receipt date is always the date of the last goods receipt. This date is used later to select a batch according to specific search strategies (LIFO, FIFO), or it is used in the framework of batch determination.

Shelf Life Expiration Date
If the shelf life expiration check is active, you have to enter the production date or the shelf life expiration date of the batch when you enter the goods receipt. The shelf life expiration date is updated in the batch master record every time a receipt is entered (though not in the case of goods issues, stock transfers, and transfer postings). Refer to Shelf Life Expiration Date [Page 55].

Vendor and Batch Number with Vendor
When entering a goods receipt with reference to a purchase order, the system updates the following data in the batch master record: the vendor and the batch number used by the vendor (vendor batch). When you enter the next goods receipt, the system checks whether the vendor and the vendor batch of the goods movement are identical to the batch data in the batch master record. If they are not, the system issues a warning or an error message.

Batch Classification
If batch classification is active, you can assign characteristic values to the batch when entering the goods receipt. Refer to Batch Classification [Page 201].
Delivery of Several Batches of a Material

If an ordered quantity is supplied in several batches, you must enter a material document item for every batch. Also refer to Several Goods Receipt Items Per Order Item [Page 48]
Goods Issue of Batch Material

Use

Batch material can be reserved at three levels for a goods issue:

- **plant level**
  The reservation does not specify batches or storage location. You enter these during goods issue posting.

- **storage location level**
  The reservation does not specify batches, but it specifies a storage location. You enter the batch during goods issue posting. The storage location is automatically copied from the reservation into the goods issue posting and cannot be changed.

- **batch level**
  You want to reserve a certain batch. In this case, you enter a reservation that specifies the plant, the batch, and, if desired, a storage location. You cannot change these specifications during goods issue.

  Although you can reserve material at storage-location or batch level, all reserved stock is displayed at plant level only.

Batch Selection for Goods Issue

If, when you enter the goods issue, you do not know the batch number, or if the required quantity is to be taken from different batches, you can enter * in the *Batch* field:

- If batch determination is active, the system displays the screen for [Batch Determination][Page 203]
- If batch determination is not active, the system displays the screen for [Storage Location and Batch Selection][Page 101].
Stock Transfers and Transfer Postings of Batch Material

Prerequisites

For materials handled in batches, you can carry out stock transfers from plant to plant and from storage location to storage location as well as transfer postings from material to material.

An issuing batch and a receiving batch are always involved in a stock transfer or transfer posting of a batch material. The issuing batch number is copied as the receiving batch number (except in the case of a plant-to-plant stock transfer in two steps). The batch number can, however, still be changed.

Stock Transfers in Two Steps

In a stock transfer from plant to plant using the two-step procedure, you enter only the receiving plant for the removal from storage. The stock in transfer is managed only at plant level in the receiving plant, independent of storage location and batches. You must enter the receiving storage location and the receiving batch when you post the placement into storage.

In a stock transfer from storage location to storage location using the two-step procedure, the receiving storage location and the receiving batch are already determined during the removal from storage.

After posting the removal from storage, the quantity is in stock in transfer. Stock in transfer is managed at plant level, as well as at storage-location level and batch level. As a consequence, you must enter the same receiving batch for the placement into storage. If you do not know the batch, enter * in the Batch field. The batch selection list is displayed. This list displays the stock in transfer for the batches in the Stock column.

Procedure

You can post a transfer from batch to batch by entering a different batch for a stock transfer using the one-step procedure. To do this, proceed as follows:

1. From the Inventory Management menu, select Goods movement → Transfer posting.
2. Maintain the data on the initial screen. Choose one of the following movement types:
   - Movement type → Transfer posting → Plant to plant → Remove from storage/place in storage
   - Movement type → Transfer posting → Stor. loc. to stor. loc. → Unrestr. to unrestr.
   - Movement type → Transfer posting → Material to material
     To maintain the items directly on the item detail screen instead of on the collective entry screen, select Edit → New item.
3. On the detail screen, you can enter an issuing and a receiving batch.
4. Post the document.

In a transfer posting to a new batch, batch data (such as shelf life expiration date or vendor) is copied to the new batch. Classification data is copied as well.
Stock Transfers and Transfer Postings of Batch Material

In a transfer posting to an already existing batch, the data of the existing batch is retained.

Transfer Postings From Batch to Batch, With Status Management

In a transfer posting to a new batch, the new batch is given the status *unrestricted use* (even if the issuing batch has the status *restricted use*), unless the *restricted-use* status has been predefined by Quality Management.
Batch Classification

Use

The R/3 System allows you to classify batches. For example, you can use the batch classification functionality to store specific batch data (such as active substance content, weight, or technical data) not contained in the batch master record. Classification of batches is mandatory if you want to use the batch determination feature.

Characteristics of a Class

Characteristics are criteria according to which you can search for batches. These characteristics are defined when creating a class. There are two different types of characteristic:

- User-defined characteristics
  These are characteristics which are not defined as fields in the batch master record.
  For example: Active ingredient potency, viscosity, color, weight

- Fields in the batch master record
  Data that is stored in the batch master record can also be defined as characteristics of a class.
  For example: Goods receipt date, shelf life expiration date, batch status

Characteristic Values

When classifying a batch, you define one or more values for each characteristic.

For example: Characteristic color, value blue; characteristic status, value restricted use

If the characteristic is a field from the batch master record, the value of this field is automatically used as the characteristic value.

In batch determination, you can search for batches according to specific values or value intervals.

For example: You can search for all restricted batches with the color blue whose shelf life has already expired.

Activities

If you want to change the characteristic values of a batch or classify an existing batch, choose Batch → Change from the material master menu.

In Customizing for Inventory Management, you can define that a batch is to be classified at goods receipt. You can only use this function if the material or a batch of this material has been classified before.

Defining the Class of a Batch

You can use the function Create Material or Change material to define the class in the material master record (classification data). This class is valid for all batches of the material. You can also enter the class directly when classifying the first batch.

Depending on how the system is configured, the class is assigned to one of the class types below:
Batch Classification

- 022 for batches at plant level
- 023 for batches at material level/client level
Batch Determination

Use

When entering the goods issue of a material handled in batches, you can enter * in the Batch field in order to initiate automatic batch determination. The system then uses a specific search strategy to find batches with certain characteristic values (such as status, shelf life, etc.) and suggests these batches in a list. In this list, the batches are sorted by specific criteria (sort sequence), and the characteristic values are displayed. The system suggests how to distribute the given quantity to the batches found. You can accept the system’s proposal for the goods movement or you can distribute the quantity manually.

If the system could not find any batches via batch determination (for example, because the batches had not been classified or because there was no batch corresponding to the characteristic values in the search strategy), you can carry out a search without selection criteria. In this case, the system generates a list of all batches for the material. From this list, you select the desired batches.
Creating Batch Search Strategies

The system can only search for batches on the basis of search strategies. Therefore, you have to define these strategies. In a search strategy, you define the values according to which the system is to find batches.

A search strategy is assigned to a strategy type. Strategy types are defined in the Customizing system. Depending on the configuration of the strategy type, you can define a search strategy at various levels.

In the Customizing system, strategy type ME01 is defined. This strategy type allows you to define search strategies at the following levels, for example.

- plant/movement type
- plant/movement type/material

When entering a goods issue for a cost center (movement type 201), you wish to search for unrestricted batches. When entering the scrapping of a material (movement type 551), you wish to search for restricted batches only. When entering a goods issue of material XY for a cost center, you wish to search for unrestricted batches with the color blue.

You want to assign values to the following characteristics: status and color.

