

TSCM52

Procurement II - Part 1

**PARTICIPANT HANDBOOK
INSTRUCTOR-LED TRAINING**

Course Version: 10

Course Duration: 5 Day(s)

Material Number: 50117733

SAP Copyrights and Trademarks

© 2013 SAP AG. All rights reserved.

No part of this publication may be reproduced or transmitted in any form or for any purpose without the express permission of SAP AG. The information contained herein may be changed without prior notice.

Some software products marketed by SAP AG and its distributors contain proprietary software components of other software vendors.

- Microsoft, Windows, Excel, Outlook, and PowerPoint are registered trademarks of Microsoft Corporation.
- IBM, DB2, DB2 Universal Database, System i, System i5, System p, System p5, System x, System z, System z10, System z9, z10, z9, iSeries, pSeries, xSeries, zSeries, eServer, z/VM, z/OS, i5/OS, S/390, OS/390, OS/400, AS/400, S/390 Parallel Enterprise Server, PowerVM, Power Architecture, POWER6+, POWER6, POWER5+, POWER5, POWER, OpenPower, PowerPC, BatchPipes, BladeCenter, System Storage, GPFS, HACMP, RETAIN, DB2 Connect, RACF, Redbooks, OS/2, Parallel Sysplex, MVS/ESA, AIX, Intelligent Miner, WebSphere, Netfinity, Tivoli and Informix are trademarks or registered trademarks of IBM Corporation.
- Linux is the registered trademark of Linus Torvalds in the U.S. and other countries.
- Adobe, the Adobe logo, Acrobat, PostScript, and Reader are either trademarks or registered trademarks of Adobe Systems Incorporated in the United States and/or other countries.
- Oracle is a registered trademark of Oracle Corporation
- UNIX, X/Open, OSF/1, and Motif are registered trademarks of the Open Group.
- Citrix, ICA, Program Neighborhood, MetaFrame, WinFrame, VideoFrame, and MultiWin are trademarks or registered trademarks of Citrix Systems, Inc.
- HTML, XML, XHTML and W3C are trademarks or registered trademarks of W3C®, World Wide Web Consortium, Massachusetts Institute of Technology.
- Java is a registered trademark of Sun Microsystems, Inc.
- JavaScript is a registered trademark of Sun Microsystems, Inc., used under license for technology invented and implemented by Netscape.
- SAP, R/3, SAP NetWeaver, Duet, PartnerEdge, ByDesign, SAP BusinessObjects Explorer, StreamWork, and other SAP products and services mentioned herein as well as their respective logos are trademarks or registered trademarks of SAP AG in Germany and other countries.
- Business Objects and the Business Objects logo, BusinessObjects, Crystal Reports, Crystal Decisions, Web Intelligence, Xcelsius, and other Business Objects products and services mentioned herein as well as their respective logos are trademarks or registered trademarks of Business Objects Software Ltd. Business Objects is an SAP company.
- Sybase and Adaptive Server, iAnywhere, Sybase 365, SQL Anywhere, and other Sybase products and services mentioned herein as well as their respective logos are trademarks or registered trademarks of Sybase, Inc. Sybase is an SAP company.

All other product and service names mentioned are the trademarks of their respective companies. Data contained in this document serves informational purposes only. National product specifications may vary.

These materials are subject to change without notice. These materials are provided by SAP AG and its affiliated companies ("SAP Group") for informational purposes only, without representation or warranty of any kind, and SAP Group shall not be liable for errors or omissions with respect to the materials. The only warranties for SAP Group products and services are those that are set forth in the express warranty statements accompanying such products and services, if any. Nothing herein should be construed as constituting an additional warranty.








About This Handbook

This handbook is intended to complement the instructor-led presentation of this course, and serve as a source of reference. It is not suitable for self-study.

Typographic Conventions

American English is the standard used in this handbook.

The following typographic conventions are also used.

This information is displayed in the instructor's presentation	
Demonstration	
Procedure	
Warning or Caution	
Hint	
Related or Additional Information	
Facilitated Discussion	
User interface control	<i>Example text</i>
Window title	<i>Example text</i>

Contents

xi **Course Overview**

1 Unit 1: Introduction to Inventory Management

2	Lesson: Exploring Inventory Management and Physical Inventory
6	Lesson: Using Transaction MIGO for Goods Movements
17	Exercise 1: Maintain Default Values in Transaction MIGO
23	Exercise 2: Hold and Post a Goods Receipt

33 Unit 2: Goods Receipts

35	Lesson: Posting a Goods Receipt Without Reference
41	Exercise 3: Post a Goods Receipt Without Reference
45	Exercise 4: Post a Free-of-Charge Delivery
49	Lesson: Posting a Goods Receipt with Reference
53	Exercise 5: Post a GR with Reference to a Production Order
57	Exercise 6: Post a GR with Reference to a PO into Stock in Quality Inspection
65	Exercise 7: Post a GR with Reference to a PO in GR Blocked Stock
69	Lesson: Posting a GR with Automatic Generation of a PO
73	Exercise 8: Post a GR with the Generation of a PO
78	Lesson: Posting Cancellation, Return Delivery, and Returns
81	Exercise 9: Post a Cancellation with Reference to a Material Document
93	Exercise 10: Post a Return Delivery to a Vendor
99	Exercise 11: Enter a Return for a Purchase Order
103	Lesson: Applying Order Price Unit in Inventory Management
105	Exercise 12: Enter the GR for PO item for Which the PO Price Unit Differs from the Order Unit
109	Lesson: Applying Tolerances and the Delivery Completed Indicator
115	Exercise 13: Test the Automatic and Manual Settings of the Delivery Completed Indicator
124	Lesson: Including Date Checks in Goods Receipts for a Purchase Order
129	Exercise 14: Enter a GR for a Material with the Minimum Shelf Life Expiration Date

145 Unit 3: Stock Transfers and Transfer Postings

146	Lesson: Performing Transfer Postings
153	Exercise 15: Enter a Stock-to-Stock Transfer Posting
157	Exercise 16: Enter a Material-to-Material Transfer Posting
162	Lesson: Performing Stock Transfers Between Storage Locations
167	Exercise 17: Post a Stock Transfer Between Storage Locations in Two Steps
172	Lesson: Performing Stock Transfers Between Plants
179	Exercise 18: Post Stock Transfers Between Plants

191 Unit 4: Reservations

192	Lesson: Creating Manual Reservations
197	Exercise 19: Create Reservations Manually
205	Exercise 20: Enter a Stock Transfer with Reference to Reservations
209	Lesson: Evaluating Reservations
217	Exercise 21: Manage Reservations
221	Exercise 22: Delete Reservations

227 Unit 5: Goods Issues

228	Lesson: Posting Unplanned Goods Issues
235	Exercise 23: Post Unplanned Goods Issues
239	Exercise 24: Post a Goods Issue with Reference to a BOM
243	Lesson: Posting a Goods Issue with Reference
247	Exercise 25: Post Goods Issues with References

253 Unit 6: Special Forms of Procurement and Special Stocks

254	Lesson: Performing the Process of Subcontracting
261	Exercise 26: Provide Components to a Subcontractor
265	Exercise 27: Create and Analyze a Subcontract PO
273	Exercise 28: Post a GR to a subcontract PO and Further Goods Movements for Subcontracting Stock
279	Lesson: Considering Vendor Consignment
287	Exercise 29: Analyze Consignment Stock
293	Exercise 30: Perform the PO Process for Vendor Consignment
297	Exercise 31: Post a Transfer Posting to Consignment Stock
301	Exercise 32: Post a GI from Consignment Stock and Settle the Liabilities

309 Unit 7: Physical Inventory

310	Lesson: Conducting Physical Inventory
319	Exercise 33: Conduct a Physical Inventory with Recount
324	Lesson: Analyzing Determination of Book Inventory
331	Exercise 34: Conduct a Physical Inventory with Posting Block
339	Lesson: Simplifying Physical Inventory
345	Exercise 35: Create and Run a Batch Input Session to Create Physical Inventory Documents

355 Unit 8: Analyses

356	Lesson: Applying Stock Lists and Document Lists
363	Exercise 36: Work with Document Lists
367	Exercise 37: Work with Stock Lists
370	Lesson: Applying Periodic Processing

377 Unit 9: Customizing

378	Lesson: Implementing Settings for Documents
382	Lesson: Setting up Movement Types
387	Exercise 38: Create a New Movement Type
392	Lesson: Applying Other Customizing Settings
397	Exercise 39: Check the Customizing Settings for Transaction MIGO

403 Unit 10: Master Data

404	Lesson: Defining Settings for Vendor Master Records
419	Exercise 40: Define Settings for Vendor Master Records

431 Unit 11: Purchasing

433	Lesson: Creating Document Types in Purchasing
443	Exercise 41: Create Document Types in Purchasing
456	Lesson: Using Document Types in Purchasing
461	Exercise 42: Use Document Types in Purchasing
467	Lesson: Creating Account Assignment Categories
471	Exercise 43: Create Account Assignment Categories
481	Lesson: Adjusting the Screen Layout of Purchasing Documents
485	Exercise 44: Adjust the Screen Layout of Purchasing Documents
490	Lesson: Outputting Messages in Purchasing
495	Exercise 45: Maintain Message Schema and Message Types
499	Lesson: Using Condition Technique for Message Determination
509	Exercise 46: Create Condition Records and Message Types

539 Unit 12: Inventory Management

540	Lesson: Adjusting the Output of Messages in Inventory Management
549	Exercise 47: Adjust the Output of System Messages

Course Overview

TARGET AUDIENCE

This course is intended for the following audiences:

- Application Consultant

UNIT 1

Introduction to Inventory Management

Lesson 1

Exploring Inventory Management and Physical Inventory

2

Lesson 2

Using Transaction MIGO for Goods Movements

6

Exercise 1: Maintain Default Values in Transaction MIGO

17

Exercise 2: Hold and Post a Goods Receipt

23



UNIT OBJECTIVES

- Explain the basics of inventory management and physical inventory
- Distinguish between different units of entry for goods movements
- Use the central transaction for goods movements, transaction MIGO
- Hold data and execute print outputs

Exploring Inventory Management and Physical Inventory

LESSON OVERVIEW

This lesson provides an overview of inventory management and physical inventory. It also covers how inventory management and physical inventory are integrated into the logistics environment.

Business Example

Changes to stock are made in your company on a daily basis. These changes might, for example, stem from the delivery of goods from vendors, internal stock transfers, or the provisions of production materials. You need to check the relationship between inventory management and other areas of logistics. For this reason, you require the following knowledge:

- How inventory management and physical inventory are integrated into the SAP ERP application
- The functions of inventory management and physical inventory



LESSON OBJECTIVES

After completing this lesson, you will be able to:

- Explain the basics of inventory management and physical inventory

Environment of Inventory Management

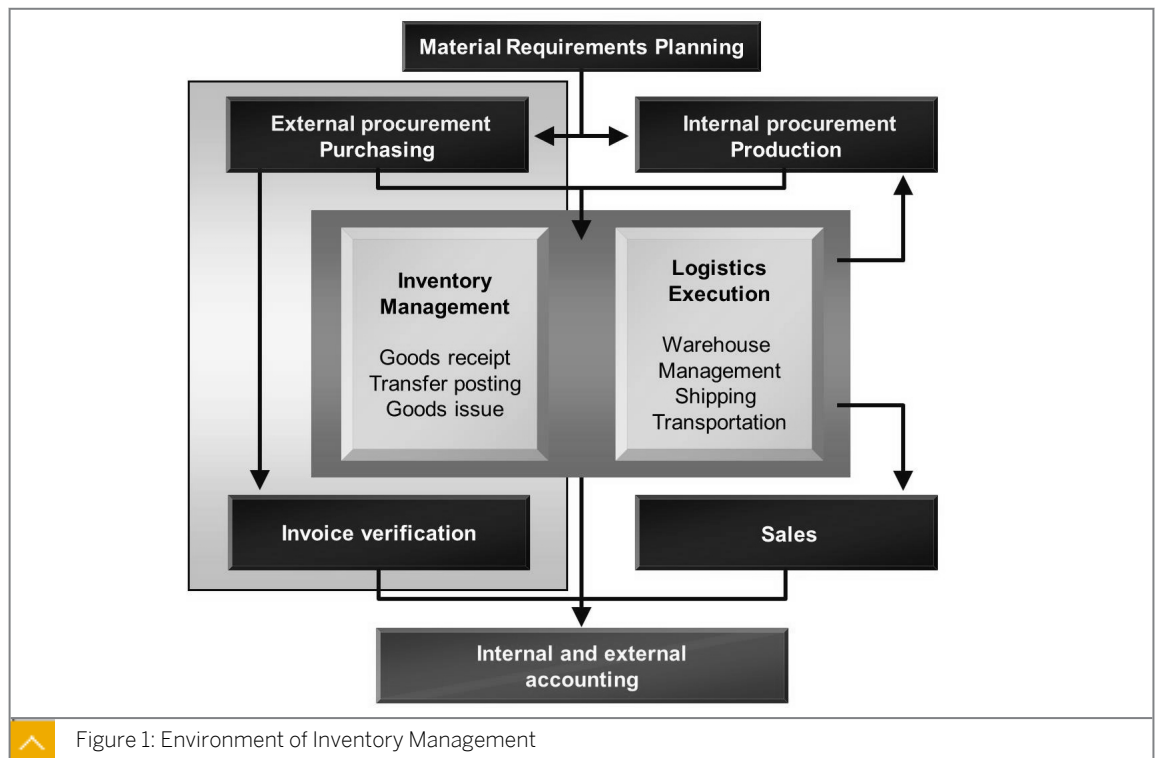


Figure 1: Environment of Inventory Management

Inventory management is an essential component of Materials Management (MM) and is embedded in the whole logistics process.

Inventory management provides information to material requirements planning (MRP), which takes into account not only the physical stock but also planned movements (requirements and receipts). Requirements calculated by MRP are acquired externally or internally.

When you order a material from a vendor, the goods receipt (GR) with respect to the purchase order takes place in inventory management. The vendor invoice is later processed by invoice verification. This verification process checks, for example, whether the quantities and values from the purchase order and the GR match those on the invoice.

If a material is acquired internally by means of production, inventory management provides the components. Similarly, the receipt of the finished products in the warehouse is also posted in Inventory Management.

On the other hand, material is not only withdrawn from the warehouse for internal production, but also for the delivery of sales orders. By running a dynamic availability check when you enter the sales order, you can determine whether the required material is available in a sufficient quantity. (You may also use the availability check in conjunction with reservations and production orders.) When the system generates the delivery, it marks the quantity to be delivered as delivery to customer and deducts it from the total stock when the goods issue (GI) is posted.

Using Inventory Management for Warehousing

By managing your warehouse stock using inventory management, you are able to manage your material stocks in several storage locations on a quantity basis.

Warehouse Management (WM) also enables you to map your entire warehouse complex into the system in detail, through to the storage bin level. This not only provides you with an

overview of the total quantity of a material in the warehouse but also enables you to determine where a specific material is located in your warehouse complex at any given time. By using WM, you can optimize how you use all storage bins and warehouse movements and store material stocks from disorganized warehouses across several plants.



Note:
WM is a part of Logistics Execution.

Inventory Management and Physical Inventory as part of MM

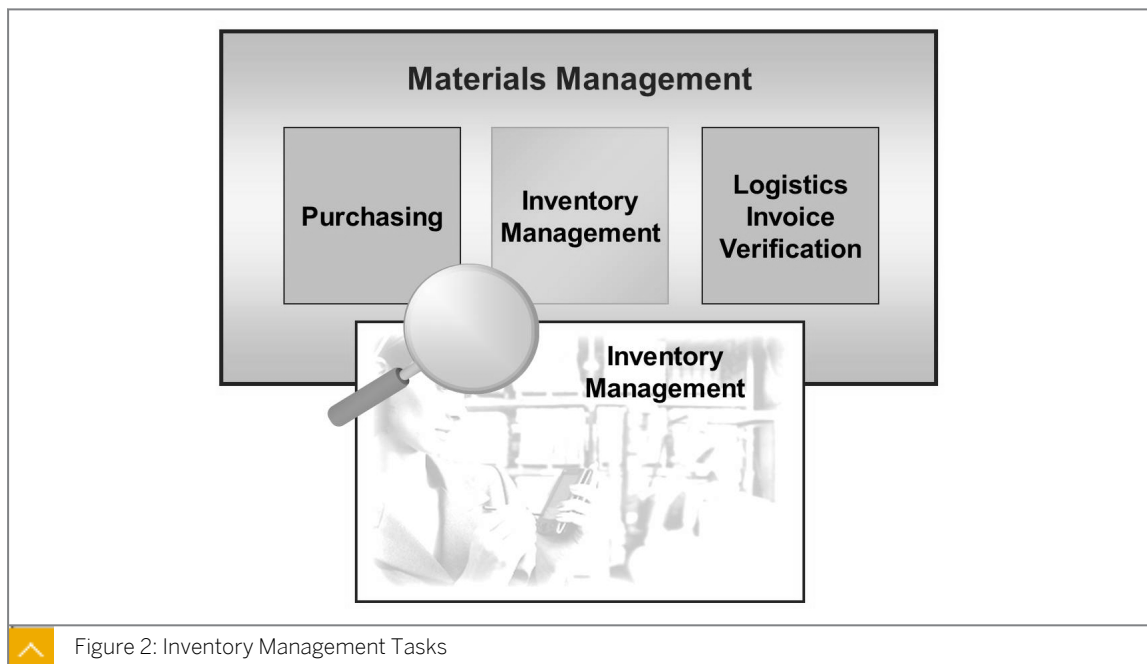


Figure 2: Inventory Management Tasks

In addition to Purchasings and Logistics Invoice Verification, Inventory Management is a classic component of MM.

Inventory management includes the following tasks:

- Managing material stock on a quantity and value basis
- Planning, creating, and verifying all goods movements
- Carrying out physical inventory

Inventory Management maps the physical stock in real time by recording all stock-changing transactions and the resulting stock updates. An overview of the current stock situation for a given material is always available.

You can differentiate between the following types of stock quantities, which enables you to differentiate between the following types of stock quantities:

- Stock quantities in unrestricted-use stock
- Stock quantities in quality inspection
- Stock quantities already ordered but not yet received

- Stock quantities that are in the warehouse, but that are already reserved by the system for production or for a customer

If you need to subdivide a material into lots, you can create a batch for each lot, which you can then manage individually in the stock. Inventory Management can also manage many of its own and external special stock forms (such as consignment stocks) separately from the normal stock.

The system automatically updates the following data with each goods movement:

- Stock quantities and stock values for Inventory Management
- G/L accounts for Financial Accounting by means of automatic account determination
- Account assignments for cost accounting (provided internal accounting is active)

The organizational level at which you manage the material stock based on value is the valuation area. The valuation area can correspond to a plant or company code. Inventory management generally operates at plant and storage location levels. When you enter a goods movement, you only need to enter the plant and the storage location of the goods. The system derives the company code from the plant based on the valuation area.

Goods movements include both external movements (such as GRs from external procurement or GIs for sales orders) and internal movements (such as GRs from production, material withdrawals for internal purposes, stock transfers, and transfer postings). When you move the goods, documents are created that form the basis for the quantity and value updates, and are also used in the verification process for the movement.

Physical inventory is the process of taking inventory of your stock. **You can carry out physical inventory for both your own stock and external stock.**



LESSON SUMMARY

You should now be able to:

- Explain the basics of inventory management and physical inventory

Using Transaction MIGO for Goods Movements

LESSON OVERVIEW

This lesson introduces transaction MIGO and explains how to use it. The transaction contains a function for entering goods movements. Transaction MIGO also includes additional functions for displaying material documents and reversing postings. The lesson uses a goods receipt (GR) as an example.

Business Example

As an employee in the warehouse, you are responsible for the entry of goods movements. To become better acquainted with the single-screen transaction for goods movements, you enter a GR. After the posting, you check whether the quantity-based and value-based update of the stock has taken place. For this reason, you require the following knowledge:

- An understanding of the screen areas of the single-screen transaction for goods movements
- How to navigate in the single-screen transaction for the goods movements
- How to post a GR with reference to a reference document
- An understanding of the account movements that occur during the posting
- An understanding of the effects of goods movement transactions

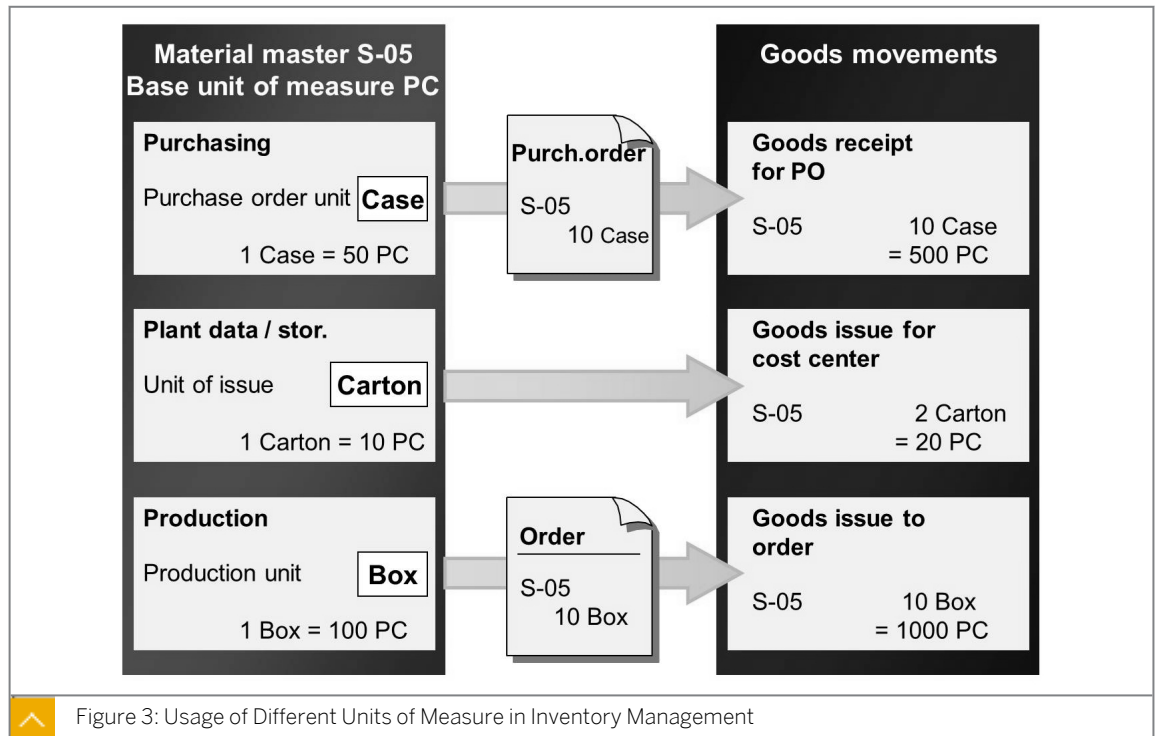


LESSON OBJECTIVES

After completing this lesson, you will be able to:

- Distinguish between different units of entry for goods movements
- Use the central transaction for goods movements, transaction MIGO
- Hold data and execute print outputs

Usage of Different Units of Measure in Inventory Management



The various units of measure in Inventory Management are as follows:

- Base unit of measure or stockkeeping unit
- Unit of entry
- Purchase order price unit

The stockkeeping unit is the unit in which the stock of a material is managed. You can enter goods movements in other units of measure, if these units of measure are defined in the material master record as alternative units of measure or as standard conversions (for example, g into kg). If the unit of entry differs from the stockkeeping unit, the system converts the quantity from the unit of entry into the stockkeeping unit.

In the material master record, you can define the following units of entry for the applications:

- Purchase order unit (OUn)
- Sales unit (SUn)
- Unit of issue (UIn)
- Production unit (PUn)

These units of measure are then automatically proposed for the goods movement.

If you have not maintained an alternative unit of measure, the system proposes the stockkeeping unit.

Goods Movements and Related Documents

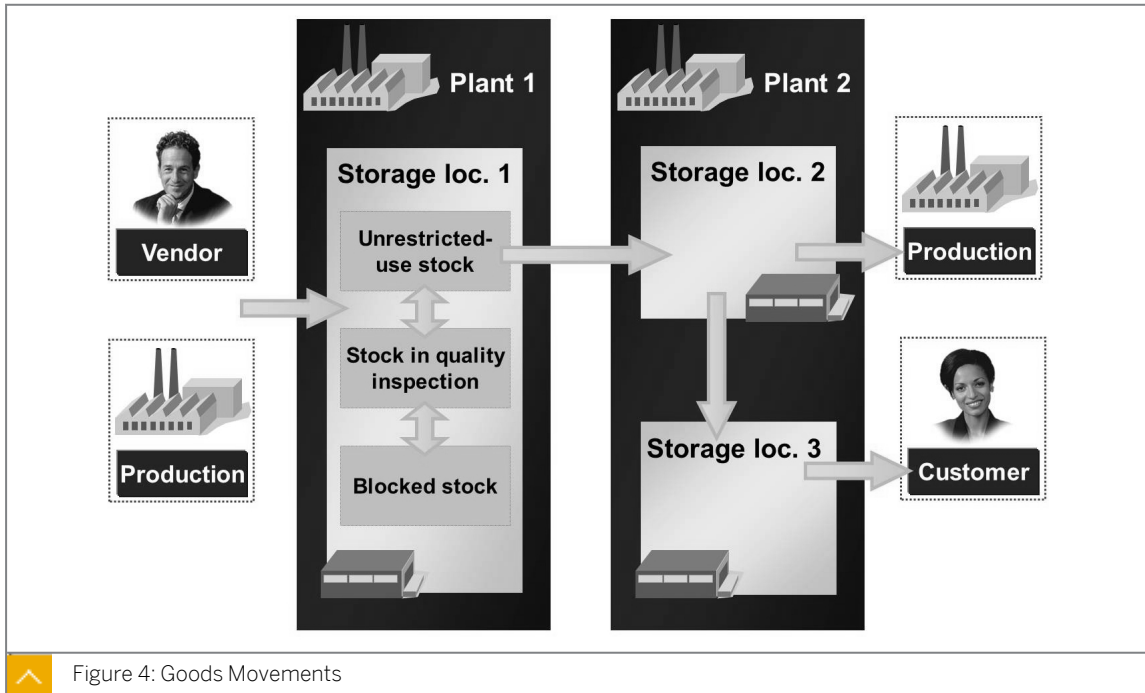


Figure 4: Goods Movements

Goods movements include both external and internal movements. A transaction that causes a stock change is marked as a goods movement.

You can distinguish between GRs, goods issues (GIs), stock transfers, and transfer postings as follows:

- GR

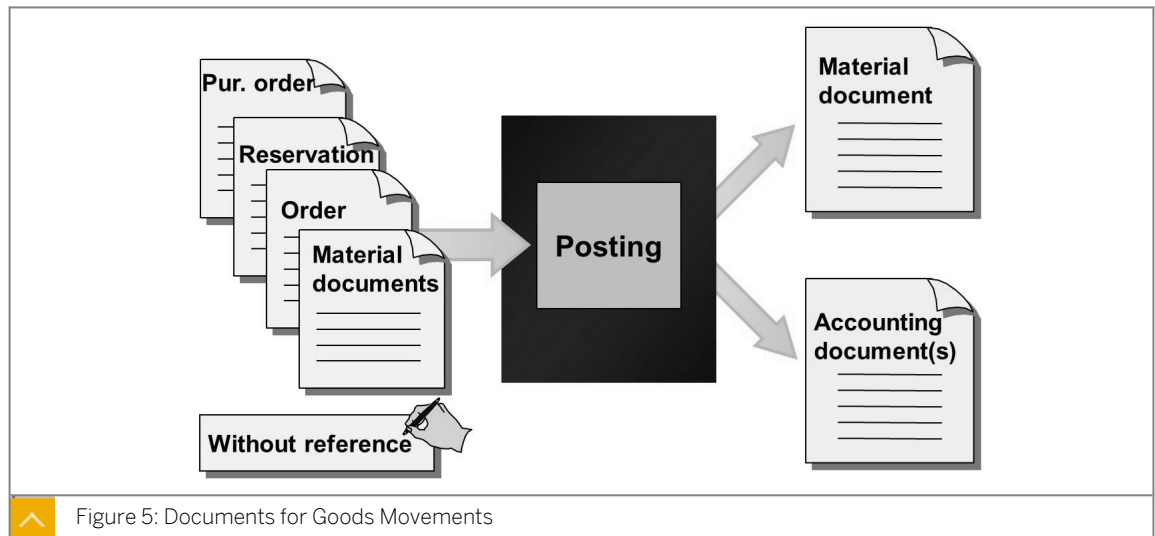
A GR is a goods movement that is posted with the goods received from external vendors as well as production. A GR leads to an increase in warehouse stock.
- GI

A GI is a goods movement in which a material withdrawal, material consumption, or goods shipment is posted to a customer. A GI leads to a decrease in warehouse stock.
- Stock transfer

A stock transfer is a goods movement in which materials are removed from a particular storage location and placed into another storage location. Stock transfers can take place both within the same plant and between two plants.
- Transfer posting

A transfer posting is a superordinate term for stock transfers and changes the stock identification or qualification of a material, regardless of whether the posting is linked to a physical movement. Examples of transfer postings include the release of the stock for quality inspection, the transfer posting from material to material, and the transfer of consignment material to own stock.

Documents for Goods Movements



When you enter a goods movement, you can work with or without a reference document. You can enter a GR, for example, with reference to a production order or to a PO. However, you can also enter all the necessary data manually. The documents that you create during the posting of a goods movement are the basis for the quantity and value update, and they are also used for the verification of goods movements. The bookkeeping principle "no posting without document" applies.

The material document serves as verification for the goods movement and as a source of information for all subsequent applications.

The characteristics of a material document are as follows:

- The material document consists of a header and at least one item.
- The header contains general data about the movement type, such as the date and delivery note number.
- The items describe the individual movements.

A material document is identified by the document number and the material document year.

If the movement leads to an update of the G/L accounts, the system creates an accounting document parallel to the material document. In some cases, for example, for two material document items with different plants that belong to different company codes, the system creates several accounting documents for one material document. Using automatic account determination, the system updates the G/L accounts that are affected by a goods movement. You can identify an accounting document by the company code, the document number, and the fiscal year.



Hint:

As a rule, the material document number and the accounting document number are different.

The entry of a goods movement triggers other transactions in the system. The system, therefore, updates the stock quantities and values in the material master record. The system also updates any other applications involved in the transaction.

Transaction MIGO

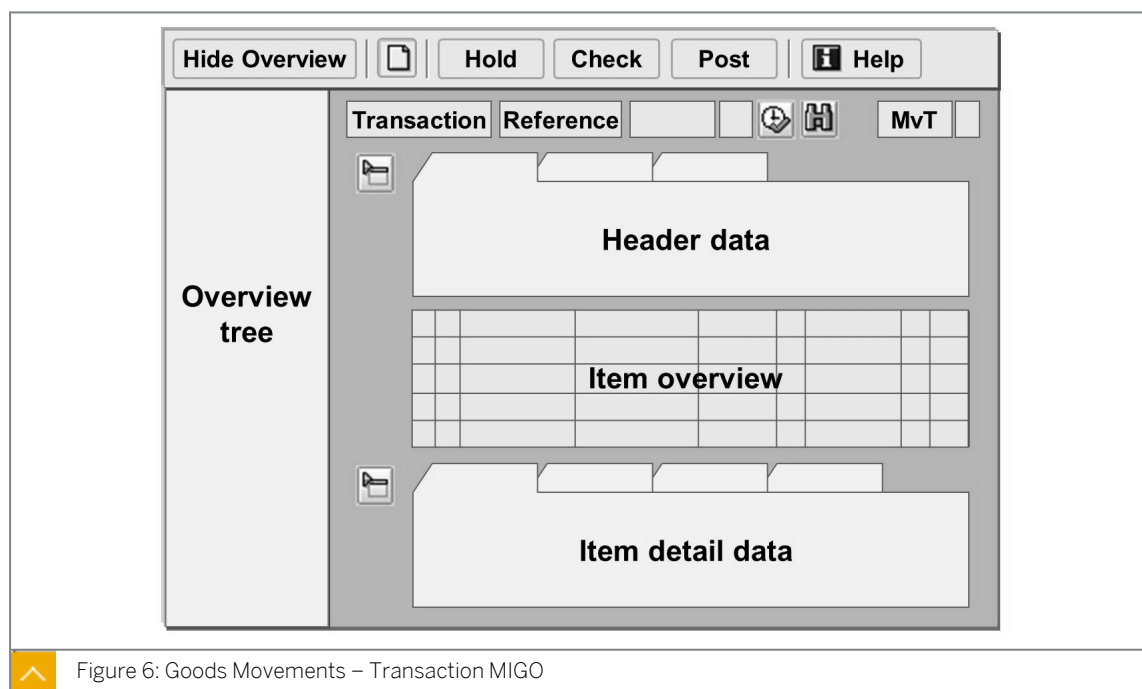


Figure 6: Goods Movements – Transaction MIGO

The transaction for entering goods movements is a single-screen transaction, which is divided into the following screen areas, which are also shown in the figure:

- Overview tree
- Header data
- Item overview
- Item details

In the header and detail data screen areas, the information is grouped on individual tab pages.

The header data contains information that refers to the complete material document, such as the document and posting date, the document header text, the person who created it, and the entry date. You can branch from the header data to the accounting document.

The document items are listed in the item overview. If you click the number of an item in the overview, the system opens the detail data for this item. In the item details, you find information about reference document or account assignment, for example.

The overview tree displays your last 10 documents for the following document types:


- POs
- Orders
- Reservations
- Material documents
- Held data

The system inserts these documents automatically into the overview tree. These are documents you referred to when posting a goods movement, as well as the material documents that were created.

You therefore always have an overview of the activities you last executed.



Hint:

1. The document overview is not intended for document searches. The  (*Find Document*) function is used for this purpose instead.
2. In the document overview, you can only display the material document.

Showing and Hiding of Screen Areas in Transaction MIGO

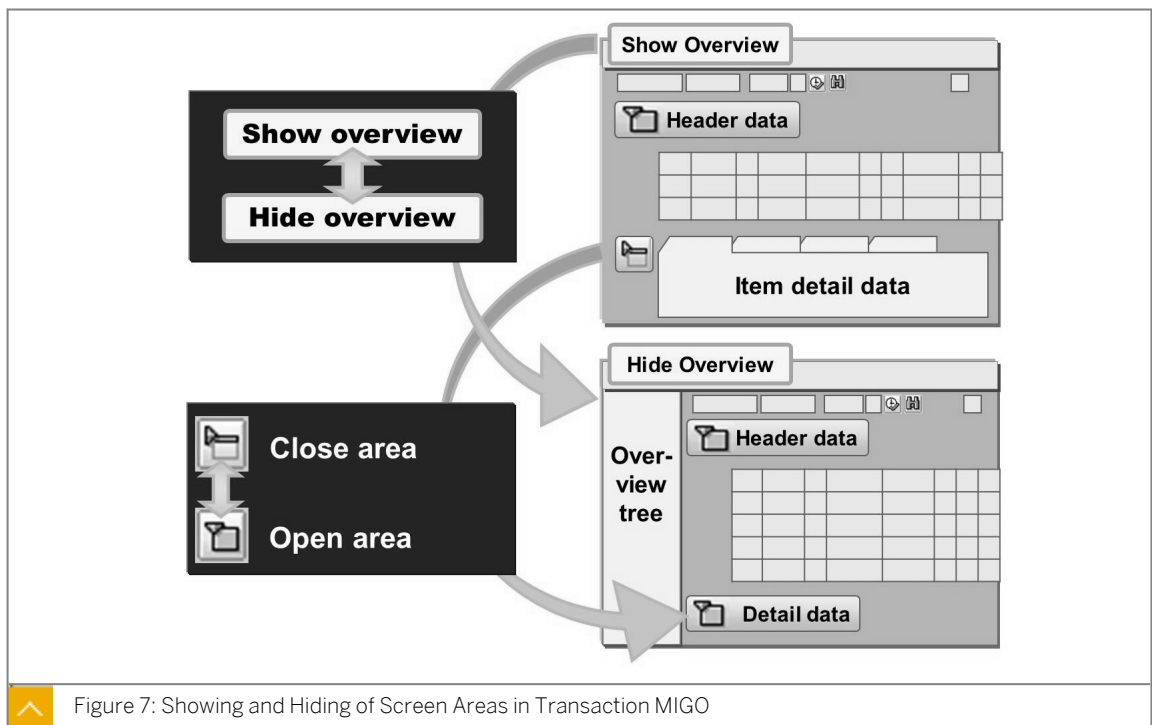


Figure 7: Showing and Hiding of Screen Areas in Transaction MIGO

You can open and close the individual screen areas, except the item overview. You can show and hide the overview tree using *Show/Hide Overview*. For the header, choose *Open/Close Header Data*, and for the item details, choose *Open/Close Detail Data*. You can also open the item details by clicking the item number in the item overview.



Caution:

If the item details are open, you can make changes in the detail data, but not in the item overview.

You can change the size of the screen areas by opening and closing different areas. For example, the size of the item overview increases if you close the header and detail data. Each time you call the transaction, the screen appears in the layout that you selected before closing your last session.

Navigation in Transaction MIGO

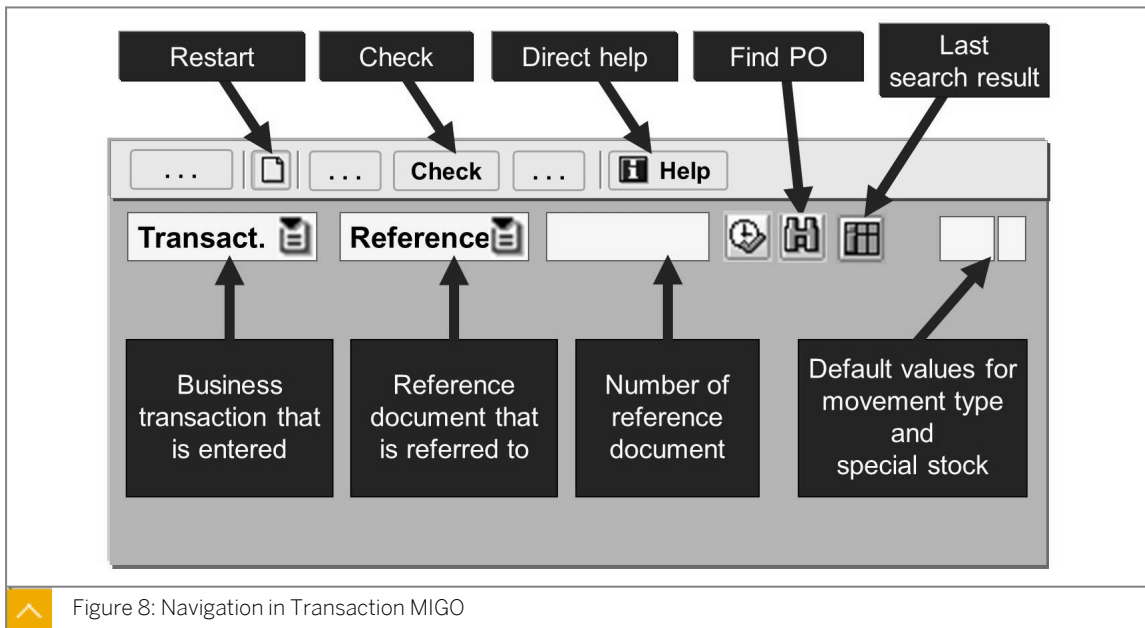


Figure 8: Navigation in Transaction MIGO

This figure shows the important fields and functions of transaction MIGO.

Function: Restart

You do not have to leave transaction MIGO to terminate processing. To start with a new transaction, choose (Restart).

Function: Check

When you process goods movements and enter data, the system does not issue any warning messages or error messages. If you want to know whether the system will issue any warning messages or error messages before you perform the actual posting, choose *Check* first. A dialog box then displays all warning messages and error messages. When you check a document for the first time, you see a new *Status* column in the item overview that displays the check result for each item with a traffic light symbol. When you click a traffic light symbol, the message log for the corresponding item appears.

If you save the document without performing a check and error messages appear, the system displays a dialog box with a message log that includes the warning messages and error messages. If no error messages occur during posting, the system does not display any warning messages that may have occurred.


If you need further information on what this transaction can do, what advantages it brings, how the screen is structured and how to work with the transaction you can find it under (*Help*).


Navigation in Transaction MIGO - Direct Help and Find Doc. Function

When you choose (*Help*), a separate screen area opens with information and user tips for transaction MIGO. This means that you can display the help documentation while working in the transaction. To hide the help again, choose (*Help*) or (*Close*).

Depending on the reference you have selected, you can search for reservations, purchasing documents, or material documents by choosing (*Find Document*).

When you call the search function, enter your search criteria in the dialog box. The system displays the search result in a separate window in the lower area of the screen. You can use the SAP List Viewer (ALV) functions in the results list to sort the documents according to different criteria. You can double-click a document in the search result to transfer it to the item overview for processing.

To close the window with the search results, choose  (*Close Search Result*).

If you want to show the last search result again, choose  (*Display Last Search Result*).
When you exit the transaction, the search results are lost.

Navigation in Transaction MIGO - Reference and Transaction List Boxes

In the *Transaction* list box, you can select the business transaction that you want to process.

You can choose from the following transactions:

- Goods Receipt
- Return delivery
- Subsequent delivery
- Subsequent adjustment
- Release GR blocked stock
- Goods Issue
- Transfer posting
- Remove from storage
- Place in storage
- Cancel
- Display

In the *Reference* list box, you can specify the document you want to refer to for the respective transaction.

You can choose from the following references:

- Inbound delivery
- Order
- Outbound delivery
- Purchase Order
- Delivery note
- Material document
- Reservation
- Others (without reference)
- Transport
- Transport ID code

The entries available for selection in the *Reference* list box depend on the transaction selected.

The combination of the entries from the transaction list box and from the reference list box defines the general appearance of the MIGO transaction.

Default Values for Transaction MIGO



Change Default Values

General Default Values

Stor. location **Propose OK function in future**
In Plant **Propose all items**
 Copy account assgt fields

Action	Reference doc.	Move..	S...	Stock type
Goods receipt	Purchase order	101		Quality inspection
...
Goods issue	Others	201	K	Unrestricted-use

Non-ordered items at goods receipt for purchase order

Material **GI receipt without order**
Transport equipment **M GI receipt RTP**

General Settings

...

Redisplay tips already read

Figure 9: Default Values for Transaction MIGO

You can use the fields in the figure to enter default values for the movement type and the special stock indicator. The system then proposes these values for all items.

If you change the default values during an entry transaction, your change does not affect the items you have already entered. The new default values apply only to items entered after the change.

To change these default values, you can also choose *Settings* → *Default Values*. In the dialog box that displays, you can determine your own personal default values.

Depending on the transaction and reference document, you define the default values for the movement type, special stock indicator, and stock type in a list.

You can also specify additional values for the system to propose when you enter another goods movement. These values may include plant, storage location, and the *OK* checkbox.

The system saves all default values for each user individually, and they are valid until you change them again.



To Enter a Goods Receipt for a Purchase Order

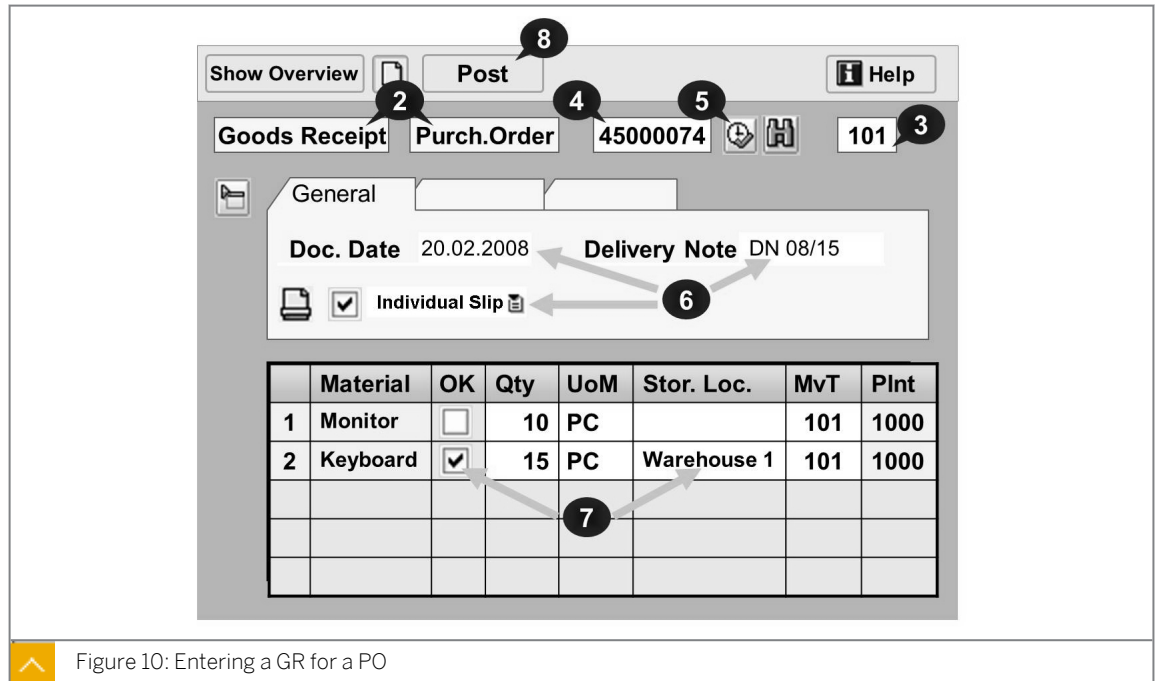


Figure 10: Entering a GR for a PO

1. On the SAP Easy Access screen, choose *Logistics* → *Materials Management* → *Inventory Management* → *Goods Movement* → *Goods Movement (MIGO)*.
2. Enter the transaction **Goods Receipt** and, as the reference, enter **Purchase Order**.
3. Check the default value for the movement type and change it to *101* if necessary.
4. Enter the PO number. To find the PO, choose (*Find Purch. Order*).
5. To copy the item from the PO, choose (*Execute*).
6. Enter the document date and the delivery note number of the vendor on the *General* tab page. If you want to print a GR slip, select the *Print* checkbox and choose the required version.
7. Select the delivered items using the *OK* checkbox. If necessary, change the default quantity for the items and specify a storage location.








Caution:

If you are displaying the item details, you can make changes to the item in the detail data, but not in the item overview.

8. Post the GR.



To Display a Material Document and a Corresponding Accounting Document

1. On the *SAP Easy Access* screen, choose *Logistics* → *Materials Management* → *Inventory Management* → *Goods Movement* → *Goods Movement (MIGO)*.
2. Enter the transaction **Display** and, as the reference, enter **Material Document**.
3. Enter the material document number and the document year. You can also search for the material document by choosing  (*Find Material Doc.*) or double-clicking the material document number in the overview.
4. To display the material document, choose  (*Execute*).
5. To display the accounting document, open the header data and choose the *Document info* tab page. Choose  *FI Documents*. A dialog box displays. Choose the accounting document and choose  or  *Separate* to display it.

Maintain Default Values in Transaction MIGO

Business Example

As an employee in the warehouse, you are responsible for the entry of goods movements. To become better acquainted with the single-screen transaction for goods movements, you maintain your personal default values in transaction MIGO.

Before you enter a GR for a PO, check the default values in the transaction for goods movements MIGO.

1. Open the *Change default values* dialog box and note the proposed movement types and stock types for the following transactions (actions) and reference documents:

Action	Reference Document	Movement Type	Stock Type
GR	PO		
GR	Order		
GR	Other		
GI	Reservation		
GI	Others		

2. Enter the default values **1000** (Werk Hamburg) for plant and **0001** (Materiallager) for the storage location.

Maintain Default Values in Transaction MIGO

Business Example

As an employee in the warehouse, you are responsible for the entry of goods movements. To become better acquainted with the single-screen transaction for goods movements, you maintain your personal default values in transaction MIGO.

Before you enter a GR for a PO, check the default values in the transaction for goods movements MIGO.

1. Open the *Change default values* dialog box and note the proposed movement types and stock types for the following transactions (actions) and reference documents:

Action	Reference Document	Movement Type	Stock Type
GR	PO		
GR	Order		
GR	Other		
GI	Reservation		
GI	Others		

- a) On the SAP Easy Access screen, choose *Logistics → Materials Management → Inventory Management → Goods Movement → Goods Movement (MIGO)*.
- b) Choose *Settings → Default Values*.

The Change Default Values dialog box displays the following values:

Action	Reference Document	Movement Type	Stock Type
GR	PO	101	Unrestricted use
GR	Order	101	Unrestricted use
GR	Other	501	Unrestricted use
GI	Reservation		Unrestricted use
GI	Other	201	Unrestricted use



Note:
To perform the next step, stay in the *Change Default Values* dialog box.