In this case, you have to define three search strategies for strategy type ME01:

### Search Strategy

<table>
<thead>
<tr>
<th>plant</th>
<th>MvT</th>
<th>material</th>
<th>Status</th>
<th>Color</th>
</tr>
</thead>
<tbody>
<tr>
<td>0001</td>
<td>201</td>
<td></td>
<td>unrestr.</td>
<td></td>
</tr>
<tr>
<td>0001</td>
<td>551</td>
<td></td>
<td>restr.</td>
<td></td>
</tr>
<tr>
<td>0001</td>
<td>201</td>
<td>XY</td>
<td>unrestr.</td>
<td>blue</td>
</tr>
</tbody>
</table>

### Creating Search Strategies

To create a search strategy, follow these steps:

1. From the Inventory Management menu, select Environment → Batch search strategy → Create.
2. On the initial screen, enter a strategy type.
3. Press ENTER. A dialog box for selection of a key combination (for example, plant/movement type) appears. Select a key combination.
4. Enter the values of the key combination to which the search strategy applies (for example, plant 0001, movement type 201). Press ENTER. The system then suggests the values of the strategy type.

   Via Selection criteria, you can define the characteristic values by which to search for the batches.
Via Sort, you can define the sequence by which to sort the batches in the list (for example, in ascending order by shelf life expiration date).

5. Save the strategy.

When you now enter a goods movement involving the values of the key combination (for example, movement type 201, plant 0001), the system will use this strategy for batch determination.
Finding Batches Using the Batch Determination Function

If batch determination is active in the Customizing system, you can search for a batch when entering the goods issue, as follows:

1. When entering a goods issue item, specify * in the Batch field. If a search strategy has been defined for the data of the movement (for example, plant 0001, movement type 201), the system suggests the batches of the material according to the characteristic values and sort sequence specified in the search strategy.
   - This list also includes the available quantity.
   - From this list, you can perform the following functions:
     - To obtain a list of all batches without considering any selection criteria, select Batch determination → W/o class selection.
     - To display a log of the search strategy, select Goto → Strategy analysis.
     - To display the strategy data, select Goto → Strategy info.
     - To display the characteristic data of a batch, select Goto → Classification.
     - To display the characteristic values used by the system to search for the batches, select Goto → Selection criteria.
     - To display details on the availability of the batch, select Environment → Display availability.

2. If the quantity is to be withdrawn from several batches, either enter the quantity to withdraw from each batch manually or select Edit → Distribute quantities to have the system allocate the quantities to the individual batches.

3. When you select Copy, the system generates one item for each selected batch.
Goods Movements of Split-Valuated Material

When you work with split-valuated materials, note the following:

- You enter goods movements of split-valuated materials the same way you enter goods movements of batch materials. In the Batch field, you simply enter the valuation type instead of a batch number. To display a list of valid valuation types for the material, enter * in the Storage location or Batch field.

- You can change valuation types in the case of stock transfers and transfer postings, just as you can change valuation types in the case of batch management. When you change the valuation type during a transfer posting, an accounting document is created in addition to the material document.

⚠️

To carry out a stock transfer from plant to plant for a material that is split-valuated at the receiving point, you have to use the one-step procedure or a stock transport order for technical reasons.

- If the material is both handled in batches and split-valuated, the system prompts you to enter the batch and then allocate the batch to a valuation type.
Stock Determination

Use

Stock determination enables you to implement various strategies to withdraw material for goods issues and stock transfers. You configure these strategies in Customizing. Based on the material requirements entered, the R/3 system determines how and when the material should be withdrawn, and from which storage locations and stocks.

When planning your materials requirements, it is not always important that you define the stocks and storage locations from which the materials are later to be withdrawn. Automatic stock determination takes care of this decision for you, thus preventing you from defining these parameters too early and restricting your business processes unnecessarily. The R/3 system does not determine the values you require until the goods movement is posted.

Based on the stock determination strategy you predefine, the system makes decisions on material withdrawal depending on the material, plant, and the business process.

You can use stock determination for the following stocks:

- unrestricted-use stock
- vendor consignment stock (K)
- pipeline material (P)
- sales order stock (E)
- project stock (Q)

Scenario 1:
The backflushing of material in repetitive manufacturing or for a production order should be carried out for a company’s own stock first of all and then for vendor consignment stock. The most reasonable vendor’s stock should be used first.

Scenario 2:
There is always a preferred vendor for all forms of material withdrawal. Material should be withdrawn from this vendor’s stock first. If there are several preferred vendors, you can use split valuation for price and quantity.

Scenario 3:
When staging material for production, you should firstly withdraw from a central buffer store a particular component manufactured in-house. When this store is empty, you should be able to withdraw the components from the issue storage location.

Scenario 4:
If you cannot cover the requirements from the stocks on-hand, you should withdraw the remaining quantity from the pipeline supply.
Stock Determination

Integration
Stock determination functions are of significance to the integration of the R/3 System as a whole, and can be used in several R/3 application components. You can use stock determination in the following application components:

- MM – IM (Inventory Management)
- LE – WM (Warehouse Management)
- PP – SFC (Production Orders)
- PP – REM (Repetitive Manufacturing)
- PP – KAB (Kanban)
- LO – BM (Batch Management)
- SD (Sales and Distribution)

In Customizing, you can define how stock determination interacts with the settings of the Warehouse Management System and Batch Determination.

Prerequisites
In order to work with stock determination, you must configure the following:

- In Customizing for Inventory Management, you define a cross-application strategy for stock determination, according to which stocks should be reduced. Each strategy is determined at plant level based on a stock determination group and stock determination rule.
- You assign a stock determination group to the material in the material master record.
- In Customizing for the application you are using, assign a stock determination rule to the business transaction/event.

Activities
The R/3 System can carry out stock determination in two ways:

- automatically in the background
  Using this procedure, you do not have any way of intervening in the stock determination process as processing only takes place in the background. It is entirely up to the R/3 System to determine the stock from which materials are withdrawn and posted.
- via online processing during the stock determination process
  If you have configured online processing in Customizing, you can have the R/3 System display the result of stock determination in a dialog box and you can change the result manually.

⚠️

If the stock determination procedure did not remove materials from the stock you requested, you can only cancel this posting via a reverse posting in the application you are using.

You should always prepare each strategy thoroughly and configure and test the application components extensively before you start using them.
Creating Stock Determination Strategies

Use
You can define stock determination strategies for goods issues and stock transfers depending on
the material, the plant, and the business transaction. However, these strategies are independent
of the application in which they are called. The strategy you use therefore depends on:

- the plant
- the object of the stock determination (material) → stock determination group
- the calling context (application in which it is called) → stock determination rule

Since the stock determination rule is assigned by the application in which it is called, various
strategies can be assigned for the same object in various calling contexts.

In a stock determination strategy, you therefore define,

- which stocks can be used for the transaction/event type
  - unrestricted-use stock
  - vendor consignment stock
  - pipeline material
  - sales order stock
  - Project stock
- from where stocks should be withdrawn (storage location)
- whether stock determination should be processed online or in the background
- which preferences should be taken into consideration (sort criteria)
- which priority these preferences should have when used with other strategies (batch
determination, storage type search)
- whether the valuation type should be taken into account for materials with split valuation

Using a user-defined program (user exit), you can also differentiate between the following
attributes:

- vendor (who is the preferred vendor for this material?)
- valuation type (for material with split valuation)

Integration
You can use stock determination instead of the storage location selection list (refer to Storage
Location and Batch Selection [Page 101]) and can combine it with the functions batch
determination in the LO Batch Management component and storage location determination in the
LE Warehouse Management component.
Creating Stock Determination Strategies

Prerequisites
You must have analyzed the business transactions involved in material withdrawal and worked out a concept for the stock determination strategies you require. You must know which combination of stock determination groups and stock determination rules are necessary.