2. Enter the default values **1000** (Werk Hamburg) for plant and **0001** (Materiallager) for the storage location.

a) Enter the following data:

Field	Value
<i>In Plant</i>	1000
<i>Stor. Location</i>	0001

b) Choose  (*Adopt*).

c) Choose Continue (Enter) icon to confirm any information messages.

Goods Receipt/Issue Slip

A physical goods movement often requires a printed document that serves as the shipping papers (GR or GI slip) for the warehouse, an identification slip (pallet slip) for the material, and an issue slip during a GI. In inventory management, this document is known as a GR or GI slip. Inventory Management also provides you with the option of printing material slips on labels.

The system processes GR or GI slips and labels in Inventory Management using message technology. Depending on the type of message, you can print it or send it to the recipient (for example, by mail). The system normally prints messages for GR and GI.

The following are the types of GR and GI slips that can be output from the system:

- GR slip for external GRs (such as GR for PO, return delivery)
- GR slip for internal GRs (such as GR for production order)
- GI slip for GIs and other goods movements

In addition, there are three different versions for GR or GI slips. Depending on the version you choose, the system performs one of the following actions:

- The system prints a separate slip for each item of the material document either with or without quality inspection text.
- The system prints a single slip with all the items of the material document.

When you create a goods movement, you can decide whether the system should generate GR or GI slips, and if so, with which version.



Hint:

SAP Note 426554 contains a checklist that you can use to check and maintain Customizing settings for the output determination of goods movements.

Held Data Function in Transaction MIGO

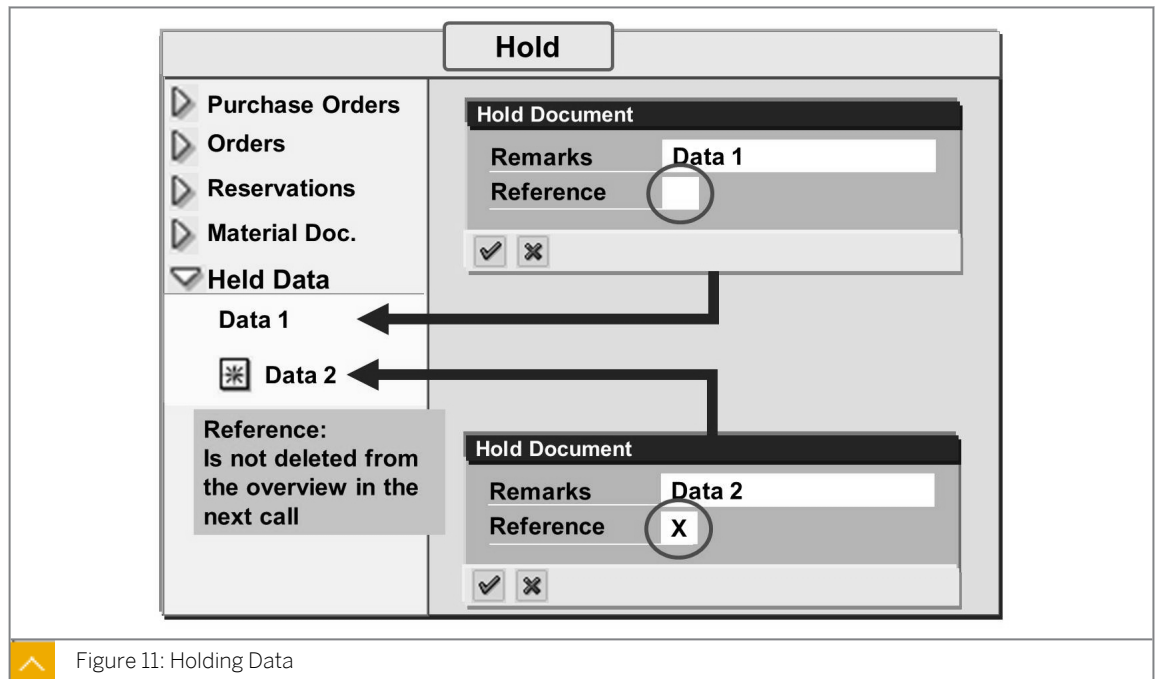




Figure 11: Holding Data

If you have to terminate goods movement processing before posting, the system can hold the data that you have already entered. You do not have to enter all of the data again in the next session, but you can call the data that is on hold. The system does not create a document for held data.

To copy the data that you want to hold, choose *Hold* to copy it to the list of held data. You can display this list in transaction MIGO. To display the data, choose *Goods Receipt* → *Held Data*. Select the data that you want to continue processing. The last 10 items of held data display in the overview tree.

Double-click the items to continue processing them. The system deletes the held data automatically when you continue processing the goods movement.

You can also use held data as a reference template for frequently recurring transactions. The system does not delete references when you call them up again. To make a reference template from held data, select the *Reference* checkbox. You can recognize a reference template in the overview tree by the  symbol in front of the comment.

If you want to delete held data that you no longer require from the overview tree, choose *Goods Receipt* → *Held Data*, select the held data you want to delete, and choose  (*Delete Selected Entries*).

If you want to delete data that is being held by other users, choose the *Manage Held Data* report (MMIM_PREDOC_MAINTAIN). To call this report, choose *Logistics* → *Materials Management* → *Inventory Management* → *Periodic Processing* → *Manage Held Data* (MBPM).



Caution:

Some data cannot be held by the system and you have to re-enter it after trying to retrieve it.

This data is as follows:

- Batch classification
- Import data
- Profitability segment

In the batch classification, newly created selection criteria are lost if the document is not posted immediately.

Hold and Post a Goods Receipt

Business Example

As an employee in the warehouse, you are responsible for the entry of goods movements. To become better acquainted with the single-screen transaction for goods movements, you enter a simple GR. After the posting, you check whether the quantity-based and value-based update of the stock has taken place.

After you have maintained your default values, enter a GR for a PO. Hold the data. Call the held data and post the GR. Display the posted material document.

1. You receive a delivery in plant 1000 of 100 pieces of **T-M510A##** from vendor **T-K510A##**. Hold the data with the description GR for PO number <your PO number>. Use the search function of the transaction to find the PO number. For the selection criteria, enter the vendor number and material number. Select the first PO.

After you held the data, exit transaction MIGO () without posting the GR.

2. Call the held data. In the header data on the *General* tab page, enter the number *LS/A##* of the delivery note and select the *print* checkbox. You want to create a GR slip as an individual slip version (without inspection text).

Before you post the GR, check whether your data entries are complete.

3. Display the material document and note the following information:

Field	Entry
<i>Vendor</i>	
<i>Created by</i>	
<i>Movement Type</i>	
<i>Stock type</i>	
<i>Output Type</i>	

4. Display your GR slip in the print preview.

Hold and Post a Goods Receipt


Business Example

As an employee in the warehouse, you are responsible for the entry of goods movements. To become better acquainted with the single-screen transaction for goods movements, you enter a simple GR. After the posting, you check whether the quantity-based and value-based update of the stock has taken place.



After you have maintained your default values, enter a GR for a PO. Hold the data. Call the held data and post the GR. Display the posted material document.

1. You receive a delivery in plant 1000 of 100 pieces of **T-M510A##** from vendor **T-K510A##**. Hold the data with the description GR for PO number <your PO number>. Use the search function of the transaction to find the PO number. For the selection criteria, enter the vendor number and material number. Select the first PO.

After you held the data, exit transaction MIGO () without posting the GR.


- a) In the SAP Easy Access Menu, expand SAP Menu > Logistics > Materials Management > Inventory Management > Goods Management.
- b) Choose *Goods Movement - MIGO*.
The Goods Receipt Purchase Order - CRM-00-## screen appears.
- c) Enter the transaction **Goods Receipt** and, as the reference, enter **Purchase Order**.
- d) Choose  (*Find Purch. Order*).
- e) Select the following values:

Field	Value
<i>Vendor</i>	T-K510A##
<i>Material</i>	T-M510A##

- f) Choose  (*Find*).
- g) Select the item for the PO number 4151-01## and choose  (*Adopt*).



Hint:

To close the screen area with the search results, choose  (*Close Search Result*).

- h) Select the *Item OK* checkbox for the item.
- i) Choose *Hold*.

- j) Acknowledge the tip dialog box by choosing Continue (Enter).
The system proposes the PO number 4151-01## as the comment.
 - k) Change the *Remarks* in accordance with the data and choose *Continue*.
 - l) Check whether the comment is listed under *Held Data* in the overview.
 - m) Exit the function and choose *No* to confirm the message *Save entered document first?*.
2. Call the held data. In the header data on the *General* tab page, enter the number *LS/A##* of the delivery note and select the *print* checkbox. You want to create a GR slip as an individual slip version (without inspection text).

Before you post the GR, check whether your data entries are complete.

- a) On the *SAP Easy Access* screen, choose *Logistics* → *Materials Management* → *Inventory Management* → *Goods Movement* → *Goods Movement (MIGO)*.




Hint:

If you have not called transaction MIGO again, choose  (Restart).
Choose *No* to confirm the message *Save entered document first?*.

- b) From the menu bar, choose *Goods Receipt* → *Held Data*.
 - c) Select the held data from the previous step and choose *Enter*.
 - d) Open the header data and enter **LS/A##** as the *Delivery Note* on the *General* tab page. Select the *Print* checkbox and choose the *Individual Slip* version.
 - e) Choose *Check*. The system displays missing data with an error message. A traffic light in the *Line* column displays the status of the item. The system checks all items that have the *Item OK* checkbox selected.
 - f) Choose the *Post* pushbutton.
3. Display the material document and note the following information:




Field	Entry
<i>Vendor</i>	
<i>Created by</i>	
<i>Movement Type</i>	
<i>Stock type</i>	
<i>Output Type</i>	

- a) Enter the transaction **Display** and, as the reference, enter **Material Document**.
- b) Choose  (*Execute*).
- c) For information about the vendor, see the header data on the *Vendor* tab page.
- d) For information about the the person who entered the data, see the header data on the *Doc. info* tab page.

- e) For information about the stock type and movement type, see the *Where* tab page in the detail data.
- f) For information about the message, see the *Output* tab page in the detail data for the item. To determine the output type, choose the *Display outputs* pushbutton.

You have the following information:

Field	Entry
<i>Vendor</i>	<i>T-K510A##</i>
<i>Created by</i>	<your user> (such as SCM510-##)
<i>Movement Type</i>	<i>101</i>
<i>Stock type</i>	<i>Unrestricted use</i>
<i>Output Type</i>	<i>WE01</i>

- g) Select the Exit icon .
4. Display your GR slip in the print preview.
- a) On the *SAP Easy Access* screen, choose *Logistics* → *Materials Management* → *Inventory Management* → *Material Document* → *Process Output (MB90)*.
 - b) Enter **2 (repeat processing)** in the *Processing Mode* field and the system automatically proposes your material document number as GRs/GIs and transfer postings.
 - c) Choose  (*Execute*).
 - d) Select your document number and choose  (*Print preview*).
 - e) Select Exit.
 - f) Select Exit.



LESSON SUMMARY

You should now be able to:

- Distinguish between different units of entry for goods movements
- Use the central transaction for goods movements, transaction MIGO
- Hold data and execute print outputs

Learning Assessment

1. Which of the following statements about inventory management is true?

Choose the correct answers.

- A Material Requirements Planning calculates the requirements that the system acquires only internally.
- B Invoice verification verifies the vendor invoice against a purchase order (PO).
- C The dynamic availability check for the material is unavailable in combination with reservations.
- D Subdivision of materials is possible by making batches of lots.

2. Which screen area(s) in transaction MIGO for goods movements cannot be closed?

Choose the correct answer.

- A Overview tree
- B Header data
- C Item overview
- D Item details

3. For which functions can you use transaction MIGO?

Choose the correct answer.

- A Entering a goods receipt (GR) with reference to another document
- B Creating a reservation
- C Changing a material document
- D Deleting a material document

4. You can make a reference template from held data by selecting the _____ checkbox.
Choose the correct answer.

- A Transaction
- B Delivery complete
- C Reference
- D OK

Learning Assessment - Answers

1. Which of the following statements about inventory management is true?

Choose the correct answers.

- A Material Requirements Planning calculates the requirements that the system acquires only internally.
- B Invoice verification verifies the vendor invoice against a purchase order (PO).
- C The dynamic availability check for the material is unavailable in combination with reservations.
- D Subdivision of materials is possible by making batches of lots.

2. Which screen area(s) in transaction MIGO for goods movements cannot be closed?

Choose the correct answer.

- A Overview tree
- B Header data
- C Item overview
- D Item details

3. For which functions can you use transaction MIGO?

Choose the correct answer.

- A Entering a goods receipt (GR) with reference to another document
- B Creating a reservation
- C Changing a material document
- D Deleting a material document

4. You can make a reference template from held data by selecting the _____ checkbox.
Choose the correct answer.

- A Transaction
- B Delivery complete
- C Reference
- D OK

Lesson 1

Posting a Goods Receipt Without Reference	35
Exercise 3: Post a Goods Receipt Without Reference	41
Exercise 4: Post a Free-of-Charge Delivery	45

Lesson 2

Posting a Goods Receipt with Reference	49
Exercise 5: Post a GR with Reference to a Production Order	53
Exercise 6: Post a GR with Reference to a PO into Stock in Quality Inspection	57
Exercise 7: Post a GR with Reference to a PO in GR Blocked Stock	65

Lesson 3

Posting a GR with Automatic Generation of a PO	69
Exercise 8: Post a GR with the Generation of a PO	73

Lesson 4

Posting Cancellation, Return Delivery, and Returns	78
Exercise 9: Post a Cancellation with Reference to a Material Document	81
Exercise 10: Post a Return Delivery to a Vendor	93
Exercise 11: Enter a Return for a Purchase Order	99

Lesson 5

Applying Order Price Unit in Inventory Management	103
Exercise 12: Enter the GR for PO item for Which the PO Price Unit Differs from the Order Unit	105

Lesson 6

Applying Tolerances and the Delivery Completed Indicator	109
Exercise 13: Test the Automatic and Manual Settings of the Delivery Completed Indicator	115

Lesson 7

Including Date Checks in Goods Receipts for a Purchase Order	124
Exercise 14: Enter a GR for a Material with the Minimum Shelf Life Expiration Date	129



UNIT OBJECTIVES

- Post a goods receipt without reference
- Post a goods receipt with reference to a PO or production order in different stock types
- Post a goods receipt with reference to a PO in GR blocked stock
- Enter a GR without reference to a PO, whereby a PO is generated automatically
- Cancel a material document of a goods movement
- Post a return delivery to a vendor
- Enter a return for a purchase order
- Use an order price unit in a GR with reference to a PO
- Use tolerances for underdelivery and overdelivery
- Use the delivery completed checkbox
- Use the shelf life expiration date check
- Customize and test system messages for a delivery that is too late or early

Posting a Goods Receipt Without Reference

LESSON OVERVIEW

This lesson introduces you to the process of entering goods receipts (GRs) without reference to other documents. Examples of such Other GRs include receipts from external vendors and receipts from internal production.

Business Example

Before the SAP ERP application goes live, you must record stocks of materials belonging to your enterprise in the new system through an initial entry of stock balances. You also want to test how GRs are entered in the system without reference to a purchase order (PO) or production order. For this reason, you require the following knowledge:

- An understanding of the procedure for the initial entry of stock balances in SAP ERP
- How to enter a GR without a PO or production order
- An understanding of the special features for entering a free-of-charge delivery

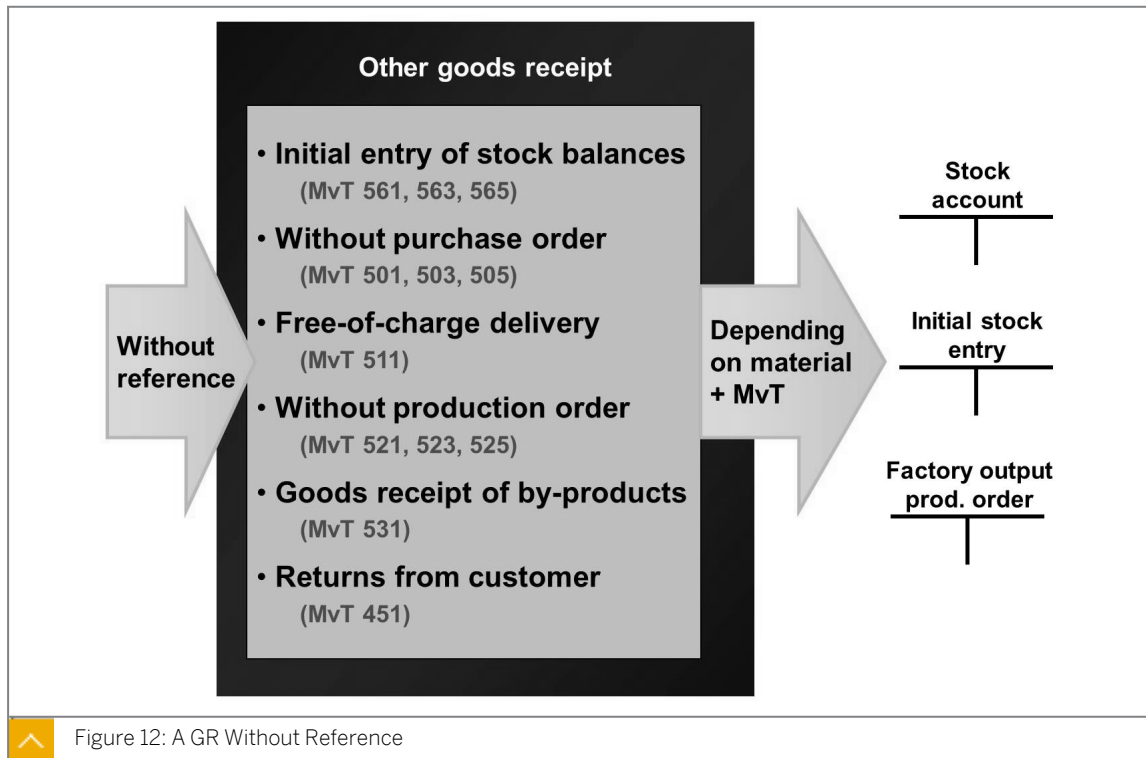


LESSON OBJECTIVES

After completing this lesson, you will be able to:

- Post a goods receipt without reference

Other Goods Receipt



If you enter a goods movement without reference to another document (a PO, production order, or reservation), it is known as an Other GR. Such GRs belong to unplanned goods movements because no information on the material, quantity, delivery date, receiving plant, or origin is stored in the system prior to the actual posting.

Other GRs are depicted using various movement types for the following reasons:

- The movement type controls quantity and value updating.
- The movement type influences the account determination for the offsetting entry to the stock posting.
- The movement type influences field selection.
- The movement type influences message determination.



Hint:

The *Stock Type* field is ready for input for movement types 501, 511, 521, 531, and 561. You can enter an initial stock balance as stock in quality inspection by using either movement type 563 or 561 and stock type quality inspection.

Initial Entry of Stock Balances

You must make an initial entry of stock balances when you implement SAP ERP to record the initial physical warehouse stock figures or transfer the book inventories from a legacy system to SAP ERP.

No physical material movement occurs during this process.

The initial entry of stock balances can take place by posting to the following stock types:

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

The quantity recorded is posted to the selected stock type and increases the total valued stock of the material. You can also use the movement types together with all special stock indicators, meaning that the initial entry of stock balances can be made for consignment stock with vendors and customers, for example, and for project and sales order stocks.

**Note:**

If the stock figures are adopted from a legacy system, the entry of large volumes of data is not made manually but via the Data Transfer Workbench. For more information, see the SAP documentation for SAP ERP under *SAP ERP Central Component* → *SAP ERP Cross-Application Functions* → *Cross-Application Components* → *CA Data Transfer*.

The valuation of the stocks to be recorded depends on the following factors:

- The data in the material master record (valuation class, price control, and current valuation price)
- Whether you enter a value for the quantity to be recorded in the initial entry of stock balances (the *External Amount in Local Currency* field in the item details on the *Quantity* tab page)

If no external amount is specified in local currency in the initial entry of stock balances, the quantity to be recorded is valued based on the valuation price from the material master record (that is, at the moving average price (MAP) or standard price).

If an external amount is entered, the quantity to be recorded is valued at this amount. In this case, if the material involved is valued at moving average price, the latter is then adjusted accordingly.

The offsetting posting to the stock posting is made to a special account for the initial entry of stock balances.



To Post an Initial Entry of Stock Balances

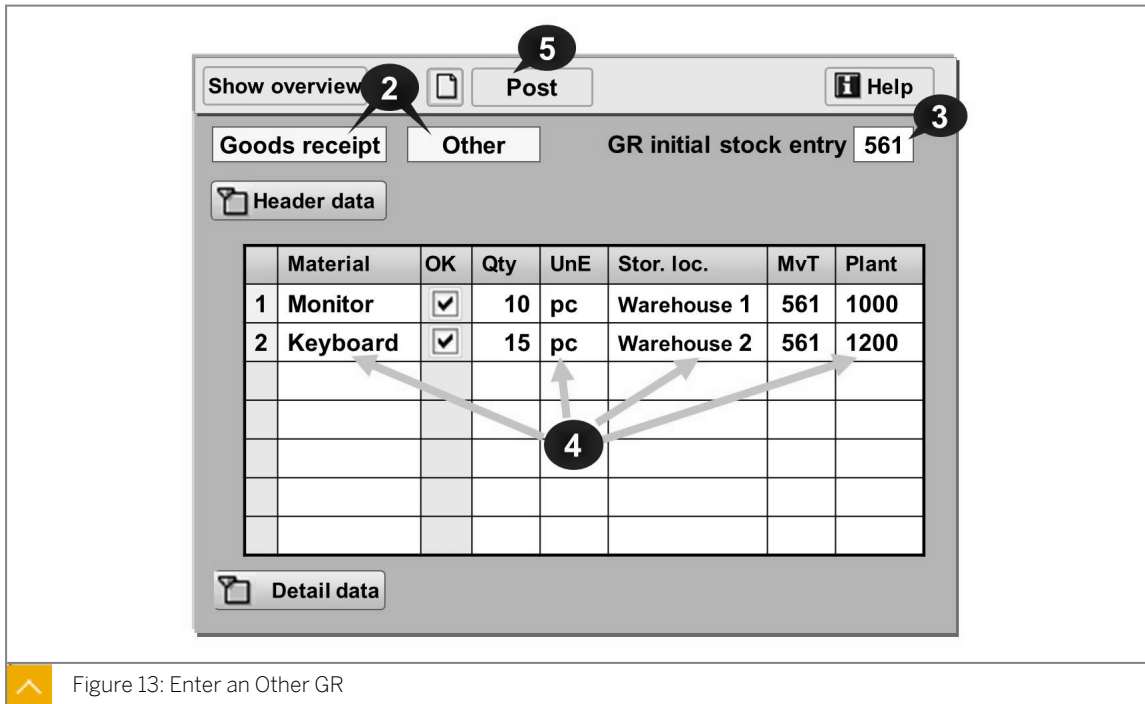


Figure 13: Enter an Other GR

1. On the SAP Easy Access screen, choose *Logistics* → *Materials Management* → *Inventory Management* → *Goods Movement* → *Goods Movement* (MIGO).
2. Enter transaction *Goods Receipt* and, as the reference, enter *Other*.
3. Check the default value for the movement type and change it, if necessary, to 561, 563, or 565 (receipt via initial entry of stock balances to unrestricted-use, quality inspection, or blocked stock respectively).
4. Enter the material number, the quantity, the storage location, and the plant for the items to be entered. Enter the material number in the *Material Short Text* column.



Hint:

There are extended entry options for the data on the material, plant, and storage location. For example, if you cannot remember the exact material number, enter part of the material short text (short description) and choose *Continue*. The system displays all the materials containing the short text in a dialog box.

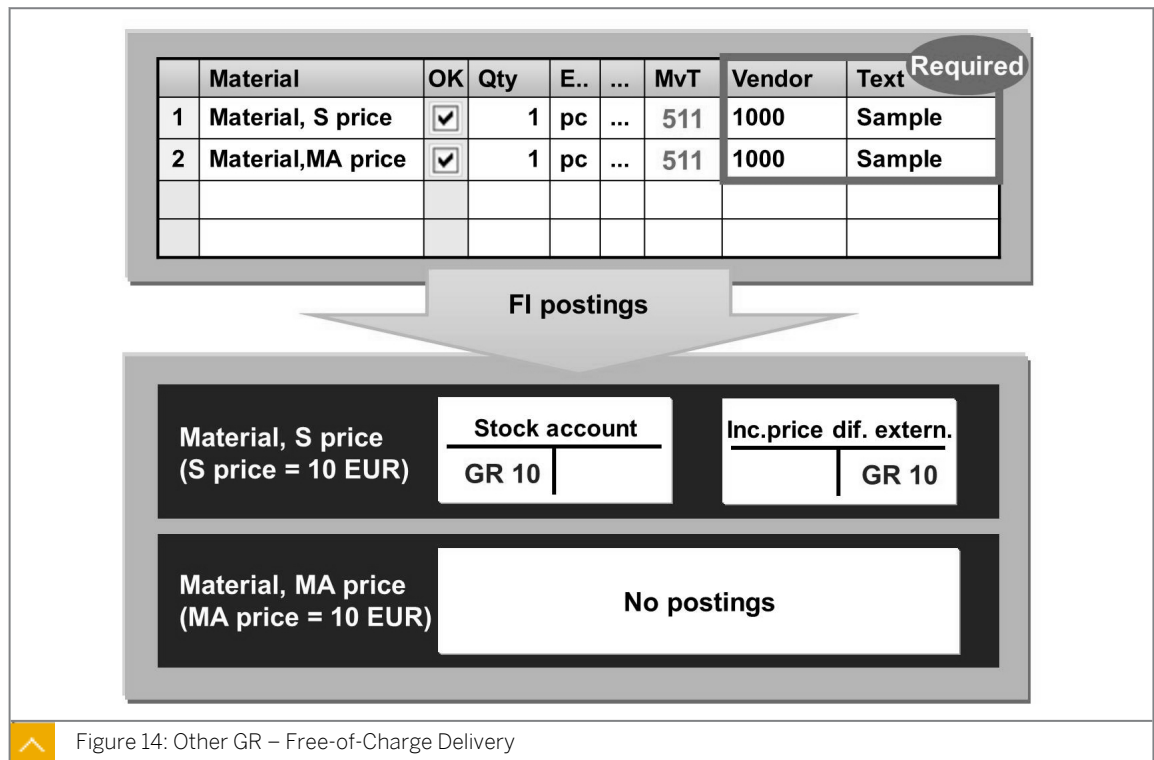
5. Post the document.

Goods Receipt Without a Purchase Order or Production Order

If you need to record an external receipt of goods without first creating a corresponding PO or scheduling agreement in SAP ERP, you must enter it as an Other GR. The same scenario also applies to an internal receipt from production for which no production order has been previously created. The lack of preceding documents for external or internal procurement may be because the relevant application area has not been implemented.

For these GRs, you can post the receipt to the following stock types:

- Unrestricted-use stock (without PO: movement type 501, without production order: movement type 521)
- Stock in quality inspection (without PO: movement type 501, without production order: movement type 523)
- Blocked stock (without PO: movement type 505, without production order: movement type 525)

Free-of-Charge Delivery

If you receive a free-of-charge delivery from a vendor without a previously issued PO, you post the delivery as an Other GR. In the standard system, you have to specify a text and vendor for each item. This control for the *Text* and *Vendor* fields can be changed depending on movement type 511 in Customizing for *Inventory Management and Physical Inventory* under *Settings for Enjoy Transactions* → *Settings for Goods Movements (MIGO)* → *Field Selection per MVT Type*.

For the valuation of materials delivered free of charge, note which of the following price controls is defined in the material master record:

- If the material is valued at moving average price, the stock figure is updated on a quantity basis only not on a value basis. Therefore, the total stock quantity increases, but the total value of the stock remains unchanged, resulting in a reduction in the moving average price.
- If the material is valued at the standard price, the stock figure is updated on a quantity and a value bases. The receipt is valued based on the standard price. The offsetting posting to the stock account is made to a revenue account for price differences.

Post a Goods Receipt Without Reference

Business Example

In SAP ERP, the data for some stocks was not adopted from the legacy system via the Workbench but posted manually as initial stock balances.

Post free-of-charge deliveries and initial stock balances in SAP ERP and explain the postings in Financial Accounting (FI) made as GRs without references.

Task 1

Price Control Procedure

Review the settings for the price control for materials **T-M510A##** and **T-M510B##**.

1. Note the following information from the material master records for materials **T-M510A##** and **T-M510B##** for plant **1000**:

Price Detail	Material (T-M510A##)	Material (T-M510B##)
Price control		
Price		

Task 2

Initial Entry of Stock Balances

It was not possible to transfer the data of some stocks from the legacy system to SAP ERP. Post the initial stock balances manually.

1. Post an initial entry of stock for **20** pieces each of **T-M510A##** and **T-M510B##** for plant **1000**, storage location **0001**.
2. Display the accounting document for the initial entry of stock balances.

Note the amounts posted to the stock account in the following table:

Field	Value
Amount (T-M510A##)	
Amount (T-M510B##)	

Post a Goods Receipt Without Reference

Business Example

In SAP ERP, the data for some stocks was not adopted from the legacy system via the Workbench but posted manually as initial stock balances.

Post free-of-charge deliveries and initial stock balances in SAP ERP and explain the postings in Financial Accounting (FI) made as GRs without references.


Task 1

Price Control Procedure

Review the settings for the price control for materials **T-M510A##** and **T-M510B##**.

- Note the following information from the material master records for materials **T-M510A##** and **T-M510B##** for plant **1000**:

Price Detail	Material (T-M510A##)	Material (T-M510B##)
Price control		
Price		

- On the *SAP Easy Access* screen, choose *Logistics* → *Materials Management* → *Material Master* → *Material* → *Display* → *Display Current* (MM03).
- Enter **T-M510A##** in the *Material Number* field.
- Choose the *Select View(s)* pushbutton.
- In the *Select View(s)* dialog box, choose *Accounting 1*.
- In the *Organizational levels* dialog box, enter **1000** in the *Plant* field and choose *Continue*.
- Record the values for material T-M510A## in the table provided in the next solution step.
- Choose  (*Other material*) to return to the initial screen and repeat solution steps b through f with material number T-M510B##.

The following data displays in the material master records:

Price Detail	Material (T-M510A##)	Material (T-M510B##)
Price control	V	S
Price	10	10


Task 2

Initial Entry of Stock Balances

It was not possible to transfer the data of some stocks from the legacy system to SAP ERP. Post the initial stock balances manually.

1. Post an initial entry of stock for **20** pieces each of **T-M510A##** and **T-M510B##** for plant **1000**, storage location **0001**.
 - a) On the *SAP Easy Access* screen, choose *Logistics → Materials Management → Inventory Management → Goods Movement → Goods Movement (MIGO)*.
 - b) Enter transaction *Goods Receipt* and, as the reference, enter *Other*.
 - c) In the (movement type) field, enter **561**.
 - d) Choose *Enter* to confirm your entry.
 - e) Enter the following data for item 1:



Tab Page	Field	Value
<i>Material</i>	<i>Material</i>	T-M510A##
<i>Quantity</i>	<i>Qty in Unit of Entry</i>	20 PC
<i>Where</i>	<i>Plant</i>	1000
<i>Where</i>	<i>Storage Location</i>	0001

- f) Choose  (*Next Item*).
- g) Enter the following data for the item 2:

Tab Page	Field	Value
<i>Material</i>	<i>Material</i>	T-M510B##
<i>Quantity</i>	<i>Qty in Unit of Entry</i>	20 PC
<i>Where</i>	<i>Plant</i>	1000
<i>Where</i>	<i>Storage Location</i>	0001

- h) Choose the *Post* pushbutton.
2. Display the accounting document for the initial entry of stock balances.
Note the amounts posted to the stock account in the following table:

Field	Value
<i>Amount (T-M510A##)</i>	
<i>Amount (T-M510B##)</i>	

- a) Enter transaction *Display* and, as the reference, enter *Material Document*.
- b) Choose  (*Execute*).
- c) In the document header, choose the *Document Info* tab page.
- d) Choose the  *FI Documents* pushbutton.

- e) In the *List of Documents in Accounting* dialog box, double-click the number of the accounting document.
- f) Note that the amount posted to the stock account is *EUR 200* for materials *T-M510A##* and *T-M510B##*.

Post a Free-of-Charge Delivery

Business Example

Some vendors may send you goods you did not order as exclusive bonus quantities. You need to enter these goods in the system as free-of-charge deliveries.

Vendor **T-K510A##** delivers certain materials to your company as exclusive bonus quantities. Enter these materials as free-of-charge deliveries and display the accounting document.

1. Post a free-of-charge delivery (MvT 511) of **10** pieces each of materials **T-M510A##** and **T-M510B##** in plant **1000**, storage location **0001**, with the text **Exclusive Bonus Quantity**.
2. Display the accounting document for this GR and determine the material for which the accounting document was generated.

Post a Free-of-Charge Delivery

Business Example

Some vendors may send you goods you did not order as exclusive bonus quantities. You need to enter these goods in the system as free-of-charge deliveries.


Vendor **T-K510A##** delivers certain materials to your company as exclusive bonus quantities. Enter these materials as free-of-charge deliveries and display the accounting document.

1. Post a free-of-charge delivery (MvT 511) of **10** pieces each of materials **T-M510A##** and **T-M510B##** in plant **1000**, storage location **0001**, with the text **Exclusive Bonus Quantity**.
 - a) On the *SAP Easy Access* screen, choose *Logistics* → *Materials Management* → *Inventory Management* → *Goods Movement* → *Goods Movement (MIGO)*.
 - b) Enter transaction *Goods Receipt* and, as the reference, enter *Other*.
 - c) Enter **511** in the *Movement type* field and choose *Enter* to confirm your entry.
 - d) Enter the following data:



Note:
To display the Partner tab, select Enter.




Tab Page	Field	Value
<i>Material</i>	<i>Material</i>	T-M510A##
<i>Quantity</i>	<i>Qty in Unit of Entry</i>	10 PC
<i>Where</i>	<i>Plant</i>	1000
<i>Where</i>	<i>Storage Location</i>	0001
<i>Where</i>	<i>Text</i>	Exclusive Bonus Quantity
<i>Partner</i>	<i>Vendor</i>	T-K510A##

- e) Enter the item data in the *Detail Data* screen area and choose  (*Next Item*).
- f) Enter the following data:



Note:
To display the Partner tab, select Enter.

Tab Page	Field	Value
Material	Material	T-M510B##
Quantity	Qty in Unit of Entry	10 PC
Where	Plant	1000
Where	Storage Location	0001
Where	Text	Exclusive Bonus Quantity
Partner	Vendor	T-K510A##

- g) Choose the *Post* pushbutton.
2. Display the accounting document for this GR and determine the material for which the accounting document was generated.
- a) Enter transaction *Display* and, as the reference, enter *Material Document*.
- b) Choose  (*Execute*).
- c) In the document header, choose the *Document Info* tab page.
- d) Choose the  *FI Documents* pushbutton.
- e) In the *List of Documents in Accounting* dialog box, double-click the accounting document.
- f)  To view the material, choose *(Choose Layout)*.
- g) In the dropdown menu, select *Choose Layout*.
- h) In the *Choose layout* dialog box, choose the */Z-Material* layout.
Note that the material is T-M510B##

Why is there no posting in FI for a free-of-charge delivery of material T-M510A##?

In the case of a free-of-charge delivery, the goods have no acquisition value. Materials valuated at moving average price (T-M510A##) do not have postings in FI because the value in the stock account does not change. The stock value of valuated materials at the standard price (T-M510B##) must change with every change in quantity. Therefore, if a free-of-charge delivery of 10 pieces is received, the stock value must be updated by 10 x standard price.



LESSON SUMMARY

You should now be able to:

- Post a goods receipt without reference

Posting a Goods Receipt with Reference

LESSON OVERVIEW

This lesson explains the entry of goods receipts (GRs) with reference to other documents. In this context, you learn about the unrestricted-use stock, stock in quality inspection and blocked stock types.

Business Example

The goods you have procured from vendors and the materials manufactured in-house must be added to your own stock. To do so, you enter GRs with reference to the relevant documents, such as production orders or purchase orders (POs). Depending on how you can use the materials, you can book them into unrestricted-use stock, stock in quality inspection, or blocked stock. Some deliveries may be subject to conditional acceptance. In such cases, you book the goods received into nonvaluated GR blocked stock for closer examination. For this reason, you require the following knowledge:

- How to enter a GR with reference to a PO or production order into unrestricted-use stock, stock in quality inspection, and blocked stock
- An understanding of the process of receiving goods in GR blocked stock and its other special aspects
- An understanding of the settings required for the automatic generation of POs at the time of GR



LESSON OBJECTIVES

After completing this lesson, you will be able to:

- Post a goods receipt with reference to a PO or production order in different stock types
- Post a goods receipt with reference to a PO in GR blocked stock

Goods Receipt with Reference

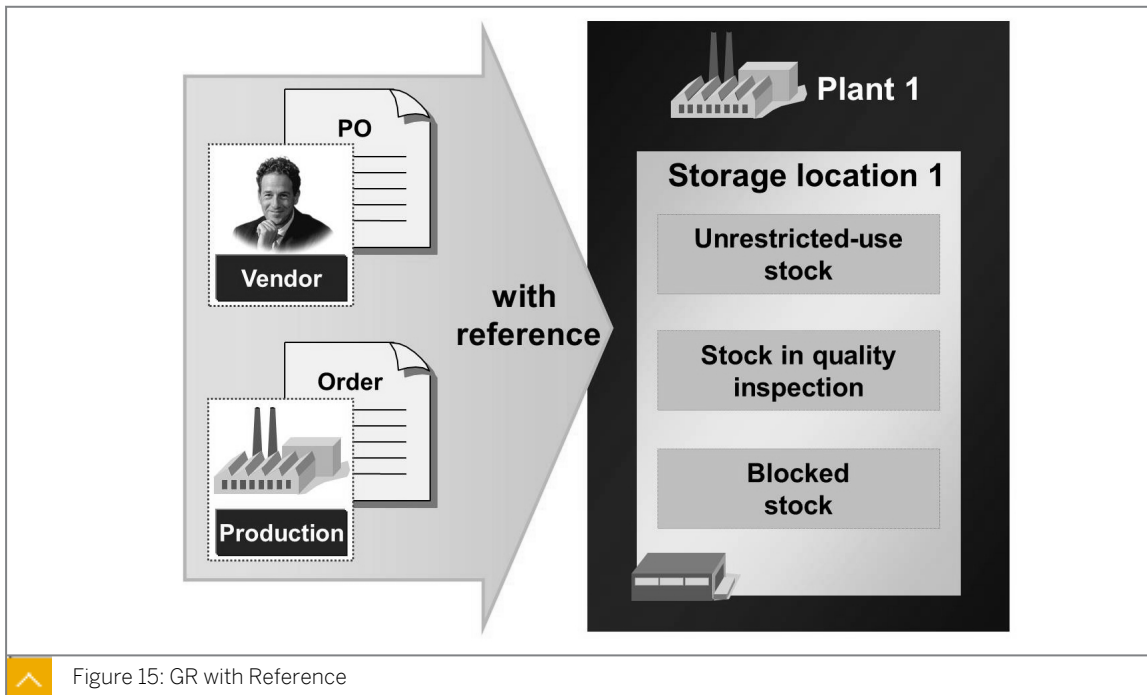


Figure 15: GR with Reference

A GR with reference is always a planned GR. To preplan a receipt, you need to enter certain key information pertinent to the receipt prior to the actual GR posting.

To preplan a GR, you require the following information:

- What? (Which material?)
- When? (Which delivery date?)
- How much? (What quantity?)
- From which source? (From which vendor, plant, or company?)
- To where? (Which location or stock type?)

The aim of preplanning is to facilitate and accelerate the GR process and efficiently organize work in the goods receiving department, thereby avoiding bottlenecks, for example. Also, materials planning can use preplanning to monitor stocks of ordered materials and materials produced in-house and optimize stockholdings.

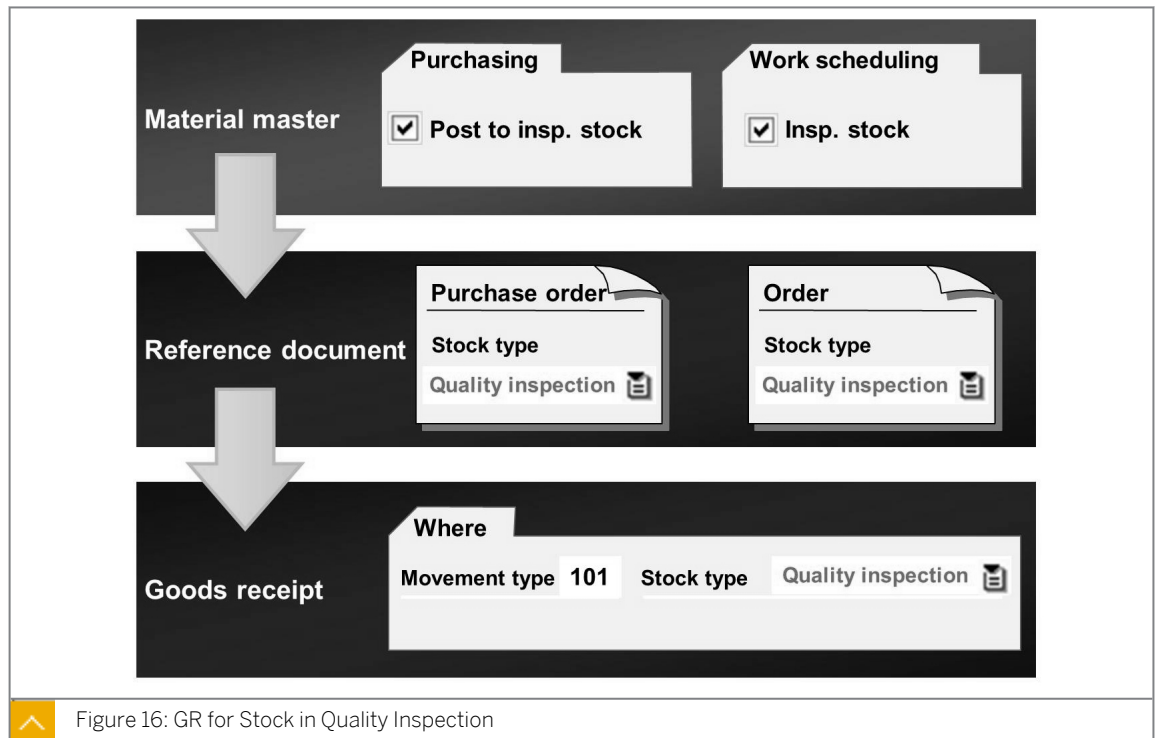
The documents with which you preplan a GR serve as reference documents when you enter the goods movement. The preplanning of GRs takes place using POs and production orders. In exceptional cases, you can also preplan a receipt using a reservation.



Hint:

Even though you can preplan GRs using reservations, reservations are primarily used for planning goods issues.

GR for Stock in Quality Inspection



You enter GRs against production and POs with movement type *101*. For a GR into a warehouse, based on the stock type, you can book the receipt into unrestricted-use stock, stock in quality inspection, or blocked stock.

You can preplan a GR for stock in quality inspection in the following ways:

- If the material is generally subject to a quality check (that is done without SAP quality management) prior to use, choose the *Post to inspection stock* checkbox in *Purchasing* or *Work Scheduling Data* in the material master record. The system then adopts the stock type *Quality Inspection* in the production order or PO.
- If you want to make the material subject to a quality check in exceptions only, enter stock type stock in *Quality Inspection* only in the relevant document (PO or production order). This can occur when a material is procured from a new vendor, if you need to check the quality of the goods received at the first delivery. You locate the stock type for the PO item in the item details on the *Delivery* tab page. In the production order, you locate the stock type on the *Goods Receipt* tab page.
- If SAP *Quality Management (QM)* is active for a material, the relevant data is entered in the material master record. QM uses the inspection type to determine the goods movements (movement types) for which a check is relevant and whether a posting is made to the stock in quality inspection. The system then automatically creates an inspection lot for a goods movement. All subsequent steps are mapped using this inspection lot.


When you post a receipt to a warehouse, the quantity and value of the stock are increased irrespective of the stock type (except for material types without value updating).

Post a GR with Reference to a Production Order

Business Example

As a senior store person, you record receipts of materials manufactured in-house.

Enter a GR against a production order. The system posts the produced material for stock in quality inspection at the time of GR. The production orders need to be released or they will not appear as a result of the search.

1. Enter the receipt of **50 PC** of **R-F1##** in plant **1000** with reference to the production order.
Use  (*Find*) to search for the order number. Choose the production order with **50 PC** of the material.
2. Display the production order from within the material document. Locate the default value of the stock in quality inspection for the stock type in the production order.


Post a GR with Reference to a Production Order

Business Example

As a senior store person, you record receipts of materials manufactured in-house.

Enter a GR against a production order. The system posts the produced material for stock in quality inspection at the time of GR. The production orders need to be released or they will not appear as a result of the search.

1. Enter the receipt of **50 PC** of **R-F1##** in plant **1000** with reference to the production order.

Use  (*Find*) to search for the order number. Choose the production order with **50 PC** of the material.

- a) On the SAP Easy Access screen, choose *Logistics* → *Materials Management* → *Inventory Management* → *Goods Movement* → *Goods Movement (MIGO)*.

- b) Enter transaction *Goods Receipt* and, as the reference, enter *Order*.

- c) Choose  (*Find*).

- d) Enter the following data:

Field	Value
<i>Material</i>	R-F1##
<i>Plant</i>	1000

- e) Choose the *Find* pushbutton.

- f) Choose the production order with *50 PC* of material *R-F1##*.

- g) Select *Adopt*.

- h) Close the search results.

- i) Select the *Item OK* checkbox and check whether *Quality inspection* is selected in the *Stock Type* field (on the *Where* tab page).

- j) Choose the *Post* pushbutton.

2. Display the production order from within the material document. Locate the default value of the stock in quality inspection for the stock type in the production order.

- a) Enter transaction *Display* and, as the reference, enter *Material Document*.

- b) Choose  (*Execute*).

- c) In the item details, on the *Order Data* tab page, double-click the order number to display the production order.
- d) On the *Production order Display: Header* screen, choose the *Goods Receipt* tab page and verify that *Quality inspection* displays in the *Stock Type* field.

Post a GR with Reference to a PO into Stock in Quality Inspection

Business Example

As warehouse clerk, you record incoming deliveries of ordered materials. You book deliveries that are defective into nonvaluated GR blocked stock.

Enter a GR against a PO. Book the selected materials for stock in quality inspection at the time of GR.

1. Enter the receipt of 100 PC of material *T-M510C##* (gaskets) with reference to PO **4151-02##**. Materials *T-M510A##* and *T-M510B##* are not included in this delivery. Verify that the delivery is booked for stock in quality inspection.

Distribute the following delivered quantities of material *T-M510C##* among multiple storage locations:

Storage Location	Quantity
0001	60
0002	20
0003	20

2. Display the material document and go to the stock overview for material *T-M510C##*. Verify that the stock has been updated correctly in the storage locations.
3. From the material document, go to the PO. Find out where the default value stock in *Quality inspection* is stored for the stock type in the PO.

Post a GR with Reference to a PO into Stock in Quality Inspection

Business Example



As warehouse clerk, you record incoming deliveries of ordered materials. You book deliveries that are defective into nonvaluated GR blocked stock.

Enter a GR against a PO. Book the selected materials for stock in quality inspection at the time of GR.

1. Enter the receipt of 100 PC of material *T-M510C##* (gaskets) with reference to PO **4151-02##**. Materials *T-M510A##* and *T-M510B##* are not included in this delivery. Verify that the delivery is booked for stock in quality inspection.

Distribute the following delivered quantities of material *T-M510C##* among multiple storage locations:

Storage Location	Quantity
0001	60
0002	20
0003	20

- a) On the *SAP Easy Access* screen, choose *Logistics* → *Materials Management* → *Inventory Management* → *Goods Movement* → *Goods Movement (MIGO)*.
- b) Enter transaction *Goods Receipt* and, as the reference, enter *Purchase Order*.
- c) Enter PO number **4151-02##** and choose  (*Execute*).
- d) Select the *Item OK* checkbox for item 3.
- e) To delete nonselected items 1 and 2, choose the *Delete* pushbutton.
- f) Select *Continue (Enter)* to clear the dialog box.
- g) If the detail tab pages are not displayed, choose the *Detail Data* pushbutton.
- h) Verify that the *Stock Type* field value for the delivered item is *Quality inspection*. In the *Detail Data* screen area, you find this information on the *Where* tab page.
- i) Choose  (*Distribute Quantity*).
- j) Refer to the table in the exercise and, in the *Distribute Quantity: 100 PC for Item 0003* dialog box, enter the material and storage location values.

k) Choose *Adopt*.