Activities
- Define a stock determination strategy in Customizing for Inventory Management.
- Assign a stock determination rule in Customizing for the application in which it is called up. You can also do this in Customizing for Inventory Management. But here you only have a limited view of the settings in Customizing for the calling application.
- Assign the stock determination group to the required materials in the MRP 2 or Plant data/storage 2 screen of the material master record.

Example of Stock Determination Strategies
The following example illustrates the combinations you can use to define a stock determination strategy for the MM Inventory Management component. This example applies to all other calling applications, for example, PP Production Orders or SD Sales and Distribution.

<table>
<thead>
<tr>
<th>Material</th>
<th>stock det. group</th>
<th>Movement type</th>
<th>Stock det. rule</th>
<th>Stock det. strategy</th>
</tr>
</thead>
<tbody>
<tr>
<td>4711</td>
<td>0001</td>
<td>201</td>
<td>0003</td>
<td>0001/0003</td>
</tr>
<tr>
<td>4712</td>
<td>0002</td>
<td>201</td>
<td>0003</td>
<td>0002/0003</td>
</tr>
<tr>
<td>4711</td>
<td>0001</td>
<td>221</td>
<td>0004</td>
<td>0001/0004</td>
</tr>
</tbody>
</table>

In this example, stock determination groups vary according to the material. Therefore, different stock determination strategies can be determined for the same movement type and the same stock determination rule.

On the other hand, a material has a different stock stock determination rule for different movement types. Therefore, one material has various strategies depending on the application and the stock determination rule.
Starting Stock Determination

1. When you enter a goods issue or transfer posting, enter a * in the Storage location field.
2. Choose Continue.
   
   If you have activated the stock determination dialog box in Customizing, the system displays the dialog box, indicating the stocks it has determined for withdrawal.
   
   If you work without the stock determination dialog box, on the overview screen, the R/3 System suggests the stocks that are to be withdrawn.

3. Change the proposals as required.
4. Post the document.
Print Functions

Use
A physical goods movement generally requires a document in printed form to serve the following functions for the following areas: as a transfer document (goods receipt slip, goods issue slip) for the warehouse, as a label for identification of the material (pallet slip), and as a goods issue slip for goods issue. In the Inventory Management system, this category of document is called a goods receipt/issue slip (also referred to as a GR/GI slip or goods accompanying slip). In addition to printing GR/GI slips, Inventory Management allows you to print material document information on labels.

Features
The Inventory Management system uses the output technique to process GR/GI slips and labels. Output is a text that is generated at the time of goods movements.

Depending on the output type, output can either be printed or sent to a recipient through some other means of communication (for example, through the MAIL system). Output for GR/GI slips or labels is usually printed.

The system distinguishes between various types of output. The output type varies according to the following factors (see also Output Types [Page 216]):

- Type of GR/GI slip or label
- Version

Types of Goods Receipt/Issue Slips
The Inventory Management system supports three types of GR/GI slip, as follows:

- Goods receipt slip for external goods receipts
  For goods receipts with reference to purchase orders as well as return delivery slips

- Goods receipt slip for internal goods receipts
  For goods receipts with reference to orders

- Goods issue slip
  For goods issues and other goods movements

At the time of goods movement, the system automatically determines the type of GR/GI slip relevant for the given movement.

Versions
There are three printout versions available for printing a goods receipt slip or goods issue slip:

- Version 1: Individual slip
  In this version, one GR/GI slip is printed per material document item.

- Version 2: Individual slip with inspection text
  In this version, one slip is also printed per material document item. In addition, the printout includes any quality inspection text if contained in the material master record.
- Version 3: Collective slip
  In this version, a collective slip is printed containing all of the items of the material document.

You can specify the desired version when you enter a goods movement.
Output Types

Use
An output type is defined in the system both for each type of GR/GI slip or label and for each version. The output type is a four-digit key that contains any information relevant for printing output. For example:

- **SAPscript form**
  A form in SAPscript defines the format and content of output. You can stipulate that specific data (such as the material number) is output as a barcode.

- **Timing of output**
  The system can issue output at the following times:
  - immediately
  - at regular intervals
  - only on manual print request

The standard system provides the following output types for printing GR/GI slips and labels.

<table>
<thead>
<tr>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>WA01</td>
<td>GI slip, version 1</td>
</tr>
<tr>
<td>WA02</td>
<td>GI slip, version 2</td>
</tr>
<tr>
<td>WA03</td>
<td>GI slip, version 3</td>
</tr>
<tr>
<td>WAE1</td>
<td>GI label, version 1</td>
</tr>
<tr>
<td>WAE2</td>
<td>GI label, version 2</td>
</tr>
<tr>
<td>WAE3</td>
<td>GI label, version 3</td>
</tr>
<tr>
<td>WE01</td>
<td>GR slip (POs), version 1</td>
</tr>
<tr>
<td>WE02</td>
<td>GR slip (POs), version 2</td>
</tr>
<tr>
<td>WE03</td>
<td>GR slip (POs), version 3</td>
</tr>
<tr>
<td>WF01</td>
<td>GR slip (orders), version 1</td>
</tr>
<tr>
<td>WF02</td>
<td>GR slip (orders), version 2</td>
</tr>
<tr>
<td>WEE1</td>
<td>GR label, version 1</td>
</tr>
<tr>
<td>WEE2</td>
<td>GR label, version 2</td>
</tr>
<tr>
<td>WEE3</td>
<td>GR label, version 3</td>
</tr>
</tbody>
</table>
Separate output types are available in the system for special cases such as the processing of subcontract orders.
Printing Output

Purpose
You can print output that the R/3 System issues, for example, goods receipt/issue slips.

Prerequisites
You have to configure output determination and printer control in Customizing for Inventory Management.

Process Flow
1. When you enter or change data for a goods movement, you can activate the output determination function through an indicator.
   
   When the output determination function is active, the system checks:
   
   • whether any output is to be generated
   • which output type is to be generated
   • which printer is to be used for printout
   • the timing of output

2. Normally, printout occurs automatically. However, if the output type specifies that printout is to be initiated manually, you must process the output manually in order to print it.
Generating Output for Goods Movement

Use

When you enter a goods movement, you can proceed in one of two ways to generate output:

- Generating Output Automatically
- Entering Output Types Manually

Output is usually generated when a goods movement is entered. If you want to generate output for a goods movement that has already been posted, you can use the Change Material Document function to enter desired output types manually.

Generating Output Automatically

1. From the Inventory Management menu, select the function for entering the desired goods movement.
2. Set the Print via output control indicator by selecting it. This indicator activates the output determination function.
3. Enter and post the goods movement. If an output type is available for this particular movement, it is generated automatically. Depending on the timing of the output defined, printout either occurs automatically or has to be requested manually (refer to Processing Output [Page 221]).

   It is possible to maintain the Print via output control indicator as one of the parameters (parameter NDR) in the user master record. When you do so, the Print indicator will be preselected on the initial screen. Enter the value X (capital letter) for this parameter.