Caution:

The system splits item 3 into three lines with different storage locations.


l) Choose the *Post* pushbutton.

2. Display the material document and go to the stock overview for material *T-M510C##*. Verify that the stock has been updated correctly in the storage locations.

a) Enter transaction *Display* and, as the reference, enter *Material Document*.

b) Choose  (*Execute*).


c) In the detail data for one of the items, choose the *Where* tab page.

d) Choose  (*Stock Overview*). The system displays the current stocks of *material T-M510C##* at storage locations *0001* to *0003* in plant *1000*.

e) Choose  (*Back*).

3. From the material document, go to the PO. Find out where the default value stock in *Quality inspection* is stored for the stock type in the PO.

a) On the *Purchase Order Data* tab page, in the item details, double-click the PO number to display the PO.

b) In the PO, display the detail data for item *30*. You will need to select  (*Next Item*) to display item *30*.

c) Choose the *Delivery* tab page. The setting for stock type is set as *Quality inspection*.

Nonvaluated Goods Receipt Blocked Stock

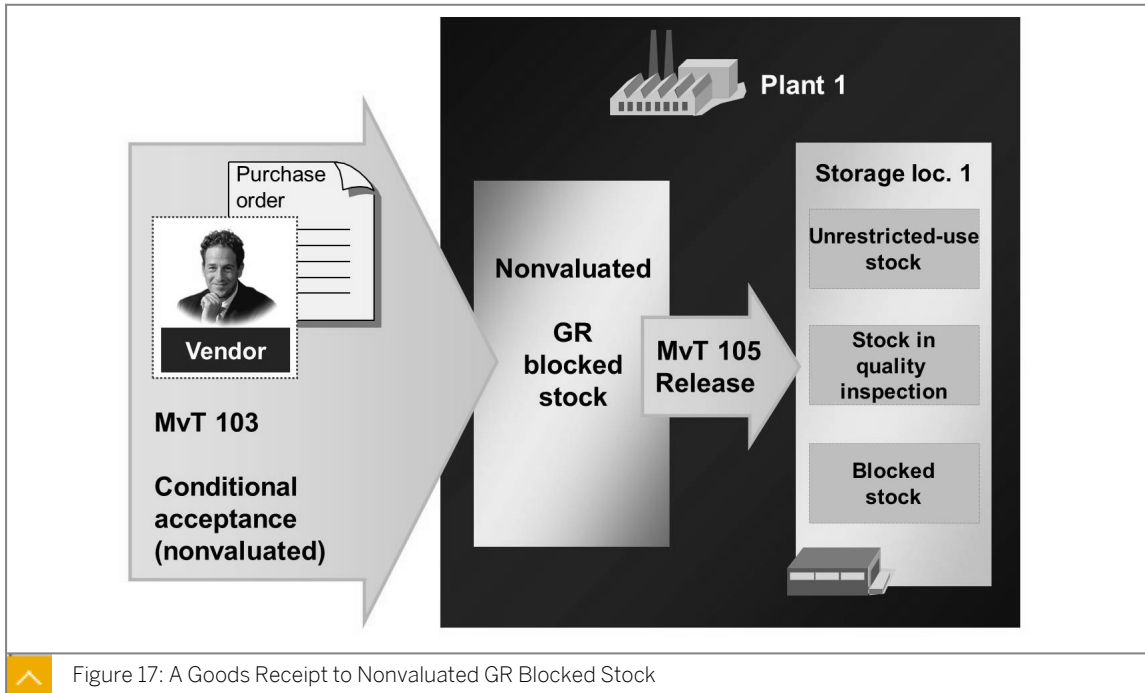


Figure 17: A Goods Receipt to Nonvaluated GR Blocked Stock

If you want to accept goods from a vendor conditionally (because of a missing certificate, for example), you initially post the goods to the nonvaluated GR blocked stock upon receipt, using movement type 103. The quantity you post to GR blocked stock does not yet form part of your regular inventory, but is recorded in the PO history.

The material document generated at the time of the GR serves as a record of the receipt of the goods. **As GR blocked stock is not valuated in posting with movement type 103, no accounting document is generated at the time of the GR.**

The system does not change the valuated stock as a result of a receipt to the nonvaluated GR blocked stock. Although the system updates the nonvaluated GR blocked stock in the PO history, the open PO quantity is not reduced as a result.

You can display nonvaluated GR blocked stock from the following views:

- Stock overview for the material (at plant level)
On the SAP Easy Access screen, choose *Logistics* → *Materials Management* → *Inventory Management* → *Environment* → *Stock* → *Stock Overview* (MMBE).
- PO history for the PO item
On the SAP Easy Access screen, choose *Logistics* → *Materials Management* → *Inventory Management* → *Environment* → *Information* → *Purchase Order* (ME23N).

When conditions for the acceptance of the delivery are fulfilled, you transfer the material to unrestricted-use stock, stock in quality inspection, or blocked stock. **The valuation and updating of the stock data does not take place until you release the material from stock in quality inspection or blocked stock using movement type 105.** If the conditions for release are not satisfied, you can return the goods to the vendor using movement type 124.

Valuated Good Receipt Blocked Stock

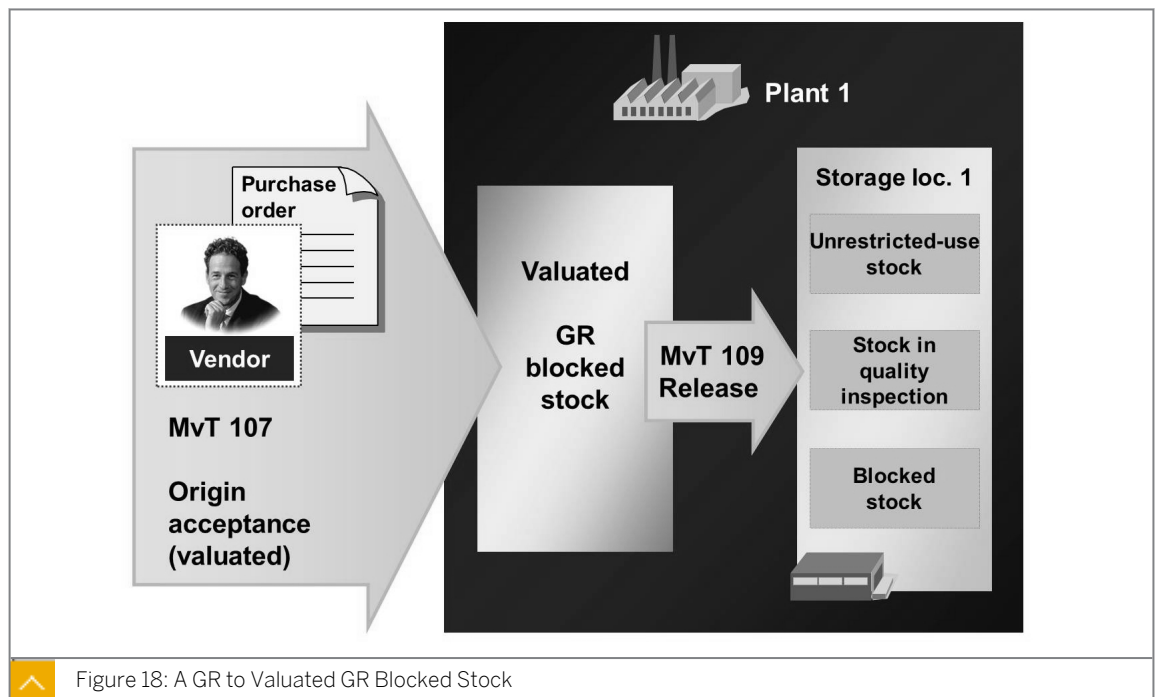


Figure 18: A GR to Valuated GR Blocked Stock

As of SAP ERP 6.0, you can map origin acceptance of goods. With origin acceptance (post with movement type *107*), the value of the material is already posted to your own stock, even though the material has not arrived at the warehouse. The postings in Financial Accounting are similar to those of a GR with movement type *101*.

You can use the option of valuated GR blocked stock if you have contractually agreed with the vendor that the quality inspection and acceptance takes place at the point of origin before the goods are delivered, and that an invoice is issued immediately after acceptance. If origin acceptance has been preplanned in the PO, the system proposes the accepted quantity as the amount to be invoiced in invoice verification. The actual shipment of the goods takes place after acceptance. The release of the valuated GR blocked stock with movement type *109* maps the receipt of goods at your company. (For movement type *109*, use the entry made for the stock type to determine whether the GR is to be posted to unrestricted-use stock, stock in *quality inspection*, or blocked stock.)

You can preplan origin acceptance in a PO item (select the *Origin Acceptance* checkbox in the item details for the PO, *Delivery* tab page). The GR for such a PO item must be posted using the valuated GR blocked stock using movement type *107*. The accepted quantity can be received later.

You can also opt for a receipt using the valuated GR blocked stock when you post the GR. In this case, the quantity posted with movement type *107* is not updated as a quantity to be settled.

A return delivery from the valuated GR blocked stock is not possible. If you post the origin acceptance incorrectly, you need to reverse the posting with movement type *108*. If the material has been delivered after origin acceptance, and errors or defects are discovered, you need to post the release with movement type *109*, and then a return delivery with movement type *122*.

You can display the valuated and nonvaluated GR blocked stock in the PO history and stock overview. In the stock overview (transaction *MMBE*), there is a separate entry for nonvaluated

and valuated GR blocked stock. If you make a posting to the GR blocked stock, the quantity is increased. If you post a release, the quantity is reduced accordingly.


You need to distinguish between the following entries for the valuated GR blocked stock:

- Origin acceptance preplanned in the PO item:

Status	Value
Posted with movement type 107	Div.Val.GR-BSt
Released with movement type 109	PDAcc.Val.GR-BSt

- Origin acceptance not preplanned in the PO item:

Status	Value
Posted with movement type 107	Div.Val.GR-BSt
Released with movement type 109	PDAcc.Val.GR-BSt





Hint:
The valuated GR blocked stock quantities are always increased by the respective postings, but not reduced by the subsequent postings.




To Release GR Blocked Stock

1. On the SAP Easy Access screen, choose *Logistics* → *Materials Management* → *Inventory Management* → *Material Document* → *Release Blocked Stock*.
2. Enter transaction *Release GR Blocked Stock* and, as the reference, enter *Material Document*.
3. Enter the material document number and the year of the document generated at the time of posting to GR blocked stock.



Hint:
To find the material document number, choose  (*Find Material Doc.*). Enter selection values, such as movement type **103** or **107**, the material, and the posting date.

4. Choose  (*Execute*). Enter a storage location and select the *OK* checkbox.



Hint:
On releasing the GR blocked stock; the movement type is automatically derived from the movement type for the reference document.

The following table displays the automatically derived movement type from the movement type for the reference document:

Post to GR blocked stock	Release GR blocked stock
103 (nonvaluated)	105 (valuated)
107 (valuated)	109 (non-valuated)

5. Post the material document.

Post a GR with Reference to a PO in GR Blocked Stock

Business Example

The supplier delivers materials *T-M510A##* and *T-M510B##* against PO *4151-02##*. You realize that the packaging has been exposed to moisture during transportation, but cannot immediately determine whether the materials have been damaged as a result. Record your conditional acceptance of the materials (movement type *103*). Subsequent close inspection reveals no damage to material *T-M510A##*. Therefore, you release the GR blocked stock for this material.

Release the GR blocked stock for conditionally-accepted material.

1. Enter the receipt of materials *T-M510A##* and *T-M510B##* against PO **4151-02##** into nonvaluated GR blocked stock.
2. Display the material document and go to the stock overview for material *T-M510A##*. Verify that the GR blocked stock has been updated correctly.
3. Was an accounting document generated for the GR with movement type *103*?
4. Release the GR blocked stock of material *T-M510A##*. Post this receipt to unrestricted-use stock at storage location *0001*.
5. Display the material document for release. Which movement type was used to post this transaction? Is there an accounting document for this posting?
6. Which of the following statements are correct?

Choose the correct answers.





- A GR blocked stock is always valuated and is comparable with stock in quality inspection.
- B The GR blocked stock can be evaluated or nonvaluated, and is only managed at plant level.
- C POs can be posted to general blocked stock or GR blocked stock using movement type *101*.
- D You post deliveries that are subject to conditional acceptance to nonvaluated GR-blocked stock upon receipt.
- E You release GR blocked stock using special movement types (*105* or *109*).




Post a GR with Reference to a PO in GR Blocked Stock

Business Example

The supplier delivers materials *T-M510A##* and *T-M510B##* against PO *4151-02##*. You realize that the packaging has been exposed to moisture during transportation, but cannot immediately determine whether the materials have been damaged as a result. Record your conditional acceptance of the materials (movement type *103*). Subsequent close inspection reveals no damage to material *T-M510A##*. Therefore, you release the GR blocked stock for this material.

Release the GR blocked stock for conditionally-accepted material.

1. Enter the receipt of materials *T-M510A##* and *T-M510B##* against PO **4151-02##** into nonvaluated GR blocked stock.
 - a) On the *SAP Easy Access* screen, choose *Logistics* → *Materials Management* → *Inventory Management* → *Goods Movement* → *Goods Movement* (MIGO).
 - b) Enter transaction *Goods Receipt* and, as the reference, enter *Purchase Order*.
 - c) Enter **103** in the *Movement Type* field.
 - d) Enter PO number **4151-02##** and choose  (*Execute*).
 - e) Select the *Item OK* checkbox for both items.
 - f) Choose the *Post* pushbutton.
2. Display the material document and go to the stock overview for material *T-M510A##*. Verify that the GR blocked stock has been updated correctly.
 - a) In the transaction for goods movements MIGO, enter transaction *Display* and, as the reference, enter *Material Document*.
 - b) Choose  (*Execute*).
 - c) In the item details, on the *Where* tab page, choose  *Stock Overview*. Scroll through the list to get to the *GR blocked stock* column.
 - d) To return to transaction MIGO, go back.
3. Was an accounting document generated for the GR with movement type *103*?
 - a) Choose the *Document Info* tab page in the document header and then choose the  *FI Documents* pushbutton. The system displays the message *No subsequent document found in accounting*.

4. Release the GR blocked stock of material *T-M510A##*. Post this receipt to unrestricted-use stock at storage location *0001*.
 - a) Enter transaction *Release GR Blocked Stock* and, as the reference, enter *Material Document*.
 - b) Choose  (*Execute*).
 - c) Select the *Item OK* checkbox for item *1*.
 - d) Enter **0001** in the *Storage Location* field, if necessary, and choose the *Post* pushbutton.
5. Display the material document for release. Which movement type was used to post this transaction? Is there an accounting document for this posting?
 - a) In the transaction for goods movements *MIGO*, enter transaction *Display* and, as the reference, enter *Material Document*.
 - b) Choose  (*Execute*).
 - c) In the *item details*, choose the *Where* tab page. The system automatically determines *105* as the movement type.
 - d) Choose the *Document Info* tab page in the document header and choose the  *FI Documents* pushbutton. When you release the nonvaluated GR blocked stock, postings equivalent to those of a GR with movement type *101* are generated in accounting.

6. Which of the following statements are correct?

Choose the correct answers.

- A GR blocked stock is always valuated and is comparable with stock in quality inspection.
- B The GR blocked stock can be evaluated or nonvaluated, and is only managed at plant level.
- C POs can be posted to general blocked stock or GR blocked stock using movement type *101*.
- D You post deliveries that are subject to conditional acceptance to nonvaluated GR-blocked stock upon receipt.
- E You release GR blocked stock using special movement types (*105* or *109*).

A receipt can be posted to GR blocked, nonvaluated stock using movement type *103*. To post a receipt to a GR blocked, valuated stock, use movement type *107* (as of ECC6.0). **GR blocked stock is managed at plant level.** If you post a conditional acceptance using movement type *103*, the system updates it to accounting when it is released.



LESSON SUMMARY

You should now be able to:

- Post a goods receipt with reference to a PO or production order in different stock types
- Post a goods receipt with reference to a PO in GR blocked stock

Posting a GR with Automatic Generation of a PO

LESSON OVERVIEW

This lesson shows you how to post a goods receipt (GR) with automatic generation of a purchase order (PO).

Business Example

The goods procured from vendors and materials manufactured in-house must be added to your own stock for further processing and record maintenance. To do so, you need to enter GRs with reference to the relevant documents (purchase order (PO) or production order) and book the materials into the relevant stock automatically generate a PO for these goods. For this reason, you require the following knowledge:

- An understanding of the automatic generation of a PO
- How to post a GR with automatic PO generation



LESSON OBJECTIVES

After completing this lesson, you will be able to:

- Enter a GR without reference to a PO, whereby a PO is generated automatically

Automatic Generation of a Purchase Order at Goods Receipt

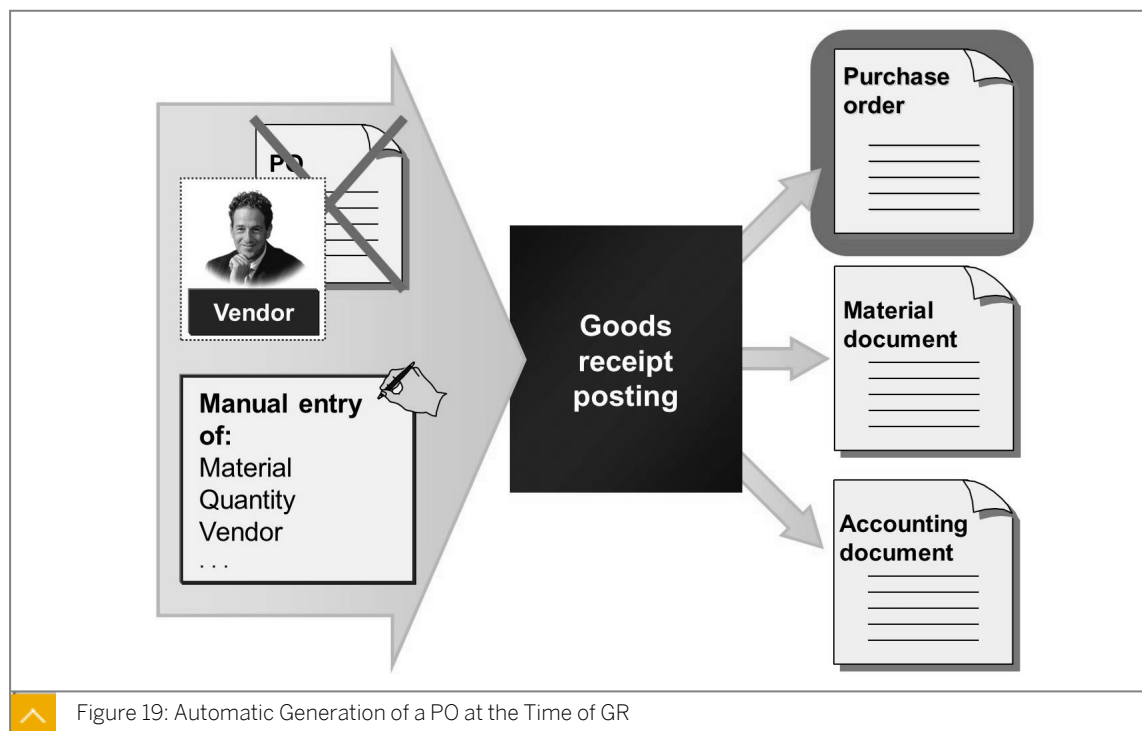


Figure 19: Automatic Generation of a PO at the Time of GR

If you receive a delivery for which there is no PO in the system, you can enter it as an Other GR, which is a GR without reference to a PO. The invoice for this delivery cannot be entered and checked with reference to the PO.

Alternately, the SAP ERP application provides the option of having a PO automatically generated by the system at the time of GR.

Automatic Generation of a PO – Prerequisites

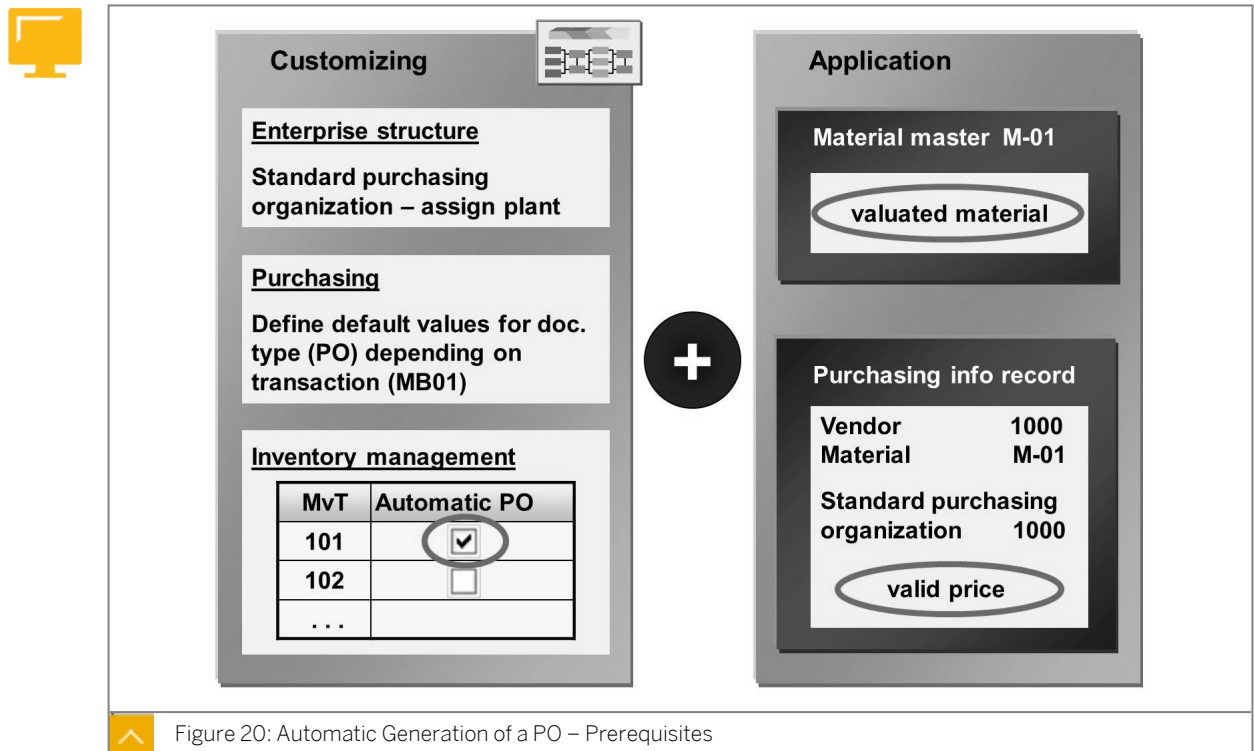
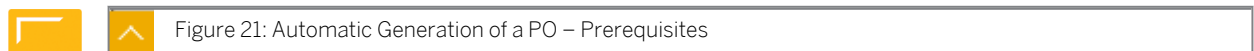


Figure 20: Automatic Generation of a PO – Prerequisites



For automatic generation of a PO, certain prerequisites must be fulfilled in Customizing and the application.

The prerequisites in Customizing for the automatic generation of a PO are as follows:

- You must activate *Automatic PO Generation* for the movement type.

Go to Customizing for *Materials Management under Inventory Management and Physical Inventory* → *Goods Receipt* → *Create Purchase Order Automatically*.



Hint:

The automatic generation of POs is only possible for movement types for which you can enter GRs with reference to POs (101 and 161).

- You must assign a standard purchasing organization to the plant for which you enter the GR if there are multiple purchasing organizations for the plant.

Go to Customizing for *Enterprise Structure under Assignment* → *Materials Management* → *Assign standard purchasing organization to plant*.

- You must specify a default document type for the PO of the GR.

You must maintain a document type for transaction MB01 in Customizing for *Materials Management under Purchasing* → *Define Default Values for Document Type*.

Prerequisites in the Application

The prerequisites in the application for the automatic generation of a PO are as follows:




- The material delivered must be managed as a valuated material.
- A purchasing info record must exist for the vendor, material, and standard purchasing organization of the receiving plant. The conditions of the purchasing info record must be valid, or a link to the last purchasing document must exist in the purchasing info record.

The automatic generation of POs is for receipts in the warehouse, not for consumption. Similarly, you cannot book any movements into GR blocked stock with this function when a PO is automatically generated.

The data necessary for the automatic generation of a PO is as follows:

- Vendor, material, quantity, plant, and storage location, all of which are entered manually by the clerk at the time of the GR.
- Purchasing organization (standard purchasing organization of the plant)
- Purchasing group (purchasing group from the material master record)
- Delivery date (posting date of the GR)
- The price (the value of price in the purchasing info record)

**To Enter a GR for automatic PO Generation**

1. On the *SAP Easy Access* screen, choose *Logistics* → *Materials Management* → *Inventory Management* → *Goods Movement* → *Goods Movement (MIGO)*.
2. Enter transaction *Goods Receipt* and, as the reference, enter *Purchase Order*.
3. Choose *Settings* → *Default Values*.
4. Change the movement type under *Non-Ordered Items at Goods Receipt for Purchase Order* in the material field to *IO1*.
5. To save the new default values, choose  (*Adopt*).
6. Choose  (*Close Detail Data*).
7. To enter items manually when goods are received against a PO, choose  (*Non-Ordered Item*).
8. Enter the material, quantity, storage location, plant, and vendor in the item overview.
9. Choose the *Post* pushbutton.

Upon posting, the system generates a material document, an accounting document, and a PO. You can enter an invoice against this PO during the invoice verification process.

Post a GR with the Generation of a PO

Business Example

Your company received a delivery of goods without reference to a PO from a vendor that supplies components for production. To use the GR data for invoice verification, the system is configured in a way that POs can be automatically created when posting a GR.

In Customizing, verify the settings required to create an automatic PO at GR. Enter the receipt for material *T-M510B##* with automatic PO generation and then display the PO created.



Caution:

Do not change the Customizing settings.

1. Check the Customizing settings for automatic PO generation with movement type *101*.
2. Check the Customizing setting for the standard purchasing organization of plant *1000*. Purchasing organization *1000* must be assigned as the standard purchasing organization.
3. Post the GR of **10 PC** of material **T-M510B##** for vendor **T-K510A##** in plant **1000**, storage location **0001**. Choose the movement type that triggers the system to automatically generate a PO when the goods are received.
4. Display the PO that is generated.
5. Which master data must exist in SAP ERP for the automatic generation of a PO when the goods are received?

Choose the correct answers.

- A Bill of materials
- B Material master record
- C Outline agreement
- D Source list
- E Purchasing info record
- F Vendor master record

Post a GR with the Generation of a PO

Business Example

Your company received a delivery of goods without reference to a PO from a vendor that supplies components for production. To use the GR data for invoice verification, the system is configured in a way that POs can be automatically created when posting a GR.

In Customizing, verify the settings required to create an automatic PO at GR. Enter the receipt for material *T-M510B##* with automatic PO generation and then display the PO created.




Caution:
Do not change the Customizing settings.

1. Check the Customizing settings for automatic PO generation with movement type *101*.
 - a) On the *SAP Easy Access* screen, choose *Tools* → *Customizing* → *IMG* → *Execute Project* (*SPRO*).
 - b) Create a PO automatically in Customizing for *Materials Management* under *Inventory Management and Physical Inventory* → *Goods Receipt* → *Create Purchase Order Automatically*.
 - c) Verify that the *Generate Purchase Order Automatically* checkbox for movement type *101* is selected.
2. Check the Customizing setting for the standard purchasing organization of plant *1000*. Purchasing organization *1000* must be assigned as the standard purchasing organization.
 - a) On the *SAP Easy Access* screen, choose *Tools* → *Customizing* → *IMG* → *Execute Project* (*SPRO*).
 - b) Assign standard purchasing organization to the plant in Customizing for *Enterprise Structure* under *Assignment* → *Materials Management* → *Assign standard purchasing organization to plant*.



Note:
Instead of steps a) to c), you can also directly run transaction *OMKI*.


- c) Check whether the standard purchasing organization *1000* has been entered for *Plant 1000*.
3. Post the GR of **10 PC** of material **T-M510B##** for vendor **T-K510A##** in plant **1000**, storage location **0001**. Choose the movement type that triggers the system to automatically generate a PO when the goods are received.

- a) On the *SAP Easy Access* screen, choose *Logistics → Materials Management → Inventory Management → Goods Movement → Goods Movement (MIGO)*.
- b) Enter transaction *Goods Receipt* and, as the reference, enter *Purchase Order*.
- c) Choose  (*Non-Ordered Item*).
- d) Enter the following data:
Select Enter for the Partner tab to display.

Tab Page	Field	Value
<i>Material</i>	<i>Material</i>	T-M510B##
<i>Quantity</i>	<i>Qty in Unit of Entry</i>	10 PC
<i>Partner</i>	<i>Vendor</i>	T-K510A##

- e) On the *Where* tab page, enter the following data:

Field	Value
<i>Movement Type</i>	101
<i>Plant</i>	1000
<i>Storage Location</i>	0001

- f) Choose the *Post* pushbutton.
4. Display the PO that is generated.
 - a) In transaction *MIGO*, enter transaction *Display* and, as the reference, enter *Material Document*.
 - b) Double-click the PO number.
 - c) Choose  (*Execute*).
 - d) In the detail data, choose the *Purchase Order Data* tab page and then choose the PO number to display the PO.

5. Which master data must exist in SAP ERP for the automatic generation of a PO when the goods are received?

Choose the correct answers.

- A Bill of materials
- B Material master record
- C Outline agreement
- D Source list
- E Purchasing info record
- F Vendor master record

For the automatic generation of a PO, the system needs the material master record for the plant and storage location, the vendor master record, and the purchase info record.



LESSON SUMMARY

You should now be able to:

- Enter a GR without reference to a PO, whereby a PO is generated automatically

Posting Cancellation, Return Delivery, and Returns

LESSON OVERVIEW

This lesson explains the options available for returning goods to a vendor, such as return deliveries and returns for a purchase order (PO).

Business Example

You want to return damaged or faulty materials, with reference to the original delivery, to the vendor (return delivery). You can mark PO items as returns and return the materials to the vendor without reference to the previous delivery. If, however, you have entered a posting incorrectly, you can correct this with a reversal posting in the SAP ERP application. For this reason, you require the following knowledge:

- How to enter a return delivery for a goods receipt (GR)
- How to enter a subsequent delivery
- How to create a PO with a returns item and post the goods issue (GI)
- How to reverse a goods movement posting



LESSON OBJECTIVES

After completing this lesson, you will be able to:

- Cancel a material document of a goods movement
- Post a return delivery to a vendor
- Enter a return for a purchase order

Cancellation

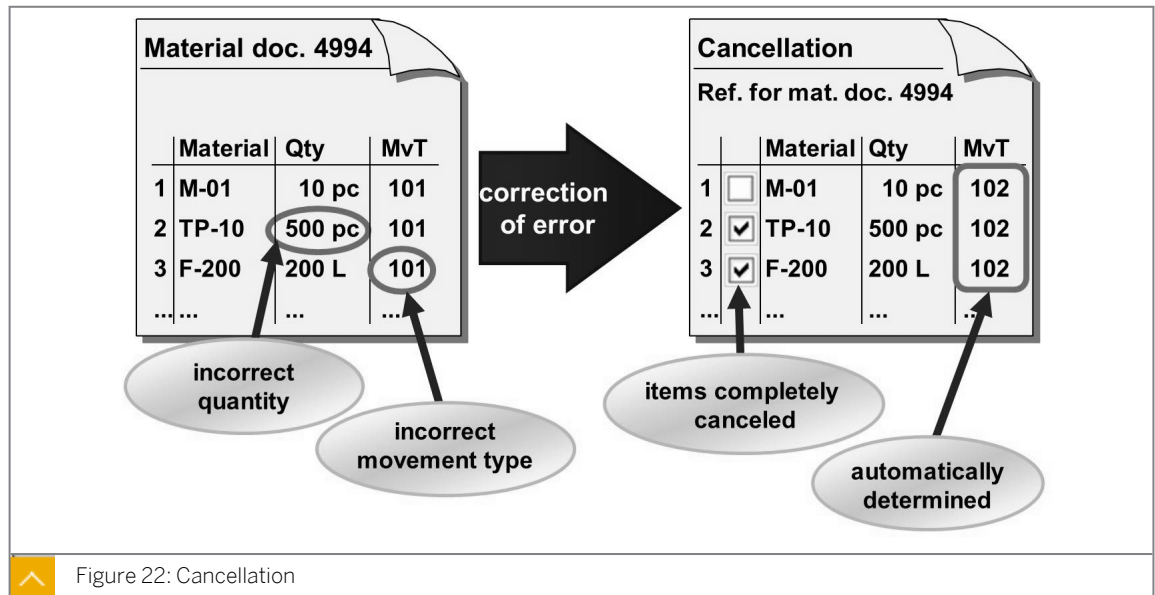


Figure 22: Cancellation

If you make an error when posting a goods movement (for example, incorrect quantity or incorrect movement type), you need to cancel the material document of this posting because the data in the material document can no longer be changed. Then, enter the item with the correct data.

The advantages of entering a cancellation document with reference to the original material document are as follows:

- You can copy the items to be reversed from the source document.
- The system automatically determines the reversal movement type.
- Reversal postings of GIs, transfer postings, and GRs without references are valued with the value of the original document.
- Reversal postings of GRs with reference to POs or production orders are valued with the value determined from the PO or production order.
- You can use the list of canceled material documents (transaction `MBSM`) to analyze the canceled material documents.

(On the SAP Easy Access screen, choose *Logistics* → *Materials Management* → *Inventory Management* → *Environment* → *List Displays* → *Cancelled Material Documents (MBSM)*).

You can also enter a cancellation document without reference to the original material document. To do this, enter the cancellation document in the same way as the original material document, with the only difference being that you use the reversal movement type. You can use the reversal movement type, for example, if you want to only reverse a partial quantity.



Hint:


As a rule, this is valid for the reversal movement type, where reversal movement type = Original movement type + 1.

The following table shows examples of reversal movement types:

Goods Movement	Movement Type	Reversal Movement Type
GR for PO or production order	101	102
GR to nonvaluated GR blocked stock	103	104
Return delivery	122	123
Initial entry of stock balances	561	562



To Post a Cancellation with Reference to a Material Document

1. On the *SAP Easy Access* screen, choose *Logistics* → *Materials Management* → *Inventory Management* → *Goods Movement* → *Goods Movement (MIGO)*.
2. Enter transaction *Cancellation* and, as the reference, enter *Material Document*.
3. Enter the material document number to be canceled.
You can also use  (*Find Material Doc.*).
4. To reverse the items, select the *OK* checkbox.
5. Post the reversal document.

Post a Cancellation with Reference to a Material Document

Business Example

If the materials delivered are of poor quality, return them to the vendor using a return delivery. However, if you have entered something incorrectly for a correction to the GR posting, you must reverse the wrongly posted GRs and then enter the posting correctly as a subsequent delivery in the system.

Enter the GR for the PO 4151-03## in plant 1000, storage location 0002, in the stock in quality inspection.

Reverse this posting so that you can then enter the delivery note number. Enter the correct document as a subsequent delivery for reversal.

1. Enter the GR of 50 pieces of material T-M510A## for PO 4151-03## into the quality inspection stock for plant 1000, storage location 0002.

Note the following details:

Details	Value
Movement type	
Material document number	

Display the PO history and the accounting document after posting. Note the following posting information:

Description	Amount	Debit/Credit
<i>Inventory – Raw materials 1</i>		
<i>Goods Rcvd/Invoice Rcvd (third party)</i>		

2. You have not entered a delivery note number. Because it is not possible to change the material document later, you need to cancel the material document you just entered.

Note the number of the reversal document and posted movement type in the following table:

Movement Details	Value
Movement type	
Material document number	

Display the PO history and accounting document for the reversal.

Note the following posting details:

Description	Amount	Debit/Credit
<i>Inventory – Raw materials 1</i>		
<i>Goods Rcvd/Invoice Rcvd</i> (third party)		

3. Enter the GR with delivery note number **65##** as a subsequent delivery for the reversal from previous exercises. Ensure that the GR is posted to stock in quality inspection.

Note the following details:

Movement Details	Value
Movement type	
Material document number	

Display the PO history and accounting document. Compare the posting information with that from the steps 1 and 2.

Post a Cancellation with Reference to a Material Document

Business Example

If the materials delivered are of poor quality, return them to the vendor using a return delivery. However, if you have entered something incorrectly for a correction to the GR posting, you must reverse the wrongly posted GRs and then enter the posting correctly as a subsequent delivery in the system.

Enter the GR for the PO 4151-03## in plant 1000, storage location 0002, in the stock in quality inspection.

Reverse this posting so that you can then enter the delivery note number. Enter the correct document as a subsequent delivery for reversal.


1. Enter the GR of 50 pieces of material T-M510A## for PO 4151-03## into the quality inspection stock for plant 1000, storage location 0002.


Note the following details:


Details	Value
Movement type	
Material document number	

Display the PO history and the accounting document after posting. Note the following posting information:

Description	Amount	Debit/Credit
Inventory – Raw materials 1		
Goods Rcvd/Invoice Rcvd (third party)		

- a) On the SAP Easy Access screen, choose *Logistics* → *Materials Management* → *Inventory Management* → *Goods Movement* → *Goods Movement (MIGO)*.
- b) Enter transaction *Goods Receipt* and, as the reference, enter *Purchase Order*.
- c) Enter **101** in the *Movement type* field and then choose *Enter*.
- d) Enter PO number **4151-03##** and choose  (*Execute*).
- e) Select the *Item OK* checkbox.

- f) On the *Quantity* tab page, enter **50 PC** in the *Quantity* field and, on the *Where* tab page, choose *Quality inspection* in the *Stock Type* field.
- g) Choose the *Post* pushbutton and note the document number.
- h) Enter transaction *Display* and as the reference, enter *Material Document*.
- i) Choose  (*Execute*).
- j) In the item details, choose the *Purchase Order Data* tab page.
- k) Choose the PO number to display it and, in the item details, choose the *PO History* tab page.
- l) Go back to the *Display Material Document* screen.

Choose the *Document Info* tab page in the header data, and then choose the  *FI Documents* pushbutton to display the accounting document. Note the account number, name, and amount of the postings.

The following posting information displays:

Description	Amount	Debit/Credit
<i>Inventory – Raw materials 1</i>	500.00	S (Debit)
<i>Goods Rcvd/Invoice Rcvd (third party)</i>	500.00 -	H (Credit)

The following data displays:

Details	Value
Movement type	101
Material document number	(varies)



2. You have not entered a delivery note number. Because it is not possible to change the material document later, you need to cancel the material document you just entered. Note the number of the reversal document and posted movement type in the following table:

Movement Details	Value
Movement type	
Material document number	

Display the PO history and accounting document for the reversal.

Note the following posting details:

Description	Amount	Debit/Credit
<i>Inventory – Raw materials 1</i>		
<i>Goods Rcvd/Invoice Rcvd (third party)</i>		

- a) In transaction **MIGO**, enter transaction *Cancellation* and as the reference, enter *Material Document*. Check whether the specified material document number matches the document number from step 1.
- b) Choose  (*Execute*).
- c) Select the *Item OK* checkbox and then choose the *Post* pushbutton.
- d) Enter transaction *Display* and, as the reference, enter *Material Document*. Note the movement type *102 (goods receipt - reversal)* and material document number.
- e) Choose the *Document info* tab page and then choose the  *FI Documents* pushbutton. Note the posting data given in the table in the exercise.

The following information displays:

Description	Amount	Debit/Credit
<i>Inventory – Raw materials 1</i>	<i>500.00 -</i>	<i>H (Credit)</i>
<i>Goods Rcvd/Invoice Rcvd (third party)</i>	<i>500.00</i>	<i>S (Debit)</i>

The following data displays:

- f) Go back to the *Display Material Document* screen and choose the *Purchase Order Data* tab page.
- g) Double-click the PO number to display the PO. In the item details, choose the *PO History* tab page. Verify that the reversal posting has been updated correctly.

The following data displays:

Movement Details	Value
Movement type	<i>102</i>
Material document number	<i>(varies)</i>



3. Enter the GR with delivery note number **65##** as a subsequent delivery for the reversal from previous exercises. Ensure that the GR is posted to stock in quality inspection.

Note the following details:

Movement Details	Value
Movement type	
Material document number	

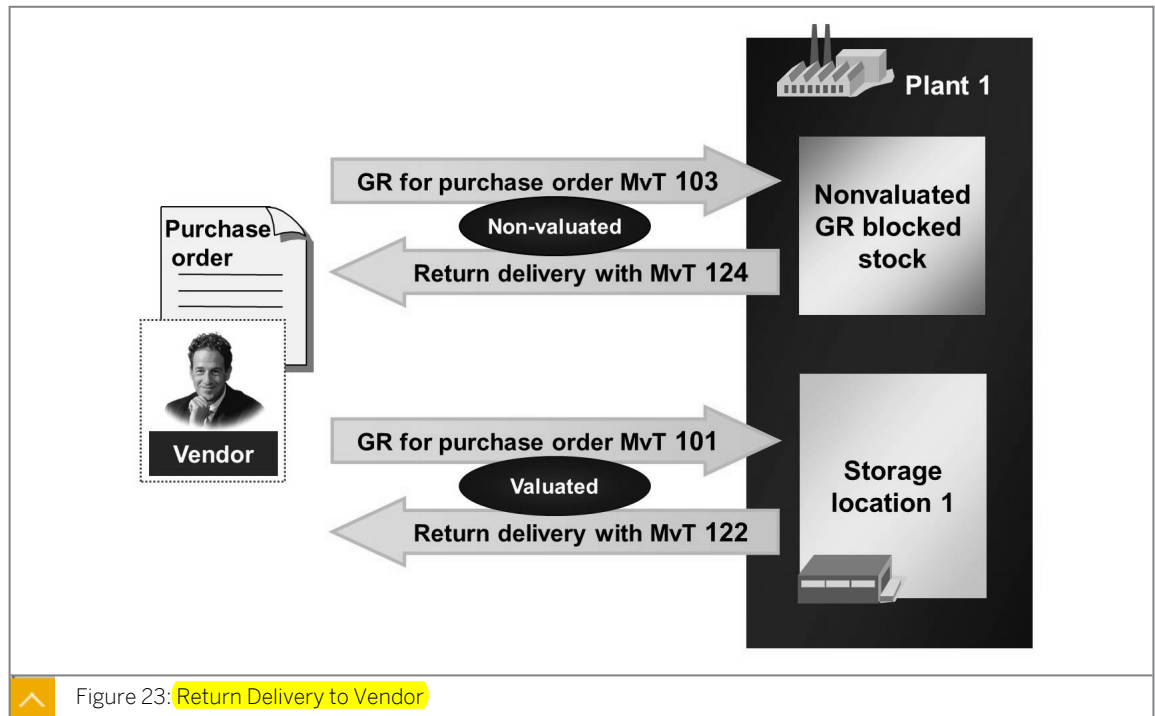
Display the PO history and accounting document. Compare the posting information with that from the steps 1 and 2.

- a) In transaction **MIGO**, enter transaction **Subsequent Delivery** and, as the reference, enter *Material Document*.

- b) Check whether the specified material document number is the document number of the reversal.
- c) Choose  (*Execute*).
- d) In the header data on the *General* tab page, enter **65##** in the *Delivery Note* field and then select the *Item OK* checkbox.
- e) Choose the *Post* pushbutton.
- f) Enter transaction *Display* and, as the reference, enter *Material Document*, and execute (F8).
Note movement type *101 (Goods Receipt)*.
- g) On the *Document Info* tab page, choose the  *FI Documents* pushbutton to display the accounting document.
On the *Display Document: Data Entry View* screen, ensure that the postings match those from the first GR.
Go back to the material document and then choose the *Purchase Order Data* tab page.
- h) Choose the PO number to display the PO.
- i) In the item details, choose the *Purchase Order History* tab page.
The following data displays:

Movement Details	Value
Movement type	101
Material document number	(varies)

Return Delivery



You entered goods from a vendor in the system with reference to a PO. You determine that either the incorrect material was delivered, or the quality of the delivered material is unsatisfactory. In either case, you return the material to the vendor. A return delivery takes place according to the stock the goods were posted to upon receipt.

A return delivery can take place from the following stock types:

- Unrestricted-use stock
- Stock in quality inspection
- Blocked stock
- Nonvaluated GR blocked stock

If you accepted the goods conditionally and posted the GR with movement type (MvT) 103 in the nonvaluated GR blocked stock, use movement type 124 for the return delivery. As the GR is nonvaluated in this case, the return delivery is also nonvaluated.

If, however, you increased your own valuated stock in the GR by posting with movement type 101, then the return delivery is posted with movement type 122. This means that the return delivery reduces your stock on both a quantity and value basis.

If you enter a return delivery, you can refer to the material document of the GR and PO. You also have the option of using the functions of the Shipping (LE-SHP) component when posting a return delivery; for example, you can use picking and packing. Therefore, you have detailed shipping documents and delivery notes.

You can use return deliveries via Shipping for the following types of POs:

- Standard POs
- POs with account assignment and material number

- POs with special stocks

For more information about return deliveries via shipping, see the SAP Library under *SAP ERP Central Component* → *Logistics* → *Materials Management (MM)* → *Inventory Management (MM-IM)* → *Inventory Management and Physical Inventory* → *Goods Movement* → *Goods Movements via Shipping*.

Subsequent Delivery

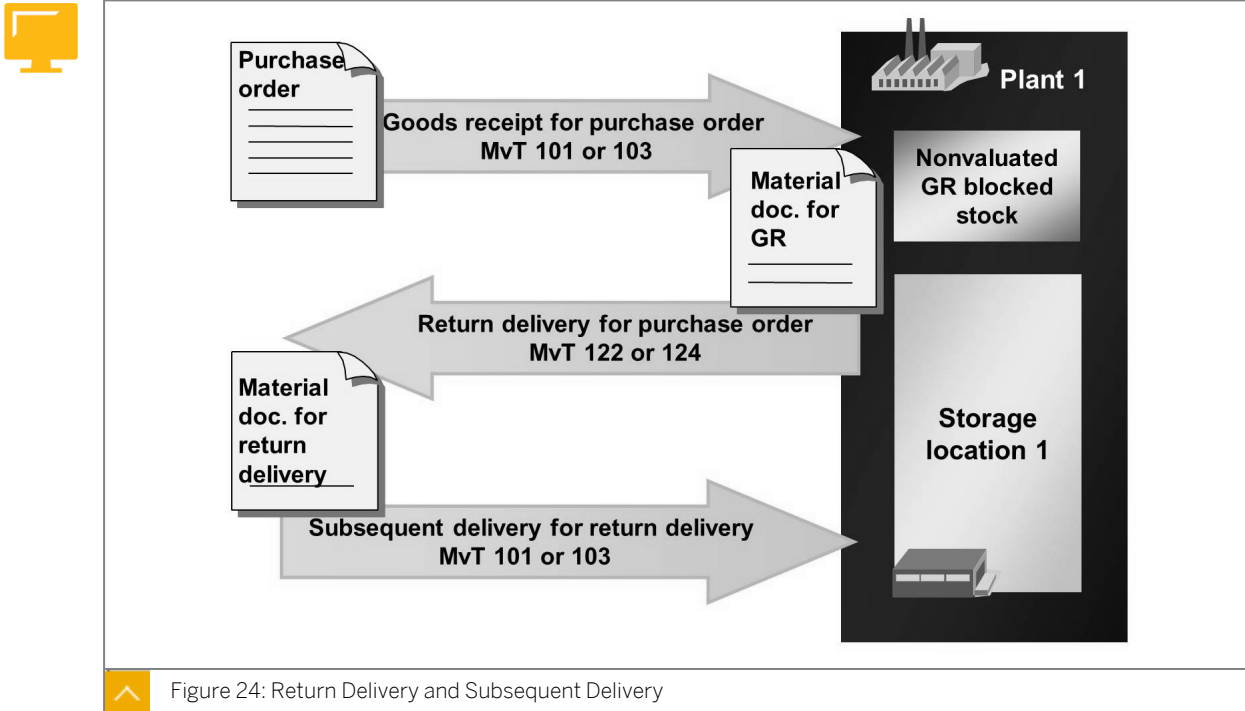


Figure 24: Return Delivery and Subsequent Delivery

If the vendor sends a substitute delivery after the return delivery, you can enter the new GR as a subsequent delivery. **In a subsequent delivery, refer to the material document of the original GR or the material document of the return delivery.** The original reference document number (delivery note number) is copied into the new material document. The direct assignment between the GRs and the invoice remains. In addition, the item is proposed from the reference document.

If, for example, the vendor specifies your document number for the return delivery on the delivery note for the substitute delivery, you can refer to this document using the subsequent delivery. This means that the system proposes the exact materials and quantities for the return delivery. You do not need to select the PO items again.

Entering a substitute delivery as a subsequent delivery is particularly useful in GR-based invoice verification. Even if a GR is reversed and a new GR is posted after you enter the invoice, the new GR must be a subsequent delivery for GR-based invoice verification.



Hint:

In Customizing for *Inventory Management*, if you have already entered the relevant invoice, you can make a setting for each movement type to specify whether a reversal of a GR or return delivery is allowed in GR-based invoice verification.

These settings are in Customizing for *Materials Management* under *Inventory Management and Physical Inventory* → *Goods Receipt* → *For GR-Based IV, Reversal of GR Despite Invoice* (OMBZ).

Reason for Movement



Control Reason			
MvT	...	Reason	Control Reason
101		—	Field is suppressed
103		.	Entry in this field is optional
122		+	Entry in this field is required
...		...	

Reason for Movement			
MvT	...	Reason	Reason for Movement
103		1	Certificate missing
122		1	Poor quality
122		2	Incomplete
122		3	Damaged
...		...	

Figure 25: Customizing – Reasons for Goods Movements

To analyze why goods were returned to a vendor, you can enter a reason when you enter the goods movement.

In Customizing for inventory management, you specify the following settings depending on the movement type:


- Whether it is possible and mandatory to specify a reason
- Whether certain reasons can be selected

These settings can be made in the Customizing for *Materials Management* under *Inventory Management and Physical Inventory* → *Movement Types* → *Record Reason for Goods Movements* (OMBS).



To Enter a Return Delivery with Reference to a Material Document



1. On the SAP Easy Access screen, choose *Logistics* → *Materials Management* → *Inventory Management* → *Goods Movement* → *Goods Movement* (MIGO).

-  2. Enter transaction *Return Delivery* and, as the reference, enter *Material Document* or *Delivery Note*, depending on the number you know.



Hint:

You can then refer to the delivery note only when the document or delivery note number is entered in the GR.

3. Enter the material document number and the document year or delivery note number. If you do not know the material document number, you can search for it by choosing  (*Find Material Doc.*).
4. To copy the data from the material document, choose  (*Execute*).
5. Select the items that were returned using the *OK* checkbox and, if necessary, change the proposed values for quantity, stock type, and storage location.
6. On the *Where* tab page, enter a reason for the goods movement for each item in the item details.



Hint:



If the return delivery is to take place via shipping, you must select the *Via Delivery* checkbox in the header on the *General* tab page.

In this case, instead of a goods issue posting, the system generates an outbound delivery. If required, you can select the checkbox using the *MB_DELIV* parameter.

7. Post the return delivery.



To Enter a Return Delivery with Reference to a Purchase Order

1. On the *SAP Easy Access* screen, choose *Logistics* → *Materials Management* → *Inventory Management* → *Goods Movement* → *Goods Movement (MIGO)*.
2. Enter transaction *Goods Receipt* and, as the reference, enter *Purchase Order*.
3. Change the default value for the movement type to *122* (or *124*, if the GR was posted to nonvaluated GR blocked stock).
4. Enter the number of the PO. If you do not know the PO, you can search for it by choosing  (*Find Purch. Order*).
5. To copy the data from the PO, choose  (*Execute*). The system proposes the items with the delivered quantities.



Hint:

For PO items that are intended for GR-based invoice verification, the system proposes one item for each GR.

6. Select the items that were returned with the *OK* checkbox and, if necessary, change the proposed quantity. On the *Where* tab page, enter a reason for the goods movement for each item in the item details.



Hint:



A return delivery via shipping is not possible with this procedure. In this case, the *via shipping* checkbox is not available in the header on the *General* tab page.

7. Post the goods movement.

Post a Return Delivery to a Vendor

Task 1

Business Example

If the materials delivered are of poor quality, you need to return these to the vendor using a return delivery. However, if you have entered something incorrectly for a correction to the GR posting, you must first reverse the wrongly posted GRs and then enter the postings correctly as a subsequent delivery in the system.

During quality inspection (QI) of the delivery from the exercise on posting a cancellation with reference to a material document, serious defects appeared. You have decided to send 10 pieces of the material back to the vendor.

1. Post a return delivery of 10 pieces of T-M510A## from plant 1000, storage location 0002, from the stock in quality inspection. Use delivery note 65## from the exercise on posting a cancellation with reference to a material document as the reference document. Enter **Poor quality** as the reason for movement.

Note the following details:

Movement Details	Value
Movement type	
Material document number	

Display the PO history and accounting document.

Note the following posting details:

Description	Amount	D/C
Goods Rcvd/Invoice Rcvd (third party)		
Inventory – Raw materials 1		

Task 2

1. Which of the following statements are correct?

Choose the correct answers.

- A With the transaction for goods movement `MIGO`, you can post, display, and change material documents.
- B Material documents with movement type 101 are cancelled with movement type 102.
- C You can enter subsequent deliveries for the material document.
- D A reversal does not have any consequences in Financial Accounting (FI).
- E A return delivery with movement type 122 has the same update in FI as a reversal with movement type 102.
- F You can only define reasons for reversal movement types in Customizing.

Post a Return Delivery to a Vendor

Task 1

Business Example

If the materials delivered are of poor quality, you need to return these to the vendor using a return delivery. However, if you have entered something incorrectly for a correction to the GR posting, you must first reverse the wrongly posted GRs and then enter the postings correctly as a subsequent delivery in the system.

During quality inspection (QI) of the delivery from the exercise on posting a cancellation with reference to a material document, serious defects appeared. You have decided to send 10 pieces of the material back to the vendor.

1. Post a return delivery of 10 pieces of T-M510A## from plant 1000, storage location 0002, from the stock in quality inspection. Use delivery note 65## from the exercise on posting a cancellation with reference to a material document as the reference document. Enter **Poor quality** as the reason for movement.


Note the following details:



Movement Details	Value
Movement type	
Material document number	

Display the PO history and accounting document.

Note the following posting details:

Description	Amount	D/C
Goods Rcvd/Invoice Rcvd (third party)		
Inventory – Raw materials 1		

- a) In transaction **MIGO**, enter transaction *Return Delivery* and, as the reference, enter *Delivery Note*.
- b) Enter delivery note number **65##** of the subsequent delivery from the exercise on posting a cancellation with reference to a material document and choose  (*Execute*).
- c) On the *Quantity* tab page, choose the material, and then in the *Quantity in Unit of Entry* field enter **10** PC.
- d) On the *Where* tab page, enter **0001** (*Poor quality*) in the *Reason for Movement* field.

- e) Select the *Item OK* checkbox and save the return delivery
- f) Enter transaction *Display* and, as the reference, enter *Material Document*.
- g) Choose  (*Execute*) and note movement type *122* (*Return delivery to vendor*).
- h) On the *Document info* tab page, choose the  *FI Documents* pushbutton to display the accounting document. In the *List of Documents in Accounting* dialog box, choose the document number.

The following posting data displays:

Description	Amount	D/C
Inventory – Raw materials 1	100,00 –	H (Credit)
Goods Rcvd/Invoice Rcvd (third party)	100,00	S (Debit)

- i) On the *Display document: Data Entry View* screen, note the posting data in the table and then go back to the material document.
- j) On the *Purchase Order Data* tab page, double-click the PO number to display the PO.
- k) In the item details, choose the *PO History* tab page.

Verify that all goods movements (GR, reversal, subsequent delivery, and return delivery) are updated in the PO history.

The following data displays:

Movement Details	Value
Movement type	122
Material document number	(varies)

Task 2

1. Which of the following statements are correct?

Choose the correct answers.

- A With the transaction for goods movement *MIGO*, you can post, display, and change material documents.
- B Material documents with movement type 101 are cancelled with movement type 102.
- C You can enter subsequent deliveries for the material document.
- D A reversal does not have any consequences in Financial Accounting (FI).
- E A return delivery with movement type 122 has the same update in FI as a reversal with movement type 102.
- F You can only define reasons for reversal movement types in Customizing.

Returns for Purchase Orders

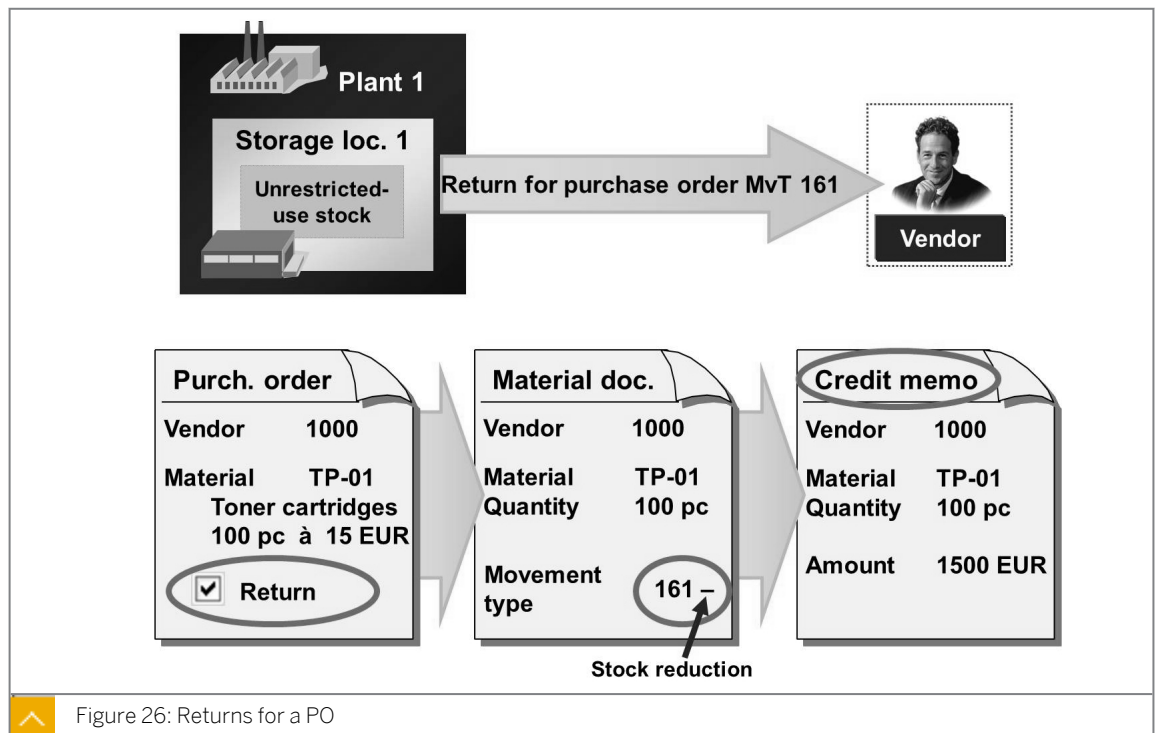


Figure 26: Returns for a PO

Returns for a PO are also related to return deliveries of materials to an external vendor. Therefore, you do not create a reference to the PO that you created for the original delivery or the GR posted. For this type of return, set the *Returns* indicator in the item overview of the PO to create a returns item. If you later receive a credit memo from the vendor for the return, you can refer to the PO during invoice verification.

Examples of returns for a PO are as follows:

- You procure filters from a vendor. You return the dirty filters to the vendor for recycling.
- You agree with your cable vendors that you can return cable remnants to them. You then receive a credit memo for the value of the copper contained in the cables.

You enter a return in the same way as you enter a GR for a PO. Enter transaction *Goods Receipt* and, as the reference, enter *Purchase Order*. The system automatically proposes movement type *161* and the direction indicator *Issue (-)* for the returns item.

You can also specify that the system generate a PO automatically in the background when you enter a returns item. Go to *Customizing for Inventory Management* under *Goods Receipt* → *Create Purchase Order Automatically* for movement type *161*.

To handle the return in Shipping, you must select the *Return via Shipping* checkbox in the vendor master record in the purchasing organization data. The required settings for shipping processing must also exist.

Enter a Return for a Purchase Order

Business Example

At regular intervals, you order 50 full printing cartridges and send empty cartridges back to the vendor as a return.

1. Post the GR for PO **4151-04##** for 50 pieces of material *T-M510D##* in plant *1000*, storage location *0001*. The vendor then takes 50 empty cartridges, material *T-M510E##*, away.

Which movement types do you use to post the items?

Before posting, note the movement type and direction indicator for each item in the following table:

Material	Movement Type	Direction Indicator
<i>T-M510D##</i> (printer cartridge - full)		
<i>T-M510E##</i> (printer cartridge - empty)		

2. After posting, display the accounting document and explain the postings on the stock accounts.
3. Go to the PO to check the PO history for the second item (material *T-M510E##*).

Enter a Return for a Purchase Order

Business Example


At regular intervals, you order 50 full printing cartridges and send empty cartridges back to the vendor as a return.

1. Post the GR for PO **4151-04##** for 50 pieces of material *T-M510D##* in plant *1000*, storage location *0001*. The vendor then takes 50 empty cartridges, material *T-M510E##*, away.

Which movement types do you use to post the items?

Before posting, note the movement type and direction indicator for each item in the following table:



Material	Movement Type	Direction Indicator
<i>T-M510D##</i> (printer cartridge - full)		
<i>T-M510E##</i> (printer cartridge - empty)		

- a) On the SAP Easy Access screen, choose *Logistics → Materials Management → Inventory Management → Goods Movement → Goods Movement (MIGO)*.
- b) Enter transaction *Goods Receipt* and, as the reference, enter *Purchase Order*.
- c) Enter **101** in the *GR into blocked stock* field.
- d) Enter PO number **4151-04##**.
- e) Choose  (*Execute*).
- f) Note the movement types and direction indicators.
- g) Select the *Item OK* checkbox in both lines.
- h) Post the entries.

The following data displays:

Material	Movement Type	Direction Indicator
<i>T-M510D##</i> (printer cartridge - full)	101	+ (receipt)

Material	Movement Type	Direction Indicator
T-M510E## (printer cartridge - empty)	161	– (issue)

2. After posting, display the accounting document and explain the postings on the stock accounts.
 - a) Enter transaction *Display* and, as the reference, enter *Material Document*.
 - b) Choose  (*Execute*).
 - c) On the *Document Info* tab page in the document header, choose the  *FI Documents* pushbutton to display the accounting document.
 - d) On the *Display Document: Data Entry View* screen, notice the details of stock postings.
 For the full printer cartridges, T-M510D##, a receipt of EUR 7500 (price of the PO EUR 150 * 50 PC) was posted to stock account 300000.
 For the empty printer cartridges, T-M510E##, an issue of EUR 250 is posted from stock account 300010 (standard price of the material EUR 5 * 50 PC).
 - e) Go back to the *Display Material Document* screen.
3. Go to the PO to check the PO history for the second item (material T-M510E##).
 - a) On the *Display Material Document* screen, choose the *Purchase Order Data* tab page.
 - b) Double-click the PO number.
 - c) In the item details for item 20, choose the *PO History* tab page.
 The returns checkbox is in the item overview of the PO.



LESSON SUMMARY

You should now be able to:

- Cancel a material document of a goods movement
- Post a return delivery to a vendor
- Enter a return for a purchase order

Applying Order Price Unit in Inventory Management

LESSON OVERVIEW

This lesson deals with the tolerances relevant to goods receipts (GRs), including the tolerances for purchase order (PO) items (in which the order unit differs from the PO price unit), underdeliveries, and overdeliveries.

Business Example

Sometimes a vendor does not deliver the exact quantity ordered, so you want to test the possible checks the SAP ERP application can execute in this respect. For this reason, you require the following knowledge:

- How to enter a GR for a PO with one of the order price units varying from the order unit



LESSON OBJECTIVES

After completing this lesson, you will be able to:

- Use an order price unit in a GR with reference to a PO

Order Unit and Order Price Unit

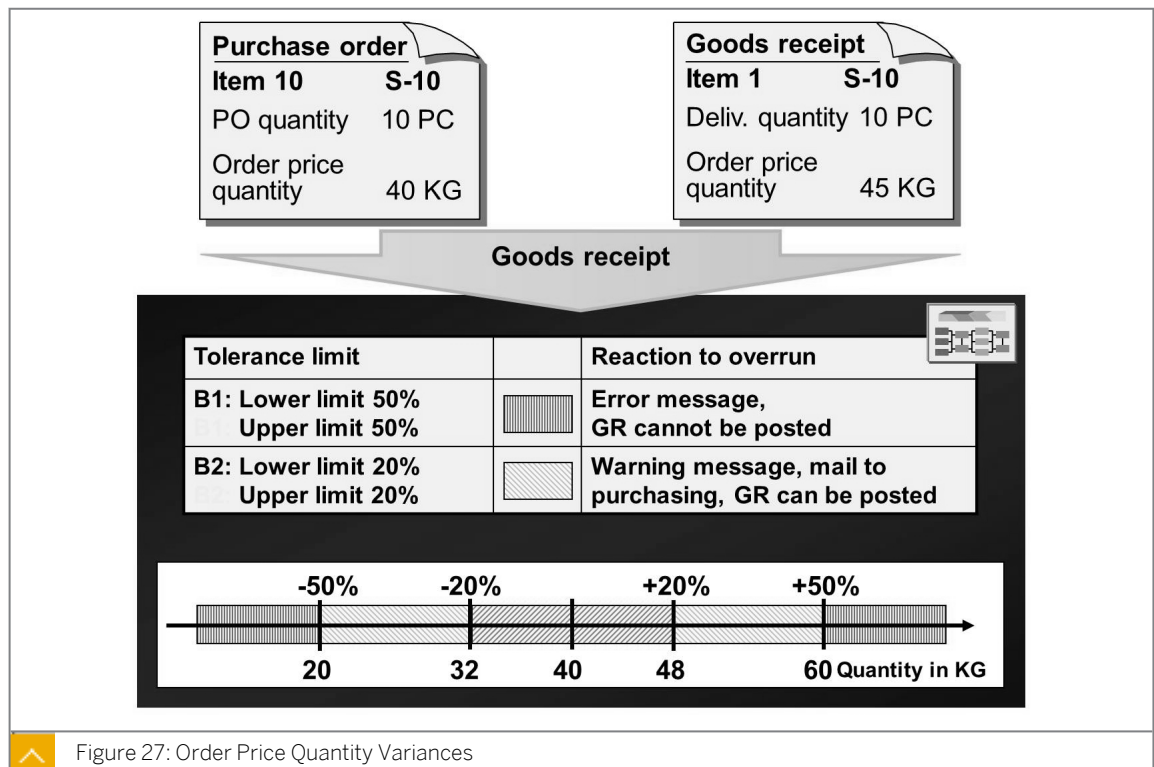


Figure 27: Order Price Quantity Variances

In a PO, you can specify an order price unit (OPUn) and order unit (OUn) that are different from each other. The order price unit is valid in connection with the net price, and is the basis used to value the GR and verify the invoice. You need to enter the delivered quantity in both units of measure (OUn and OPUn) when the goods are received.

For example, you order 10 frozen geese at a price of EUR 5/kg. In the PO, you assume that one goose has an average weight of 4 kg (order value 40 kg * EUR 5). During the GR, you determine that 10 geese weigh a total of 45 kg. For the valuation of the GR and the invoice verification, there is an amount of 45 kg * EUR 5 for the 10 geese.

In Customizing, two tolerance keys are provided to define limits for variance in the order price quantity for each company code.

Go to Customizing for *Materials Management* under *Inventory Management and Physical Inventory* → *Goods Receipt* → *Set Tolerance Limits* (OMC0).

Select the following keys to define limits of variation in Customizing:

- **Tolerance key B1 (error message)**

Use tolerance key B1 to define the upper and lower limits for the maximum percentage variance. If the variance is larger than the maximum variance, the system creates an error message. The GR cannot be posted.

- **Tolerance key B2 (warning message)**

Use tolerance key B2 to define the lower and upper limits for the percentage variance. If the variance is outside the defined limits, the system issues a warning message (only with the *Check* function).

The buyer is also informed of the PO price quantity variance by mail if the following conditions are met:

- In the header data, on the *Delivery* or *Invoice* tab page, the *GR Message* indicator is set for the PO.
- The Customizing settings required for message determination (message type *MLMD*) are made.

Unit 2

Exercise 12

Enter the GR for PO item for Which the PO Price Unit Differs from the Order Unit

Business Example

You have ordered two pieces of cheese for an anniversary party in your company. The amount you have to pay for these pieces of cheese depends on their weight. For this reason, you must enter the quantity delivered in kilograms when receiving the goods.

Enter the GR for PO items for which the PO price unit differs from the order unit, and explain the tolerances for the PO price unit.

You have ordered two cheeses weighing a total of 12.5 kg. The price per kilogram is EUR 3.90. The system calculates the delivered total weight of the cheese.

1. Determine which tolerances are allowed for variances from the planned PO price quantity for the PO in company code 1000.
2. Enter the GR for two pieces of cheese (weighing 12.5 kg each) for PO 4151-06##. What is the total weight of the cheese that can be posted without issues? Post the GR using this weight.

Check the following values:

Total weight (kg)	Postable (?)
4	
6	
14	
24	

Enter the GR for PO item for Which the PO Price Unit Differs from the Order Unit

Business Example

You have ordered two pieces of cheese for an anniversary party in your company. The amount you have to pay for these pieces of cheese depends on their weight. For this reason, you must enter the quantity delivered in kilograms when receiving the goods.

Enter the GR for PO items for which the PO price unit differs from the order unit, and explain the tolerances for the PO price unit.

You have ordered two cheeses weighing a total of 12.5 kg. The price per kilogram is EUR 3.90. The system calculates the delivered total weight of the cheese.

1. Determine which tolerances are allowed for variances from the planned PO price quantity for the PO in company code 1000.
 - a) To set the tolerance limits, go to Customizing for *Materials Management* under *Inventory Management and Physical Inventory* → *Goods Receipt* → *Set Tolerance Limits*.




Note:

Instead of step a, you can also run transaction OMC0 directly.

- b) Choose the rows containing company code 1000 and tolerance keys B1 and B2.
 - c) Choose *Goto* → *Details* to display the details for tolerance key B1.
 - d) To display the details for tolerance key B2, choose *Goto* → *Next Entry*.
2. Enter the GR for two pieces of cheese (weighing 12.5 kg each) for PO 4151-06##. What is the total weight of the cheese that can be posted without issues? Post the GR using this weight.

Check the following values:

Total weight (kg)	Postable (?)
4	
6	
14	
24	

- a) On the *SAP Easy Access* screen, choose *Logistics* → *Materials Management* → *Inventory Management* → *Goods Movement* → *Goods Movement (MIGO)*.
- b) Enter transaction *Goods Receipt* and, as the reference, enter *Purchase Order*.
- c) Enter purchase order number **4151-06##**.
- d) Choose  (*Execute*).
- e) Select the *Item OK* checkbox.
- f) On the *Quantity* tab page in the item details, enter the quantity values in the table given in the exercise (one after the other).
- g) Choose the *Check* pushbutton each time.



Note:

The Customizing settings for this system permit a maximum variance of $\pm 50\%$.

The following results of quantity postings displays:

Total weight (kg)	Postable (?)
4	<i>Not Postable</i>
6	<i>Postable, with warning message</i>
14	<i>Postable</i>
24	<i>Not Postable</i>

- h) Finally, enter **12.5 kg** in the *Qty in PO Price Unit* field and post the GR.



LESSON SUMMARY

You should now be able to:

- Use an order price unit in a GR with reference to a PO

Applying Tolerances and the Delivery Completed Indicator

LESSON OVERVIEW

This lesson explains the tolerances relevant to goods receipts (GRs). The lesson also describes the function of the *Delivery Completed* checkbox and how to automatically select it.

Business Example

Sometimes a vendor does not deliver the exact quantity ordered, so you want to test which checks the SAP ERP application can execute in this respect. You are also interested in learning about the *Delivery Completed* checkbox to test under which conditions it is selected automatically in a purchase order (PO) item. For this reason, you require the following knowledge:

- How to manually select the *Delivery Completed* checkbox during GR entry
- An understanding of the circumstances under which the *Final Delivery* checkbox is automatically selected when posting a GR

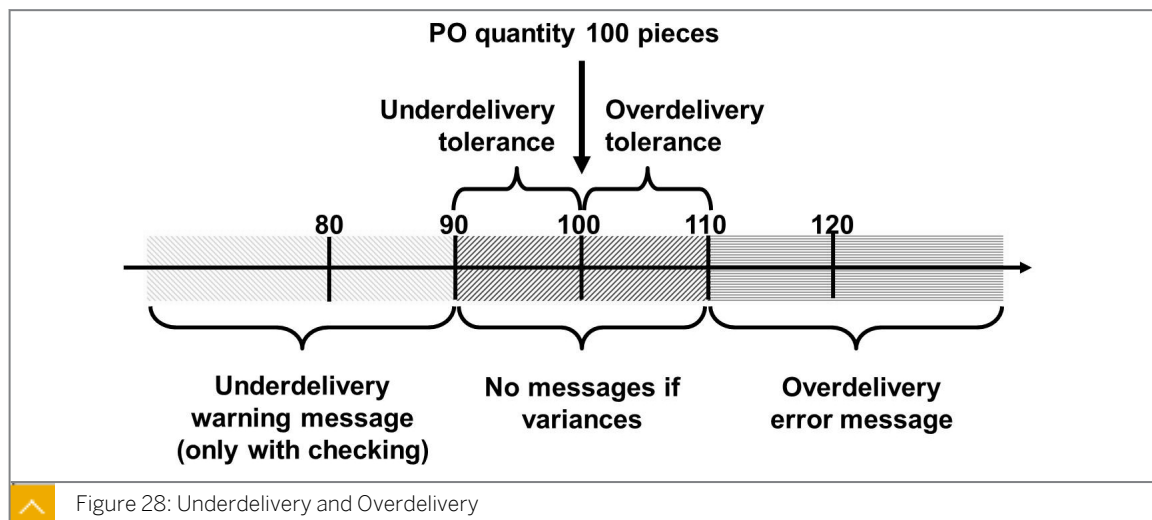


LESSON OBJECTIVES

After completing this lesson, you will be able to:

- Use tolerances for underdelivery and overdelivery
- Use the delivery completed checkbox

Under and Overdeliveries in Goods Receipt to Purchase Order



In Supply Chain Management, the system allows the following types of deliveries of goods:

- Underdeliveries

The system interprets and accepts the underdelivery as a partial delivery. If you check the entries before posting the GR, the system indicates the underdelivery by displaying a warning message. In the order item, you can enter a percentage value for underdelivery tolerance. If the total of previously delivered quantities and currently entered quantities lies within the underdelivery tolerance, the system does not issue a warning message. If the total is less than the tolerance, the system creates a warning message during a check.

- Overdeliveries

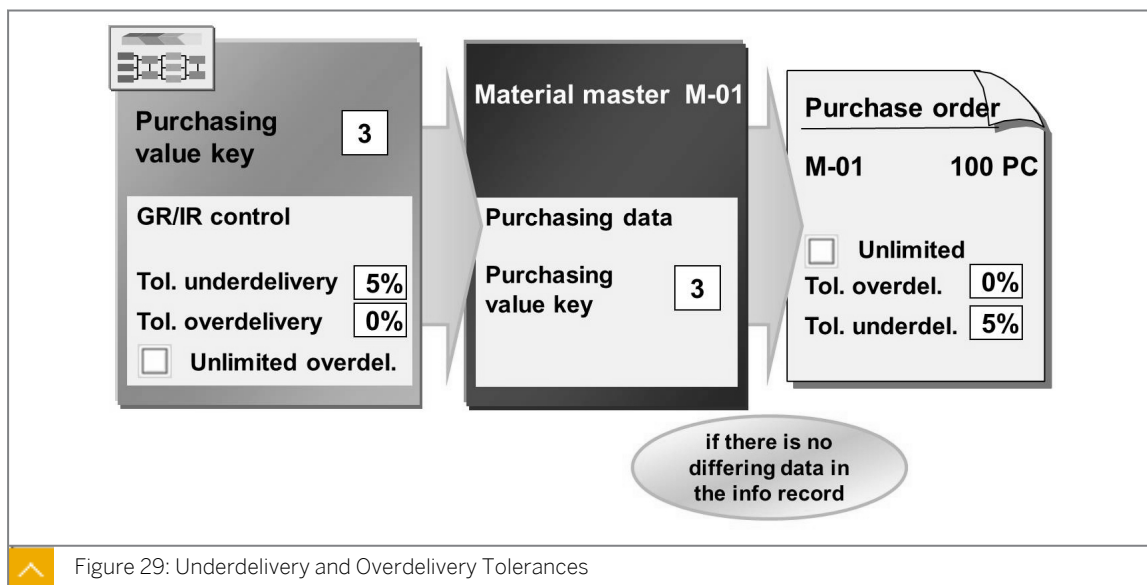
You have the option of selecting the checkbox for unlimited overdelivery in the PO item, or specifying a percentage overdelivery tolerance. The system allows the overdeliveries to a PO item only if this is determined in the order item. If the total of previously delivered and currently entered quantities lies within the overdelivery tolerance, the system does not issue a message. If the total is more than the tolerance, the system issues an error message.

Default Values for Underdelivery and Overdelivery Tolerances

If the same underdelivery and overdelivery tolerances always apply for one material, you can define them in the material master record as default values for purchasing. **The tolerances are determined by the purchasing value key specified in the purchasing data of the material master record.**

The purchasing value key delivers the further default values and is created in Customizing for *Materials Management* under *Purchasing* → *Material Master* → *Define Purchasing Value Keys*.

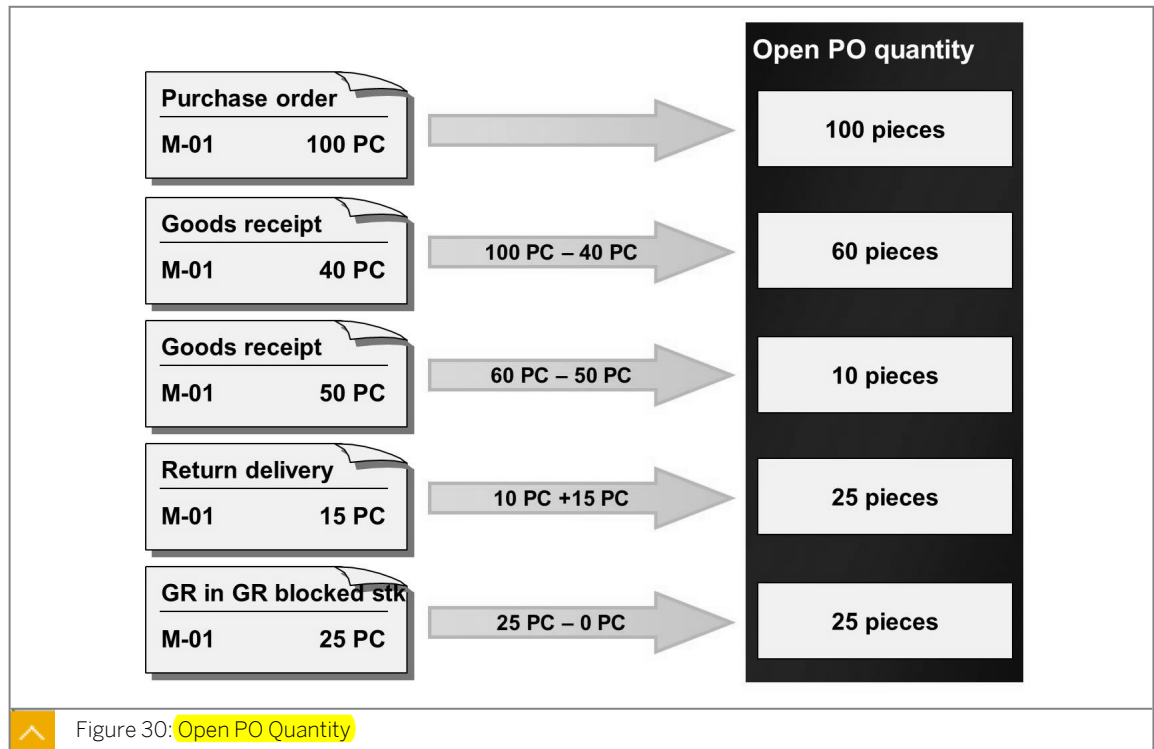
Underdelivery and Overdelivery Tolerances



If underdelivery and overdelivery tolerances that vary from the material master record are valid for a vendor-material combination, you can define the tolerances in the purchasing info record for the vendor and material. You can also specify the tolerances directly in the PO.

The *Tolerance limit for underdelivery* and *Tolerance limit for overdelivery* fields, as well as the *Unlimited overdelivery allowed* checkbox, are found in the detail data of an item on the *Delivery* tab page.

Delivery Completed Indicator



For a GR to a PO, SAP ERP proposes the open PO quantity of an item for the GR.

The open PO quantity specifies the quantity still to be delivered for a PO item. The system calculates the open PO quantity as the difference between the ordered quantity and the delivered quantity. You can change the open PO quantity proposed during the GR posting if the delivered quantity is less than what was ordered.

If the vendors deliver the entire PO quantity, or more than the PO quantity, then the open order quantity equals zero. The system automatically matches the open PO quantity for each goods movement with the PO item (GR, subsequent delivery, return delivery, and cancellation).



Note:

A GR in the GR blocked stock or a return delivery from the GR blocked stock does not change the open PO quantity.

If the *Delivery Completed* checkbox is selected in a PO item, the open order quantity of this item equals zero. Whether the entire ordered quantity was actually delivered is irrelevant.

**Hint:**

If the delivered quantity is less than the quantity ordered at GR for the PO item, the system proposes the difference between the quantity ordered and the delivered quantity (as the open order quantity), even if the *Delivery Completed* checkbox is selected. The checkbox does not prevent you from entering additional GRs for the PO item. This condition only applies as long as the overdelivery tolerance is not exceeded

Clearing open PO quantities is one of many effects that the *Delivery Completed* checkbox has on a PO.

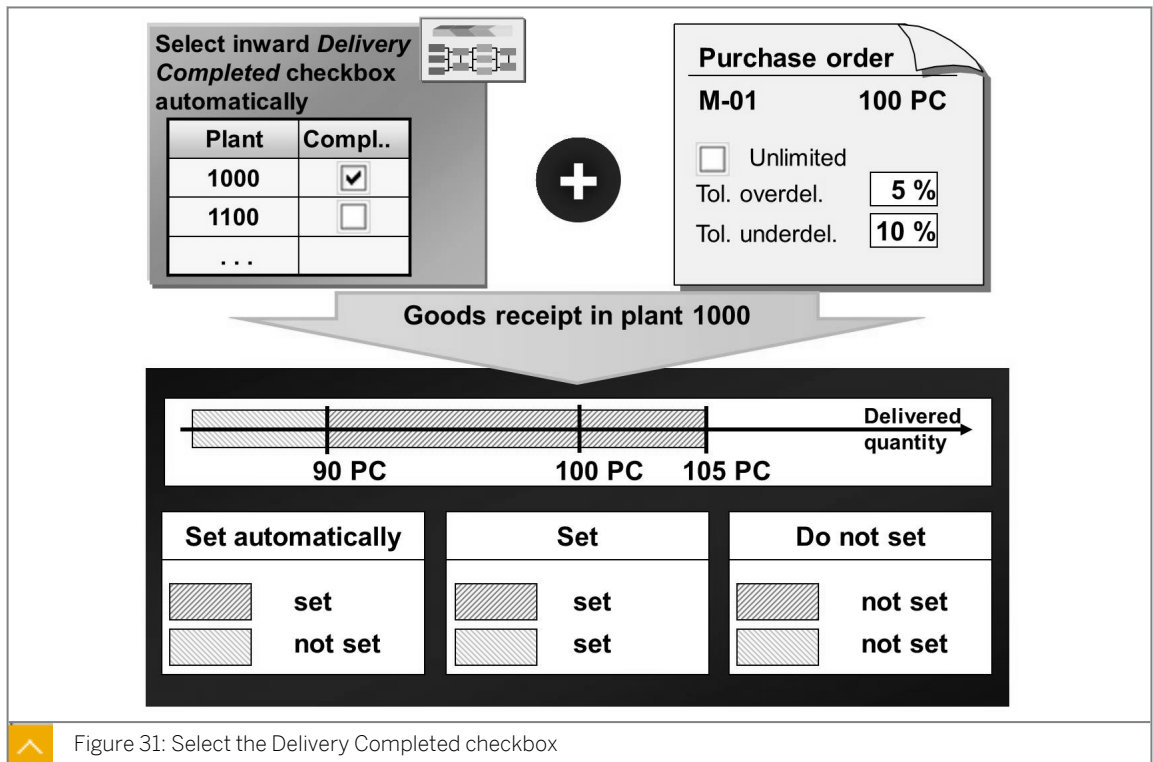
**The Delivery Completed checkbox has the following additional effects on a PO:**

- The open PO quantity of the PO item equals zero.
- The PO item is no longer relevant for materials planning.
- The PO item is ignored when letters urging delivery of overdue goods are generated.
- An additional delivery is not expected, but is possible.
- The commitment for the PO item is canceled.
- The PO item can be deleted and archived.

In Customizing for *Inventory Management* and *Physical Inventory*, you can determine for each plant whether the system automatically selects the *Delivery Completed* checkbox for delivery quantities within the underdelivery and overdelivery tolerances.

Go to Customizing for *Materials Management* under *Inventory Management and Physical Inventory* → *Goods Receipt* → *Set Delivery Completed Indicator (OMCD)*.

Selection of the Delivery Completed Indicator



Independent of the Customizing settings and overdelivery or underdelivery tolerances, you can manually define whether the *Delivery Completed* checkbox is to be selected for goods movements with PO reference (GR, return delivery, subsequent delivery, and cancellation).

In the *Delivery Completed Indicator* field, you can specify whether the *Delivery Completed* checkbox field is to be selected automatically, not selected, or selected in all cases. You can locate the list field for each item in the item overview and on the *PO data* tab page.

If you enter a return delivery or cancellation for a delivery completed item, and the delivered quantity falls short of the underdelivery tolerance, then the *Delivery Completed* checkbox is automatically reselected.

If no further delivery is expected, you can change the value of the *Delivery Completed Indicator* field from *Set automatically* to *Set*, completing the delivery process.

You can also select or reselect the *Delivery Completed* checkbox in the PO.



Hint:

For GRs for orders, the functions for under, over, and final delivery correspond to those for GRs for POs.

In the PO, you can specify the tolerances for underdelivery and overdelivery on the *Goods Receipt* tab page.



Hint:

As of ERP 6.0 Enhancement Package 4, you can use the new system message *M7 433 (The "Delivery Completed" Indicator is set for the PO item)* in connection with Business Add-In (BAI) *MB_GOODSMOUMENT_DCI*. If you have configured this message as an error message, you will not be able to post further GRs for a PO item for which the *Delivery Completed* checkbox is selected.

The *BAI* also allows custom logic for selecting the *Delivery Completed* checkbox in a PO item.

Test the Automatic and Manual Settings of the Delivery Completed Indicator

Business Example

During a partial delivery, the vendor informs you that the remaining PO quantity cannot be delivered. You want to test the necessary settings for the delivery completion for maintaining the correctness throughout the transactions and postings.

Manually select the *Delivery Completed* checkbox during the GR posting. Then, select and test the automatic selection of the *Delivery Completed* checkbox in the system.

A setting has been made in Customizing for plant **1100**, so that the system proposes the *Delivery Completed* checkbox for GRs for the PO. For the material, you have used a purchasing value key to determine an underdelivery and overdelivery tolerance of 10%.

You will select the on-order stock for the material and the *Delivery Completed* checkbox during the course of the exercise.

To get a better overview of these changes, enter the values *on-order stock total quantity delivered* and *Delivery Completed* checkbox list status in the following table after the individual subtasks:



Hint:

You can take the on-order stock from the stock overview, and the other data from the PO.

- Note in the first line of the table the on-order stock for material **T-M510A##** in plant **1100**, storage location **0001**. Also note whether the *Delivery Completed* checkbox is selected in PO **4151-05##** for item **10** and the total delivered quantity for the item.
- Enter the GR for PO **4151-05##**. This is a partial delivery of **50** pieces of material **T-M510A##** in plant **1100**, storage location **0001**. Select the *Delivery Completed* checkbox manually at GR. Check the entered data before posting.

Note the messages issued by the system and enter them in the following table:

Message	Warning or Error
.	.
.	.

- Enter another partial delivery of **25** pieces of **T-M510A##** for PO **4151-05##** for storage location **0001**. Do not change the system suggestion for the *Delivery Completed* checkbox. Post with the *Delivery completed* checkbox, and enter *Set automatically* in the *Delivery Completed Indicator* list.



Note:
Complete the table given in the exercise after making the posting.

4. Enter another partial delivery of **20** pieces.

Distribute the delivery quantity as follows:

Quantity	Storage Location
10 PC	0001
10 PC	0002

Note the line in the material document in which the *Delivery Completed* checkbox for the material document or PO item is set.

Complete the following table after making the posting:

Line	1	2
<i>Delivery Completed</i> checkbox of the material document		
<i>Delivery Completed</i> checkbox of the PO item		

5. Cancel the last-posted GR and, after making the posting, complete the table given in the exercise.
6. You have set an overdelivery tolerance of 10% for the material. Enter a GR for 35 pieces of T-M510A## for PO 4151-05## in plant 1100, storage location 0001. Before you make the posting, check whether you can also post a delivery of 36 pieces.

The results for each step are as follows:

Exercise Step	On-order Stock	Total Delivered Quantity	Delivery Completed checkbox in PO Item
Task 1 Starting point	100	0	Not selected
Task 2 GR 50 PC	0	50	Selected
Task 3 GR 25 PC	25	75	Not selected
Task 4 GR 20 PC	0	95	Selected
Task 5 GR 20 PC	25	75	Not selected
Task 6 GR 35 PC	0	110	Selected

Test the Automatic and Manual Settings of the Delivery Completed Indicator

Business Example

During a partial delivery, the vendor informs you that the remaining PO quantity cannot be delivered. You want to test the necessary settings for the delivery completion for maintaining the correctness throughout the transactions and postings.

Manually select the *Delivery Completed* checkbox during the GR posting. Then, select and test the automatic selection of the *Delivery Completed* checkbox in the system.

A setting has been made in Customizing for plant **1100**, so that the system proposes the *Delivery Completed* checkbox for GRs for the PO. For the material, you have used a purchasing value key to determine an underdelivery and overdelivery tolerance of 10%.

You will select the on-order stock for the material and the *Delivery Completed* checkbox during the course of the exercise.

To get a better overview of these changes, enter the values *on-order stock total quantity delivered* and *Delivery Completed* checkbox list status in the following table after the individual subtasks:



Hint:

You can take the on-order stock from the stock overview, and the other data from the PO.

1. Note in the first line of the table the on-order stock for material **T-M510A##** in plant **1100**, storage location **0001**. Also note whether the *Delivery Completed* checkbox is selected in PO **4151-05##** for item **10** and the total delivered quantity for the item.


a) On the *SAP Easy Access* screen, choose *Logistics → Materials Management → Environment → Stock → Stock Overview (MMBE)*.

b) On the *Stock Overview: Company Code/Plant/Storage Location/Batch* screen, enter the following data:

Field	Value
<i>Material</i>	T-M510A##
<i>Plant</i>	1100


c) Choose  (*Execute*).

d) On the *Stock Overview: Basic List* screen, note the on-order stock. Exit the transaction.


- e) On the *SAP Easy Access* screen, choose *Logistics → Materials Management → Purchasing → Purchase Order → Display (ME23N)*.
 - f) Choose  (*Other Purchase Order*).
 - g) In the *Select Document* dialog box, enter **4151-05##** in the *Purchase Order* field.
 - h) Choose the *Other Document* pushbutton.
 - i) Choose the *Delivery* tab page in the item details and note whether the *Delivery Completed* checkbox is selected.
 - j) The total quantity delivered is 0. You can tell this by the lack of a *PO History* tab page in the item details.
2. Enter the GR for PO 4151-05##. This is a partial delivery of 50 pieces of material **T-M510A##** in plant 1100, storage location 0001. Select the *Delivery Completed* checkbox manually at GR. Check the entered data before posting.


Note the messages issued by the system and enter them in the following table:

Message	Warning or Error
.	.
.	.

- a) On the *SAP Easy Access* screen, choose *Logistics → Materials Management → Inventory Management → Goods Movement → Goods Movement (MIGO)*.
- b) Enter transaction *Goods Receipt* and, as the reference, enter *Purchase Order*.
- c) Enter movement type **101** in the *GR goods receipt* field and order number **4151-05##**.
- d) Choose  (*Execute*).
- e) On the *Quantity* tab page, change the default quantity to 50 PC. Select the *Item OK* checkbox.
- f) In the item details, on the *Purchase Order Data* tab page, choose *Set* for the *Delivery Completed Indicator*.
- g) Choose the *Check* pushbutton and, in the *Display logs* dialog box, note the messages *PC ordered quantity fallen short by 50 PC* and *Item is indicated as delivery completed*.
- h) Choose the *Post* pushbutton.
The system shows the following messages:




Message	Warning or Error
PC ordered quantity fallen short of by 50 PC	Warning
Item is indicated as delivery completed	Warning

- i) Enter transaction *Display* and, as the reference, enter *Material Document*.
- j) Choose  (*Execute*).

- k) On the *Where* tab page, choose  *Stock Overview*.
 - l) Navigate to the on-order stock. Note that the on-order stock of plant 1100 is 0 PC.
 - m) Go back to the material document.
 - n) On the *PO Data* tab page, double-click the PO number to display the PO.
 - o) In the item details, on the *Delivery* tab page, note that the *Delivery Completed* checkbox is selected. On the *PO History* tab page, note that in the *Delivery Quantity* field, the total is 50 pieces.
 - p) Choose the *Display/Change* pushbutton.
3. Enter another partial delivery of **25** pieces of *T-M510A##* for PO **4151-05##** for storage location *0001*. Do not change the system suggestion for the *Delivery Completed* checkbox. Post with the *Delivery completed* checkbox, and enter *Set automatically* in the *Delivery Completed Indicator* list.



Note:
Complete the table given in the exercise after making the posting.






- a) Enter transaction *Goods Receipt* and, as the reference, enter *Purchase Order*.
 - b) Enter **4151-05##** as the PO and then choose  (*Execute*).
 - c) Select the *Item OK* checkbox and change the proposed quantity to **25** pieces.
 - d) Choose the *Post* pushbutton.
 - e) Enter transaction *Display*, and, as the reference, enter *Material Document*. Choose  (*Execute*).
 - f) On the *Where* tab page, choose  (*Stock Overview*).
 - g) Navigate to the on-order stock. Note that the on-order stock at plant level is 25 pieces. Go back to the material document.
 - h) Choose the *PO Data* tab page in the detail data and double-click the PO number to display the PO.
 - i) In the item details, on the *Delivery* tab page, note that the *Delivery Completed* checkbox is not selected.
 - j) On the *PO History* tab page, note that the delivery quantity total is 75 pieces.
4. Enter another partial delivery of **20** pieces.
Distribute the delivery quantity as follows:

Quantity	Storage Location
10 PC	0001
10 PC	0002

Note the line in the material document in which the *Delivery Completed* checkbox for the material document or PO item is set.

Complete the following table after making the posting:

Line	1	2
<i>Delivery Completed</i> checkbox of the material document		
<i>Delivery Completed</i> checkbox of the PO item		





- a) Enter the transaction *Goods Receipt* and, as the reference, enter *Purchase Order*.
- b) Enter PO number **4151-05##** and then choose  (*Execute*).
- c) Select the *Item OK* checkbox. Change the quantity to **20** pieces.
- d) Choose  (*Distribute Quantity*).
- e) Refer to the table in the exercise and enter the quantities and storage locations. Choose  (*Adopt*). The system splits line 1 into two lines with different storage locations, but with the same description: *Line 1*. Choose the *Post* pushbutton.
- f) Enter transaction *Display* and, as the reference, enter *Material Document*.
- g) Choose  (*Execute*).
- h) On the *Where* tab page for the first item, choose  (*Stock Overview*). Navigate to the on-order stock. Note that the stock at plant level is 0. Go back to the material document.
- i) Choose the *PO Data* tab page and double-click the PO number to display the PO.
- j) In the item details, on the *Purchase Order History* tab page, note that the total quantity delivered is 95 pieces. On the *Delivery* tab page, note that the *Delivery Completed* checkbox is selected.
- k) Go back to the material document, choose the *PO Data* tab page and verify whether the *Delivery Completed* checkbox is selected for the material document item or the PO item. Choose line 2 and note the checkbox.

Note: Before the GR, the quantity that had been delivered for the PO item was 75 pieces. The first item in the material document increased the delivered quantity to 85 pieces.