Entering Output Types Manually

1. From the Inventory Management menu, select the function for changing a goods movement (for example, Material Document → Change).
2. Check the individual items.
3. To generate output for a particular item choose that item. To generate output for a collective slip, choose the first item.
4. On the detail screen of the item, select Goto → More functions → Output. A screen appears on which you can enter the output types manually. If the Print indicator is set, the system may already have determined one or more output types.
5. Specify the desired output type (by entering the four-digit key) and the language. To specify the printer destination and other print parameters used for printout, select Edit → Communication method.
6. Select Back to return to the detail screen of the item.
7. Post the document.
Generating Output for Goods Movement

**Result**

When posting the goods movement, the system generates output of the specified output type. Depending on the timing of the output defined, printout either occurs automatically or has to be requested manually (see also Processing Output [Page 221]).
Processing Output

Use
If the system generated output when you entered or changed a goods movement, you will have to manually process the output if:

- Printout should only be possible using a manual print request
- You want to repeat output, in order to obtain another printout of a particular GR/GI slip

Procedure
1. From the Inventory Management menu, select Material document → Process output.
2. Enter a material document number or a number range. Select the indicator Reprocessing if you wish to re-print output that has been printed before.
   - Do not enter a material document if you wish to process all of the output to be printed.
   - You obtain a list of material document items for which output has been generated.
3. Select the items to be processed. From this list screen, you can choose the following functions:
   - Select Process to enter a print request for the output. Depending on how the system is set, the output is either issued immediately or placed in the spool file.
   - Select Goto → Parameter to change the printer setting and the print parameters.
   - Select Goto → Preview to display the output on the screen. This function allows you to display the GR/GI slip before entering the print request.
   - Select Goto → Log to display a log of all output that has been processed. The system only creates a log when the Process function is used.
Printer Control

Use

Printer Name

The system automatically determines the printer on which the GR/GI slip is to be printed. In Customizing for Inventory Management, you can specify the printer depending on various parameters:

- Printer by condition
- Printer by user
- Printer by output type, plant, storage location
- Printer by output type, plant, storage location, user group

You can also enter a printer destination manually when processing output. To do this, select Edit → Communication method from the output detail screen.

The relevant Customizing settings are described in detail in the Implementation Guide (IMG) for Inventory Management.

Print Parameters

In Customizing for Inventory Management, the print parameters for the spool file are maintained for each condition. However, you can manually change the print parameters when processing output. To do this, select Edit → Communication method from the output detail screen.
Multiple Printout of Goods Receipt/Issue Slips

Use

It is possible to have the system calculate the number of pallets during entry of a goods receipt with reference to a purchase order or production order and print a copy of the GR/GI slip for every pallet received.

Prerequisites

Printing multiple copies requires the following:

- You have to choose either 1 (individual slip) or 2 (individual slip with quality inspection text) for the version of the GR/GI slip.
- You must activate multiple printout for the printer in Customizing.
- You must define the pallet capacity (number of units of entry per pallet) must be defined in the material master record (storage data), in the Number of GR slips field.

Features

The system determines how many copies to print by dividing the quantity of goods received by the pallet capacity, then rounding this figure up to the next whole number. If the Number of GR slips field in the material master record does not contain an entry, only one GR/GI slip is printed.

If the multiple printout indicator is set, an additional field (No. of GR slips) appears on the detail screen of an item during entry of a goods receipt for a purchase order or a production order. As a default, this field contains the number of copies to print as calculated by the system. You can change this number simply by entering a different value.

If you manually enter the number of GR slips to print, and you later change the quantity of goods received, the system does not suggest a new number.
Printing Purchase Orders With Multiple Account Assignment

Use

If a purchase order contains more than one account assignment, the system issues both a GR/GI slip and an account assignment slip for each item. The account assignment slip lists all account assignments including the relevant order quantity.

Since the account assignment slip is printed for each item, it is not possible to print a collective slip in the case of multiple account assignment. Even if you select version 3 (collective slip), the system will print individual slips.
Archiving

Use
You can archive the following documents in Inventory Management and Physical Inventory:

- Material documents
- Physical inventory documents

Reservation documents are not archived. They can be deleted using the reservations management program (refer to Managing Reservations [Page 151]).

SAP’s archiving tool is used for archiving documents. For more information on archiving, refer to the BC Archiving Application Data component, under Archiving in Inventory Management (MM-IM) [Ext.].

The R/3 standard system contains the following archiving objects:

- MM_MATBEL for material documents
- MM_INVBEL for physical inventory documents

To access the archiving function, proceed as follows:

- From the Inventory Management menu, choose Material document → Archive.
- From the Physical Inventory menu, choose Physical inventory document → Archive.

Activities

Displaying Archived Documents
When the system archives material documents, it creates indexes and short documents that enable you to access the archived material documents quicker. When you are searching for a material document, you only have to enter the short document belonging to it and the system accesses the archive via indexes.

You also have the option of defining your own selection options. For example, as a selection criterion, you can define that only a particular vendor’s material documents are displayed.

To display archived documents, proceed as follows:

- From the Inventory Management menu, choose Environment → List display → Archived material documents.
- From the Inventory Management menu, choose Environment → List display → Material documents.
- From the Physical Inventory menu, choose Environment → Archived physical inventory documents.

For more information, see the relevant report documentation.
Archiving

**Archive Research with the Archive Information System (SAP AS)**

The Archive Information System (SAP AS) offers a wide range of options for searching for and displaying archived data. For more information, refer to the Archive Information System (SAP AS) [Ext.].
Reporting in Inventory Management

Use

To simplify your day-to-day work with the Inventory Management component, there are a range of functions and reports that provide extensive information on all materials with their stock data. This section provides an overview of the reporting function in Inventory Management. For more information, refer to the documentation on each function or the relevant report documentation.

Features

Environment Menu

- List displays
  
  This provides reports for documents posted in Inventory Management. Example: material documents for a material.

- Stock
  
  This provides information on a material’s stocks. Example: current stock/requirements list.

  The stock overview provides an overview of all stocks of a material over all organizational levels (see also Plant/Storage Location Stocks [Ext.]).

- Information
  
  This allows you to display data (master data, transaction/movement data) from other applications. Example: displaying a purchase order.

- Balances display
  
  This provides reports on the GR/IR clearing account.

- Consignment
  
  You can use this to display all information on consignment stocks. Example: displaying vendor consignment stocks.

- Batch where-used list
  
  This provides all the functions on the Batch Where-used List [Ext.].

- Batch search strategy
  
  You use this to define the strategies for Batch Determination [Page 203].

- Inventory Controlling
  
  You can also analyze and evaluate material stocks using Inventory Controlling. For more information, refer to the LO – Logistics Information System [Ext.] component.

Periodic Processing Menu

- List of stock values
  
  This report is used to display the total stock quantity and the total stock value for a material at plant and storage location level.
Reporting in Inventory Management

- Consistency check
  You can use this to check the consistency of your stocks at company code level, valuation area level, and material level.

- Managing held data
  When you enter a goods receipt, this function allows you to display and delete data that you have held for further processing but not yet posted.

- Analysis of rounding differences
  This function allows you to analyze rounding differences that resulted from conversion between units of entry and base units. This applies when you work with a material with metric and non-metric units of measurement, for example.

Activities

For the reports that work with the ABAP List Viewer, you can configure the output list as you require to display and evaluate further data. To extend the current display variant (basic list) or choose another existing display variant, choose Settings → Display variant. You can also create your own display variants and choose them on the initial screen. For more information on the ABAP List Viewer, see the ABAP List Viewer [Ext.] component.
Storing Documents

Use
In Inventory Management, you can use SAP ArchiveLink to store print-format documents in external content servers. You can store the following documents with this function:

- Incoming print-format documents for goods receipts for purchase orders and goods movements without reference (for example, delivery notes from vendors or goods receipt/issue slips).
- Inventory count results that have been entered on paper

The scanned print-format documents are stored in an external content server and linked with the R/3 documents upon which they are based. You can display the stored print-format documents from the display of the R/3 documents.