This quantity still remains under the underdelivery tolerance of 10% = 90 PC. Only the second item results in the quantity exceeding the underdelivery tolerance. This is why the second item automatically set the *Delivery Completed Indicator* field in the PO item.

The resulting observations are as follows:


Line	1	2
<i>Delivery Completed</i> checkbox of the material document	Not selected	Selected
<i>Delivery Completed</i> checkbox of the PO item	Selected	Selected

5. Cancel the last-posted GR and, after making the posting, complete the table given in the exercise.
 - a) Enter transaction *Cancellation* and, as the reference, enter *Material Document*.
 - b) Choose  (*Execute*).
 - c) Select the *Item OK* checkbox for both items.
 - d) Choose the *Post* pushbutton.
 - e) Enter transaction *Display* and, as the reference, enter *Material Document*. Choose  (*Execute*).
 - f) On the *Where* tab page, choose  (*Stock Overview*). Note that the on-order stock at plant level is *25 PC*.
 - g) Go back to the material document and, on the *PO Data* tab page, double-click the PO number to display the PO.
 - h) On the *Delivery* tab page, note that the *Delivery completed* checkbox is not selected.
 - i) Choose the *PO History* tab page and note that the total quantity delivered is *75 pieces*.
6. You have set an overdelivery tolerance of *10%* for the material. Enter a GR for *35 pieces* of *T-M510A##* for PO **4151-05##** in plant *1100*, storage location *0001*. Before you make the posting, check whether you can also post a delivery of *36 pieces*.
 - a) Enter the transaction *Goods Receipt* and, as the reference, enter *Purchase Order*.
Enter PO number **4151-05##** and then choose  (*Execute*).
 - b) Select the *Item OK* checkbox.
 - c) Change the quantity to *36 pieces* and then choose the *Check* pushbutton.



Note:

This PO allows you to post up to 10% above the PO quantity, *110 pieces* in total. As *75 pieces* have already been created, you can now enter a maximum of *35 pieces*.

- d) Change the quantity to *35 pieces*. Choose the *Post* pushbutton.
- e) Enter transaction *Display* and, as the reference, enter *Material Document*, choose  (*Execute*).

- f) On the *Where* tab page, choose *Stock Overview*. Note that the on-order stock at plant level is 0.
- g) Go back to the material document and, on the *PO Data* tab page, double-click the PO number to display the PO.
- h) On the *Delivery* tab page, ensure that the *Delivery Completed* checkbox is selected. On the *PO History* tab page, note that the total quantity delivered is 110 pieces.

The results for each step are as follows:

Exercise Step	On-order Stock	Total Delivered Quantity	Delivery Completed checkbox in PO Item
Task 1 Starting point	100	0	Not selected
Task 2 GR 50 PC	0	50	Selected
Task 3 GR 25 PC	25	75	Not selected
Task 4 GR 20 PC	0	95	Selected
Task 5 GR 20 PC	25	75	Not selected
Task 6 GR 35 PC	0	110	Selected



LESSON SUMMARY

You should now be able to:

- Use tolerances for underdelivery and overdelivery
- Use the delivery completed checkbox

Including Date Checks in Goods Receipts for a Purchase Order

LESSON OVERVIEW

This lesson describes the date check options in the goods receipt (GR).



Note:

This lesson does not deal with batches. They are covered in a topic in course SCM595 (Batch Management).

Business Example

In the GR of perishables, there must be a shelf life expiration date (SLED) check of the goods in your company. You need to know the messages that the system may issue if a delivery is early or late, and the pre-settings that are necessary. For this reason, you require the following knowledge:

- An understanding of the prerequisites for the SLED check
- How to enter a GR and enter and check the SLED
- How to activate the check for the latest possible GR date



LESSON OBJECTIVES

After completing this lesson, you will be able to:

- Use the shelf life expiration date check
- Customize and test system messages for a delivery that is too late or early

Shelf Life Expiration Date Check



The screenshot shows two SAP screens. The left screen is titled 'Customizing: Set expiration date check' and contains the following data:

Plant	
Plant	Best Before Date/Production Date
	<input checked="" type="checkbox"/>
1000	<input checked="" type="checkbox"/>
1100	<input type="checkbox"/>
1200	

Below this is the 'Movement type' section:

MvT	...	Check SLExpDate
101		1
102		
105		1
...		

A legend for the 'Check SLExpDate' values is shown:

- : No check
- 1: Enter and check
- 2: Enter only
- 3: No check at goods issue

The right screen is titled 'Application' and shows 'Material master S-01' with the following data:

General plant data/storage

Minimum remaining shelf life: 30 d

Purchase order

S-01 100 pc

Minimum remaining shelf life: 30 d

A plus sign (+) is positioned between the two screens, indicating prerequisites.

Figure 32: SLED Check – Prerequisites

When you receive goods from a vendor, the system checks the minimum remaining shelf life of the goods during the GR. Therefore, you can ensure that the goods are only placed in storage if their shelf life corresponds with your requirements.

To check the minimum remaining shelf life in the GR for a purchase order (PO), the following prerequisites must be met:

1. You must activate the SLED check for the plant and movement type. Go to Customizing for *Materials Management* under *Inventory Management and Physical Inventory* → *Goods Receipt* → *Set Expiration Date Check* (OMJ5).
2. You must enter the remaining shelf life in the material master record (*general plant data/storage*) and/or in the PO item (item details *Delivery* tab page).



Hint:

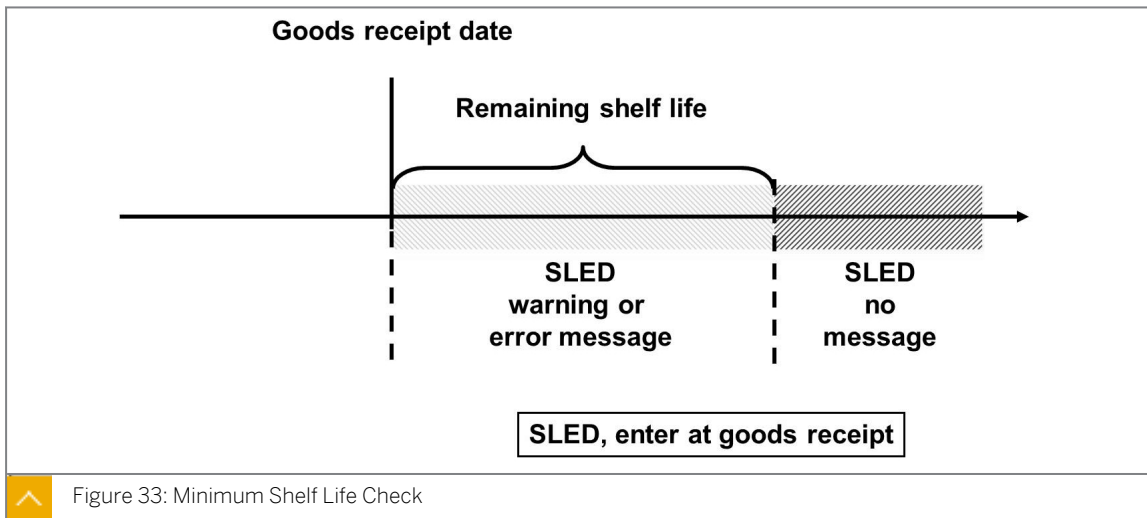
The minimum remaining shelf life value is the number of calendar days that a material must be usable for the system to accept the GR.



Caution:

The remaining shelf life in the material master is not plant specific, but only client dependent.

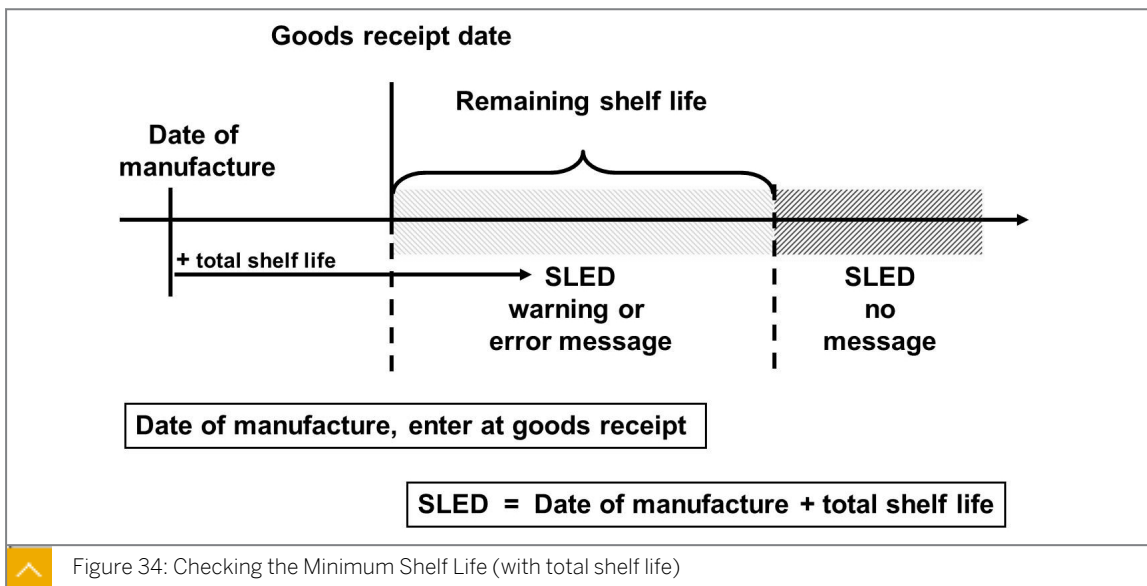
Minimum Shelf Life Check



If you fulfill the prerequisites to check the minimum remaining shelf life in the GR for the PO, the system requests that you specify the minimum remaining SLED in the *Shelf Life Expiration Date/BBD* field in the GR. The system then checks whether the required remaining shelf life that you enter complies with the SLED. In case of a shortfall, you can decide in Customizing whether the system issues the message (work area 12, message no. 007) as a warning or an error message.

In the SLED check, you can also use the date of manufacture to calculate the remaining shelf life. **To use the date of manufacture in a SLED check, you must enter the total shelf life as well as the remaining shelf life in the material master record.** In this case, enter the date of manufacture in the GR. The system calculates the minimum SLED (date of manufacture + total shelf life = SLED).

Checking the Minimum Shelf Life (with total shelf life)



For materials without a batch management requirement, you can enter and check the minimum SLED for only the GR. You can also print the minimum SLED on the GR and goods issue (GI) slip. For materials with a batch management requirement, it is possible to use the

SLED in batch determination for GIs and analyses for batches. (For more information, see the SAP documentation for *Inventory Management and Physical Inventory (MM-IM)* under *Goods Receipt → Goods Receipts for Purchase Orders → Shelf Life Expiration Date Check → Expiration Date Check for Materials Handled in Batches.*)



Hint:

If the storage location is subject to warehouse management, there is no batch management requirement for monitoring and withdrawing materials according to their minimum shelf life.

The following conditions must be met when the storage location is subject to warehouse management:

- You must activate the minimum SLED management for the warehouse number (Customizing).
- You must select the SLED or strict first in first out stock removal strategy for the storage type (Customizing).
- You must enter the minimum remaining shelf life in the material master record.
- You must enter the SLED when you receive the material.

Enter a GR for a Material with the Minimum Shelf Life Expiration Date

Business Example

In your company, you often refer to goods with SLEDs. To guarantee that the materials will have a long shelf life, you must check the remaining shelf life of the material when the goods are received.

Your company has ordered 500 kilograms (kg) of tomato soup for the cafeteria. The SLED of the soup has to be checked as part of the GR check. Check the data of the material master record and the PO, and enter the GR.

1. Display material *T-M510G##* in plant *1000* and check your entries for shelf life.

Note the remaining shelf life and the total shelf life in the following table:

Material	Minimum Remaining Shelf Life	Total Shelf Life
<i>T-M510G##</i>		

2. Display PO *4151-07##* and check the data for the SLED check:

PO	Remaining Shelf Life
<i>4151-07##</i>	

3. Check whether you can enter the GR for PO *4151-07##*. The tomato soup has a SLED of <Today + 5 months>.

Which of the following statements are correct?

Choose the correct answers.

- A The system checks the SLED for all GRs.
- B You must set the check for the SLED in Customizing for the plant and movement type.
- C When the expiration date check is active and you enter the remaining shelf life in the material master record, you must enter the date of manufacture in the GR.
- D When the expiration date check is active and you enter the remaining shelf life in the material master record, you must enter the expiration date in the GR.
- E You can maintain the total shelf life of the material manually in the PO.
- F You can maintain the remaining shelf life of the material in the PO.

Enter a GR for a Material with the Minimum Shelf Life Expiration Date

Business Example

In your company, you often refer to goods with SLEDs. To guarantee that the materials will have a long shelf life, you must check the remaining shelf life of the material when the goods are received.

Your company has ordered 500 kilograms (kg) of tomato soup for the cafeteria. The SLED of the soup has to be checked as part of the GR check. Check the data of the material master record and the PO, and enter the GR.

1. Display material *T-M510G##* in plant *1000* and check your entries for shelf life.

Note the remaining shelf life and the total shelf life in the following table:

Material	Minimum Remaining Shelf Life	Total Shelf Life
<i>T-M510G##</i>		


- a) On the *SAP Easy Access* screen, choose *Logistics → Materials Management → Material Master → Material → Display → Display Current (MM03)*.
- b) Enter **T-M510G##** in the *Material* field.
- c) In the *Select View(s)* dialog box, choose *General Plant Data/Storage 1*.
- d) Choose the *Organizational Levels* pushbutton and enter **1000** in the *Plant* field. Confirm your entries by choosing *Enter*.
- e) The following data displays:

Material	Minimum Remaining Shelf Life	Total Shelf Life
<i>T-M510G##</i>	6 months	No entry

2. Display PO *4151-07##* and check the data for the SLED check:


PO	Remaining Shelf Life
<i>4151-07##</i>	

- a) On the *SAP Easy Access* screen, choose *Logistics → Materials Management → Purchasing → Purchase Order → Display (ME23N)*.

- b) Choose  (*Other Purchase Order*).
- c) In the *Select Document* dialog box, enter **4151-07##** in the *Purchase Order* field and choose the *Other Document* pushbutton.
- d) Choose the *Delivery* tab page in the *Item Details* screen area and compare the remaining shelf life with the result from step 1.

The following remaining shelf life value displays:

PO	Remaining Shelf Life
4151-07##	6 months

- 3. Check whether you can enter the GR for PO 4151-07##. The tomato soup has a SLED of <Today + 5 months>.
 - a) On the *SAP Easy Access* screen, choose *Logistics* → *Materials Management* → *Inventory Management* → *Goods Movement* → *Goods Movement (MIGO)*.
 - b) Enter transaction *Goods Receipt* and, as the reference, enter *Purchase Order*.
 - c) Enter movement type **101** in the *GR goods receipt* field.
 - d) Enter **4151-07##** as the PO number. Choose  (*Execute*).
Note: Clear any value in the Plant field.
 - e) On the *Item Overview* screen, choose the *Material* tab page.
 - f) On the *Material* tab page, select the *Item OK* checkbox.
 - g) On the *Material* tab page, enter <Today + 5 months> in the *SLED/BBD* field as the SLED.
 - h) Choose the *Check* pushbutton.
In the *Display log(s)* dialog box, the system issues an error message to notify that the minimum shelf life has fallen short. A GR in the valuated stock is not possible with these settings.

i) Choose *Continue*.

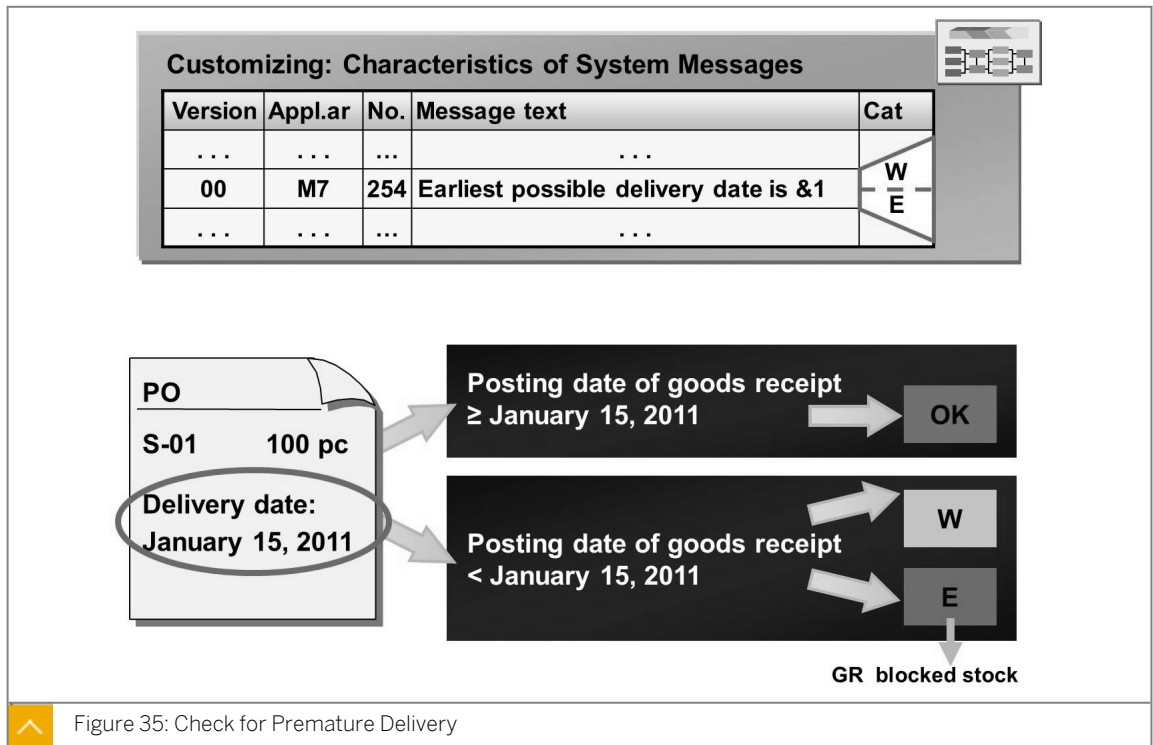
Which of the following statements are correct?

Choose the correct answers.

- A The system checks the SLED for all GRs.
- B You must set the check for the SLED in Customizing for the plant and movement type.
- C When the expiration date check is active and you enter the remaining shelf life in the material master record, you must enter the date of manufacture in the GR.
- D When the expiration date check is active and you enter the remaining shelf life in the material master record, you must enter the expiration date in the GR.
- E You can maintain the total shelf life of the material manually in the PO.
- F You can maintain the remaining shelf life of the material in the PO.

You must set the check for the SLED or date of manufacture in Customizing. You can maintain the total shelf time of the material only in the material master record. You can maintain the remaining shelf life in the material master record, in the purchasing info record, and in the PO.

Delivery – Too Early or Too Late



For each purchase order item, Purchasing specifies a delivery date. The system may check during the GR posting whether the goods are delivered too early or late.

To check whether the delivery is made before the planned delivery date, in Customizing, you must set message number 254 (work area M7) as the warning or error message.

Define the attributes of system messages in Customizing for *Materials Management* under *Inventory Management and Physical Inventory* → *Define Attributes of System Messages* (OMCQ).

If the GR date lies before the planned delivery date in the PO, the system then issues the message Earliest delivery date is ... according to your settings.



Hint:

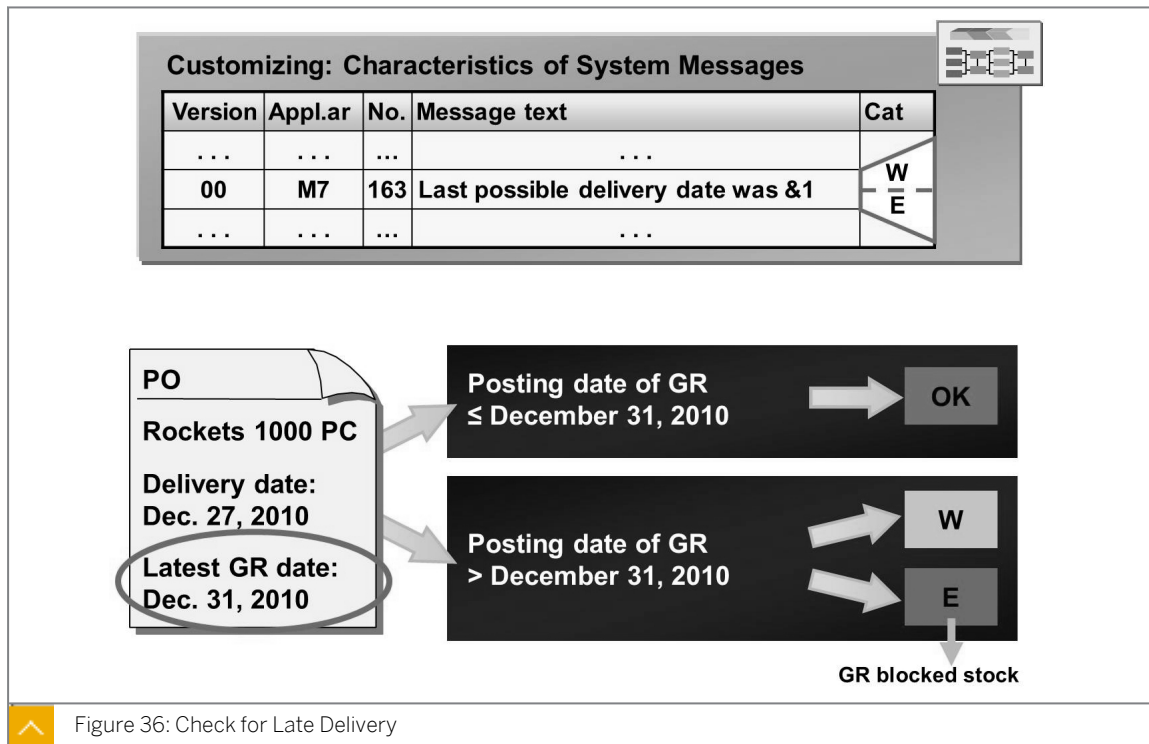
The system only issues a warning message in transaction MIGO if you check the entries before you post the GR.

If you have set message 254 as an error message, you can then post prematurely delivered goods to the GR blocked stock. If the delivery date is achieved, you can release the GR blocked stock. The check for premature delivery may be useful if your storage capacity is limited.

To prevent goods from being accepted in the case of delayed delivery, you must specify the value for the *latest possible goods receipt date* field in the PO.

The *latest possible goods receipt date* field is in the item detail data on the *Delivery* tab page. You also need to set message 163, *Last possible delivery date was ...* (work area M7), as a warning or error message in Customizing.

Check for Late Delivery



If you have set the message as an error message for delayed delivery, you can post the delivered goods to the GR blocked stock, and then post a return delivery from the GR blocked stock.



LESSON SUMMARY

You should now be able to:

- Use the shelf life expiration date check
- Customize and test system messages for a delivery that is too late or early

Learning Assessment

1. Which of the following stock types can you post to with movement type 501?

Choose the correct answers.

- A Unrestricted-use stock
- B Stock in quality inspection
- C Blocked stock
- D Rejected stock

2. *Choose the correct answers.*

- A When you enter a goods receipt (GR) with reference to another document, it is known as an Other GR.
- B You can post a GR without a purchase order (PO), as an Other GR.
- C You cannot enter an initial entry of stock balances for special stock consignment.
- D You can post an Other GR into blocked stock.

3. Which of the following statements regarding goods receipt (GR) blocked stock is true?

Choose the correct answers.

- A Using the GR blocked stock, you can apply quality inspection (QI) on materials before the delivery.
- B The material document that you generate at the time of GR serves as a record for that transaction.
- C The valuation and updating of the stock data takes place just before you release the material using movement type 105.
- D On posting a release of a GR blocked stock, the system increases the stocks.

4. Which of the following statements are true?

Choose the correct answers.

- A You always value goods receipt (GR) blocked stock, comparable with stock in quality inspection.
- B You can choose whether to value the GR blocked stock at plant level only.
- C You can post purchase orders (POs) to general blocked stock or GR blocked stock using movement type 101.
- D You post deliveries that are subject to conditional acceptance to nonvaluated GR blocked stock, upon receipt.
- E You release GR blocked stock using special movement types 105 or 109.

5. Which of the following statements about automatic generation of a purchase order (PO) are true?

Choose the correct answers.

- A The system specifies a default document type PO of the goods receipt (GR) for automatic PO generation.
- B You must specify the material for which you need to create a PO automatically, as nonvaluated.
- C You can book any movements into GR blocked stock for the automatic PO generation function.
- D The system automatically sets the vendor, material, quantity, plant, and storage location values.
- E The purchasing group for a plant is derived from the purchasing group assigned to the material in the material master record of that plant.

6. Which of the following statements regarding new delivery is true?

Choose the correct answers.

- A The system copies the original reference document number into the new material document.
- B The system copies the original invoice number and goods receipt number to the old material document.
- C You need to create a subsequent material document for direct assignment between the goods receipts (GRs) and the invoice.
- D After you post an invoice with a new delivery, it is necessary to select the old purchase items again.

7. Which of the following statements regarding the returns of a purchase order (PO) is true?

Choose the correct answers.

- A You need to create a reference to the PO that you created for the original delivery or the goods receipt (GR) posted.
- B You create a returns item by deselecting the Returns checkbox for an item which you require to return.
- C The system automatically proposes movement type 161 and the direction indicator Issue (-) for the returns items.
- D The system can automatically create a PO for returns, even if you have set it to do so.

8. Which of the following units will you use as the basis to evaluate a goods receipt (GR) and verify the invoice?

Choose the correct answer.

- A Order price unit
- B Order unit
- C Sales unit
- D Unit of issue

9. Which of the following statements about using an order price unit in a goods receipt (GR) with reference to a purchase order (PO) is true?

Choose the correct answers.

- A You can verify the invoices on the basis of an order unit.
- B You can enter the delivered quantity in order price unit only, as the unit of measure, for the goods you receive.
- C You use tolerance key B2 to set error messages and the tolerance key B1 to set warning messages.
- D If you have defined the tolerance key B1 and the variance is larger than the maximum variance, goods cannot be posted.

10. Which of the following statements regarding underdeliveries is true?

Choose the correct answers.

- A The system interprets and accepts the underdeliveries as a complete delivery and displays an error message.
- B Only the system can create, in the order item, a percentage value for underdelivery tolerance.
- C With the underdelivery tolerance, the system determines when to issue a warning message.
- D The system contains the options for unlimited overdelivery in the purchase order (PO) item for an item.

11. Which of the following statements is true regarding the Delivery Completed checkbox settings?

Choose the correct answers.

- A You can change the open purchase order (PO) quantity proposed during the goods receipt (GR), if the delivered quantity is different.
- B You can specify whether the Delivery Completed checkbox is to be selected automatically.
- C You can enter additional goods even after selecting the Delivery Completed checkbox.
- D Once you select the Delivery Completed checkbox you cannot delete the PO item.

12. You want to ensure that the delivery is made before the planned delivery date. Which of the following actions will you perform to accomplish this?

Choose the correct answer.

- A Set message number 254 as warning message.
- B Set a low minimum shelf life for the material.
- C Set a low maximum shelf life for the material.
- D Extend the delivery date of the material.

Learning Assessment - Answers

1. Which of the following stock types can you post to with movement type 501?

Choose the correct answers.

- A Unrestricted-use stock
- B Stock in quality inspection
- C Blocked stock
- D Rejected stock

2. *Choose the correct answers.*

- A When you enter a goods receipt (GR) with reference to another document, it is known as an Other GR.
- B You can post a GR without a purchase order (PO), as an Other GR.
- C You cannot enter an initial entry of stock balances for special stock consignment.
- D You can post an Other GR into blocked stock.

3. Which of the following statements regarding goods receipt (GR) blocked stock is true?

Choose the correct answers.

- A Using the GR blocked stock, you can apply quality inspection (QI) on materials before the delivery.
- B The material document that you generate at the time of GR serves as a record for that transaction.
- C The valuation and updating of the stock data takes place just before you release the material using movement type 105.
- D On posting a release of a GR blocked stock, the system increases the stocks.

4. Which of the following statements are true?

Choose the correct answers.

- A You always value goods receipt (GR) blocked stock, comparable with stock in quality inspection.
- B You can choose whether to value the GR blocked stock at plant level only.
- C You can post purchase orders (POs) to general blocked stock or GR blocked stock using movement type 101.
- D You post deliveries that are subject to conditional acceptance to nonvaluated GR blocked stock, upon receipt.
- E You release GR blocked stock using special movement types 105 or 109.

5. Which of the following statements about automatic generation of a purchase order (PO) are true?

Choose the correct answers.

- A The system specifies a default document type PO of the goods receipt (GR) for automatic PO generation.
- B You must specify the material for which you need to create a PO automatically, as nonvaluated.
- C You can book any movements into GR blocked stock for the automatic PO generation function.
- D The system automatically sets the vendor, material, quantity, plant, and storage location values.
- E The purchasing group for a plant is derived from the purchasing group assigned to the material in the material master record of that plant.

6. Which of the following statements regarding new delivery is true?

Choose the correct answers.

- A The system copies the original reference document number into the new material document.
- B The system copies the original invoice number and goods receipt number to the old material document.
- C You need to create a subsequent material document for direct assignment between the goods receipts (GRs) and the invoice.
- D After you post an invoice with a new delivery, it is necessary to select the old purchase items again.

7. Which of the following statements regarding the returns of a purchase order (PO) is true?

Choose the correct answers.

- A You need to create a reference to the PO that you created for the original delivery or the goods receipt (GR) posted.
- B You create a returns item by deselecting the Returns checkbox for an item which you require to return.
- C The system automatically proposes movement type 161 and the direction indicator Issue (-) for the returns items.
- D The system can automatically create a PO for returns, even if you have set it to do so.

8. Which of the following units will you use as the basis to evaluate a goods receipt (GR) and verify the invoice?

Choose the correct answer.

- A Order price unit
- B Order unit
- C Sales unit
- D Unit of issue

9. Which of the following statements about using an order price unit in a goods receipt (GR) with reference to a purchase order (PO) is true?

Choose the correct answers.

- A You can verify the invoices on the basis of an order unit.
- B You can enter the delivered quantity in order price unit only, as the unit of measure, for the goods you receive.
- C You use tolerance key B2 to set error messages and the tolerance key B1 to set warning messages.
- D If you have defined the tolerance key B1 and the variance is larger than the maximum variance, goods cannot be posted.

10. Which of the following statements regarding underdeliveries is true?

Choose the correct answers.

- A The system interprets and accepts the underdeliveries as a complete delivery and displays an error message.
- B Only the system can create, in the order item, a percentage value for underdelivery tolerance.
- C With the underdelivery tolerance, the system determines when to issue a warning message.
- D The system contains the options for unlimited overdelivery in the purchase order (PO) item for an item.

11. Which of the following statements is true regarding the Delivery Completed checkbox settings?

Choose the correct answers.

- A You can change the open purchase order (PO) quantity proposed during the goods receipt (GR), if the delivered quantity is different.
- B You can specify whether the Delivery Completed checkbox is to be selected automatically.
- C You can enter additional goods even after selecting the Delivery Completed checkbox.
- D Once you select the Delivery Completed checkbox you cannot delete the PO item.

12. You want to ensure that the delivery is made before the planned delivery date. Which of the following actions will you perform to accomplish this?

Choose the correct answer.

- A Set message number 254 as warning message.
- B Set a low minimum shelf life for the material.
- C Set a low maximum shelf life for the material.
- D Extend the delivery date of the material.

UNIT 3

Stock Transfers and Transfer Postings

Lesson 1

Performing Transfer Postings	146
Exercise 15: Enter a Stock-to-Stock Transfer Posting	153
Exercise 16: Enter a Material-to-Material Transfer Posting	157

Lesson 2

Performing Stock Transfers Between Storage Locations	162
Exercise 17: Post a Stock Transfer Between Storage Locations in Two Steps	167

Lesson 3

Performing Stock Transfers Between Plants	172
Exercise 18: Post Stock Transfers Between Plants	179



UNIT OBJECTIVES

- Perform different transfer postings
- Post stock transfer postings using the one-step and two-step procedures
- Post plant-to-plant stock transfer postings

Performing Transfer Postings

LESSON OVERVIEW

This lesson introduces transfer postings and the levels at which they can take place. The lesson also examines the difference between a transfer posting and a physical stock transfer and shows you how to perform different transfer postings.

Business Example

You have checked the goods posted to stock in quality inspection (QI) at the time of their receipt and can now release them for production or for sale. You make a posting which transfers the relevant stock from quality inspection to unrestricted-use stock. The properties of some materials change in the course of time, which necessitates a change in the numbers under which they are managed. In such cases, you need to make a material-to-material transfer posting. For this reason, you require the following knowledge:

- An understanding of the procedure for a stock-to-stock transfer posting
- An understanding of the prerequisites for a material-to-material transfer posting and how you make this type of posting

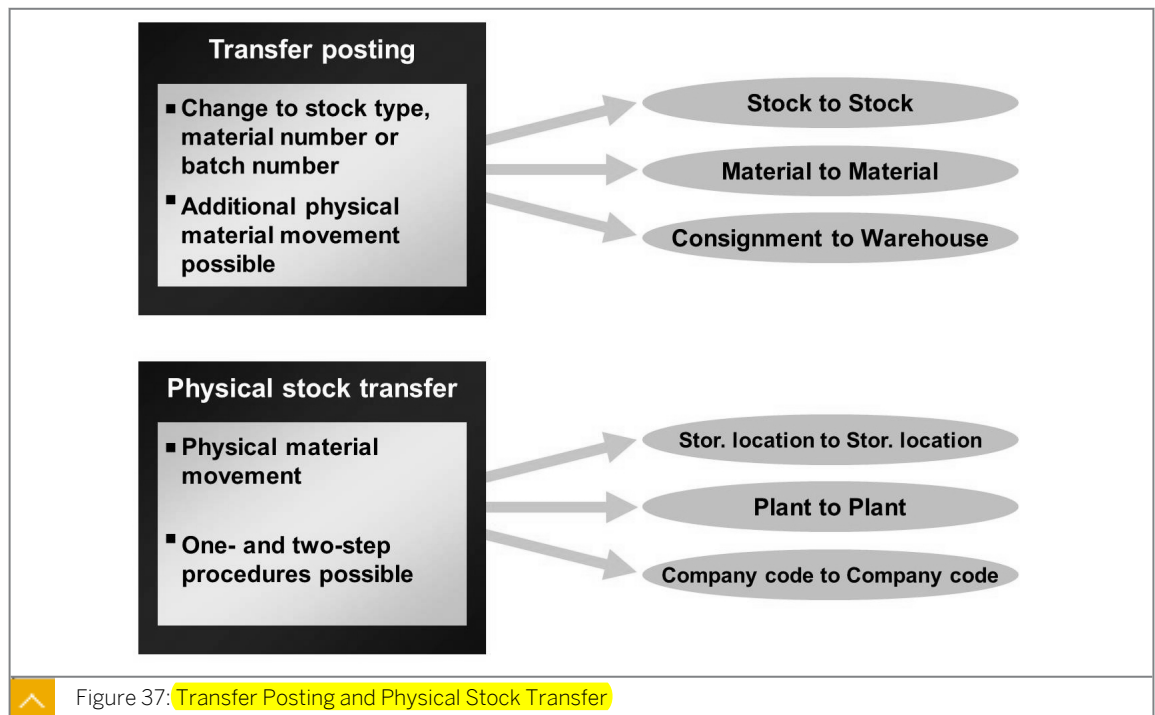


LESSON OBJECTIVES

After completing this lesson, you will be able to:

- Perform different transfer postings

Transfer Postings and Physical Stock Transfer



In any enterprise, goods movements do not only take the form of goods receipts (GRs) and goods issues (GIs). For organizational reasons (for example, decentralized storage) or due to other factors (for example, quality assurance) internal transfer postings and physical stock transfers may be necessary.

In the case of transfer postings, the key aspect is a change in the stock ID number or the stock category of a material. Transfer postings do not need to involve an actual (physical) goods movement. In the case of stock transfers, on the other hand, there is always a physical movement of goods.

The examples of transfer postings and physical stock transfers are as follows:

- Transfer postings: stock to stock (for example, in quality inspection to unrestricted use) or material to material.
- Physical stock transfers: such as storage location to storage location or plant to plant

As you can see from the examples, transfer postings and physical stock transfers can take place at different organizational levels.

The different types of stock transfers at different organizational levels are as follows:

- Storage-location-to-storage-location stock transfer
The stock is transferred between two storage locations within a plant
- Plant-to-plant stock transfer
The stock is transferred between two plants and the plants belong to the same company code.
- Company-code-to-company-code stock transfer

The stock is transferred between two plants and the plants belong to different company codes.

Transfer Posting – Stock to Stock

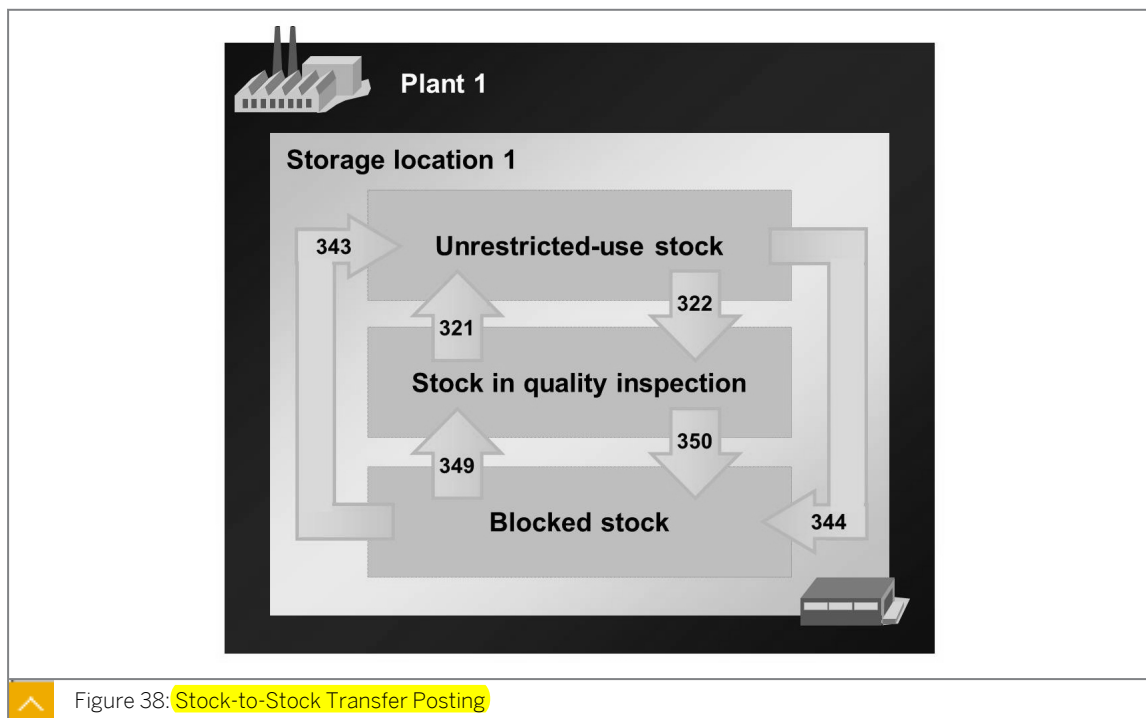


Figure 38: Stock-to-Stock Transfer Posting

In inventory management, the following stock types indicate the usability of a material:

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

If the usability of a material changes, you need to make transfer postings between the different stock types. With a stock-to-stock transfer posting, you can also enter a physical goods movement to a different storage location. However, you can enter a movement only within one plant, not between several plants.

The examples of stock transfer postings are as follows:

- Material is posted to stock in quality inspection at the time of a goods receipt (GR) against a purchase or production order. Following quality inspection, the quantity is posted to unrestricted-use stock.

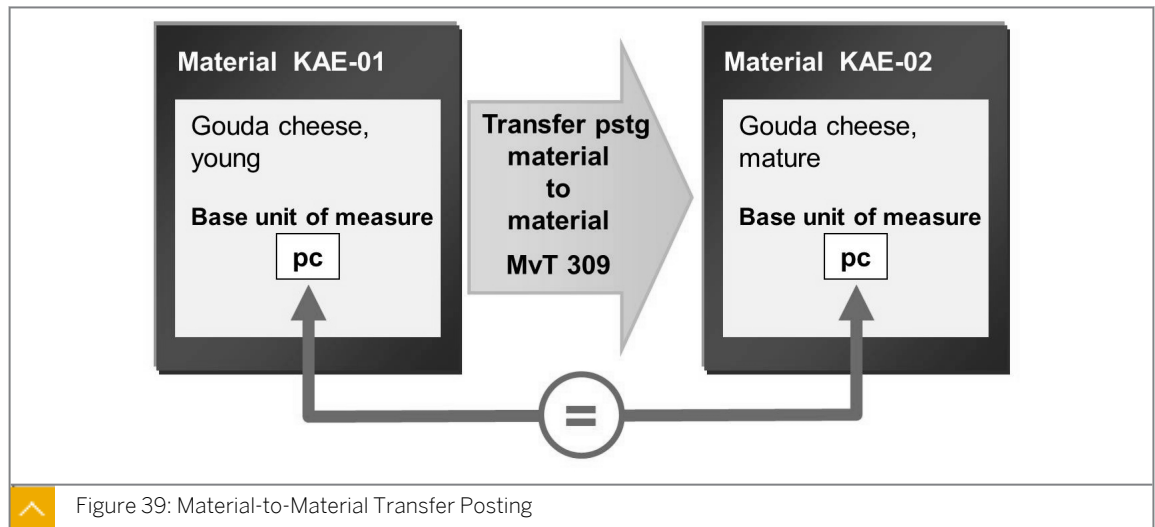


Hint:

If inspection processing in quality management is active, you cannot post any issues from stock in quality inspection within inventory management. You can only perform such movements within the framework of inspection processing.

- Due to a damaged water pipe in a warehouse, a certain material can no longer be used and is transferred to blocked stock.

Transfer Posting – Material to Material



If the state of a material changes over time, then a material-to-material transfer is necessary. For example, if the state of a material changes over time, then instead of the properties defined in the original material master record, the material now has the properties corresponding to a different material number. This often occurs in the chemical and pharmaceutical industries.



Caution:

A material-to-material transfer posting is possible only if both materials have the same base unit of measure and standard procedures.

The following conditions apply to material-to-material transfer postings:

- The postings cannot be preplanned via a reservation.
- The postings can be made only from unrestricted-use stock of the issuing material to unrestricted-use stock of the receiving material.
- The postings can be made only in a single step.

Copying Rules for Transfer Postings in Transaction MIGO



Enter/Change Copying Rules										
	MvT	S...	Material	Plant	SLoc	...	Material TrPg	Plant TrPg	SLoc. TrPg	...
	321		<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
	309		<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	

Figure 40: Copying Rules for Transfer Postings (MIGO)

If you need to enter several transfer posting items in one document using transaction MIGO, you can save time and effort by using the copying rules for transfer postings.

For example, you want to transfer 20 materials in plant 1000 from stock in quality inspection at storage location 0001 to unrestricted-use stock at storage location 0002. Using copying rules, you can specify that the system always suggests storage location 0001 as the issuing location and storage location 0002 as the receiving location in plant 1000.

To transfer materials from one stock to another, perform the following steps:

1. Enter the first item with the necessary data.
2. Choose (*Copy to New Item*).

If you are using *Copy to New Item* function for the first time for a combination of the movement type and special stock indicator, you are automatically taken to a dialog box in which you can specify the copying rules.

3. In the dialog box, you specify the fields from the current item that are to be adopted to a new item when using the copy function.

You can choose from the following fields:

- *Material*
- *Plant*
- *Storage Location*
- *Batch*
- *Material (Transfer Posting)*
- *Plant (Transfer Posting)*
- *Storage Location (Transfer Posting)*
- *Batch (Transfer Posting)*

4. Choose (*Adopt*) to save the copying rules.



Hint:

You can change the settings at any time by choosing *Settings* → *Copying Rules Transfer Postings*.

- If, after copying to the new item, fields of the primary posting are not filled, but are maintained for the transaction under *Settings* → *Default Values*, you can adopt these values (for example, plant and storage location).



To Enter a Transfer Posting in Transaction MIGO

	Material	OK	Quantity	EUn	Stor. loc.	MvT	Plant	Oth...
1	Sunny	<input checked="" type="checkbox"/>	20	PC	0001	321	1000	

Figure 41: Transfer Posting Using Transaction MIGO – Example

- On the SAP Easy Access screen, choose *Logistics* → *Materials Management* → *Inventory Management* → *Goods Movement* → *Transfer Posting (MIGO)*.
- Enter transaction *Transfer Posting* and, as the reference, enter *Other*.
- Check the default value for the movement type and change it, if necessary (for example, movement type 321 for the transfer posting quality inspection to unrestricted-use stock).
- In the item details, enter the material that you want to transfer in the *From* section. You also have to specify the issuing plant and the issuing storage location.
- In the *Destination data* section, specify the receiving material, the receiving plant, and the receiving storage location.



Hint:

The fields available under the *Destination* section depend on the movement type. For example, in the case of stock-to-stock transfer postings, it is only possible to specify a receiving storage location. In the case of a material-to-material transfer posting, you can also enter the material and the plant.

6. In the item details, enter the quantity to be transferred.
7. Make the transfer posting.

Enter a Stock-to-Stock Transfer Posting

Business Example

After the quality inspection, you need to transfer the stock from the stock in quality inspection to unrestricted-use stock. Also, some printer cartridges have run out of toner and you need to transfer these items to the stock of empty cartridges.

Many of the materials that are delivered every day are automatically posted to stock in quality inspection upon receipt. After the quality inspection, the relevant material must be transferred to unrestricted-use stock. In plant **1200**, you need to maintain your quality inspection stock and unrestricted-use stock at different storage locations.




1. To make several transfer postings for plant 1200 in the system, adjust the default values for transaction MIGO accordingly. Do not specify a default value for the storage location. Also, select the *Propose the OK Function in Future* checkbox.
2. When copying items for a transfer posting with movement type 321, adopt the data on plant and storage location (issuing and receiving) in new items. Adjust the copying rules for transaction MIGO.
3. Enter the transfer posting in plant **1200** for **10 PC** of material **T-M510A##** and **10 PC** of **T-M510B##** from stock in quality inspection at storage location QP01 to unrestricted-use stock at storage location **0001**. Use the copying function for transaction MIGO (Choose *Copy to New Item*).

Enter a Stock-to-Stock Transfer Posting

Business Example


After the quality inspection, you need to transfer the stock from the stock in quality inspection to unrestricted-use stock. Also, some printer cartridges have run out of toner and you need to transfer these items to the stock of empty cartridges.

Many of the materials that are delivered every day are automatically posted to stock in quality inspection upon receipt. After the quality inspection, the relevant material must be transferred to unrestricted-use stock. In plant **1200**, you need to maintain your quality inspection stock and unrestricted-use stock at different storage locations.

1. To make several transfer postings for plant 1200 in the system, adjust the default values for transaction MIGO accordingly. Do not specify a default value for the storage location. Also, select the *Propose the OK Function in Future* checkbox.
 - a) On the *SAP Easy Access* screen, choose *Logistics* → *Materials Management* → *Inventory Management* → *Goods Movement* → *Goods Movement (MIGO)*.
 - b) Choose *Settings* → *Default Values*.
 - c) Enter **1200** in the *Plant* field and delete the entry for the storage location.
 - d) Select the *Propose the OK Function in Future* checkbox.
 - e) Choose  (*Adopt*).
2. When copying items for a transfer posting with movement type 321, adopt the data on plant and storage location (issuing and receiving) in new items. Adjust the copying rules for transaction MIGO.
 - a) Choose *Settings* → *Copying Rule Transfer Posting*.
 - b) In the *Enter/Change Copying Rules* dialog box, choose  (*Insert New Lines*).
 - c) Enter **321** in the *Movement Type* field.
 - d) Select the *Plant*, *SLoc*, *Plant Trfr Pstg*, *SLoc Trfr Pstg* checkboxes.
 - e) Choose  (*Adopt*).
3. Enter the transfer posting in plant **1200** for **10 PC** of material **T-M510A##** and **10 PC** of **T-M510B##** from stock in quality inspection at storage location QP01 to unrestricted-use stock at storage location **0001**. Use the copying function for transaction MIGO (Choose *Copy to New Item*).
 - a) On the *SAP Easy Access* screen, choose *Logistics* → *Materials Management* → *Inventory Management* → *Goods Movement* → *Goods Movement (MIGO)*.

- b) Enter transaction *Transfer Posting* and, as the reference, enter *Other*.
- c) On the *Where* tab page, enter **321** in the *Movement Type* field.
- d) To confirm your entries, choose *Enter*.
- e) On the *Transfer Posting* tab page, enter the following item detail data:

Field	From Area	To Area
<i>Material</i>	T-M510A##	
<i>Plant</i>	1200	
<i>Storage Location</i>	QP01	0001
<i>Quantity in Une.</i>	10 PC	

- f) Choose  (*Copy to New Item*).
- The system generates a second item with the same data for plant and storage locations.

- g) Enter the following data:

Field	Value
<i>Material</i>	T-M510B##
<i>Quantity</i>	10

- h) Choose the *Post* pushbutton.

Enter a Material-to-Material Transfer Posting

Business Example

After the quality inspection, you need to transfer the stock from the stock in quality inspection to unrestricted-use stock. Also, some printer cartridges have run out of toner and you need to transfer these items to the stock of empty cartridges.

In the warehouse, a number of printer cartridges with material number **T-M510D##** are found to be leaking and cannot be used. Transfer the cartridges to empty printer cartridges **T-M510E##**.

1. Display the two materials and note the base unit of measure in the following table:

Material	Base Unit of Measure
T-M510D##	
T-M510E##	

2. Transfer **10 PC** from full printer cartridges **T-M510D##** from plant **1200**, storage location **0001**, to empty printer cartridges **T-M510E##** (movement type **309**). The plant and storage location are not changed.
3. Display the accounting document for the transfer posting and note the amounts and the accounts to which postings are made.

Accounting Details	Value (account 1)	Value (account 2)
Amount		
Account		
D/C		

Enter a Material-to-Material Transfer Posting


Business Example

After the quality inspection, you need to transfer the stock from the stock in quality inspection to unrestricted-use stock. Also, some printer cartridges have run out of toner and you need to transfer these items to the stock of empty cartridges.

In the warehouse, a number of printer cartridges with material number **T-M510D##** are found to be leaking and cannot be used. Transfer the cartridges to empty printer cartridges **T-M510E##**.

1. Display the two materials and note the base unit of measure in the following table:

Material	Base Unit of Measure
T-M510D##	
T-M510E##	

- a) On the SAP Easy Access screen, choose *Logistics* → *Materials Management* → *Material Master* → *Material* → *Display* → *Display Current* (MM03).
- b) On the *Display Material: (Initial)* screen, enter T-M510D## in the *Material* field.
- c) Choose the *Select View(s)* pushbutton. In the dialog box that displays, choose *Purchasing*.
- d) Choose the *Organizational Levels* pushbutton and then choose *Continue*.
- e) On the *Display Material T-M510D## Raw Material* screen, note that the base unit of measure is *PC* (piece).
- f) To return to the *Display Material (Initial)* screen, choose  (*Other material*) and repeat steps b) to e) using material number **T-M510E##**.
- g) Note that for material T-M510E## also, the base unit is *PC*.

For materials, the following data displays:

Material	Base Unit of Measure
T-M510D##	PC
T-M510E##	PC



2. Transfer **10 PC** from full printer cartridges **T-M510D##** from plant **1200**, storage location **0001**, to empty printer cartridges **T-M510E##** (movement type **309**). The plant and storage location are not changed.

- a) On the *SAP Easy Access* screen, choose *Logistics → Materials Management → Inventory Management → Goods Movement → Goods Movement (MIGO)*.
- b) Enter transaction *Transfer Posting* and, as the reference, enter *Other*.
- c) On the *Where* tab page, enter 309 in the *Movement Type* field (*transfer posting material to material*)
- d) To confirm your entries, choose *Enter*.
- e) On the *Transfer Posting* tab page, enter the following data:

Field	From Area	Dest Area
<i>Material</i>	T-M510D##	T-M510E##
<i>Plant</i>	1200	1200
<i>Storage Location</i>	0001	0001
<i>Qty in UnE</i>	10 PC	

- f) Choose the *Post* pushbutton.
3. Display the accounting document for the transfer posting and note the amounts and the accounts to which postings are made.

Accounting Details	Value (account 1)	Value (account 2)
Amount		
Account		
D/C		

- a) Enter transaction *Display*, and, as the reference, enter *Material Document*.
- b) Choose  (*Execute*).
- c) On the *Document Info* tab page in the document header, choose the  *FI Documents* pushbutton.
- d) To display the accounting document, double-click on the document number.
- e) An issue from stock account 300000 and a receipt to stock account 300010 are posted. However, the full amount of the issue (credit posting for *T-M510D##*) is not posted back to the stock account 300010 (debit posting for *T-M510E##*), because the empty printer cartridges (*T-M510E##*) are valued according to the standard price procedure. The difference between the amounts of the credit and debit postings to the stock accounts is posted to a separate "Losses - inventory transfer" account (235000) (debit posting).

The following accounting data displays for material *T-M510D##*:

Accounting Details	Value
Amount	200
Account	300000 (raw materials 1)

Accounting Details	Value
D/C	Credit

The following accounting data displays for material T-M510E##:

Accounting Details	Value (account 1)	Value (account 2)
Amount	50	150
Account	300010 (raw materials 2)	235000 (Losses- inventory transfer)
D/C	Debit	Debit



LESSON SUMMARY

You should now be able to:

- Perform different transfer postings

Performing Stock Transfers Between Storage Locations

LESSON OVERVIEW

This lesson deals with physical stock transfers between two storage locations within a plant.

Business Example

In your enterprise, numerous materials have been approved for direct factory sale. Therefore, you must transfer these materials to a special factory outlet warehouse. For this reason, you require the following knowledge:

- An understanding of the distinction between the one-step and two-step procedures for stock transfers
- An understanding of how the entry of a stock transfer from one storage location to another takes place



LESSON OBJECTIVES

After completing this lesson, you will be able to:

- Post stock transfer postings using the one-step and two-step procedures

One-Step and Two-Step Procedures

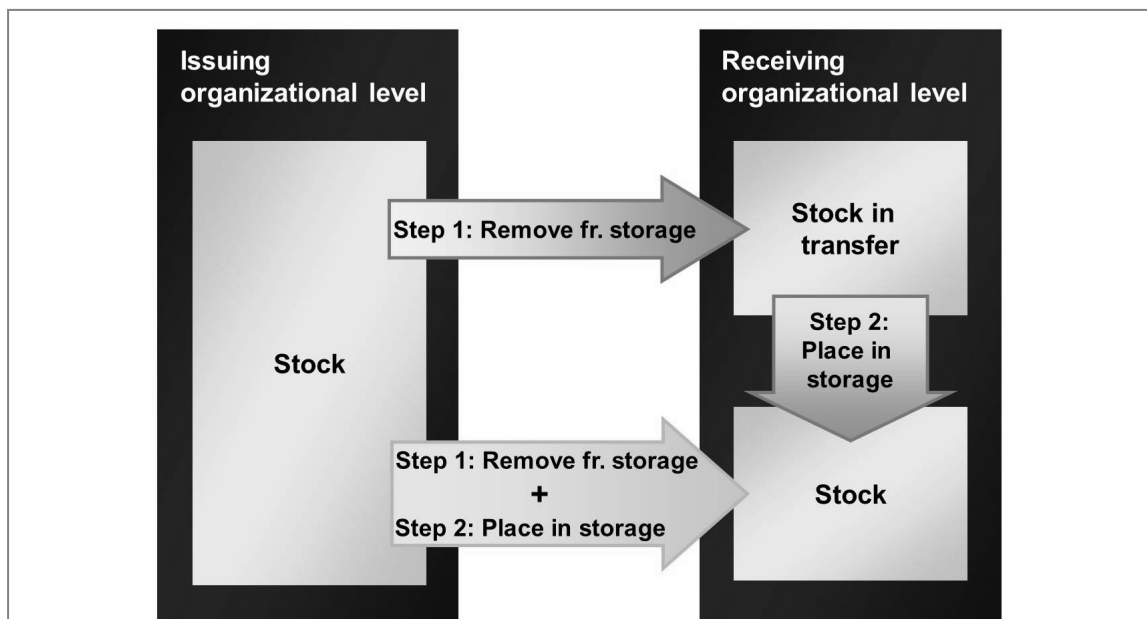


Figure 42: One-Step and Two-Step Procedures

A stock transfer or transfer posting consists of a goods issue (GI) from the issuing point and a goods receipt (GR) at the receiving point. You can enter the GI and GR using a single posting for all transfer postings or stock transfers.

For some stock transfers, you have the additional option of entering the GI and GR in two separate steps and, therefore, in two separate postings. In the case of storage-location-to-storage-location and plant-to-plant stock transfers, a distinction is made between the one-step procedure and the two-step procedure.

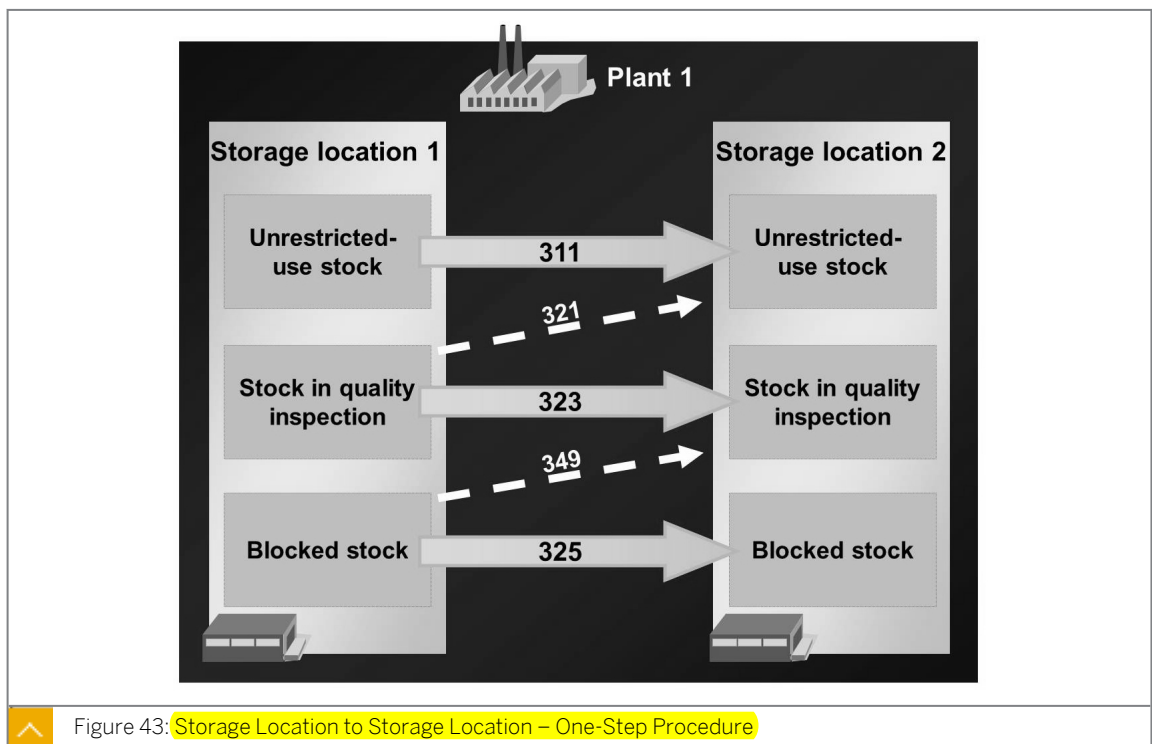
The one-step procedure has the advantage that you enter only a single transaction in the system. However, the two-step procedure enables you to monitor stocks that you are in the process of transferring from one place to another. Once you have posted the GI from the issuing point, the stock is regarded as in transfer at the receiving point, and is treated as such in the system.



Hint:

In the case of stock transfers between plants, the two-step procedure is necessary if users have authorizations only for their own plant in each case. At the time of physical inventory, ensure that you do not have any stocks in transfer because you cannot inventory such stocks.

Storage Location to Storage Location – One-Step Procedure



A stock transfer from one storage location to another is carried out within a plant. You can post a storage-location-to-storage-location stock transfer using the one-step procedure for all stock types.

The material document items generated during the one-step procedure are as follows:

- One item for the removal of the material from storage (GI) at the issuing storage location

- One item for the placement of the material in storage (GR) at the receiving storage location

No accounting document is generated for this stock transfer because the transferred material is managed in the same plant, and therefore has the same posting data as before.



Hint:

If you transfer the stock from one storage location to another, the system generates an accounting document if the material is split-valuated and the valuation type changes in the course of the transfer.

Storage Location to Storage Location – Two-Step Procedure

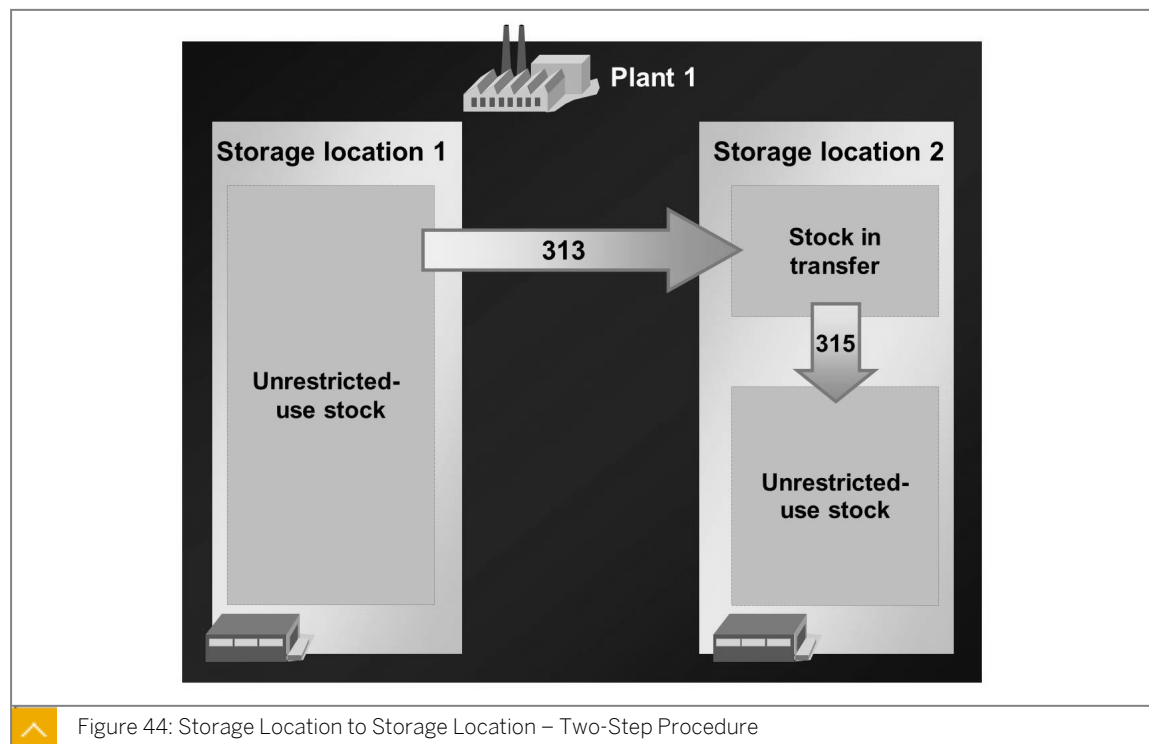


Figure 44: Storage Location to Storage Location – Two-Step Procedure

Using the two-step procedure, you can transfer material only from unrestricted-use stock at the issuing location to unrestricted-use stock at the receiving storage location. After the stock removal posting, the quantity is booked out of the issuing storage location. At the receiving storage location, the quantity is already included in the stock for that location, not as unrestricted-use stock, but as a stock in transfer. The quantity is not available for unrestricted use at plant level either. When the goods are putaway at the receiving storage location, the quantity is transferred from stock in transfer to unrestricted-use stock.

The system generates two material documents in the course of a stock transfer from storage location to storage location using the two-step procedure.

The material documents generated during a two-step procedure are as follows:

- One item at the time of GI (in this case referred to as removal from storage)
- One item at the time of GR (in this case referred to as putaway or placement in storage)

Valuation does not take place in the case of the two-step procedure.



To Use the Two-Step Procedure - First Step Removal for Storage

1. On the *SAP Easy Access* screen, choose *Logistics* → *Materials Management* → *Inventory Management* → *Goods Movement* → *Transfer Posting* (MIGO).
2. Enter transaction *Remove from Storage* and, as the reference, enter *Other*.
3. Check the default value for the movement type and change it to *313*, if necessary.
4. In the item detail data, enter the material that is to be transferred under the *From data* section. Also, specify the issuing plant and the issuing storage location.
5. Enter the receiving storage location under the *Destination* section.



Hint:

You must specify the receiving storage location because the stock in transfer belongs to the receiving location.

6. Enter the quantity to be transferred in the item details.
7. Post the removal from storage.



To Use the Two-Step Procedure - Second Step

Prerequisite

For a putaway (placement in storage) to be posted, stock in transfer must exist at the receiving storage location.

You can simplify the entry of the putaway if you reference the material document of the removal from storage when doing so. In this case, the system provides the materials, the quantities, the receiving plant, the receiving storage location, and the movement type as default values for the putaway.

However, you can also enter the necessary data manually, as with the removal from storage.


Procedure

1. On the *SAP Easy Access* screen, choose *Logistics* → *Materials Management* → *Inventory Management* → *Goods Movement* → *Transfer Posting* (MIGO).
2. Enter transaction *Place in Storage* and, as the reference, enter *Material Document*.
3. Enter the material document number.



Hint:

You can also search for the material document. To do so, choose (*Find Material Doc.*) and enter the movement type 313, the material, and the plant as selection values.

4. To transfer the items, choose  (*Execute*).

5. Choose the desired items by selecting the *OK* checkbox. If necessary, change the default quantity for the items.
6. Post the putaway (placement in storage).

Post a Stock Transfer Between Storage Locations in Two Steps

Business Example

For direct factory sales, materials must be transferred from a central storage location to the factory outlet storage location.

Using the two-step procedure, transfer two materials from the central storage location **0001** of plant **1200** to storage location **0120** for direct factory sales.

1. Remove 10 PC of each of materials **T-M510A##** and **T-M510B##** from storage at plant 1200, storage location 0001, and transfer them to storage location 0120 (direct factory sales).

For a stock transfer between storage locations, you usually need to enter multiple items. To reduce the time and effort required for entry, maintain the copying rules for this transaction.

Note the material document number after the posting.

2. Display stock in transfer at plant 1200, storage location 0120.
3. Enter the placement into storage of the 10 PC each of materials T-M510A## and T-M510B## as a stock putaway for a material document. Before posting, check the following points for one of the two materials:

Question	Answer
Can you change the stock type?	
Can you place 15 PC in storage?	
Can you place 5 PC in storage?	
Can you put away 10 PC in storage location 0001?	

4. Check the movement type that was used to post the putaway.

Movement type for putaway: _____

In addition, check whether the stock in transfer for material T-M510A## at plant 1200, storage location 0120 is completely reduced as a result of the putaway.

Post a Stock Transfer Between Storage Locations in Two Steps

Business Example

For direct factory sales, materials must be transferred from a central storage location to the factory outlet storage location.

Using the two-step procedure, transfer two materials from the central storage location **0001** of plant **1200** to storage location **0120** for direct factory sales.

1. Remove 10 PC of each of materials **T-M510A##** and **T-M510B##** from storage at plant 1200, storage location 0001, and transfer them to storage location 0120 (direct factory sales).

For a stock transfer between storage locations, you usually need to enter multiple items. To reduce the time and effort required for entry, maintain the copying rules for this transaction.

Note the material document number after the posting.

- a) On the *SAP Easy Access* screen, choose *Logistics* → *Materials Management* → *Inventory Management* → *Goods Movement* → *Goods Movement (MIGO)*.
- b) Enter transaction *Remove from Storage* and, as the reference, enter *Other*.
- c) Enter **313** in the *Movement Type* field (*Transfer Posting Storage-Location-to-Storage-Location*). To confirm your entries, choose *Enter*.
- d) On the *Transfer Posting* tab page, enter the following data:


Field	Value
<i>Material</i>	T-M510A##
<i>Plant</i>	1200
<i>From storage location</i>	0001
<i>Dest storage location</i>	0120
<i>Qty in UnE</i>	10 PC

- e) Choose  (*Copy to New Item*).






Note:

The system displays a dialog box for you to enter copying rules.

- f) For movement type *313*, select the *Plant*, *SLoc*, *Plant Trfr Pstg*, and *SLoc Trfr Pstg* checkboxes.
- g) Choose  (*Adopt*).
- h) On the *Transfer Posting* tab page, enter the following data:

Field	Value
<i>Material</i>	T-M510B##
<i>Qty in UnE</i>	10 PC


- i) Post your entries and note the material document number.
2. Display stock in transfer at plant *1200*, storage location *0120*.
- a) Enter transaction *Display* and, as the reference, enter *Material Document*.
- b) Choose  (*Execute*).
- c) On the *Transfer Posting* tab page, choose  (*Stock Overview*).
- d) Position the cursor on the line for storage location *0120* and choose  (*Detailed Display*). The storage-location-related stock in transfer is described as *Stock Transfer (SLoc)*.
3. Enter the placement into storage of the *10 PC* each of materials *T-M510A##* and *T-M510B##* as a stock putaway for a material document. Before posting, check the following points for one of the two materials:

Question	Answer
Can you change the stock type?	
Can you place 15 PC in storage?	
Can you place 5 PC in storage?	
Can you put away 10 PC in storage location 0001?	

- a) Enter transaction *Place in Storage* and, as the reference, enter *Material Document*.
- b) Enter the number of the material document from the removal from storage.



Hint:

You can choose  (*Find Material Doc.*). Enter **313** in the *Movement Type* field and user name **SCM510-##** as selection values.

- c) Choose  (Execute).

The answers to the questions given in the exercise are as follows:

Question	Answer
Can you change the stock type?	No
Can you place 15 PCs in storage?	No
Can you place 5 PCs in storage?	Yes
Can you put away 10 PCs in storage location 0001?	No

- d) Select the *Item OK* checkbox for both items.




The stock type cannot be changed. The two-step procedure for storage-location-to-storage-location stock transfers is possible only for unrestricted-use stock.

- e) On the *Quantity* tab page, enter **15** in the *Quantity* field, then choose the *Check* pushbutton. The system displays an error message which informs you that the stock in transfer is exceeded by *5 PC*. The stock putaway cannot be posted.
- f) Enter **5** in the *Quantity* field and choose the *Check* pushbutton. The system does not display an error message so you can post the putaway.
- g) Enter **10** in the *Quantity* field.
- h) On the *Where* tab page, enter **0001** in the *Storage Location* field and choose the *Check* pushbutton.
The system displays an error message which informs you that the stock in transfer for plant *1200*, storage location *0001*, is short by *10 PC*. The stock putaway cannot be posted.
- i) On the *Quantity* tab page, enter **10** in the *Quantity* field.
- j) On the *Where* tab page, enter **0120** in the *Storage Location* field.
- k) Post the entries.

4. Check the movement type that was used to post the putaway.

Movement type for putaway: _____

In addition, check whether the stock in transfer for material *T-M510A##* at plant *1200*, storage location *0120* is completely reduced as a result of the putaway.

- a) Enter transaction *Display* and, as the reference, enter *Material Document*.
- b) Choose  (Execute).
- c) In the details of the item for material *T-M510A##*, choose the *Where* tab page. The movement type is *315* (place in storage location).
- d) Choose  (*Stock Overview*).
- e) Choose the storage location *0120* and then choose  (*Detailed Display*). The storage-location-related stock in transfer *Stock Transfer (SLoc)* amounts to *0 PC*.



LESSON SUMMARY

You should now be able to:

- Post stock transfer postings using the one-step and two-step procedures

Performing Stock Transfers Between Plants

LESSON OVERVIEW

This lesson introduces you to physical stock transfers between two plants of a company code using the one-step and two-step procedures, and by using a stock transport order.

Business Example

Parts that are prefabricated in one of your plants must be transferred to your main plant for final assembly. You want to test the process of stock transfer with and without a stock transport order. For this reason, you require the following knowledge:

- How to perform a stock transfer between plants in the same company code using the one-step and two-step procedures
- How to create a stock transport order
- How to perform a stock transfer with reference to a stock transport order using the two-step procedure



Hint:

Stock transfers with shipping are dealt with in course SCM680 (Cross-Application Processes in Sales and Distribution (SD) and Materials Management (MM)).

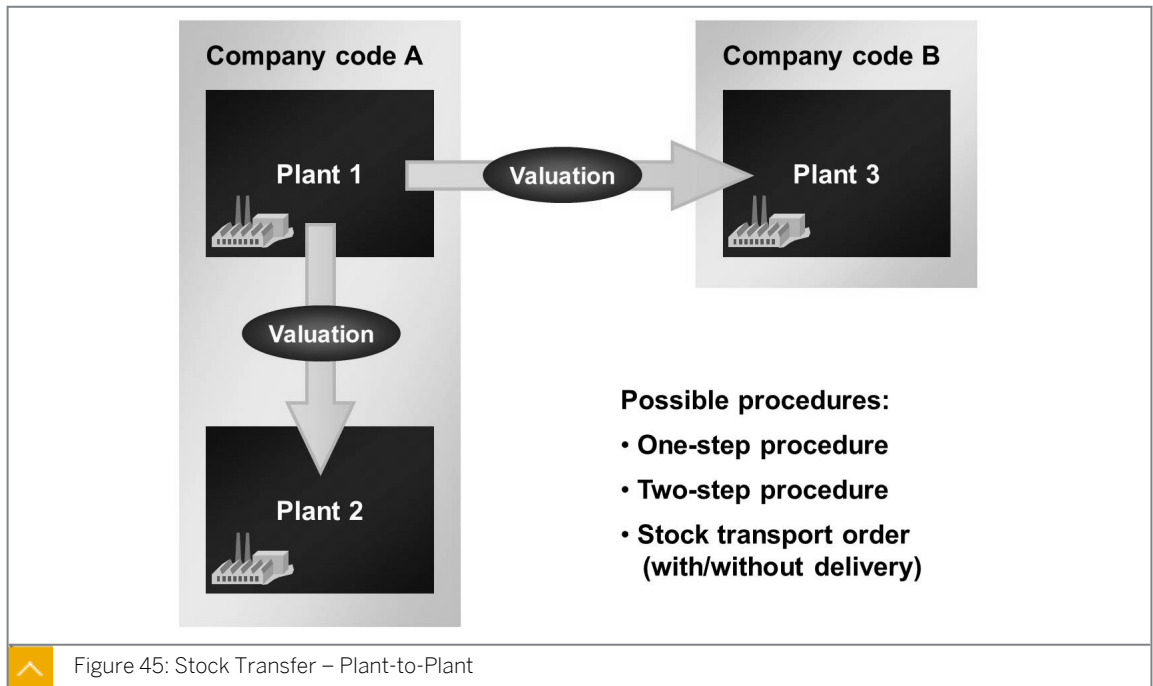


LESSON OBJECTIVES

After completing this lesson, you will be able to:

- Post plant-to-plant stock transfer postings

Cross-Plant Stock Transfer



In the case of a plant-to-plant stock transfer, the plants between which material is transferred can belong either to the same company code or to different ones. **As a general rule, cross-plant stock transfers can only be booked out of unrestricted-use stock.**

In contrast to a storage-location-to-storage-location stock transfer, a plant-to-plant transfer affects Financial Accounting (FI) and material requirements planning (MRP) in the following ways:

- FI (only if the two plants are assigned to different valuation areas)

A cross-plant stock transfer leads to a value update in the stock accounts. An accounting document is generated parallel to the material document for the stock transfer. **The stock transfer is valued at the valuation price of the material in the issuing plant.**

In the case of a cross-company-code stock transfer, two accounting documents are created at the time of posting - one for each company code. The offsetting entry to the stock posting is then made to a company-code clearing account.



Hint:

If the stock transfer is entered in two separate steps, valuation always takes place at the time of the first step.

- MRP

A change in the plant stock is taken into account by MRP.

Procedures for the Physical Transfer of Materials

The procedures available for the physical transfer of materials from one plant to another are as follows:

- One-step procedure
- Two-step procedure

The possible scenarios for a stock transfer using the two-step procedure are as follows:

- The plants are located far away from each other and the goods remain in transit for a certain time.
- A different employee is responsible in each plant, each of whom can post movements only in the plant of the employee.
- **Stock transport order without delivery (only possible with the two-step procedure)**
- Stock transport order with delivery via shipping (possible with the one-step or two-step procedure, and also with the billing document).

The approaches to the entry of plant-to-plant stock transfers for the one-step and two-step procedures without a stock transport order correspond to those for storage-location-to-storage-location transfers.

Plant-to-Plant – One-Step and Two-Step Procedures

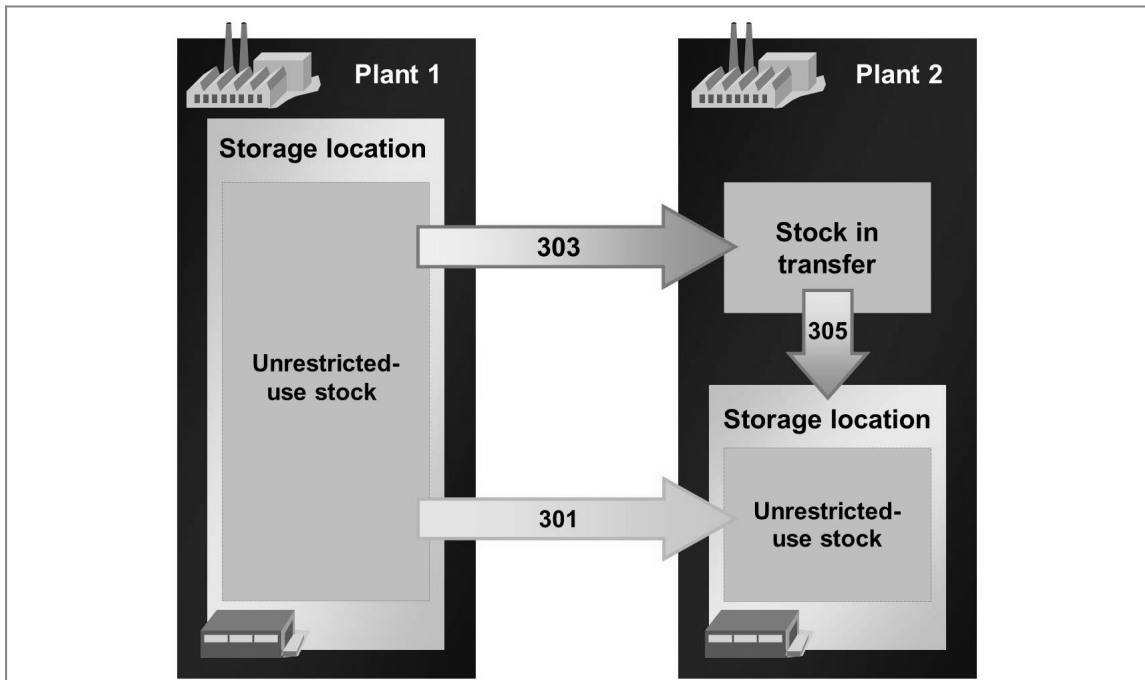


Figure 46: Plant-to-Plant – One-Step and Two-Step Procedures

The plant-to-plant stock transfer procedures are as follows:

- One-step procedure

In the one-step procedure, the goods issue (GI) and goods receipt (GR) are posted in a single material document. Therefore, you must enter all relevant data such as the material, issuing plant, issuing storage location, receiving plant, and receiving storage location in this one step. The movement type (in the standard system) is 301.

- Two-step procedure

In the two-step procedure, when removing the material from storage (movement type 303), you must specify the receiving plant in addition to the material and the issuing organizational levels. This is necessary because valuation of the stock transfer takes place when the material is removed from storage and posted to stock in transfer at the receiving plant. You can either enter the putaway (placement in storage, movement type 305) with reference to the material document of the stock removal or enter all data manually.

As a result of the putaway, the quantity is booked out of stock in transfer and into unrestricted-use stock at the receiving plant. Valuation of the putaway is not necessary, because the stock in transfer and the unrestricted-use stock at the receiving storage location belong to the same plant.

Stock Transport Order (Without Delivery)

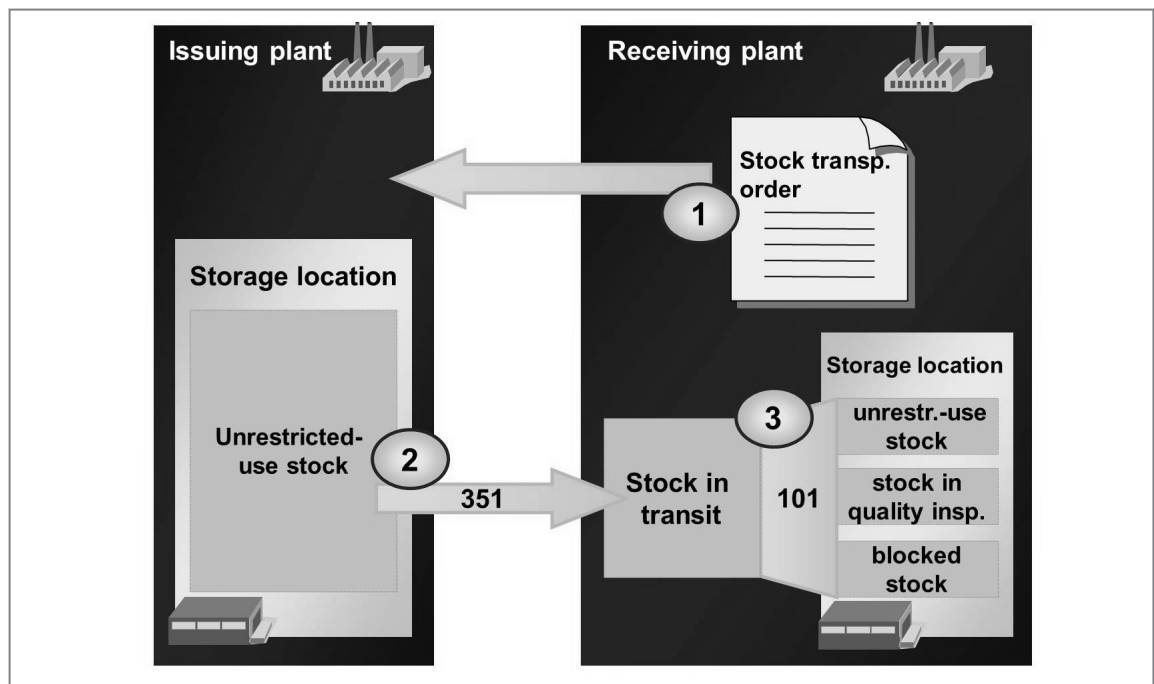


Figure 47: Stock Transport Order

This type of stock transfer involves not only inventory management but also Purchasing at the receiving plant.

Stock transport order process:

1. In the receiving plant, the stock transport order is entered in the purchasing department.
2. A GI referencing this stock transport order is entered in the issuing plant.
3. The quantity booked out is initially managed as stock in transit, at the receiving plant.
4. The GR is posted against the stock transport order at the receiving plant.

A stock transfer using a stock transport order has the following advantages, compared to a stock transfer without a stock transport order:

- The stock transport order is integrated within MRP. You can convert the purchase requisitions generated by MRP into stock transport orders.
- The MRP controller can plan the receipt at the receiving plant.
- You can enter delivery costs and a forwarder or carrier in the stock transport order.

- You can enter an account assignment in a stock transport order item. Therefore you can post the GR directly to consumption.
- In the case of a GR into the warehouse, you can also post the material to stock in quality inspection or to blocked stock.
- You can monitor the entire process (GI and GR) via the PO history.

Stock in Transit

To determine the quantity of a material that is transferred to a plant with or without a stock transport order, you can classify the stock segment as follows:

Stock Segment	Stock Transport Order
Stock in transfer	No
Stock in transit	Yes

The stock in transit is shown in the material master record in the plant stock view for the receiving plant.

A special report for the analysis of transit stocks is available under *Inventory Management* menu → *Stock* → *Stock in Transit (MB5T)*. For example, with the special report for the analysis of transit stocks report, you can select transit stocks for the receiving or issuing plant.

Stock in transit also displays in the *Stock Overview* and the *Warehouse Stocks of Material* report. In the *Warehouse Stocks of Material* report, stocks in transit and stocks in transfer are summarized at plant level in a stock line without a storage location.

Damage to Goods During Transportation

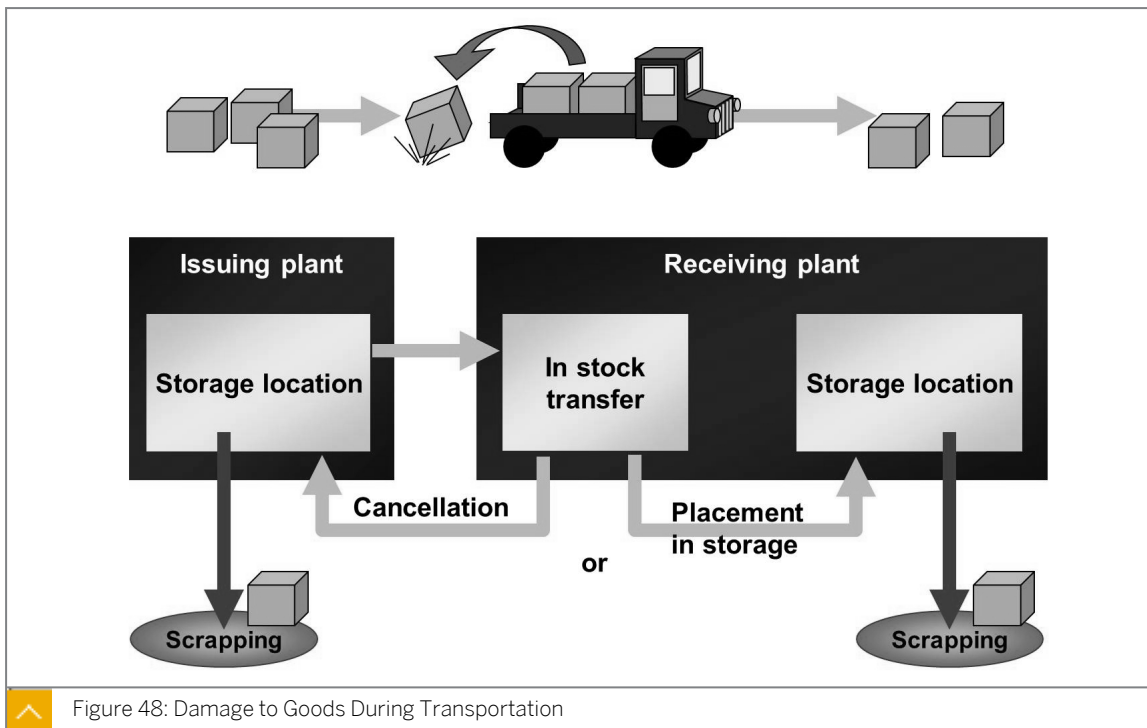


Figure 48: Damage to Goods During Transportation

If goods are damaged during transportation, leading to their destruction, you must report this as scrapping so that the system can arrive at the correct quantity of stock in transfer or stock in transit.



You can report scrapping in the following ways:

- Reverse the removal from storage at the issuing plant and then post the scrapping of the material at the issuing plant. The scrapping is posted on a value basis in the issuing plant.
- Place the full quantity of the goods into storage at the receiving plant and then post the scrapping at the receiving plant. The scrapping is posted on a value basis at the receiving plant.

It is important that the quantity destroyed does not remain in stock in transfer or stock in transit, but is reported in the system as scrapped.



To Post a GI for a Stock Transport Order

1. On the *SAP Easy Access* screen, choose *Logistics* → *Materials Management* → *Inventory Management* → *Goods Movement* → *Transfer Posting* (MIGO).
2. Enter transaction *Goods Issue* and, as the reference, enter *Purchase Order*.
3. Check the default value for the movement type and change it to 351, if necessary.
4. Enter the number of the stock transport order. (To find the PO, choose  (*Find Purchase Order*)).
5. Choose  (*Execute*) to copy the items from the PO.
6. Choose the items you want to remove from storage using the *OK* checkbox. If necessary, change the default quantity for the items and specify the storage location from which the material is to be withdrawn.
7. Post the GI.

A material document and an accounting document are generated. The quantity is booked out of the issuing plant. At the receiving plant, the material is not yet part of unrestricted-use stock. Instead, it is recorded as stock in transit at plant level. The PO history is also updated.



Hint:

Post the placement of the stock in transit into storage (stock putaway) via a GR against the stock transport order. Enter this GR in the same way as a GR against a normal PO. However, you cannot post the GR to the GR blocked stock.

Post Stock Transfers Between Plants

Business Example

You must transfer parts that are prefabricated in your plant to the main plant for final assembly. Use stock transport orders for all cross-plant stock transfers.

Task 1

Enter the GI and GR for a stock transport order. Monitor the process in the PO history and in FI. Display the stock in transit.

1. Display PO 4151-08### and note of the following information:

Field	Value
<i>Document type</i>	
<i>Supplying plant</i>	
<i>Item Category</i>	
<i>Plant for items (ordering plant)</i>	
Stock type for item10	
Stock type for item20	

2. Enter the GI for the PO. The materials are withdrawn from storage location 0001 of plant 1000.



Caution:

Delete the entry in the *Plant* field of the header data (you find the *Plant* field after the *Purchase Order Number* and *Purchase Order Item* fields) or enter the plant to which the stock is transferred (plant 1200).

Display the accounting document and PO history after posting.

3. Display the stock in transit at the receiving plant.
4. Enter the GR in plant 1200 against PO 4151-08###. Display the PO history.

5. Which of the following stock transfers is relevant to accounting?

Choose the correct answers.

- A Stock transfer between storage locations of the same plant using the one-step or two-step procedure
- B Stock transfer between storage locations in different plants using the one-step procedure
- C Removal from storage in the case of a stock transfer between plants
- D Placement in storage (putaway) in the case of a stock transfer between plants
- E Stock transfers between storage locations in different company codes
- F All stock transfers

Task 2

Creating a Stock Transport Order

Some materials are replenished from a depot. To efficiently plan and evaluate the transfer of stock, you perform all such transfers using POs. Create a stock transport order for **10 PC** of material **T-M510A##** from plant **1000** to plant **1200**, storage location **0001**. Note the PO number.

1. Create a stock transport order with the following data:

Field	Value
<i>Document type</i>	Stock transport order
<i>Supplying plant</i>	1000 (Hamburg)
<i>Purchasing organization</i>	1000 (IDES Deutschland)
<i>Purchasing group</i>	T## (SCM500-##)
<i>Company code</i>	1000 (IDES AG)
<i>Material</i>	T-M510A##
<i>Quantity</i>	10 pc
<i>Delivery Date</i>	<Today + 7 days>
<i>Plant</i>	1200 (Dresden)
<i>Storage Location</i>	0001 (Materiallager)
<i>PO number</i>	

Post Stock Transfers Between Plants

Business Example


You must transfer parts that are prefabricated in your plant to the main plant for final assembly. Use stock transport orders for all cross-plant stock transfers.

Task 1

Enter the GI and GR for a stock transport order. Monitor the process in the PO history and in FI. Display the stock in transit.

1. Display PO 4151-08## and note of the following information:

Field	Value
Document type	
Supplying plant	
Item Category	
Plant for items (ordering plant)	
Stock type for item10	
Stock type for item20	

- a) On the SAP Easy Access screen, choose *Logistics → Materials Management → Purchasing → Purchase Order → Display (ME23N)*.
- b) Choose  (*Other Purchase Order*).
- c) In the *Select Document* dialog box, enter PO number **4151-08##** and choose *Other Document* pushbutton.
- d) The following data displays:

Field	Value
Document type	Stock transport order
Supplying plant	Hamburg (1000)
Item Category	U
Plant for items (ordering plant)	Dresden (1200)
Stock Type for item 10	Quality inspection
Stock Type for item 20	Blocked stock

**Note:**

The Dresden plant orders from the Hamburg plant. The stock type displays in the item details on the *Delivery* tab page.






2. Enter the GI for the PO. The materials are withdrawn from storage location 0001 of plant 1000.

**Caution:**

Delete the entry in the *Plant* field of the header data (you find the *Plant* field after the *Purchase Order Number* and *Purchase Order Item* fields) or enter the plant to which the stock is transferred (plant 1200).

Display the accounting document and PO history after posting.

- a) On the *SAP Easy Access* screen, choose *Logistics* → *Materials Management* → *Inventory Management* → *Goods Movement* → *Goods Movement (MIGO)*.
 - b) Enter transaction *Goods Issue* and, as the reference, enter *Purchase Order*.
 - c) Enter the PO number **4151-08##** and delete the value in the *Plant* field.
 - d) Check the movement type *351 (Transfer Posting to stock in transit from unrestricted-use)* and then choose (*Execute*).
 - e) Select the *Item OK* checkbox for both the items.
 - f) In the *Storage Location* field, enter **0001** for both items. Choose the *Post* pushbutton.
 - g) Enter transaction *Display*, and, as the reference, enter *Material Document*. Choose (*Execute*).
 - h) On the *Document Info* tab page, choose the *FI Documents* pushbutton to display the accounting document.
 - i) In the *List of Documents in Accounting* dialog box, double-click on the *Accounting Document*.
 - j) Return to the material document by choosing the *Back* icon and then the *Cancel* icon in the dialog box.
 - k) On the *PO Data* tab page, double-click the PO number to display the PO.
 - l) In the item details, choose the *PO History* tab page.
 - m) Select the *Back* icon.
3. Display the stock in transit at the receiving plant.
 - a) In the transaction *MIGO*, enter transaction *Display*, and, as the reference, enter *Material Document*.
 - b) On the *Transfer Posting* tab page, choose (*Stock Overview*) for the first item (*T-M510A##*) for plant 1200.

- c) Choose the *Plant 1200* and then choose  (*Detailed Display*).
 - d) On the *Stock Overview: Basic List* dialog box, check the values for *T-M510A##*.
 - e) After viewing the stock in transit, choose  (*Continue*).
 - f) Repeat steps b-c for the second item (*T-M510B##*).
The stock in transit at plant *1200* shows *100 pc* for material *T-M510A##* and *100 PC* for material *T-M510B##*.
4. Enter the GR in plant *1200* against PO *4151-08##*. Display the PO history.
- a) On the *SAP Easy Access* screen, choose *Logistics → Materials Management → Inventory Management → Goods Movement → Goods Movement (MIGO)*.
 - b) Enter transaction *Goods Receipt* and, as the reference, enter *Purchase Order*.
 - c) Check the value *101* in the *Movement Type* field.
 - d) Enter PO number **4151-08##** and choose  (*Execute*).
 - e) Select the *Item OK* checkbox for both items and choose  (*Post*).
 - f) Enter transaction *Display* and, as the reference, enter *Material Document*.
 - g) Choose  (*Execute*).
 - h) On the *Purchase Order Data* tab page, double-click the PO number to display the PO.
 - i) In the item details, choose the *PO History* tab page.

To which plant was the stock in transit posted?

In the case of a GI for a PO, the materials are booked into the stock in transit of the receiving plant (here, plant 1200).

5. Which of the following stock transfers is relevant to accounting?

Choose the correct answers.

- A Stock transfer between storage locations of the same plant using the one-step or two-step procedure
- B Stock transfer between storage locations in different plants using the one-step procedure
- C Removal from storage in the case of a stock transfer between plants
- D Placement in storage (putaway) in the case of a stock transfer between plants
- E Stock transfers between storage locations in different company codes
- F All stock transfers

Goods movements between valuation areas are relevant to accounting. The valuation area in this case is the plant. Stock transfers within the plant are, therefore, never relevant to accounting.

Task 2

Creating a Stock Transport Order

Some materials are replenished from a depot. To efficiently plan and evaluate the transfer of stock, you perform all such transfers using POs. Create a stock transport order for **10 pc** of material **T-M510A##** from plant **1000** to plant **1200**, storage location **0001**. Note the PO number.

1. Create a stock transport order with the following data:

Field	Value
<i>Document type</i>	Stock transport order
<i>Supplying plant</i>	1000 (Hamburg)
<i>Purchasing organization</i>	1000 (IDES Deutschland)
<i>Purchasing group</i>	T## (SCM500-##)
<i>Company code</i>	1000 (IDES AG)
<i>Material</i>	T-M510A##
<i>Quantity</i>	10 pc
<i>Delivery Date</i>	<Today + 7 days>
<i>Plant</i>	1200 (Dresden)
<i>Storage Location</i>	0001 (Materiallager)
PO number	

- a) On the *SAP Easy Access* screen, choose *Logistics → Materials Management → Purchasing → Purchase Order → Create → Vendor/Supplying Plant Known (ME21N)*.
- b) Choose the *Stock Transport Order* document type.
- c) Enter **1000** in the *Supplying Plant* field.
- d) Enter the following header data on the *OrgData* tab page.



Hint:
To display the header data, choose the *Header* pushbutton.