Prerequisites
You configure storage for print-format documents in Customizing.

Documents for goods movements
In Customizing for Inventory Management, in the step Activate Storage for Incoming Documents, you define for each transaction and movement type whether you want to store the incoming documents.

Documents for physical inventory
In Customizing for SAP ArchiveLink, in Administration Settings → Activate Bar Code Storage, you specify whether you want to store documents containing physical inventory count results with bar codes.

See also:

Storing Incoming Delivery Notes (MM-IM) [Ext.]
Storing Inventory Count Results (MM-IM) [Ext.]
Handling Units in Inventory Management

Use

If you use the Inventory Management (MM-IM) component, you can use Inventory Management [Ext.] functions for goods movements involving handling units. The following goods movements are supported:

- Goods receipts
- Goods issues
- Transfer postings
- Stock transfers

When you post a goods movement in a storage location that is subject to handling unit management, the system creates a delivery. It does not create a material document. The goods issue is not valuated until the delivery is posted in Shipping (also refer to Goods Issue [Ext.]).

Prerequisites

Setting Up and Cancelling the HU Requirement in a Storage Location

To set up or cancel the handling unit requirement in a storage location, all the stocks in the storage location have to be posted out, so that the stock balances are zero for all materials. This also applies to special stocks that are managed at storage location level. After the handling unit requirement is changed, you can re-post the stocks to the storage location. You can define the handling unit requirement in Customizing for Handling Unit Management, in the step HU Requirement for Storage Locations and Default Values for Deliveries.

Creating a Delivery

To create a delivery in the Shipping [Ext.] (LE-SHP) application component, the following data must be maintained in the R/3 System (also refer to Creating Outbound Deliveries [Ext.]):

- Plant data (sales organization, distribution channel, shipping point, and division)
- The sales and distribution data in the material master record
- The Customer field in the central vendor master record, as the vendor for shipping is also the customer

You can define the required plant data in Customizing for Handling Unit Management, in the step HU Requirement for Storage Locations and Default Values for Deliveries.

Features

You can use all the functions of Inventory Management, with the exception of the following:

- Physical inventory in Inventory Management does not support Handling Unit Management.
• When goods are received for a purchase order, you cannot subsequently enter a freight vendor that is different from the vendor. You can only enter a different freight vendor by changing the relevant purchase order.

• When goods are received for a purchase order, you cannot create a purchase order automatically, as goods movements in a storage location with handling unit requirement are carried out using deliveries.

• You cannot post a goods receipt with reference to an inbound delivery.

• The EAN128 functionality is not supported.

• Handling Unit Management is only supported for special stocks if the special stocks are managed at storage location level.

**Partner Storage Location for Stock Transfers**

If, in a storage location that is subject to handling unit management, you want to increase or decrease the stock of a handling unit by transferring stock, you can define another storage location as a partner storage location. The system then suggests this partner storage location any time you do not enter any other storage location. You configure this in Customizing for Handling Unit Management, in the step *HU Requirement for Storage Locations and Default Values for Deliveries.*
Material Master (LO-MD-MM)

Purpose
The material master contains information on all the materials that a company procures or produces, stores, and sells. It is the company's central source for retrieving material-specific data. This information is stored in individual material master records.

Integration
The material master is used by all components in the SAP Logistics System. The integration of all material data in a single database object eliminates redundant data storage. In the SAP Logistics System, the data contained in the material master is required, for example, for the following functions:

- In Purchasing for ordering
- In Inventory Management for goods movement postings and physical inventory
- In Invoice Verification for posting invoices
- In Sales and Distribution for sales order processing
- In Production Planning and Control for material requirements planning, scheduling, and work scheduling

In Customizing for the Material Master [Ext.], you can configure the material master to suit your specific requirements. You do this in the section Configuring the Material Master [Ext.].

Additional Information
Transfer and Distribution of Material Master Data [Ext.]
Information Sheet on Transferring Material Master Data (Industry) [Ext.]
Corporate Structure

Definition
The material master has a hierarchical structure resembling the organizational structure of a company. Some material data is valid at all organizational levels, while other data is valid only at certain levels. The organizational units are as follows:

- Client [Ext.]
- Company code [Ext.]
- Plant [Ext.]
- Storage location [Ext.]
- Purchasing organization [Ext.]
- Sales organization [Ext.]
- Warehouse number [Ext.]
- Storage type [Ext.]

Structure
The client is the top level. Several company codes can be assigned to it. In turn, several plants can be assigned to a company code, and several storage locations assigned to a plant.

Plants must always be consecutively numbered for all company codes. Consequently, plants assigned to different company codes cannot have the same number. However, the numbers of storage locations can be repeated, as long as they are assigned to different plants.

Integration
The following graphic representation contains a possible corporate structure:
Material Master Records

Definition
All the information your company needs to manage a material is stored in a data record in the material master, sorted by various different criteria.

Use
You can enter and change most of the data in a material master record yourself. However, some information can only be updated by the system. For example, the system updates the administrative data when you process a material master record, and stock balances when goods receipts or goods issues are posted.

Structure
The data in a material master record can be divided into two categories:

- Data of a purely descriptive nature
  This is data with an information content such as name, size, or dimension.
- Data that the system uses to perform a control function
  This is data such as MRP type and price control.

Integration
Since different departments in a company work with the same material, but each department uses different information on the material, the data in a material master record is subdivided by user department. For more information, see User Departments [Page 246].
Material Numbers

Definition
Number uniquely identifying a material master record, and thus a material.

Use
For every material that your company uses, you must create a material master record in the material master. This record is uniquely identified by a material number.

You can assign mnemonic keys or nonmnemonic keys as material numbers, depending on the method your company prefers. For this reason, you have the following types of number assignment in the R/3 System:

- **External number assignment**
  If your company uses mnemonic keys (normally alphanumeric), you enter the character string you want to use as the material number when you create the material master record.

- **Internal number assignment**
  If your company uses nonmnemonic keys, you do not enter a material number when creating a material master record. Instead, the system assigns a consecutive number to the material. This number is visible when you maintain the material master record.

Your system administrator defines the required type of number assignment in Customizing for the Material Master in Define Number Ranges [Ext.]. After defining a number range, he or she can flag it, if external number assignment is required, as an external number range. Your system administrator then assigns it to one or more material types. As a result, when creating a material master record, the type of number assignment allowed depends on the material type chosen. In the standard R/3 System, one external number range and one internal number range can be defined for each material type or group of material types.

Further options are provided by the following SAP Enhancements:

- **SAP Enhancement MGA00002**
  This enhancement contains three customer exits that you can use for the following purposes:
  - To modify material numbers entered externally by users, for example, by appending a check digit
  - To assign material numbers internally by customer programs

- **SAP Enhancement MGA00003**
  This enhancement allows you to edit the display of material numbers as required. For example, a material is assigned the number 123. With this enhancement, you can define that the material number is displayed with, for example, the prefix MAT-, even though the number in the database is still 123.
Material Numbers

Structure
You can define the length of your material numbers to suit your company’s requirements. This is done by your system administrator in Customizing for the Material Master in Define Output Format of Material Numbers [Ext]. Material numbers can be up to 18 characters long.
Industry Sectors

Use

When you create a material master record, you are required to classify the material according to industry sector and material type.

Like material types, industry sectors have control functions in the R/3 System. For example, it is a factor determining the screen sequence and field selection [Ext.] in a material master record. Once you have assigned an industry sector to a material, you cannot change the industry sector again afterwards.

Features

The standard R/3 System contains the following industry sectors. The ID used to identify the industry sector internally appears in parentheses.