Field	Value
<i>Purchasing Organization</i>	1000
<i>Purchasing Group</i>	T##
<i>Company Code</i>	1000

- e) Enter the following data in the item overview:

Field	Value
<i>Material</i>	T-M510A##
<i>Quantity</i>	10
<i>Delivery Date</i>	<Today + 7 days>
<i>Plant</i>	1200
<i>Storage Location</i>	0001

- f) Save the stock transport order.



LESSON SUMMARY

You should now be able to:

- Post plant-to-plant stock transfer postings

Learning Assessment

1. Which of the following features relate to material-to-material transfer postings?

Choose the correct answers.

- A They cannot be preplanned via a reservation.
- B They can be posted only from unrestricted-use stock of the issuing material to unrestricted-use stock of the receiving material.
- C They can be posted for materials with a different base unit of measure.
- D They can be used in multiple transactions at the same time.

2. Which of the following statements about the one-step and two-step procedures are true?

Choose the correct answers.

- A In the two-step procedure, you enter a single transaction in the system.
- B You can post a storage-location-to-storage-location stock transfer using the one-step procedure for all stock types.
- C Once you post the goods issue (GI) from the issuing point, the stock is regarded as in transfer at the receiving point.
- D The system generates the first material document item at the time of goods receipt (GR).

3. How does a plant-to-plant transfer affect Financial Accounting (FI)?

Choose the correct answers.

- A In the case of cross company transfer, only one accounting document is generated for the stock transfer.
- B It leads to a value update in the stock accounts.
- C The stock transfer is valued at the valuation price of the material in the issuing plant.
- D Plant-to-plant transfers do not affect FI.

4. Why is the valuation of the putaway not necessary in the two-step procedure?

Choose the correct answer.

- A** Because the stock in transfer and the stock at the receiving storage location belong to the same plant
- B** Because the stock in transfer and the stock at the receiving storage location belong to different plants
- C** Because the quantity is booked out of stock in transfer
- D** Because the quantity is booked into unrestricted-use stock at the receiving plant

Learning Assessment - Answers

1. Which of the following features relate to material-to-material transfer postings?

Choose the correct answers.

- A They cannot be preplanned via a reservation.
- B They can be posted only from unrestricted-use stock of the issuing material to unrestricted-use stock of the receiving material.
- C They can be posted for materials with a different base unit of measure.
- D They can be used in multiple transactions at the same time.

2. Which of the following statements about the one-step and two-step procedures are true?

Choose the correct answers.

- A In the two-step procedure, you enter a single transaction in the system.
- B You can post a storage-location-to-storage-location stock transfer using the one-step procedure for all stock types.
- C Once you post the goods issue (GI) from the issuing point, the stock is regarded as in transfer at the receiving point.
- D The system generates the first material document item at the time of goods receipt (GR).

3. How does a plant-to-plant transfer affect Financial Accounting (FI)?

Choose the correct answers.

- A In the case of cross company transfer, only one accounting document is generated for the stock transfer.
- B It leads to a value update in the stock accounts.
- C The stock transfer is valued at the valuation price of the material in the issuing plant.
- D Plant-to-plant transfers do not affect FI.

4. Why is the valuation of the putaway not necessary in the two-step procedure?

Choose the correct answer.

- A** Because the stock in transfer and the stock at the receiving storage location belong to the same plant
- B** Because the stock in transfer and the stock at the receiving storage location belong to different plants
- C** Because the quantity is booked out of stock in transfer
- D** Because the quantity is booked into unrestricted-use stock at the receiving plant

Lesson 1

Creating Manual Reservations	192
Exercise 19: Create Reservations Manually	197
Exercise 20: Enter a Stock Transfer with Reference to Reservations	205

Lesson 2

Evaluating Reservations	209
Exercise 21: Manage Reservations	217
Exercise 22: Delete Reservations	221



UNIT OBJECTIVES

- Create, change, and display manual reservations
- Use reservations as a reference for a goods movement
- Execute the evaluations from the reservation menu

Creating Manual Reservations

LESSON OVERVIEW

This lesson covers the purpose and structure of a reservation, as well as the difference between automatically created and manually entered reservations.

Business Example

To guarantee material availability, you need to reserve the required materials (with the intended purpose), quantity, and requirement date. For this reason, you require the following knowledge:

- An understanding of the structure of a reservation and the information it contains
- How to create a reservation manually, with and without a reference
- How to change the data in a reservation
- How to enter a goods movement with reference to a reservation



LESSON OBJECTIVES

After completing this lesson, you will be able to:

- Create, change, and display manual reservations
- Use reservations as a reference for a goods movement

Function and Origin of a Reservation

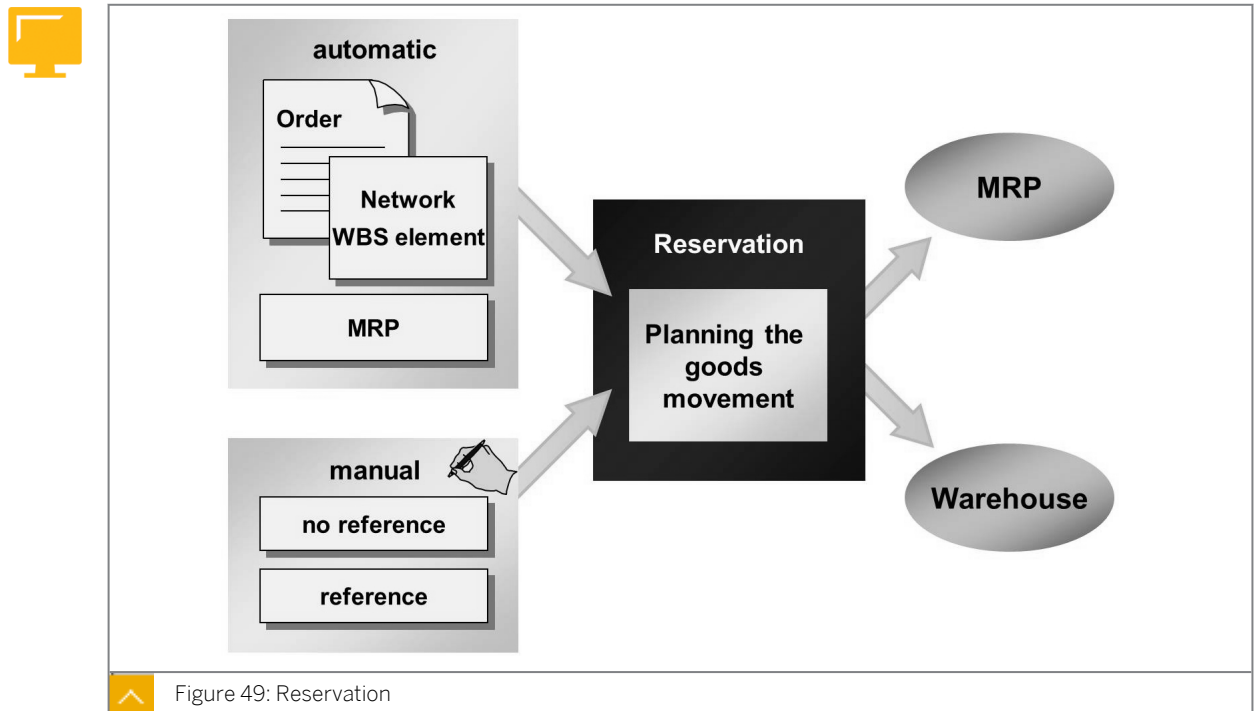


Figure 49: Reservation

A reservation is the requirement of the warehouse to make the materials for a goods movement (generally a withdrawal) ready at a later date and for a particular purpose. You must consider **reservations in materials planning** so that a required material can be procured at the right time. A reservation also simplifies and speeds up the entry process, and helps prepare the work in the goods issuing department.

Typically, you preplan goods issues (GIs) and transfer postings with a reservation, but you can also preplan goods receipts (GRs).

Preplanning of transfer postings is only possible for transfer postings in the one-step procedure, from storage location to storage location (movement type 311) and plant to plant (movement type 301). The preplanning of GRs with a reservation must only take place in exceptional cases. If you are using purchasing and production, then GRs are planned with purchase orders (POs) and production orders. Receipt reservations are not necessary.

You enter manual reservations and the SAP ERP application generates automatic reservations.

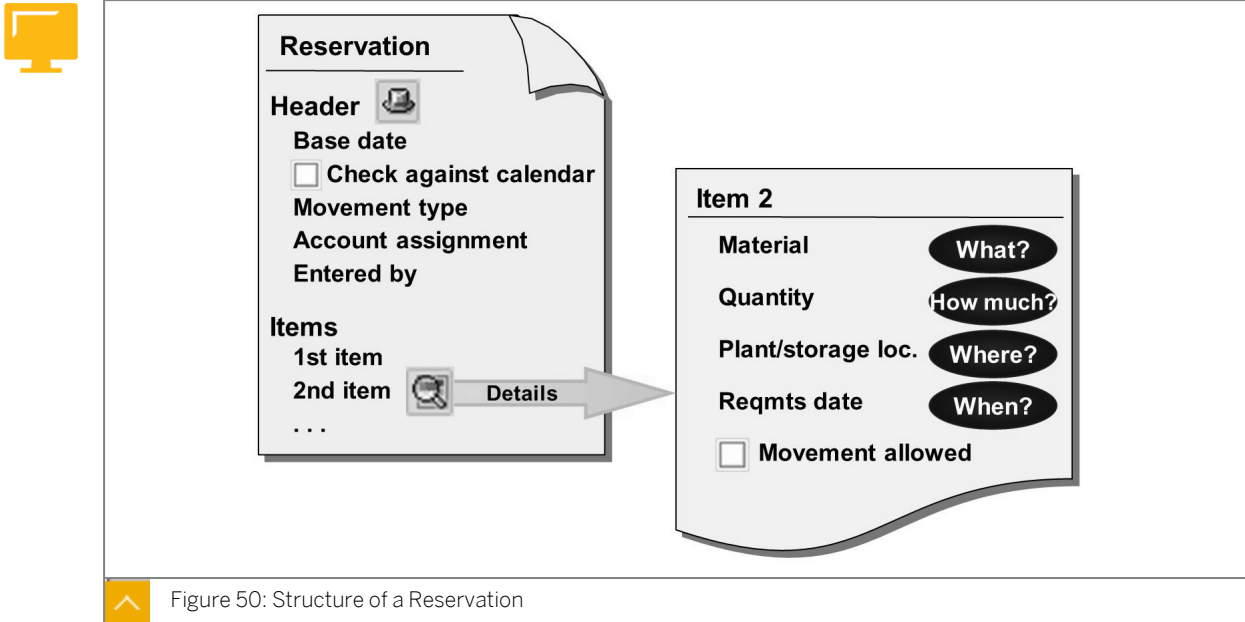
The types of automatic reservations are as follows:

- Dependent reservations
 - These reservations are for orders, networks, and work breakdown structure (WBS) elements.
 - When you open an order, network, or project, the system automatically reserves the warehouse components.
- Stock transfer reservations
 - These reservations plan transfers between storage locations. If, for example, reorder point planning is managed at storage location level, and the available stock falls short of the

reorder point, the system creates a stock transfer reservation in the plant with the amount of the replenishment quantity.

Although you can display dependent reservations, you cannot maintain them directly. For example, you cannot change a dependent reservation for an order directly, but need to change the components in the order. The system then automatically updates the reservation.

Structure of a Reservation



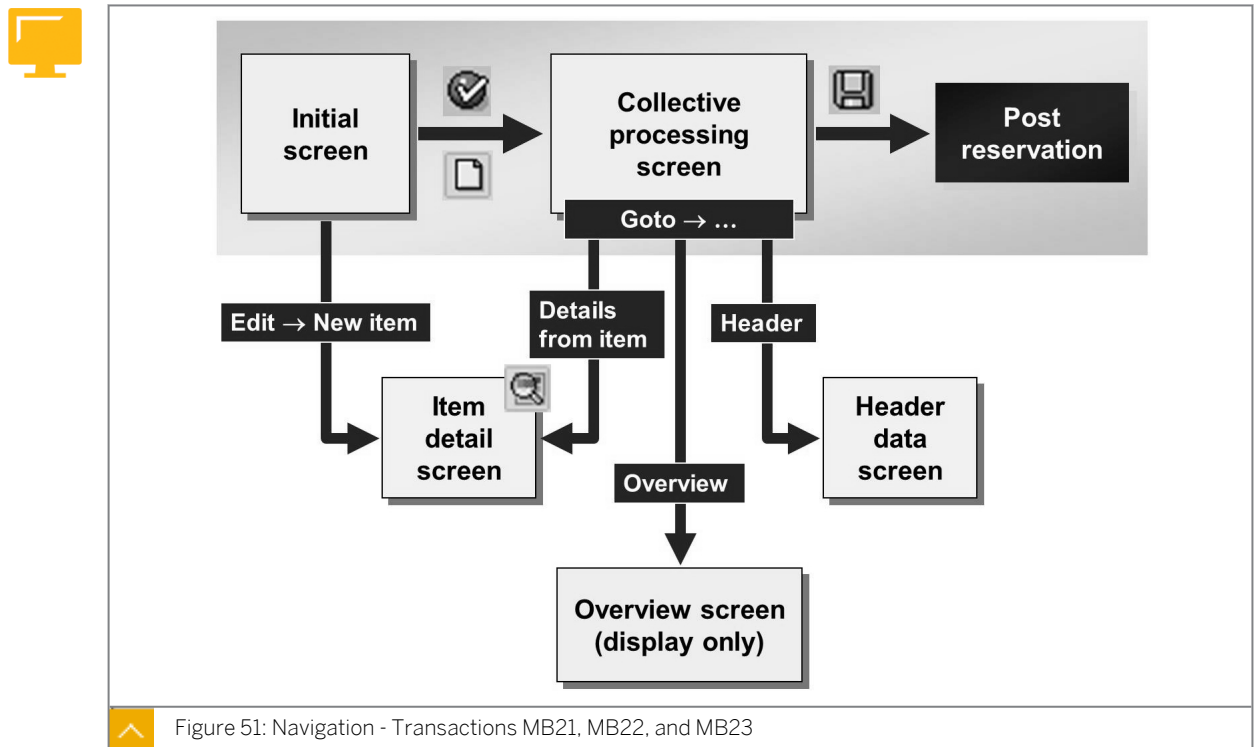
A reservation document consists of a header and at least one item. The header contains general data about the reservation transaction (created by, movement type, account assignment, and base date). The items describe the individually planned movements (material, quantity, requirement date, plant, and storage location).



Caution:

You can only enter one movement type in a reservation and create one account assignment (for example, a particular cost center). You cannot change these two entries after posting.

Creation and Processing of a Reservation



You can also find the breakdown into header and item data in transactions Create Reservation (MB21), Change Reservation (MB22), and Display Reservation (MB23). In these transactions, you first see the initial screen from which you can reach other data screens. When creating and changing reservations, you can quickly enter the important data for the header and item on the collective processing screen.

To display the detail screens for the header data and each item, choose *Goto → Header* and *Goto → Details from Item*.

To access an overview screen that displays the individual items with more-detailed data, choose *Goto → Overview*.



Hint:

You cannot make changes on the overview screen. To make changes, go to the collective processing screen (choose *Goto → Collective Processing*). From the collective processing screen, you can also choose an item to display to the item detail screen.

When you create a reservation, you can also refer to another reservation. You can then change the base date, movement type, and account assignment data. The system suggests the items from the reference reservation, and you can select the items you want to copy. You can also change the quantities and requirement dates of the items.



Hint:

To specify whether copying is already set for all items in the reference reservation, go to Customizing for *Inventory Management and Physical Inventory* under *Reservation* → *Maintain Copy Rules for Reference Documents*.



To Create a Reservation Manually

1. On the *SAP Easy Access* screen, choose *Logistics* → *Materials Management* → *Inventory Management* → *Reservation* → *Create* (MB21).
The *Create Reservation: Initial* screen displays.
2. Enter the base date, movement type, and plant.



Hint:

If you want to use another reservation as a reference, enter the reservation number in the *Reference - reservation* field.

3. Choose *Enter*. The collective processing screen displays.
4. Enter the necessary account assignment data and, if necessary, the goods recipient. Enter the data necessary for the individual items.



Hint:

Double-click the item to call up the details of the item.

5. Post the reservation.



To Change the Base Date of a Reservation

1. On the *SAP Easy Access* screen, choose *Logistics* → *Materials Management* → *Inventory Management* → *Reservation* → *Change*.
The *Change Reservation: Initial* screen displays.
2. Enter the reservation number.
3. Choose *Goto* → *Header*.
4. Change the base date and choose *Enter*. This takes you to a screen that lists the old and new requirement dates for the individual items.
5. If necessary, change individual requirement dates and copy the data by choosing *Enter*.
6. Post the reservation.

Create Reservations Manually

Business Example

You plan to transfer part of the stock of material *T-M510A##* to another warehouse. You need to create a reservation manually to achieve this.

Create two reservations for the same movement type using the copying function.

1. Create a reservation for a transfer posting of 10 pieces for material **T-M510A##** and **T-M510B##** from plant 1200, storage location 0001, to storage location 0002. The stock transfer is to be executed in one week.
Note the reservation number: _____.
2. Create a second reservation for a stock transfer in two weeks. Use the reservation that you created in step 1 as the reference. For the second reservation, you do not yet know the storage location from which the materials are to be withdrawn. Therefore, before copying data, you must delete the storage location entry.
With the same reservation, reserve 10 pieces of material **T-M510C##** for a stock transfer from storage location 0001 to storage location 0002 in plant 1200 for <Today + 16 days>.
Note the reservation number: _____.
3. You have received information that the first stock transfer will start in two weeks. Change the base date of the reservation you created in step 1 from one week to <today + 14 days>.
4. Display the reservation stocks of material *T-M510A##* for plant 1200 in the stock overview and complete the following table:

Organization level	Stock	Quantity
<i>Plant 1200</i>	Reserved	
<i>Plant 1200</i>	Receipt Reservation	
<i>Plant 1200, Storage Location 0001</i>	Reserved	
<i>Plant 1200, Storage Location 0001</i>	Receipt Reservation	
<i>Plant 1200, Storage Location 0002</i>	Reserved	
<i>Plant 1200, Storage Location 0002</i>	Receipt Reservation	

5. Why is there a higher reservation stock managed at plant level than at storage location level?

Create Reservations Manually

Business Example

You plan to transfer part of the stock of material *T-M510A##* to another warehouse. You need to create a reservation manually to achieve this.

Create two reservations for the same movement type using the copying function.

1. Create a reservation for a transfer posting of 10 pieces for material **T-M510A##** and **T-M510B##** from plant 1200, storage location 0001, to storage location 0002. The stock transfer is to be executed in one week.

Note the reservation number: _____.

- a) On the *SAP Easy Access* screen, choose *Logistics → Materials Management → Inventory Management → Reservation → Create (MB21)*.
- b) Choose *Movement Type → Transfer Posting → From SLoc. to SLoc.* (movement type 311).
- c) Enter the following data for material *T-M510A##*:

Field	Value
<i>Base Date</i>	<Today + 7 days>
<i>Plant</i>	1200

- d) Choose *Continue*.
- e) On the *Create Reservation: initial* screen, enter the following data for the first item:

Field	Value
Receiving Storage Location	0002
<i>Material</i>	T-M510A##
<i>Quantity</i>	10
Storage Location	0001

- f) Enter the same data for material *T-M510B##*.
 - g) Save your data.
2. Create a second reservation for a stock transfer in two weeks. Use the reservation that you created in step 1 as the reference. For the second reservation, you do not yet know the storage location from which the materials are to be withdrawn. Therefore, before copying data, you must delete the storage location entry.

With the same reservation, reserve 10 pieces of material **T-M510C##** for a stock transfer from storage location 0001 to storage location 0002 in plant 1200 for <Today + 16 days>.


Note the reservation number: _____.

- a) On the *SAP Easy Access* screen, choose *Logistics* → *Materials Management* → *Inventory Management* → *Reservation* → *Create* (MB21).
- b) Enter the reservation number (use the reservation that you created in step 1 as a reference), and enter the following data:

Field	Value
<i>Base Date</i>	<Today +14 days>
<i>Plant</i>	1200

- c) Choose *Enter*.
- d) Delete the storage location entries of both items and verify that both items are selected.
- e) Choose (*Adopt*) and then choose (*New Items*).
- f) Enter the following data:

Field	Value
<i>Material</i>	T-M510C##
<i>Quantity</i>	10
<i>Storage Location</i>	0001



- g) To confirm your entries, choose *Enter*.
 - h) Position the cursor on item 3 and choose  (*Choose*). The system displays the detail data for item 3.
 - i) Change the requirement date to <Today + 16 days>.
 - j) Save the reservation and note the reservation number.
3. You have received information that the first stock transfer will start in two weeks. Change the base date of the reservation you created in step 1 from one week to <today + 14 days>.
- a) On the *SAP Easy Access* screen, choose *Logistics* → *Materials Management* → *Inventory Management* → *Reservation* → *Change* (MB22).
 - b) Enter the reservation number you created previously.
 - c) Choose *Goto* → *Header*.
 - d) Enter <Today +14 days> in the *Base Date* field.
 - e) Choose *Enter*.
 - f) Save the reservation.

4. Display the reservation stocks of material T-M510A## for plant 1200 in the stock overview and complete the following table:

Organization level	Stock	Quantity
Plant 1200	Reserved	
Plant 1200	Receipt Reservation	
Plant 1200, Storage Location 0001	Reserved	
Plant 1200, Storage Location 0001	Receipt Reservation	
Plant 1200, Storage Location 0002	Reserved	
Plant 1200, Storage Location 0002	Receipt Reservation	

- a) On the SAP Easy Access screen, choose *Logistics → Materials Management → Environment → Stock → Stock Overview (MMBE)*.
- b) Enter the following data:

Field	Value
Material	T-M510A##
Plant	1200

- c) Choose  (Execute).
- d) Position the cursor on the relevant line.
- e) Choose  (Detailed Display).

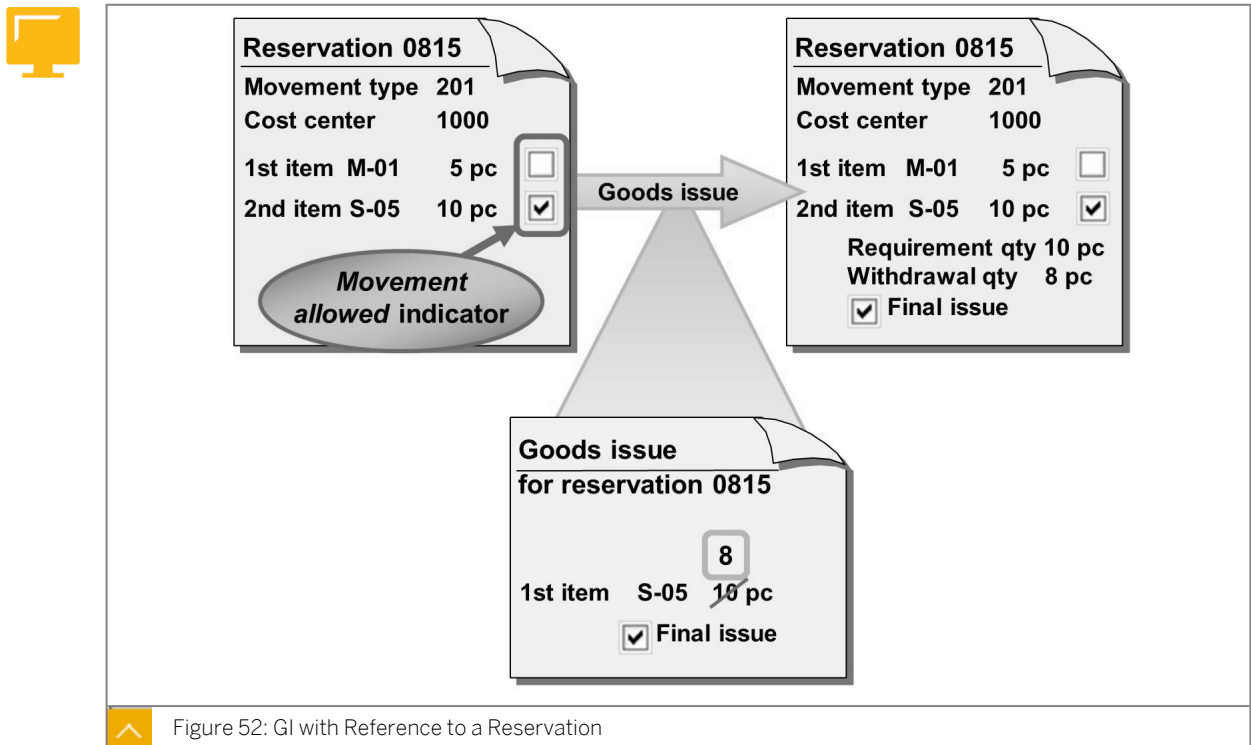
The following data displays:

Organization level	Stock	Quantity
Plant 1200	Reserved	20
Plant 1200	Receipt Reservation	20
Plant 1200, Storage Location 0001	Reserved	10
Plant 1200, Storage Location 0001	Receipt Reservation	0
Plant 1200, Storage Location 0002	Reserved	0
Plant 1200, Storage Location 0002	Receipt Reservation	20

5. Why is there a higher reservation stock managed at plant level than at storage location level?

You created a reservation without a storage location entry. You can only show the reserved quantity of 10 pieces in the reservation stock at plant level. For the confirmed reservations (*Rcpt reservations*) stock, you also specify 20 pieces at the storage location level, because the receiving storage location must be entered in the reservation for a storage-location-to-storage-location transfer posting.

Goods Movement with Reference to a Reservation



When posting a goods movement, you can refer only to reservation items for which the *Movement Allowed* checkbox is selected. With this checkbox, you can also prevent a goods movement from being posted to a reservation item. This is useful if the requirement date for the material is far in the future.

If you determine the reservation with the search function during the goods movement, the system selects only reservation items for which the *Movement Allowed* checkbox is selected.



Hint:

In Customizing, you can specify for each plant whether the *Movement Allowed* indicator is selected when you create a reservation for the items.



Go to Customizing for *Materials Management* under *Inventory Management and Physical Inventory* → *Reservation* → *Define Default Values*.

You can select or deselect the checkbox for all items. Choose *Edit* → *Other Functions* → *For All Items* → *Movement In/Out*. With the *Manage Reservations* report, you can specify that the system selects the checkbox automatically for several reservations.

If you issue the total reserved quantity during the GI, the system automatically selects the *Final Issue* checkbox. You can select the checkbox manually if you do not issue the total reserved quantity and the remaining quantity is no longer required. In this case, the remaining quantity is deemed as unrestricted-use stock. You can select the *Final Issue* checkbox when you enter the goods movement in the reservation.



To Post a Goods Movement with Reference to a Reservation

1. On the *SAP Easy Access* screen, choose *Logistics* → *Materials Management* → *Inventory Management* → *Goods Movement* → *Goods Movement (MIGO)*.
2. Choose whether you want to execute a GI, transfer posting, or GR. Enter *Reservation* as the reference.
3. Verify that there is no default value entered for the movement type, as the movement type is copied from the reservation.
4. Enter the reservation number. (You can also choose  (*Find reservation*) to search for the reservation by material, plant, and account assignment.)
5. To transfer the items from the reservation, choose  (*Execute*).
6. Select the relevant items using the *OK* checkbox. If necessary, change the default quantity for the items and specify a storage location.



Hint:

To select the Final Issue checkbox manually, open the detail data for the item and choose the Reservation tab page.

7. Post the goods movement.

Enter a Stock Transfer with Reference to Reservations

Business Example

You plan to transfer part of the stock of material *T-M510A##* to another warehouse. You need to create a reservation manually to achieve this.

Enter a stock transfer in the system using the reservations from the exercise on how to create reservations manually as reference documents. Then, display the reservations again.

1. Enter the transfer posting in the system. Post both reservations from the exercise on how to create reservations manually as reference documents in a document. All materials are withdrawn from storage location *0001*. Only five pieces of material *T-M510C##* are transferred; the remainder is no longer needed. Select the *Final issue Effected* checkbox in the reservation.
2. Display both reservations and verify that the *Final Issue* checkbox is selected for all the reservation items.
3. Which of the following statements is true?

Choose the correct answer.


- A For reservations, you can only post goods movements if the *Final Issue* checkbox is not selected.
- B For reservations, you can only post goods movements if the *Final Issue* checkbox is not selected and the *Movement Allowed* checkbox is selected.
- C For reservations, you can only post goods movements if the *Movement Allowed* checkbox is selected.
- D Only automatically-created reservations are relevant for planning.

Enter a Stock Transfer with Reference to Reservations

Business Example

You plan to transfer part of the stock of material *T-M510A##* to another warehouse. You need to create a reservation manually to achieve this.


Enter a stock transfer in the system using the reservations from the exercise on how to create reservations manually as reference documents. Then, display the reservations again.

1. Enter the transfer posting in the system. Post both reservations from the exercise on how to create reservations manually as reference documents in a document. All materials are withdrawn from storage location *0001*. Only five pieces of material *T-M510C##* are transferred; the remainder is no longer needed. Select the *Final issue Effected* checkbox in the reservation.
 - a) On the *SAP Easy Access* screen, choose *Logistics → Materials Management → Inventory Management → Goods Movement → Goods Movement (MIGO)*.
 - b) Enter transaction *Transfer Posting* and, as the reference, enter *Reservation*.
 - c) Enter the first reservation number you noted before and choose  (*Execute*).
 - d) Repeat step c with the second reservation number.
 - e) Select the *Item OK* checkbox for all items.
 - f) Change the quantity of material *T-M510C##* to 5 PC, and select the *Final Issue* checkbox for this item.



Note:

The *Final Issue* checkbox is in the item overview and the item details on the *Reservation* tab page.

- g) Enter **0001** in the *Storage Location* field in the items of the second reservation.
 - h) Choose the *Post* pushbutton.
 2. Display both reservations and verify that the *Final Issue* checkbox is selected for all the reservation items.
 - a) Enter transaction *Display* and, as the reference, enter *Material Document*.
 - b) Choose  (*Execute*).

- c) On the *Reservation* tab page, in the item details for the first item, double-click the reservation number to display the reservation.

The overview screen for the reservation displays. The *Final Issue* checkbox is automatically selected for all items, since the entire reserved quantity has been withdrawn for these items.

- d) Go back to the material document.

- e) On the *Reservation* tab page, in the item details for the first item, choose the reservation number to display the reservation.

The overview screen for the reservation displays. The *Final Issue* checkbox is selected for all items. This is done automatically for items 1 and 2, as the entire reserved quantity has been withdrawn. For item 3, this is done manually when you create the transfer posting.

3. Which of the following statements is true?

Choose the correct answer.

- A For reservations, you can only post goods movements if the *Final Issue* checkbox is not selected.
- B For reservations, you can only post goods movements if the *Final Issue* checkbox is not selected and the *Movement Allowed* checkbox is selected.
- C For reservations, you can only post goods movements if the *Movement Allowed* checkbox is selected.
- D Only automatically-created reservations are relevant for planning.



LESSON SUMMARY

You should now be able to:

- Create, change, and display manual reservations
- Use reservations as a reference for a goods movement

Evaluating Reservations

LESSON OVERVIEW

This lesson describes the evaluations that display in the reservations menu. These comprise a list of reservations, the picking list for reservations, and the report for managing reservations.

Business Example

You want an overview of the reserved materials for the next few weeks. You know that you can list all reservations with a requirement date in this time period. Using the picking list to stage materials that were reserved for a cost center or production order, you can select the desired reservations and post the goods issue (GI). For this reason, you require the following knowledge:

- An understanding of whether reservations exist for a cost center
- An understanding of the functions of the picking list for reservations



LESSON OBJECTIVES

After completing this lesson, you will be able to:

- Execute the evaluations from the reservation menu

Reservation List Inventory Management – Transaction MB25



Initial Screen for Selection Restrictions

Reservation data	Acct assignmt	Scope of list
Material	<input type="checkbox"/> W/o acct assignmt	<input checked="" type="checkbox"/> Open reservations
Plant	Cost center	<input type="checkbox"/> Receipts
Requirement date	Order	<input checked="" type="checkbox"/> Issues
...

ReservNo	Item	ReqDate	MVT	Material	Reqmt quantity	Rca	Acct assgt
17875	10	13.10.2008	261	100-100	10	F	60002832
17891	5	21.09.2008	201	100-100	22	K	1000
17914	1	02.11.2008	221	100-300	80	P	E-9990

Figure 53: Reservation List Inventory Management

Use the reservation list for an overview of the reservations.

From the reservation list, you can select reservations containing some or all of the following information:

- Material
- Requirement date
- User name (created by)
- Goods recipient
- Account assignment (such as cost center, order, Work Breakdown Structure element)

The report issues a list with reservation items according to the selection. Receipt reservations are highlighted in yellow.

The reservation list report displays the following detailed information for each item:

- Reservation number and item
- Material
- Requirements quantity
- Movement type
- Account assignment
- Requirement date
- Difference quantity between the reserved and already reduced quantity

If you require further data and want to evaluate it in detail, enhance the current layout or select another existing layout by choosing *Settings* → *Layout*.

For more information about all the functions of the *SAP List Viewer (ALV)*, see the SAP documentation for the *SAP ERP Central Component* under *Cross-Application Components* → *General Application Functions (CA-GTF)* → *SAP List Viewer (ALV): Classic (or SAP List Viewer for SAP GUI (Classic))*.



Hint:

In *Customizing for Inventory Management and Physical Inventory*, you can change the display of the output list from *SAP List Viewer* to *SAP Grid Control* under *Reporting* → *Set Up Print Functions for Reporting*. The *SAP Grid Control* form offers enhanced functions and is easier to use.

To display a reservation from the list, double-click the reservation number. If you double-click the reservation item, you can see the details of this item.

Reservation Management – Transaction MBVR

With the *Reservation Management* report, you can select the *Movement Allowed* checkbox for reservations created manually through a mass change. You can also delete reservations with the reservation management report.

The base date is located in the reservation header. For this report, the base date serves as a selection value, and only reservations with a base date that falls before or on this date are taken into account in further processing. The base date is also used in this report to calculate the time intervals used in mass changes and deletion of reservations.

Select the Movement Allowed Checkbox

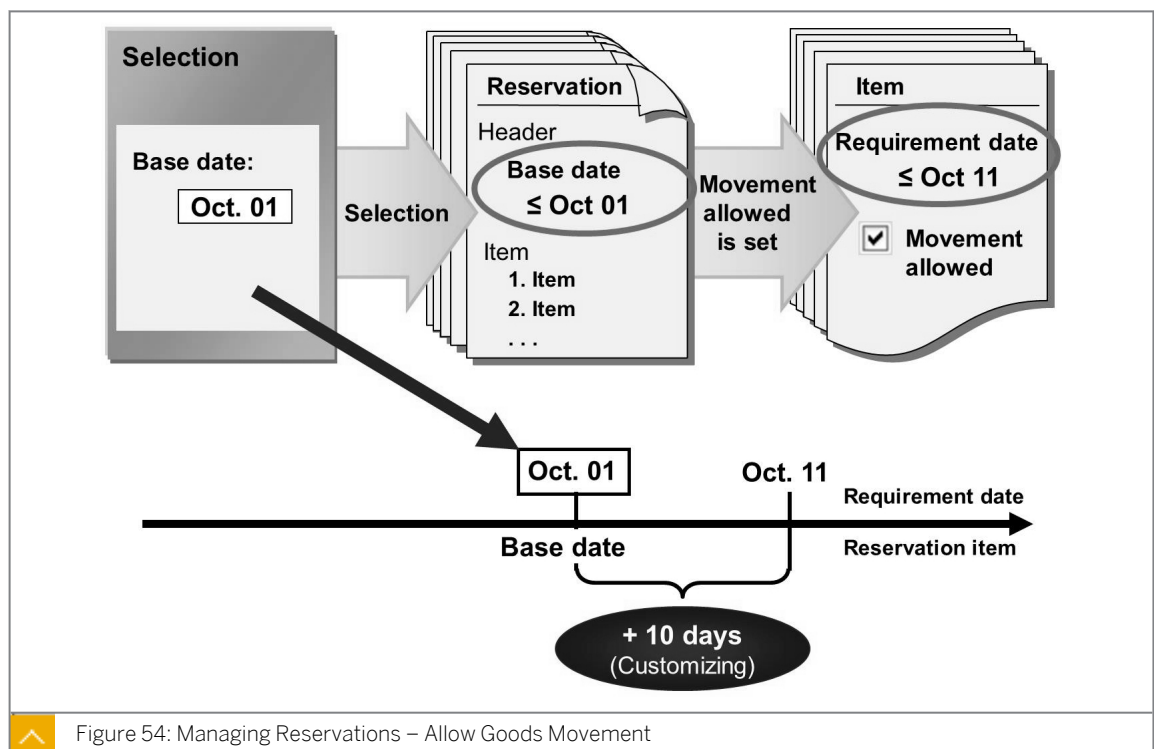


Figure 54: Managing Reservations – Allow Goods Movement

When creating reservations, you decide whether the *Movement Allowed* checkbox is to be selected for the items. To book goods movements for a reservation item, you must select this checkbox.

With this report, you can now automatically select the *Movement Allowed* checkbox for all reservation items whose requirement dates lies within the next ten days.

For example, if you enter October 1 as the base date, movements are allowed for all items with requirement dates before or on October 11, provided that the base date in the header of the reservation is before or on October 1.

Specify a requirement date and, if necessary, any other selection criteria (for example, the reservation number) on the initial screen. Select the *Movement Allowed* checkbox in the *Actions to be performed* area, and then execute the report.

As long as the requirement date of the selected reservation items lies within the period of the requirement date, plus a number of days (determined in Customizing), the *Movement Allowed* checkbox is selected in this reservation item. You can specify the number of days (the standard is 10 days) in Customizing for *Inventory Management and Physical Inventory* under *Reservation* → *Define Default Values*.

Deletion of Reservations

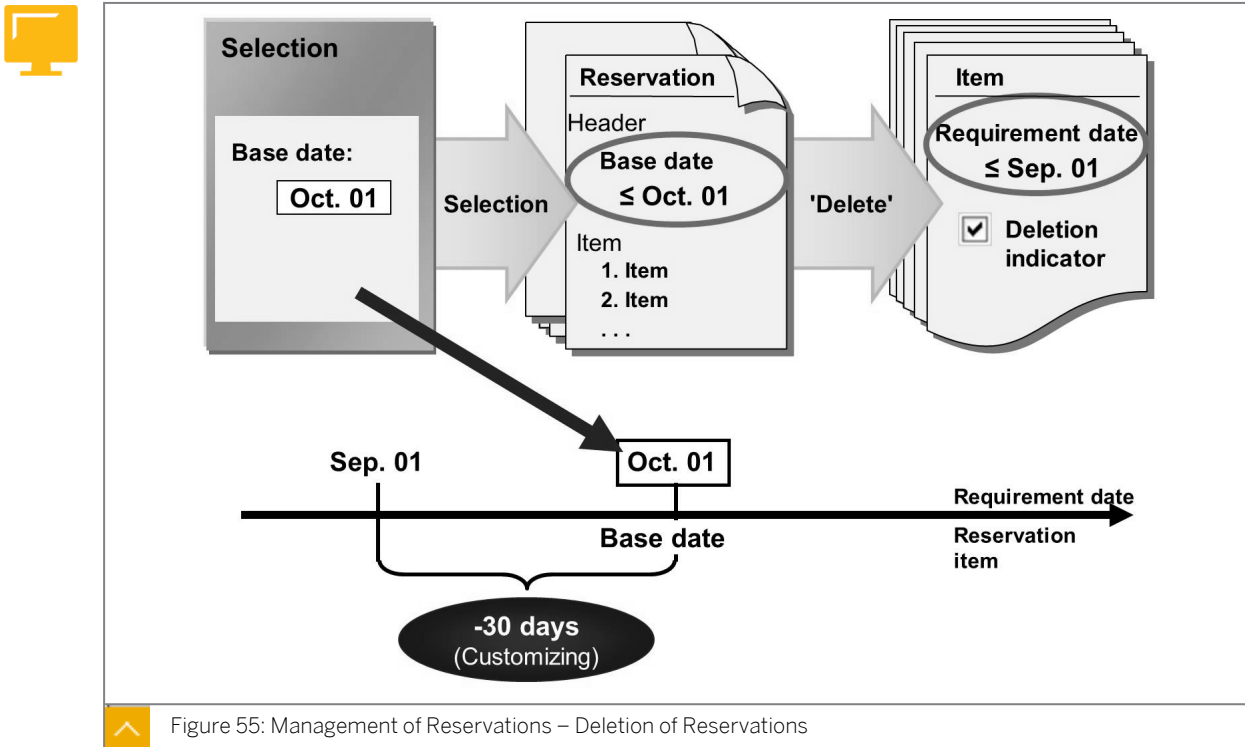


Figure 55: Management of Reservations – Deletion of Reservations

You can prevent the reservation file from becoming too large by regularly deleting finished, old, and extra reservations. The management program marks the reservation items for deletion. If all the items of a reservation are marked, the reservation is removed from the file.

When deleting reservations, you also need to specify a base date for the selection. To do this, select the *Set deletion incl/delete reservation* checkbox and then execute the report. For all selected reservations, the system checks whether the requirement date of the individual reservation item lies before the date calculated by the system. The system calculates this date from the base date minus a fixed number of days defined in Customizing (the standard is 30 days).

For example, if you enter October 1 as the base date, all reservation items with requirement dates that lie before or on September 1 are marked for deletion, provided the base date in the reservation header lies before or on October 1.



Hint:

On the selection screen, you can determine that only completed items are marked for deletion. In addition, a completed reservation item must be withdrawn completely or marked as final issue. If all items of a reservation are marked for deletion, the reservation is physically deleted. It is possible to delete only the reservations that were created for a particular account assignment (cost center or order). To do this, enter the account assignment as a selection criterion.

Default Values for Reservations



Reservations: Define Default Values

Plant	Name 1	Mvt...	Days m	Rete	M...
0001	Plant 0001	<input type="checkbox"/>	10	30	<input checked="" type="checkbox"/>
1000	Plant Hamburg	<input type="checkbox"/>	10	30	<input checked="" type="checkbox"/>
1100	Berlin	<input type="checkbox"/>	15	40	<input checked="" type="checkbox"/>
1200	Dresden	<input checked="" type="checkbox"/>	7	20	<input checked="" type="checkbox"/>
...	...				

Movement Allowed checkbox is proposed during creation

Managing reservations: Allow days for movement + retention period

Create storage location data for material automatically

Figure 56: Default Values for Reservations

The number of days for managing reservations is defined with further default values in Customizing for *Materials Management* under *Inventory Management and Physical Inventory* → *Reservation* → *Define Default Values* (OMBN).

In Customizing, you can define the following default values and actions for each plant:

- Whether the *Movement Allowed* checkbox is proposed when you create reservations
- The number of days used for calculating the period for setting the *Movement Allowed* checkbox in the *Manage Reservations* report
- The number of days used for calculating the period for deleting the reservations in the *Reservation Management* report
- Whether the relevant storage location stock data is automatically created when you post a reservation for a material

Picking Lists for Reservations – Transaction MB26



Initial Screen for Selection Restrictions

Selection of reservations
 Reservation number
 Material
 Cost center
 Requirement date
 ...

Selection of production orders
 Material
 Order
 MRP controller
 ...

Overview of goods movements

	Material	...	Qty	UoM	Plant	Stor. Loc.	...	MvT	Compltd	Reservation
	100-100		10	PC	1000	0001		261	<input type="checkbox"/>	17875
	100-100		22	PC	1000	0001		201	<input type="checkbox"/>	17891
	100-130		75	PC	1000	0002		221	<input checked="" type="checkbox"/>	17914

Batch determin.
Stock determin.

Figure 57: Picking List for Reservations (1)

The picking list allows you to create and post goods movements for several reservations in one processing step. When creating a picking list, you can select according to reservations, material and account assignments, and production orders.

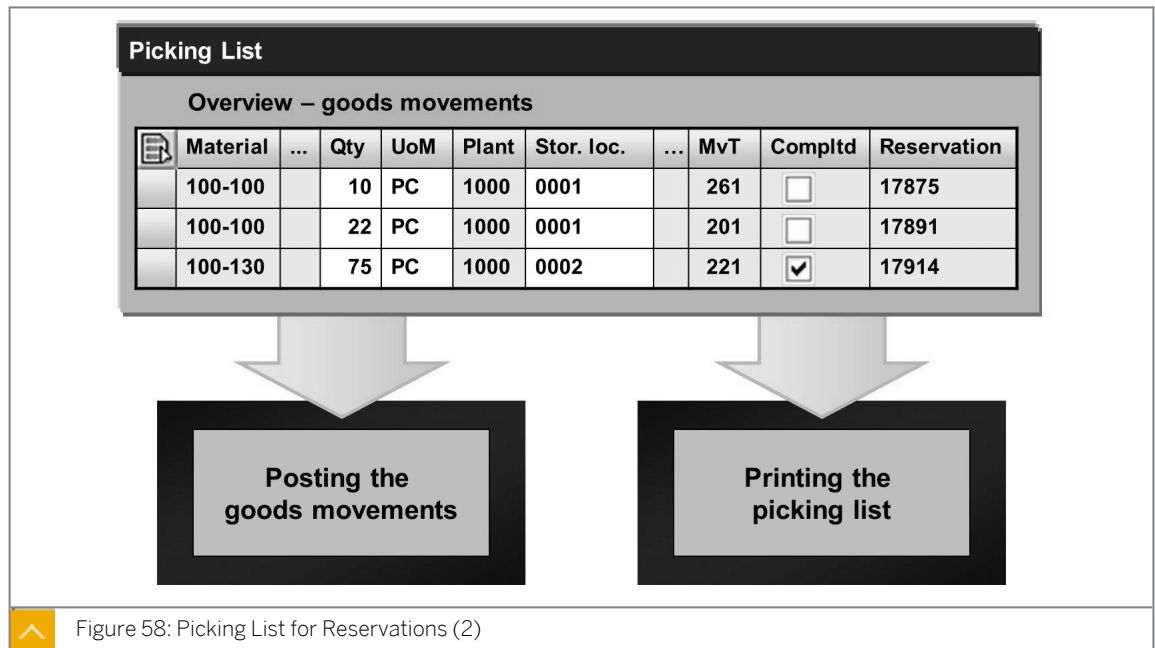
Before posting, you can change the entry quantity for each item, select the *Final Issue Effected* checkbox, and, if necessary, enter a storage location. To determine the stocks to be posted for stock transfers and GIs, you can call up stock determination by choosing *Goto* → *Stock Determination*, and batch determination by choosing *Environment* → *Batch Management* → *Batch Determination*. If it is necessary to split an item for a goods movement, choose *Edit* → *Splitting*.

Sort and *Filter* are other functions of the picking list.

Caution:

When you post the goods movements, all the reservations and production orders that correspond to the selection criteria are taken into consideration, this list includes the items that you hid with the filter function. If there are items that you do not want to book the goods movements for, select and remove them from the list by choosing *Edit* → *Delete*.

Printing a Picking List



You can also print a list of the materials to be picked. To do so, choose *List* → *Print*. You then receive a list of goods movements for which you can adjust the current layout, or choose an existing layout by choosing *Settings* → *Layout*. To print the list, choose *List* → *Print* again.

Unit 4

Exercise 21

Manage Reservations

Business Example

To keep requirements planning as close to the schedule as possible, reservations can only be withdrawn from the warehouse shortly before the reserved date. You want to test the *Movement Allowed* checkbox.

Optimize the requirements planning. The manually reserved materials are often withdrawn too early from the warehouse. To prevent this from happening in the future, use the *Movement Allowed* checkbox to only allow a goods withdrawal close to the base date of the reservation. Test the function of the *Movement Allowed* checkbox.

1. Create a reservation for a transfer posting of **10** pieces of material **T-M510A##**. The transfer posting is to take place between storage locations **0001** and **0002** of plant **1200**. The base date of the reservation is today's date. The goods movement is not allowed for this reservation.

Note the reservation number: _____.

2. Check the reservation list to ensure that the *Movement Allowed* checkbox is not selected and the reservation is not final issue effected. You must include both checkboxes in the layout of the list. Save the changed layout of the list as **GR##** (*Movement Allowed* and *Final Issue*).
3. Test whether a goods movement is possible. To do this, use the picking list.



Hint:

The picking list selects reservations according to possible goods movements. You cannot select a reservation if its goods movement is not possible.

4. Select the *Movement Allowed* checkbox in the reservation.
5. Check the reservation list to ensure that the *Movement Allowed* checkbox is selected. Use the **GR##** layout.
6. Post the stock removal for the reservation using the picking list.



Hint:

With the picking list, the system posts all selected movements when you save. Goods movements that do not display due to a set filter are also posted when you save. Therefore, you must delete goods movements from the list if you do not want them to be posted.