- Plant engineering and construction (A)
- Chemical industry (C)
- Mechanical engineering (M)
- Pharmaceuticals (P)

The other sectors are for retail.

Activities

Your system administrator can define other industry sectors in Customizing for the Material Master in Define Industry Sectors and Industry-Sector-Specific Field Selection [Ext.].
Material Types

Use

Materials with the same basic attributes are grouped together and assigned to a material type. This allows you to manage different materials in a uniform manner in accordance with your company's requirements. Examples of material types are given in the graphic below.

Integration

When creating a material master record, you must assign the material to a material type. The material type determines certain attributes of the material and has important control functions. For example, it is a factor determining the screen sequence and field selection [Ext.] in a material master record.

Features

When you create a material master record, the material type you choose determines:

- Whether the material is intended for a specific purpose, for example, as a configurable material or process material
- Whether the material number can be assigned internally or externally
- The number range from which the material number is taken
- Which screens appear and in what sequence
- Which departmental data you may enter
- What procurement type the material has; that is, whether it is manufactured in-house or procured externally, or both

Together with the plant, the material type determines the material's inventory management requirement; that is:

- Whether changes in quantity are updated in the material master record
- Whether changes in value are also updated in the stock accounts in financial accounting

In addition, the accounts affected by a material entering or leaving the warehouse depend on the material type.
Activities

Material types are configured by your system administrator in Customizing for the Material Master in Define Attributes of Material Types [Ext].
Standard Material Types

**Definition**

See Material Types [Page 240].

**Use**

The standard R/3 System comes with the following material types. The ID used to identify the material type internally appears in parentheses. It is sometimes necessary to know this ID, for example, when defining the attributes of material types in Customizing for the Material Master.

- Additionals (VKHM)
  
  Additionals are assigned to a material to be sold to ensure its effective presentation to customers.

  - Clothes hangers
  - Care labels
  - Services such as pressing clothing for display or arranging it on hangers

  For more information on the retail side, see Additionals [Ext.] in the SAP library documentation SAP Retail.

- Advertising media (WERB)
  
  Means of presentation used in advertising, grouping together advertising messages about a number of materials.

  - Printed mail-order catalogs
  - Computer catalogs on CD-ROM
  - Promotional fliers

- Apparel, seasonal (MODE)

- Beverages (FGTR)

- Competitive products (WETT)
  
  Observing and evaluating the activities of your competitors is essential for optimum market analysis. You can enter basic data on the products of your competitors in material master records of this material type. By specifying a competitor number, you can assign the product to a particular competitor. For more information, see Competitive Products [Ext.] in the SAP library documentation SD Sales Support: Computer-Aided Selling (CAS).

- Configurable materials (KMAT)
  
  Configurable materials are materials that can have different variants. For example, an automobile can have different types of paintwork, trim, and engine. The Material is configurable indicator is already set for this material type in Customizing for the Material
Master in Define Attributes of Material Types [Ext.]. For more information on configurable materials and variants, see the SAP library documentation LO Variant Configuration [Ext.].

- Empties (industry LEER, retail LGUT)
  Empties are a type of returnable transport packaging generally subject to a deposit. They can consist of several components grouped together in a bill of material (BOM) that are assigned to a full product. For example, an empty crate and the empty bottles are assigned to the full product beer. Each of the components in the BOM has a separate material master record. For more information on the retail side, see Articles: Empties and Full Products [Ext.] in the SAP library documentation SAP Retail.

- Finished products (FERT)
  Finished products are produced in-house. Since they cannot be ordered by Purchasing, a material master record of this material type does not contain purchasing data.

- Foods excluding perishables (FOOD)

- Full products (VOLL)
  Full products are the counterpart to empties. For example, with a crate of lemonade, the full product is the lemonade itself, while the empties are the individual bottles and the crate. For more information on the retail side, see Articles: Empties and Full Products [Ext.] in the SAP library documentation SAP Retail.

- Intra materials (INTR)
  Intra materials exist only temporarily between two processing steps. A material master record of this material type contains neither purchasing nor sales data.

- KANBAN containers (CONT)
  This material type is recommended for creating KANBAN containers as a material. In the standard R/3 System, only the Basic Data view is offered. Using this material type makes it easy to search for KANBAN containers.

- Maintenance assemblies (IBAU)
  Maintenance assemblies are not individual objects, but logical elements to separate technical objects into more clearly defined units in plant maintenance. For example, an automobile can be a technical object, and the engine, gearbox, chassis, and so on on the maintenance assemblies. A material master record of this material type can contain basic data and classification data.

- Manufacturer parts (HERS)
  Manufacturer parts are materials that can be supplied by different manufacturers and/or vendors who use different manufacturer part numbers to identify the materials. For more information, see Manufacturer Part Numbers (MPNs) [Ext.] in the SAP library documentation MM Purchasing.

- Nonfoods (NOF1)
  Nonfoods are items sold in grocery stores, other than food.

  - Paper products
Standard Material Types

- Magazines
- Nonstock materials (NLAG)
  Nonstock materials are not held in stock because they are consumed immediately.
- Nonvaluated materials (UNBW)
  Nonvaluated materials are managed on a quantity basis, but not by value.
- Operating supplies (HIBE)
  Operating supplies are procured externally and required for the manufacture of other products. A material master record of this material type can contain purchasing data, but not sales data.
- Packaging materials (VERP)
  Packaging materials are used to transport goods and come with the goods free of charge. A material master record of this material type is managed on both a quantity basis and value basis.
- Perishables (FRIP)
  Goods that are perishable in an assortment.
  - Fruit and vegetables
  - Dairy products
  - Meat
- Pipeline materials (PIPE)
  Materials such as oil, power, or water that flow into the production process directly from a pipeline, line, or other type of conduit. Since pipeline materials are always available, they are not planned.
- Process materials (PROC)
  Process materials are used in the manufacture of co-products. They are not physical entities, but represent production processes. They are useful if production is initiated by the availability of input materials and capacities, and not by material requirements planning.
- Product groups (PROD)
  Product groups aggregate materials according to certain freely definable criteria. For example, the products may be similar to each other in some way, or they may be finished products that were produced on the same machine.
- Production resources/tools (FHMI)
  Production resources/tools are procured externally and used in production or plant maintenance. A material master record of this material type can contain purchasing data, but not sales data. It is managed on a quantity basis.
  - Jigs and fixtures
• Measuring and test equipment

• Raw materials (ROH)
  Raw materials are always procured externally and then processed. A material master record of this type contains purchasing data, but not sales data since they cannot be sold.

• Semifinished products (HALB)
  Semifinished products can be procured externally and manufactured in-house. They are then processed by the company. A material master record of this material type can contain both purchasing and work scheduling data.

• Services (DIEN)
  Services can be performed internally or procured externally (outsourced). They cannot be stored or transported.
    - Construction work
    - Janitorial/cleaning services
    - Legal services

• Spare parts (ERSA)
  Spare parts are used to replace defective parts. They may be kept in stock. A material master record of this material type can contain purchasing data, but not sales data.

• Trading goods (HAWA)
  Trading goods are always procured externally and then sold. A material master record of this material type can contain purchasing data and sales data.

• Value-only articles (WERT)
  A value-only article represents a group of articles whose inventory is not managed on an article basis. All goods movements for this group of articles are posted to the value-only article. For more information, see Articles: Value-Only Articles [Ext.] in the SAP library documentation SAP Retail.
User Departments (Main Data)

Use

Since different departments in a company work with the same material, but each department uses different information on the material, the data in a material master record is subdivided by user department. This is illustrated in the following graphic representation:

The industry material master contains the following user departments:

- **Accounting [Ext.]**
- **Basic data [Ext.]**
- **Classification [Ext.]**
- **Costing [Ext.]**
- **Forecasting [Ext.]**
- **Material requirements planning [Ext.]** (MRP)
- **Production resources/tools [Ext.]**
- **Purchasing [Ext.]**
- **Quality management [Ext.]**
- **Sales [Ext.]**
- **Stocks, plant and storage location [Ext.]**
- **Storage [Ext.]**
- **Warehouse management [Ext.]**
- **Work scheduling [Ext.]**
Features

When you access a material master record, the user departments that you selected in the Select View(s) dialog box are indicated by an icon in the tab index. Once you have accessed the user department, this icon changes its appearance to remind you which user departments you have already accessed in the current transaction.

By choosing Information on material on any of the main or additional screens, you can display the following information:

- Industry sector and material type
- Whether the material is flagged for deletion, at what organizational level, when it was flagged for deletion, and by whom
- Person who created and/or last changed the user department data, at what organizational level, and when

Even more detailed information is available in change documents. For more information, see:

- Change Documents [Ext.]
- Displaying Change Documents and the Relevant Changes [Ext.]

Activities

The following fields appear in each user department:

- Material description
- Base unit of measure

This information is mandatory and identical for all departments. Consult with the other users to decide what you are going to enter here.

Additional Information

Maintenance Statuses [Ext.]
Automatic Creation of Storage Data

Use

If a material is located in a storage location, the storage data for that storage location must exist in the material master record, so that the system can manage the stock quantities at storage-location level.

Physical inventory is only possible if the storage location data of the material is available in the storage location.

Storage data can be manually entered when the material master record is created, or it can be automatically created during the first goods movement in that storage location.

Features

Automatic Creation of Storage Data

If automatic creation of storage data is allowed in Customizing in that plant and for that movement type, the storage data is created automatically during the first goods movement in that storage location.

⚠️

Storage data is only created automatically if the given quantity is posted to “normal” storage location stock. They are not created upon receipts into any of the special stocks (such as the sales order stock).

Manual Creation of Storage Data

You must enter the storage data for a storage location manually before you post the first goods receipt to that storage location if:

- Automatic creation of storage data is not allowed in that plant or for that movement type
- You want to define special data for the material at the storage location (for example, fixed bin location for the material in the storage location)

If the only data missing from the material master record for a new storage location is the storage data, you can choose Other → Create storage locations from the material master menu to add to the material master record the storage data for this storage location (refer to Storage-Location-Specific Data [Ext.]).
Stocks in the Material Master Record

In Inventory Management, it is not only important to know what quantity of a material is in a certain storage location or a certain plant, but also what quantities of the material are in what types of stock. Part of the stock may be in quality inspection, for example.

In the material master record, various stocks are managed at plant level and at storage-location level for both the current period and the previous period. The plant stocks (except for stock in transfer and stock in transit at plant level) are calculated as the total of all the storage location stocks.

The following section describes the stock categories in the material master record.

Total Valuated Stock
Sum of all valuated stocks of a material. It consists of all the stocks your company owns.

Unrestricted-Use Stock
Company's own stock that is physically located in the warehouse, valuated, and not subject to any kind of usage restrictions.

Quality Inspection Stock
Company's own stock that is in quality inspection. Stock in quality inspection is valuated but does not count as unrestricted-use stock.

Blocked Stock
Company's own stock that should not be used. It is not for unrestricted-use in Inventory Management.

Restricted-Use Stock
Valuated stock of a material managed in batches held by a company (and belonging to that company), usage of which is subject to certain restrictions. This category of stock is only used when batch status management is active.

Blocked Stock Returns
Stock that was returned by the customer and conditionally accepted. It is not valuated and does not count as unrestricted-use stock.

Stock in Transfer
Quantity that was already withdrawn from stock at the issuing location (plant, storage location) during a two-step stock transfer but that has not yet arrived at the receiving location (plant, storage location). Stock in transfer is managed in the valuated stock of the receiving location, but it does not yet count as unrestricted-use stock.

Stock in Transit
Stock in transfer that is created for a stock transfer via a stock transport order.
Other Stocks

In addition to the stock types that are managed in the material master record, the system can display other stocks, which you can use various functions to display (see section Reporting in Inventory Management [Page 227]). The list below contains examples of these dynamically calculated stocks:

Available stock
Dynamic stock that is calculated by MRP (with respect to the time axis) taking any receipts, issues, and the current available stocks into account. You can define how MRP is set up under the plant parameters in Customizing for MRP (see also Availability Check [Page 98]).

Reserved stock
Sum of all quantities of a material that are reserved for withdrawal. Reserved stock is not available from the point of view of MRP, but for Inventory Management it still counts as unrestricted-use stock.

Planned receipts
Sum of all quantities whose receipt has been planned with reservations. Planned receipts are already available from the point of view of MRP, but for Inventory Management they do not yet count as unrestricted-use stock.

Open PO quantity (total)
Sum of all outstanding PO quantities for a material. The open PO quantity increases available stock in MRP, but it does not increase unrestricted-use stock in Inventory Management.

Open order quantity (total)
Sum of all outstanding order quantities for a material. The open order quantity increases available stock in MRP, but it does not increase unrestricted-use stock in Inventory Management.

Goods receipt blocked stock
The total of all quantities of a material that was delivered for purchase orders and accepted conditionally. Goods receipt blocked stock is not valuated and does not count as unrestricted-use stock.

Stock scheduled for delivery
Sum of all current deliveries to customers for which goods issues have not yet been posted. Like reserved stock, stock scheduled for delivery is usually not available from the point of view of MRP, but it counts as unrestricted-use stock for Inventory Management.
Allowing Negative Stocks

Use

Negative stocks are required if, for example, goods issues are entered before the corresponding goods receipts for organizational reasons and the material is already physically located in the warehouse.

If the first movement of a material is an outward movement, in Customizing for Inventory Management, you can activate the automatic creation of storage location data at goods issue for plant and movement type.

Once the goods receipts have been posted, the book inventory balance must correspond to the physical stock, that is, the book inventory balance must no longer be negative.

Prerequisites

To work with negative stocks, you have to:

- explicitly allow this in the Customizing system for each valuation area and storage location
- set the indicator Neg. stocks in plant in the material master record of the individual materials (storage data)

Negative stocks are allowed for special stocks if you have activated negative stocks in the valuation area and for the special stock concerned in the plant. You do not need to activate negative stocks in each material master record.

Features

For unrestricted-use stock you can work with negative stocks for the following materials:

- Materials with standard price
- Materials with moving average price

and for the following special stocks:

- Vendor consignment goods (K)
- Stock of material provided to vendor (O)
- Consignment stock at customer (W)
- Sales order stock (E)
- Project stock (Q)
- Returnable packaging at customer (V)
- Returnable transport packaging (R)

Example

Negative stocks always indicate that physical movements must be entered in the system at a later stage.
1000 pieces of a material are delivered. Due to insufficient time, the goods receipt is not yet entered in the system.

Physical stock: + 1000 pieces
Book inventory balance: 0 pieces

The material is needed urgently, and 100 pieces are withdrawn from the warehouse. The goods issue is entered in the system straightaway.

Physical stock: + 900 pieces
Book inventory balance: - 100 pieces

The goods receipt of 1000 pieces is posted at the end of the day.

Physical stock: + 900 pieces
Book inventory balance: + 900 pieces
Units of Measure

Use

The R/3 System distinguishes between the following units of measure:

- **Base unit of measure**
  
  This is the unit of measure in which the stocks of a material are managed. The system converts all quantities entered in other units to the base unit of measure.

- **Alternative units of measure**
  
  Individual departments may have their own units of measure. For example, Purchasing may use a different unit than Sales or Warehouse Management (WM). All units of measure other than the base unit of measure are referred to as alternative units of measure. The R/3 System supports the following alternative units of measure:

  - **Order unit**
    
    Allows a material to be ordered in a unit differing from the base unit of measure. The order unit is proposed automatically in purchasing functions, where it can be changed.
  
  - **Sales unit**
    
    Allows a material to be sold in a unit differing from the base unit of measure. The sales unit is proposed automatically in the sales order, where it can be changed.
  
  - **Unit of issue**
    
    Unit of measure in which the material is issued from the warehouse. It allows consumption, stock transfers, transfer postings, and physical inventories to be recorded in a unit differing from the base unit of measure and from the stockkeeping unit.
  
  - **WM unit**
    
    Unit of measure in which materials are managed in Warehouse Management. For inventory management, the system converts the quantities entered in the WM unit to the base unit of measure. For example, if a material is normally managed using pieces as the base unit of measure, but several thousand pieces are contained in a box, it may be more appropriate to define a WM unit that is more manageable for WM purposes.

The relationship between the base unit of measure and alternative units of measure is illustrated below:
Units of Measure

Prerequisites
All material data is updated in the base unit of measure. Choose this unit carefully since an exact quantity can be expressed in an alternative unit of measure only if its value can be shown with decimal places. It is therefore important to observe the following two principles when defining the base unit of measure:

- The base unit of measure is the unit that provides the maximum precision necessary.
- Conversion from an alternative unit of measure to the base unit of measure should result in a simple decimal, not a recurring (or repeating) decimal.

Features

Units of Measure Groups
A units of measure group contains several alternative units of measure and the factors for converting them to the base unit of measure. You can define groups of this kind in Customizing for the Material Master in Group Together Units of Measure. When entering alternative units of measure, you can save time by specifying a units of measure group rather than entering the same alternative units of measure individually.

Maintaining Units of Measure in Accordance with the Packaging Hierarchy
See Articles: Maintaining Units of Measure in Accordance with the Packaging Hierarchy [Ext.] in the SAP library documentation SAP Retail.

Activities
All quantities that you enter in units other than the base unit of measure are converted to the base unit by the system automatically. It does this using a central conversion table. If you use units that are not contained in this table, you must state the factor for converting the alternative unit of measure to the base unit of measure in the material master record. You normally enter this information when specifying the alternative unit(s) of measure.
Units of Measure in Inventory Management

Use

The units of measure used in Inventory Management are:

- Base unit or stockkeeping unit
- Unit of entry
- Order price unit

Features

Base Unit or Stockkeeping Unit

Unit of measure in which stocks are managed. All quantities you enter in other units are converted into the stockkeeping unit.

Unit of Entry

Unit of measure in which a goods movement is entered. The unit of entry can be different from the stockkeeping unit.

You can enter a goods movement or a reservation in any unit of measure of the material. However, if you do not specify a unit of measure, the system automatically uses the unit of entry that has been defined for the given goods movement, that is:

- order unit - used for a goods receipt with reference to a purchase order
- production unit - used for a goods receipt with reference to an order
- unit of issue - used for other goods movements
- stockkeeping unit - used if no alternative unit of measure exists.

For the unit of entry to be used properly, the unit of measure must be defined in the material master record (for the order unit, in the purchasing info record), or conversion to the relevant unit of measure (for example, from g to kg) must be possible.

For example, you can enter a goods receipt in the unit of issue of the material. The system then automatically converts the specified quantity to the stockkeeping unit. In the case of a goods receipt for a purchase order, the system also converts the quantity to the order unit.

Order Price Unit

Unit of measure (differing from the order unit) in which the vendor invoice is issued. The order price unit is defined in the purchase order or in the purchasing info record. If an order price unit is defined in the purchase order, the goods receipt must be entered both in the unit of entry and in the order price unit.
Inventory Valuation

Use
The R/3 System allows you to valuate stocks of a material either together or separately, that is, according to different valuation criteria. Split valuation is necessary if, for example:

- Stock from in-house production has a different valuation price than externally procured stock.
- Stock obtained from one manufacturer is valuated at a different price than stock obtained from another manufacturer.
- Different batch stocks of a material have different valuation prices.

Integration
The way the stocks of a material are valuated depends on how you define the following:

- Valuation category
  This defines whether the stocks are valuated jointly or separately. If stocks are to be managed separately, it also specifies the criteria used to valuate the stocks, that is, whether they are valuated by origin, in-house production/external procurement, or individual batches.

- Valuation type
  This is a further subdivision of the valuation category. For example, if the valuation category is origin, a company may want to define the valuation types stock from Los Angeles and stock from Detroit.

This data is stored in the material master record.

Prerequisites
Your system administrator has defined whether valuation at your company is at company code level or plant level and whether split valuation is allowed. For more information see Accounting [Ext.].

Activities

Joint Valuation
If you want to valuate all stocks of a material at the same price, you specify neither a valuation category nor a valuation type.

Split Valuation
If you want to valuate stocks of a material separately, you must create a material master record with the appropriate valuation category. This record is called the valuation header record. Each material always has only one such record for each company code or plant (depending on whether the material is valuated at company code level or plant level).

Once you have specified the valuation category, you can create a material master record for each quantity of the material you want to valuate separately, with the appropriate valuation type and accounting data.
Specifying Split Valuation

1. Create a material master record, selecting the user department Accounting.
2. Enter your data as required on the Accounting data screen, specifying a valuation category. Be sure that the price control indicator is V for moving average price and enter a moving average price.

   In the case of split valuation, you can create only one valuation header record with price control V because the individual stock values are cumulated, and this total value is written to the valuation header record.

3. Save your data.
   The initial screen appears.

4. Extend the material by creating new material master records from the Accounting view. For the first material, specify a valuation type in the Organizational Levels dialog box and enter the respective accounting data on the data screen. Proceed likewise for the other materials, distinguishing between them by valuation type.

   You want to valuate the stock of material XYZ that you obtain from manufacturer A in Los Angeles at a different price than the stock you obtain from manufacturer B in Detroit. In this case, the valuation category is H for origin. Your valuation types can be LOS ANGELES and DETROIT.
Split Valuation in Inventory Management

Use

If a material is subject to split valuation, every quantity (sub-stock) of this material must be assigned to a valuation type (for example, country of origin).

For every valuation type, there are two types of data in the system, as follows:

- Valuation data (for example, valuation price, total stock quantity, total stock value), which is defined for every valuation type at valuation-area level and applies to all dependent storage locations.
- Stock data, which, like batch data, is managed separately for each storage location. If a material that is subject to split valuation is also subject to management in batches, its stock data is not managed by valuation type, but rather by batch. Every batch is assigned to a valuation type.

The stock quantity, stock value, and valuation price for all valuation types are managed cumulatively at valuation-area level.

Must the Valuation Type Exist Before the First Goods Receipt?

You can post the goods receipt of material of a certain valuation type only if the valuation data for this valuation type already exists, because the system valuates the goods receipt at the price defined in the valuation data. On the other hand, the stock data for the valuation type is created automatically during the first goods receipt into the storage location, if this is defined in Customizing for Inventory Management.

Goods Movements with Materials Subject to Split Valuation

If you want to enter goods movements for materials subject to split valuation, you must enter the valuation type in addition to the material number. Enter the valuation type in the Batch field.

See also:

Split Valuation [Ext.]