7. Check the reservation list to ensure that the reservation item is final issue effected. Use the **GR##** layout.

Manage Reservations

Business Example

To keep requirements planning as close to the schedule as possible, reservations can only be withdrawn from the warehouse shortly before the reserved date. You want to test the *Movement Allowed* checkbox.

Optimize the requirements planning. The manually reserved materials are often withdrawn too early from the warehouse. To prevent this from happening in the future, use the *Movement Allowed* checkbox to only allow a goods withdrawal close to the base date of the reservation. Test the function of the *Movement Allowed* checkbox.

1. Create a reservation for a transfer posting of **10** pieces of material **T-M510A##**. The transfer posting is to take place between storage locations **0001** and **0002** of plant **1200**. The base date of the reservation is today's date. The goods movement is not allowed for this reservation.


Note the reservation number: _____.




- a) On the *SAP Easy Access* screen, choose *Logistics* → *Materials Management* → *Inventory Management* → *Reservation* → *Create (MB21)*.
- b) On the *Create Reservation: Initial* screen, choose *Movement Type* → *Transfer Posting* → *From SLoc. to SLoc* (movement type 311).
- c) Enter the following data:

Field	Value
<i>Base Date</i>	<Today's date>
<i>Plant</i>	1200

- d) Choose *Enter*.
- e) Enter the following data:

Field	Value
<i>Receiving Storage Location</i>	0002
<i>Material</i>	T-M510A##
<i>Quantity</i>	10
<i>Storage Location</i>	0001



- f) Choose  (*Choose*).
- g) Deselect the *Movement Allowed* checkbox.


- h) Save the reservation.
 - i) Note the reservation number.
2. Check the reservation list to ensure that the *Movement Allowed* checkbox is not selected and the reservation is not final issue effected. You must include both checkboxes in the layout of the list. Save the changed layout of the list as GR## (*Movement Allowed* and *Final Issue*).
- a) On the *SAP Easy Access* screen, choose *Logistics → Materials Management → Inventory Management → Reservation → Reservation List (MB25)*.
 - b) Enter **T-M510A##** in the *Material* field.
 - c) In the *Scope of List* section, choose the *Goods movement not possible* checkbox. Deselect any other selected checkboxes.
 - d) On the *Reservation List Inventory Management* screen, choose  (*Execute*).
 - e) Choose *Settings → Layout → Change*.
 - f) In the column set, select *Movement Allowed* and *Final Issue* and choose  (*Show Selected Fields*).
 - g) Choose *Save Layout as...*
 - h) Save the layout as user-specific and GR## with the description *Movmt allowed/Final issue*.
 - i) Choose two times  (*Adopt*).
 - j) Ensure that the *Movement Allowed* and *Final issue* checkboxes are not selected for the reservation created in step 1.
3. Test whether a goods movement is possible. To do this, use the picking list.



Hint:

The picking list selects reservations according to possible goods movements. You cannot select a reservation if its goods movement is not possible.




- a) On the *SAP Easy Access* screen, choose *Logistics → Materials Management → Inventory Management → Reservation → Picking (MB26)*.
 - b) Enter the reservation number from task 1.
 - c) Choose  (*Execute*). The system cannot select goods movements, so the goods movement for this reservation is not possible.
4. Select the *Movement Allowed* checkbox in the reservation.
- a) On the *SAP Easy Access* screen, choose *Logistics → Materials Management → Inventory Management → Reservation → Change (MB22)*.
 - b) Note the specified reservation number and choose *Continue*.
 - c) Choose  (*Details from Item*).

- d) Select the *Movement Allowed* checkbox.
 - e) Choose the *Post* pushbutton.
5. Check the reservation list to ensure that the *Movement Allowed* checkbox is selected. Use the **GR##** layout.
- a) On the *SAP Easy Access* screen, choose *Logistics* → *Materials Management* → *Inventory Management* → *Reservation* → *Reservation List* (MB25).
 - b) On the *Reservation List Inventory Management* screen, enter **T-M510A##** in the *Material* field.
 - c) In the *Scope of List* section, select the *Open Reservations* checkbox. Deselect any other selected checkboxes.
 - d) In the *Display Options* section, enter **GR##** in the *Layout* field.
 - e) Choose  (*Execute*). The *Movement Allowed* checkbox is selected for the reservation item.
6. Post the stock removal for the reservation using the picking list.



Hint:

With the picking list, the system posts all selected movements when you save. Goods movements that do not display due to a set filter are also posted when you save. Therefore, you must delete goods movements from the list if you do not want them to be posted.

- a) On the *SAP Easy Access* screen, choose *Logistics* → *Materials Management* → *Inventory Management* → *Reservation* → *Picking* (MB26).
 - b) On the *Pick List* screen, use the reservation from step 1.
 - c) Choose  (*Execute*).
 - d) Choose  (*Post*).
7. Check the reservation list to ensure that the reservation item is final issue effected. Use the **GR##** layout.
- a) On the *SAP Easy Access* screen, choose *Logistics* → *Materials Management* → *Inventory Management* → *Reservation* → *Reservation List* (MB25).
 - b) Enter the reservation number from step 1.
 - c) In the *Scope of List* section, select the *Cancellable Reservations* checkbox. Deselect any other selected checkboxes.
 - d) In the *Display Options* section, enter **GR##** in the *Layout* field.
 - e) Choose  (*Execute*). The *Final Issue* checkbox is selected for the reservation item.

Delete Reservations

Business Example

For requirements planning to be close to the schedule, reservations can only be withdrawn from the warehouse shortly before the reserved date. You also want to test the deletion of reservations that are final issue effected.

Delete all reservations with final issue 30 days after the base date. Test the settings.

1. Check the Customizing settings for deleting reservations with the *Manage Reservation* function.
How many days after the base date is the final issue reservation deleted in plant 1200?
Find and note the retention period: _____.
2. Delete the reservation created and posted in the exercise on managing reservations. Use the transaction Manage Reservation (MBVR).
Make a selection according to the base date <Current date + 2 months> and your reservation number.
Delete only completed items.
3. Check whether you can still display the reservation.

Delete Reservations

Business Example

For requirements planning to be close to the schedule, reservations can only be withdrawn from the warehouse shortly before the reserved date. You also want to test the deletion of reservations that are final issue effected.

Delete all reservations with final issue 30 days after the base date. Test the settings.

1. Check the Customizing settings for deleting reservations with the *Manage Reservation* function.

How many days after the base date is the final issue reservation deleted in plant 1200?

Find and note the retention period: _____.


- a) Go to Customizing for *Materials Management* under *Inventory Management and Physical Inventory* → *Reservation* → *Define Default Values (OMBN)*.
 - b) On the *Default Values: Reservation* screen, choose the *Plant* pushbutton.
 - c) On the *Change View "Setting: Reservation": Overview* screen, in the row containing plant 1200, note that the retention period is 30 days.
2. Delete the reservation created and posted in the exercise on managing reservations. Use the transaction *Manage Reservation (MBVR)*.

Make a selection according to the base date <Current date + 2 months> and your reservation number.

Delete only completed items.

- a) On the *SAP Easy Access* screen, choose *Logistics* → *Materials Management* → *Inventory Management* → *Reservation* → *Administer (MBVR)*.
- b) On the *Manage Reservation* screen, enter the following data:

Field	Value
<i>Reservation</i>	<your reservation>
<i>Base Date</i>	<Today + 2 months>

- c) Select the *Delete/Set Deletion Indicator* and *Closed Items Only* checkboxes.
 - d) Choose  (*Execute*).
3. Check whether you can still display the reservation.
 - a) On the *SAP Easy Access* screen, choose *Logistics* → *Materials Management* → *Inventory Management* → *Reservation* → *Display (MB23)*.
 - b) Enter the reservation number and choose *Enter*. The reservation has been deleted and can no longer be displayed.



LESSON SUMMARY

You should now be able to:

- Execute the evaluations from the reservation menu

Learning Assessment

1. Which of the following actions can you perform when creating a reservation?

Choose the correct answer.

- A You can preplan transfer postings in the one-step procedure and two-step procedure.
- B You cannot make a reference to another reservation.
- C You can add only one item in the header of a reservation document.
- D You can change the quantities and requirement dates of the items.

2. Which of the following statements about the use of reservations as a reference for a goods movement is true?

Choose the correct answer.

- A You can refer all the reservation items, when posting a goods movement.
- B When you use the search function during a goods movement, the system selects all reservation items.
- C You can only manually select the Final Issue checkbox for reservations.
- D You can manually select the Final Issue checkbox when you enter a goods movement with reference to a reservation.

3. Which of the following statements regarding the process of evaluations are true?

Choose the correct answers.

- A The base date is used to calculate the time intervals used in both mass changes and deletion of reservations.
- B The reservation file can be prevented from becoming too large by regularly deleting finished reservations.
- C Before posting of a goods movement, the entry quantity for each item gets locked and no change is allowed in items.
- D In Customizing, you define default values for reservations by plant.

Learning Assessment - Answers

1. Which of the following actions can you perform when creating a reservation?

Choose the correct answer.

- A You can preplan transfer postings in the one-step procedure and two-step procedure.
- B You cannot make a reference to another reservation.
- C You can add only one item in the header of a reservation document.
- D You can change the quantities and requirement dates of the items.

2. Which of the following statements about the use of reservations as a reference for a goods movement is true?

Choose the correct answer.

- A You can refer all the reservation items, when posting a goods movement.
- B When you use the search function during a goods movement, the system selects all reservation items.
- C You can only manually select the Final Issue checkbox for reservations.
- D You can manually select the Final Issue checkbox when you enter a goods movement with reference to a reservation.

3. Which of the following statements regarding the process of evaluations are true?

Choose the correct answers.

- A The base date is used to calculate the time intervals used in both mass changes and deletion of reservations.
- B The reservation file can be prevented from becoming too large by regularly deleting finished reservations.
- C Before posting of a goods movement, the entry quantity for each item gets locked and no change is allowed in items.
- D In Customizing, you define default values for reservations by plant.

Lesson 1

Posting Unplanned Goods Issues	228
Exercise 23: Post Unplanned Goods Issues	235
Exercise 24: Post a Goods Issue with Reference to a BOM	239

Lesson 2

Posting a Goods Issue with Reference	243
Exercise 25: Post Goods Issues with References	247



UNIT OBJECTIVES

- Post unplanned goods issues
- Post goods issues with references

Posting Unplanned Goods Issues

LESSON OVERVIEW

This lesson shows you how to enter goods issues (GIs) without reference to another document. The lesson also covers the internal staging of materials, for example, for a cost center or a project.

Business Example

Your company carries out various transactions that require the entry of a GI without a reference. For example, you might have to scrap materials that have become unusable or take random samples of materials for quality control purposes. For this reason, you require the following knowledge:

- How to enter GIs without reference to another document
- How to use a bill of material (BOM) as a template for a GI
- An understanding of the differences between a withdrawal for a random sample or scrapping and a withdrawal for a cost center

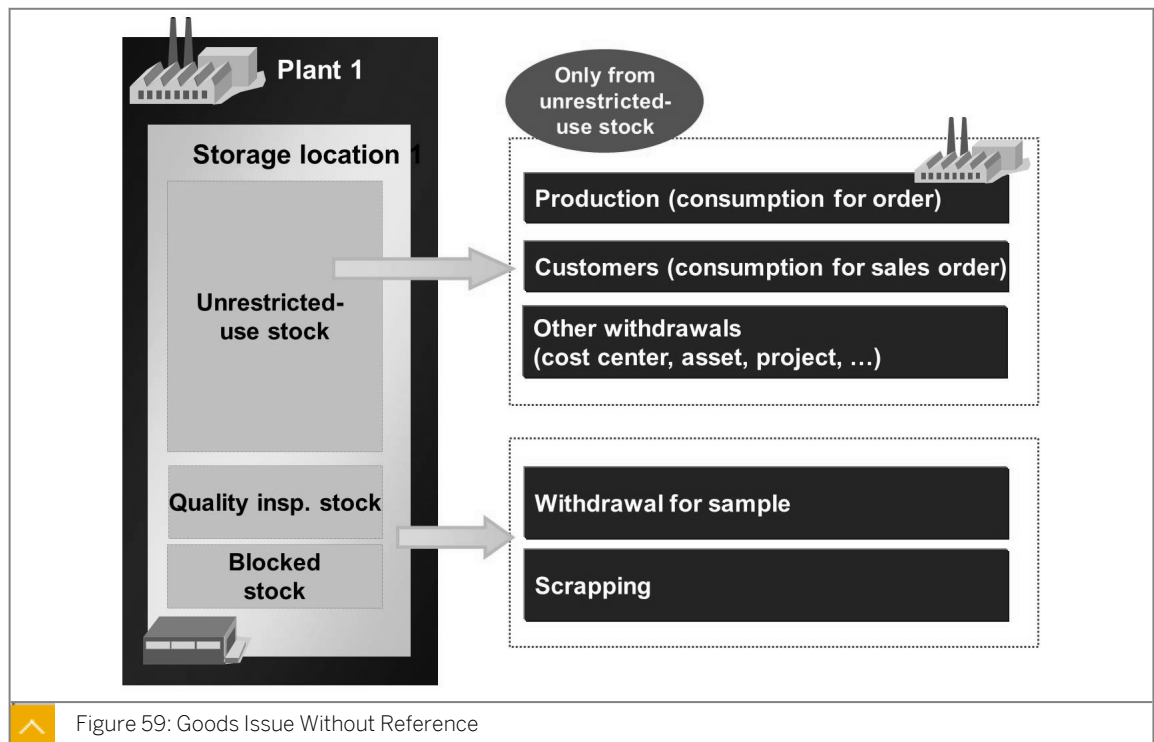


LESSON OBJECTIVES

After completing this lesson, you will be able to:

- Post unplanned goods issues

Goods Issue Without Reference



A GI is a goods movement that leads to a reduction in stock.

The following types of GIs are possible:

- Withdrawal of material for a production order
- Withdrawal of material for random sampling purposes
- Scrapping of material
- Internal staging of material for other purposes
- Shipping of goods to a customer

The movement type selected determines the transaction you enter. The movement type also determines the additional account assignment data that you need to specify. To poste a GI to a cost center, for example, you use movement type 201. You then need to enter a cost center as the account assignment object.



Hint:

You also post GIs involving stock-reducing transactions when you return ordered goods to vendors or when the system transfers stock. You post these issues under the special return delivery and transfer posting operations, respectively.

Withdrawals for consumption (for example, for a production order, a sales order, or a cost center) can be posted only out of unrestricted-use stock. A withdrawal for random sampling or scrapping can be booked out of unrestricted-use stock, quality inspection, and blocked stocks.

Important Effects of a GI

The most important system effects of a GI are as follows:

- The system generates a material document and an accounting document.
- The system indicates the reduced stock of the material.
- The system books the amount of the material withdrawn from the stock account and posts it to some type of offsetting account, which depends on the relevant transaction, for example, a consumption account. The material master record provides the posted value at the time of posting.
- If consumption updating has been configured for the movement type, consumption for this material is increased by the quantity withdrawn. A distinction is made between planned and unplanned withdrawals. **If the withdrawal is planned, total consumption is updated. If the withdrawal is unplanned, total and unplanned consumption are updated.**
Consumption is not updated for withdrawals for scrapping and random sampling.



Hint:

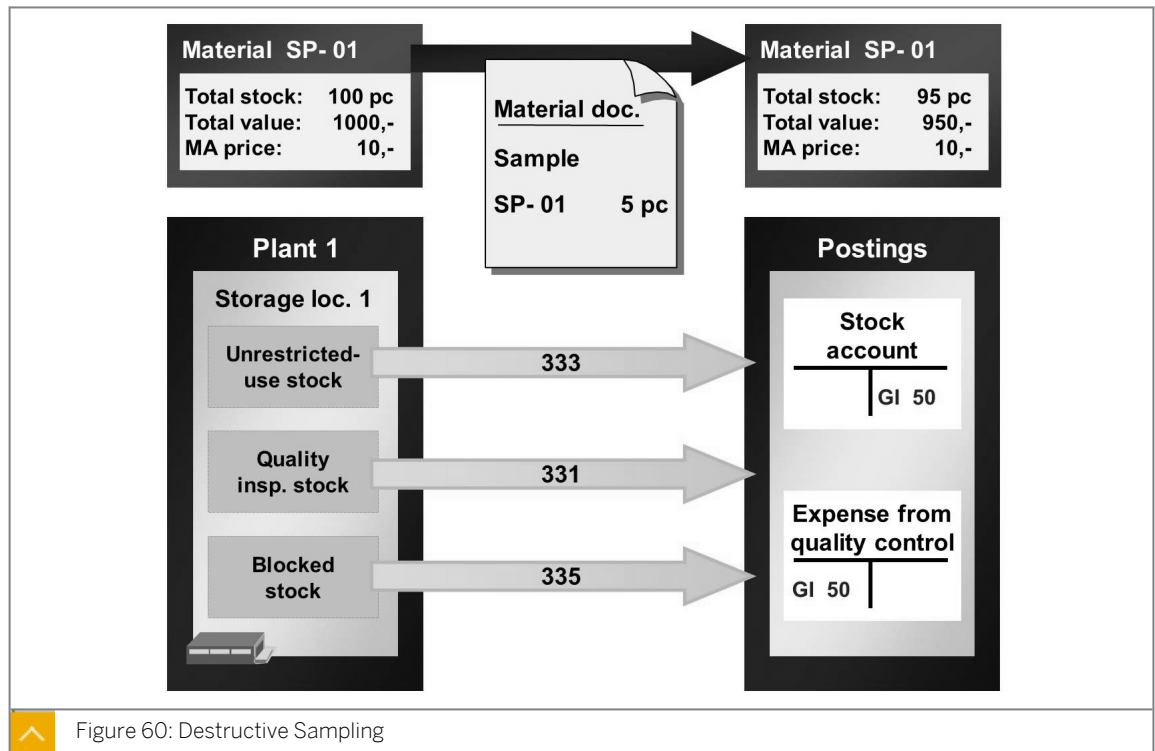
You can display the consumption of a material in the material master record at plant level. To do so, choose the *Consumption* tab page in the *Additional Details* screen area.

- If appropriate, the system debits the specified account assignment, for example, the cost center.

If you cannot reference another document such as a production order or reservation when entering the GI, you must enter an other GI without a reference and enter all the necessary data manually. Such cases are referred to as unplanned GIs.

If you want to withdraw several materials that display as components on a BOM, you can reference the BOM when entering the GI, thereby reducing the effort required for manual entry.

Sampling



Random samples are usually taken as part of quality control measures. Frequently, only a small quantity of the material subjected to quality inspection (QI) is actually checked or tested. The result of this check then forms the basis of the usage decision for the entire quantity.

To ensure that the quantity to be checked is removed from stock, you post a sample. At the time of quality inspection, you must decide whether the check or test causes the destruction of the material, that is, whether it is possible to use the material subsequently. If the check or test is destructive, you enter a withdrawal for sampling. As a result of this posting, the quantity and value of the material is reduced. The system posts the value from a stock account to a quality-inspection expense account. **A withdrawal for sampling does not result in a consumption update.**

You can enter a sample in the same way as a GI without a reference.

In the SAP ERP application, the following movement types are defined for a withdrawal for sampling:

- **331**
Withdrawal for sampling from stock in quality inspection
- **333**
Withdrawal for sampling from unrestricted-use stock
- **335**
Withdrawal for sampling from blocked stock

Nondestructive Sampling

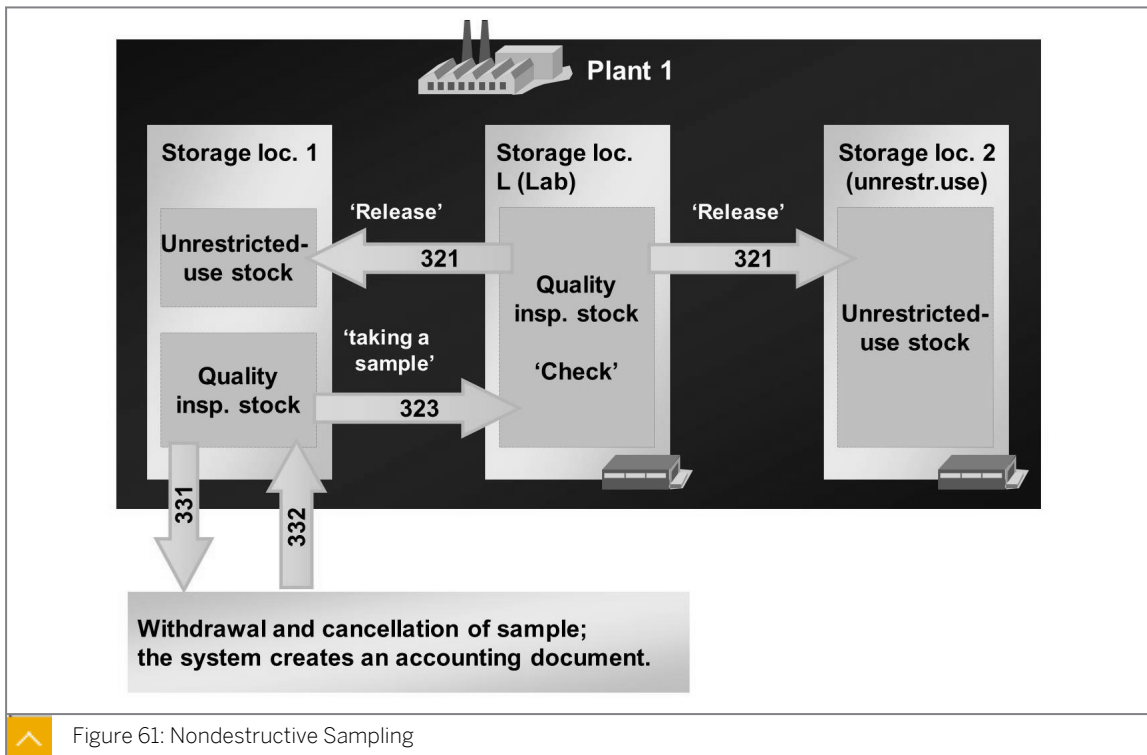


Figure 61: Nondestructive Sampling

If you can still use the material after the check, you need to define the laboratory or checking or testing point as a separate storage location. Then, transfer the material to be checked to the newly defined storage location. The relevant quantity of the material is then still part of stock in the quality inspection but is kept at a different storage location than the rest of the material. This allows you to keep track of exactly what quantities of materials are currently undergoing quality tests.

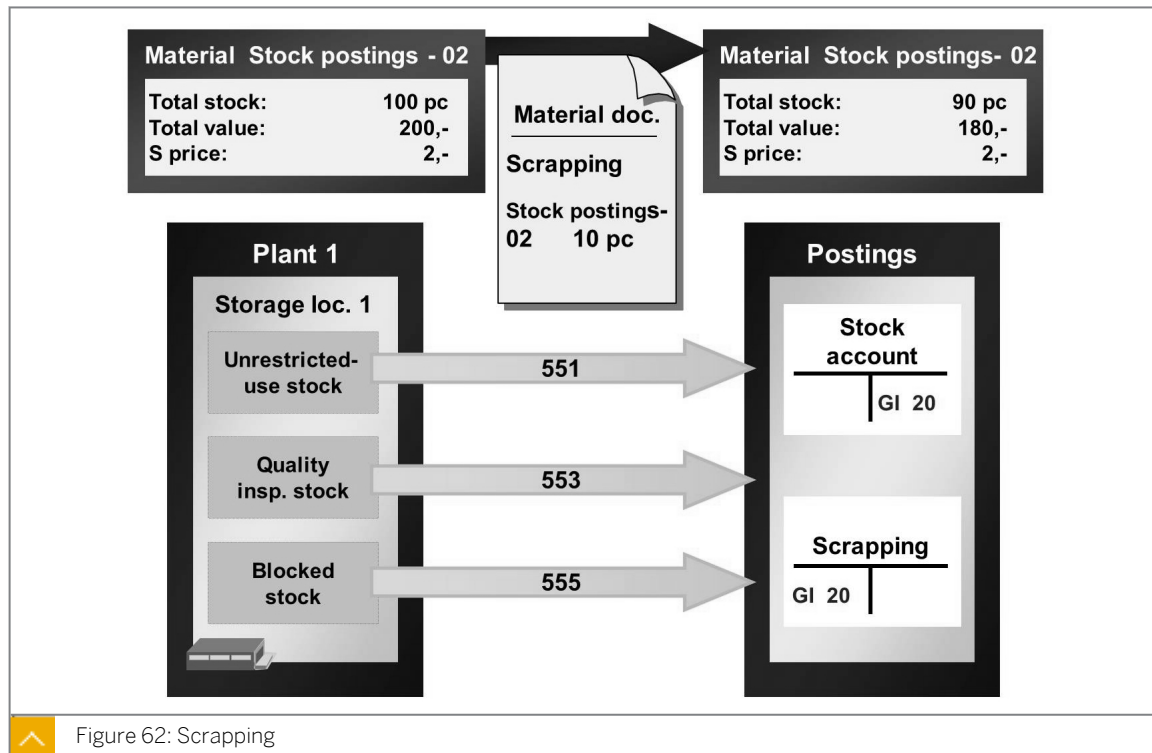
This transfer posting has no effect on the total quantity or value of the material. After a successful check or test, the material can be released directly from the checking or testing point storage location.



Caution:

If inspection processing is active for a material, you perform the quality inspection of the material in the quality management (QM) system. Note that **issues from stock in the quality inspection cannot then be made in inventory management but only in inspection processing.**

Scrapping



You enter a scrap posting if it is not possible to use a material any longer, for example, because it has been damaged or because its minimum shelf life has been exceeded. Scrapping is possible from each of the three stock types and is entered as a GI without a reference.

In SAP ERP, the following movement types are defined for scrapping:

- 551
Withdrawal for scrapping from unrestricted-use stock
- 553
Withdrawal for scrapping from stock in quality inspection
- 555
Withdrawal for scrapping from blocked stock

Scrapping causes a reduction in the associated stock. The system moves the value of the scrapped material from the stock account to a scrap account.



To Enter a Goods Issue without Reference

1. On the *SAP Easy Access* screen, choose *Logistics* → *Materials Management* → *Inventory Management* → *Goods Movement* → *Goods Issue (MIGO)*.
2. Enter transaction *Goods Issue* and, as the reference, enter *Other*.
3. Enter the required movement type in the *Default Values for the Movement Type* field, for example, 201 (consumption for a cost center from a warehouse), 221 (consumption for a project from a warehouse), or 241 (consumption for an asset from a warehouse).



Hint:

If you want to enter items with different movement types, you can change the default value for the movement type before entering further items. You can also change the movement type in the item itself.

4. Enter the material number, quantity, storage location, and plant for the items to be entered. Enter the material number in the *Mat. Short Text* column. You must also enter the account assignment data that is dependent on the movement type (such as the cost center, work breakdown structure (WBS element), or asset).




Hint:

There are extended entry options for the material, plant, and storage location data. For example, if you cannot remember the exact material number, enter part of the material short text (short description) and choose *Continue*. The system displays all the materials containing the short text in a dialog box.

5. Post the document.



To Enter a Goods Issue with Reference to a Bill of Material (BOM)

1. On the *SAP Easy Access* screen, choose *Logistics* → *Materials Management* → *Inventory Management* → *Goods Movement* → *Goods Issue (MIGO)*.
2. Enter transaction *Goods Issue* and, as the reference, enter *Other*.
3. Enter the required movement type in the *Default Values for the Movement Type* field.
4. In the *Mat. Short Text* field, enter a material for which a BOM has been created. Enter a quantity, the account assignment data, the plant, and the storage location.
5. To explode the BOM, choose  (*Explode BOM*) below the item overview. The system displays all components of the BOM in the item overview. You can change the details of individual items, such as the quantity, storage location, or (for items you do not want to post) select the *OK* checkbox.
6. Post the document.

Post Unplanned Goods Issues

Business Example

GIs are entered in the system without reference in the case of scrapping and unplanned withdrawals.

Various transactions take place within an enterprise for which GIs without references are entered. Enter GIs for a cost center and a withdrawal for scrapping. Display the consumption data for the material.

1. Note the total and unplanned consumption from the consumption data for material **T-M510A##** in plant **1200** in the following table:

Consumption	Value
Total consumption	
Unplanned consumption	

2. Enter the issue of material **T-M510A##** from plant **1200**, storage location **0001**. Enter **10 PC** as a GI from the warehouse for the cost center and **20 PC** as a withdrawal for scrapping from unrestricted-use stock. Enter **T-L##** as the cost center for both items.
3. Note the total and unplanned consumption from the consumption data for material **T-M510A##** in plant **1200** in the following table:

Consumption	Value
Total consumption	
Unplanned consumption	

Post Unplanned Goods Issues


Business Example

GIs are entered in the system without reference in the case of scrapping and unplanned withdrawals.

Various transactions take place within an enterprise for which GIs without references are entered. Enter GIs for a cost center and a withdrawal for scrapping. Display the consumption data for the material.

1. Note the total and unplanned consumption from the consumption data for material **T-M510A##** in plant **1200** in the following table:

Consumption	Value
Total consumption	
Unplanned consumption	

- a) On the *SAP Easy Access* screen, choose *Logistics* → *Materials Management* → *Material Master* → *Material* → *Display* → *Display Current* (MM03).
- b) Enter **T-M510A##** in the *Material* field.
- c) Choose the *Select View(s)* pushbutton.
- d) In the *Select View(s)* dialog box, choose *MRP 1*.
- e) Choose the *Organizational Levels* pushbutton.
- f) In the *Organizational Levels* dialog box, enter **1200** in the *Plant* field and choose *Enter*.
- g) Choose  (*Additional Data*).
- h) On the *Consumption* tab page, the following data displays:


Consumption	Value
Total consumption	0
Unplanned consumption	0

No consumption of material has yet been recorded in the system.

2. Enter the issue of material **T-M510A##** from plant **1200**, storage location **0001**. Enter **10 PC** as a GI from the warehouse for the cost center and **20 PC** as a withdrawal for scrapping from unrestricted-use stock. Enter **T-L##** as the cost center for both items.

- a) On the *SAP Easy Access* screen, choose *Logistics → Materials Management → Inventory Management → Goods Movement → Goods Movement (MIGO)*.
- b) Enter transaction *Goods Issue* and, as the reference, enter *Other*.
- c) Enter **201** in the *Movement Type* field and choose *Enter*.
- d) Enter the following data for the first item:

Tab page	Field	Value
<i>Material</i>	<i>Material</i>	T-M510A##
<i>Quantity</i>	<i>Qty in Unit of Entry</i>	10 PC
<i>Where</i>	<i>Plant</i>	1200
<i>Where</i>	<i>Storage Location</i>	0001


- e) Click *Enter*.
The Account Assignment tab appears.
- f) In the Cost center field, enter T-L##.
- g) To confirm your entries, choose *Enter*.
- h) Change the default value to **551** in the *Movement Type* field and choose *Enter*.
- i) Choose  (*Next Item*).

Enter the following data for item 2:

Tab page	Field	Value
<i>Material</i>	<i>Material</i>	T-M510A##
<i>Quantity</i>	<i>Qty in Unit of Entry</i>	10 PC
<i>Where</i>	<i>Plant</i>	1200
<i>Where</i>	<i>Storage Location</i>	0001

- j) Click *Enter*.
The Account Assignment tab appears.
 - k) In the Cost Center field, enter T-L##.
 - l) Choose the *Post* pushbutton.
3. Note the total and unplanned consumption from the consumption data for material **T-M510A##** in plant **1200** in the following table:

Consumption	Value
Total consumption	
Unplanned consumption	

- a) On the SAP Easy Access screen, choose *Logistics* → *Materials Management* → *Material Master* → *Material* → *Display* → *Display Current* (MM03).
- b) Enter **T-M510A##** in the *Material* field.
- c) Choose the *Select View(s)* pushbutton.
- d) In the *Select View(s)* dialog box, choose *MRP 1*.
- e) Choose the *Organizational levels* pushbutton.
- f) In the *Organizational Levels* dialog box, enter 1200 in the *Plant* field and choose *Enter*.
- g) Choose  (*Additional Data*).
- h) On the *Consumption* tab page, the following data displays:

Consumption	Value
Total consumption	10
Unplanned consumption	10

The total consumption in the current period is 10 pieces. These 10 pieces have been posted without a reference to a reference document, that is, the total consumption is the same as the unplanned consumption. The scrapped quantity is not updated as consumption in the material master record.

Post a Goods Issue with Reference to a BOM

Business Example

GIs are entered in the system without reference in the case of scrapping and unplanned withdrawals.

The manager of project **I/5001-1** reports that he urgently needs some components of pump **R-F1##**.

1. Post the GI for the project from storage location **0002** at plant **1000**. The manager needs 6 shafts and 2 casings. Use the BOM for pump **R-F1##** to help you enter the items.

Post a Goods Issue with Reference to a BOM


Business Example

GIs are entered in the system without reference in the case of scrapping and unplanned withdrawals.

The manager of project **I/5001-1** reports that he urgently needs some components of pump **R-F1##**.

1. Post the GI for the project from storage location **0002** at plant **1000**. The manager needs 6 shafts and 2 casings. Use the BOM for pump **R-F1##** to help you enter the items.
 - a) On the SAP Easy Access screen, choose *Logistics* → *Materials Management* → *Inventory Management* → *Goods Movement* → *Goods Movement (MIGO)*.
 - b) Enter transaction *Goods Issue* and, as the reference, enter *Other*.
 - c) Enter **221** in the *GR goods receipt* field and choose *Enter*.
 - d) Enter the following data:

Tab Page	Field	Value
<i>Material</i>	<i>Material</i>	R-F1##
<i>Quantity</i>	<i>Qty in Unit of Entry</i>	6 PC
<i>Where</i>	<i>Plant</i>	1000
<i>Where</i>	<i>Storage Location</i>	0002
<i>Account Assignment</i>	<i>WBS Element</i>	I/5001-1

- e) Choose  (*Explode BOM*).



Hint:

The system generates several subitems for item *I*. You can change the entries for each subitem.

- f) Change the quantities for the components.
 - g) Select the *Item OK* checkbox for the casing and shaft.



Hint:

The *Item OK* checkbox must also be selected for the BOM material *R-F1##*. When you explode the BOM, however, this item (*R-F1##*) is not posted.

h) Choose the *Post* pushbutton.



LESSON SUMMARY

You should now be able to:

- Post unplanned goods issues

Posting a Goods Issue with Reference

LESSON OVERVIEW

This lesson shows you how to enter a goods issue (GI) with reference to a reservation or production order.

Business Example

You have reserved several materials for a cost center. You now want to issue some of the reserved items and enter the created GI with reference to the relevant reservation. The remaining reserved quantity is no longer needed. To make this quantity freely available again, select the *Final Issue* checkbox when entering the GI. For this reason, you require the following knowledge:

- How to enter a GI with reference to a reservation or a production order
- An understanding of the difference between planned and unplanned GIs



LESSON OBJECTIVES

After completing this lesson, you will be able to:

- Post goods issues with references

Goods Issue with Reference to a Reservation

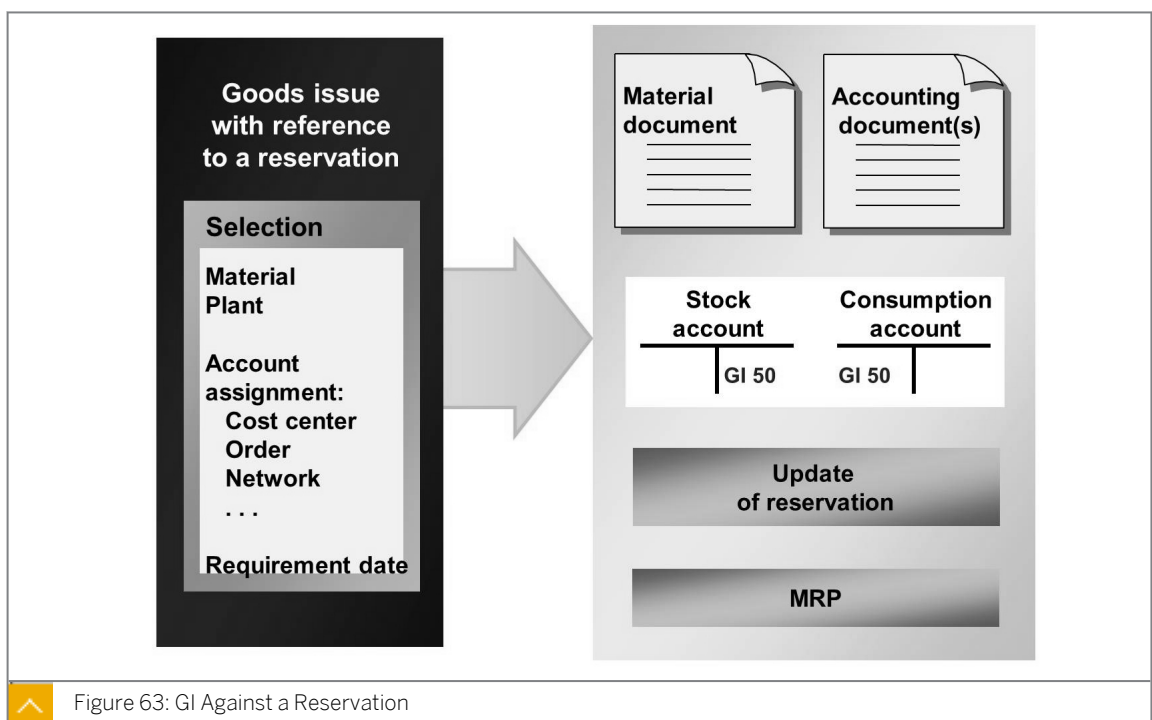


Figure 63: GI Against a Reservation

After you secure the timely provision of a material through a reservation, you need to enter the GI at the appropriate time with reference to the reservation. By referencing the reservation, you simplify the entry of the goods movement because the system can adopt the data of the individual items from the reservation. After you enter the GI, you can perform a check to ensure that the materials and quantities that were reserved are actually withdrawn.

The reference to the reservation is also necessary to update the quantities withdrawn in the reservation, therefore, providing material requirements planning (MRP) with the correct values. If you reserve the entire reserved quantity for an item, the *Final Issue* checkbox is selected automatically in the reservation item. If you withdraw only a partial quantity and do not require the remaining quantity, you must select the *Final Issue* checkbox manually at the time of the entry of the GI so that the requirement is completely cancelled in MRP.



Caution:

A withdrawal with reference to a reservation item is possible only if the *Movement Allowed* checkbox is selected for the item.

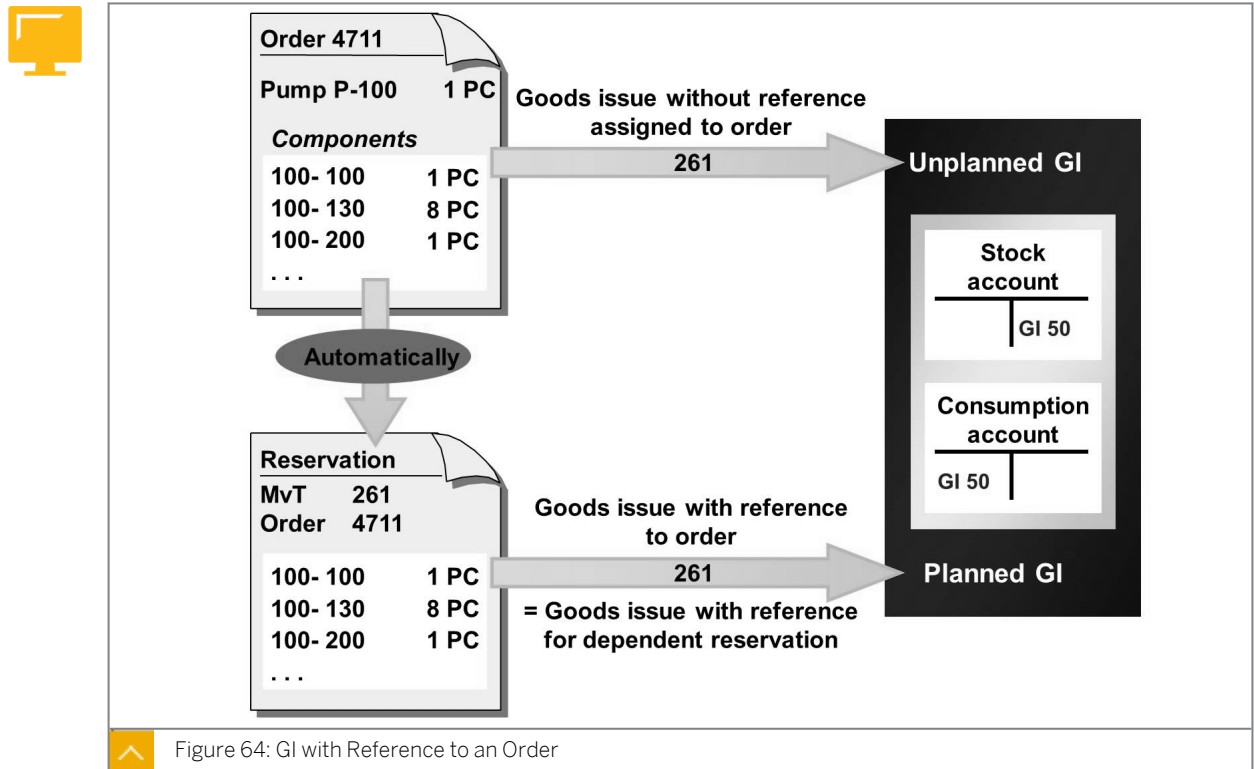
If you do not know the reservation number, you can find the reservation using the search function. For the selection values, you can, for example, enter the material, plant, and account assignment. You can also stipulate that you only want to see open reservations (non final-issue reservations) or final-issue (cancelable) reservations in the list of search hits. If you want to adopt a final-issue item, you get the message Document contains no selectable items. To reference this reservation in a later GI, choose *Settings* → *Default Values* and choose *Suggest All Items*.



Caution:

It is not possible to reverse a goods movement with reference to a reservation using transaction *MIGO*. For information on entering a reversal with reference to a reservation, see the SAP Library under *SAP ERP Central Component* → *Logistics* → *Materials Management (MM)* → *Inventory Management (MM-IM)* → *Inventory Management and Physical Inventory* → *Goods Issue* → *Reversing a Planned Goods Issue*.

Posting of a Goods Issue with Reference to an Order



If you create a production order in the SAP ERP application, the system automatically reserves the required quantities of the components. However, you may need additional parts. For this reason, there are a number of different GI postings for withdrawals of components for an order.



The various GI postings for withdrawals of components for an order are as follows:

- **Planned GI**
You enter this GI with reference to the dependent reservation for the order. The system automatically determines 261 (consumption for order from warehouse) as the relevant movement type.
- **Unplanned GI**
You enter this GI without reference to a reservation as another GI. You choose movement type 261 (consumption for order from warehouse). You must specify the order number as the account assignment.
- **Backflush**
With this type of withdrawal, the components are already at the place of production. They are physically consumed in the course of the production process; however, their consumption is not reported until the quantity consumed is known, that is, when completion of the order is confirmed. You do not need to enter a goods movement in inventory management for these components.

When completion of the order is confirmed, you can flag all quantities reserved for the order but not needed as final issue effected.



To Enter a Goods Issue with Reference to an Order

1. On the SAP Easy Access screen, choose *Logistics* → *Materials Management* → *Inventory Management* → *Goods Movement* → *Goods Movement (MIGO)*.
2. Enter transaction *Goods Issue* and, as the reference, enter *Order*.
3. Ensure that the system displays no default value for the movement type or that *261* displays as the default value.
4. Enter the number of the production order. (You can also search for the dependent reservation for the order according to the components. To do so, choose  (*Find Order*)).
5. To transfer the items from the reservation, choose  (*Execute*).
6. Select the relevant items using the *OK* checkbox. If necessary, change the default quantity for the items and specify a storage location.



Hint:

If you want to select the *Final Issue* checkbox manually, select the detail data for the item and choose the *Reservation* tab page.

7. Post the goods movement.

Post Goods Issues with References

Business Example

You enter the goods movements in production for a small number of materials using transaction `MIGO`.

Enter the GI of the components from the warehouse for production of pump **R-F1##**. Then, ensure that the *Final Issue Effected* checkbox is selected for the components in the production order.







1. Enter the GI of the components for the production order for 10 pieces of pump **R-F1##**. Search for the order number. Use the Find Order to search for the production order.
2. Display the production order and ensure the *Final Issue* checkbox is selected for the components.

Post Goods Issues with References

Business Example

You enter the goods movements in production for a small number of materials using transaction `MIGO`.

Enter the GI of the components from the warehouse for production of pump **R-F1##**. Then, ensure that the *Final Issue Effected* checkbox is selected for the components in the production order.

1. Enter the GI of the components for the production order for 10 pieces of pump **R-F1##**. Search for the order number. Use the Find Order to search for the production order.
 - a) On the SAP Easy Access screen, choose *Logistics → Materials Management → Inventory Management → Goods Movement → Goods Movement (MIGO)*.
 - b) Enter transaction *Goods Issue* and, as the reference, enter *Order*.
 - c) Choose  (*Find Order*).
 - d) In the Goods Issue Order dialog box, enter material **R-F1##**.
 - e) Choose  (*Find*).
 - f) Double-click on the production order with the quantity of 10 pieces.
 - g) Close the search results.
 - h) Choose  (*Execute*).
 - i) Select the *Item OK* checkbox for all items.
 - j) Choose  (*Post*).
2. Display the production order and ensure the *Final Issue* checkbox is selected for the components.
 - a) Enter transaction *Display* and, as the reference, enter *Material Document*.
 - b) Choose  (*Execute*).
 - c) In the item details, choose the *Account Assignment* tab page for any item.
 - d) To display the order, choose the order number.
 - e) Choose  (*Component Overview*). Ensure that the *Final Issue* checkbox is selected for all components.



LESSON SUMMARY

You should now be able to:

- Post goods issues with references

Learning Assessment

1. Which of the following statements regarding unplanned goods issues (GIs) are true?

Choose the correct answers.

- A You can carry out the withdrawals for consumption with unrestricted-use and restricted-use stocks only.
- B You get an update in consumption as the result of a withdrawal for sampling.
- C You use movement types 551, 555, and 553 for scrapping.
- D You get a reduction in the associated stock because of scrapping.

2. Which of the following conditions apply to goods issues (GIs) with reference?

Choose the correct answer.

- A The reference to the reservation provides material requirements planning (MRP) with the correct values.
- B For an unplanned GI posting, the components are already at the place of production.
- C The entry of a goods movement in inventory management for backflush withdrawal components is mandatory.
- D Withdrawal of only a partial quantity is not possible at the time of GI.

Learning Assessment - Answers

1. Which of the following statements regarding unplanned goods issues (GIs) are true?

Choose the correct answers.

- A You can carry out the withdrawals for consumption with unrestricted-use and restricted-use stocks only.
- B You get an update in consumption as the result of a withdrawal for sampling.
- C You use movement types 551, 555, and 553 for scrapping.
- D You get a reduction in the associated stock because of scrapping.

2. Which of the following conditions apply to goods issues (GIs) with reference?

Choose the correct answer.

- A The reference to the reservation provides material requirements planning (MRP) with the correct values.
- B For an unplanned GI posting, the components are already at the place of production.
- C The entry of a goods movement in inventory management for backflush withdrawal components is mandatory.
- D Withdrawal of only a partial quantity is not possible at the time of GI.

Lesson 1

Performing the Process of Subcontracting	254
Exercise 26: Provide Components to a Subcontractor	261
Exercise 27: Create and Analyze a Subcontract PO	265
Exercise 28: Post a GR to a subcontract PO and Further Goods Movements for Subcontracting Stock	273

Lesson 2

Considering Vendor Consignment	279
Exercise 29: Analyze Consignment Stock	287
Exercise 30: Perform the PO Process for Vendor Consignment	293
Exercise 31: Post a Transfer Posting to Consignment Stock	297
Exercise 32: Post a GI from Consignment Stock and Settle the Liabilities	301



UNIT OBJECTIVES

- Provide components to a subcontractor
- Post a GR to a subcontract PO and further goods movements for subcontracting stock
- Perform a process for vendor consignment

Performing the Process of Subcontracting

LESSON OVERVIEW

This lesson provides an overview of the subcontracting procedure in inventory management. It also provides a brief explanation about the subcontracting item in a purchase order (PO).

Business Example

Your company manufactures pumps. As you do not have the resources to assemble the pump casing, you send the individual parts to a subcontractor who takes on this task for you. For this reason, you require the following knowledge:

- An understanding of the procurement process with subcontracting
- An understanding of the components required by the subcontractor
- How to post a goods receipt (GR) for a subcontract order or a subcontract PO and the effects of the posting

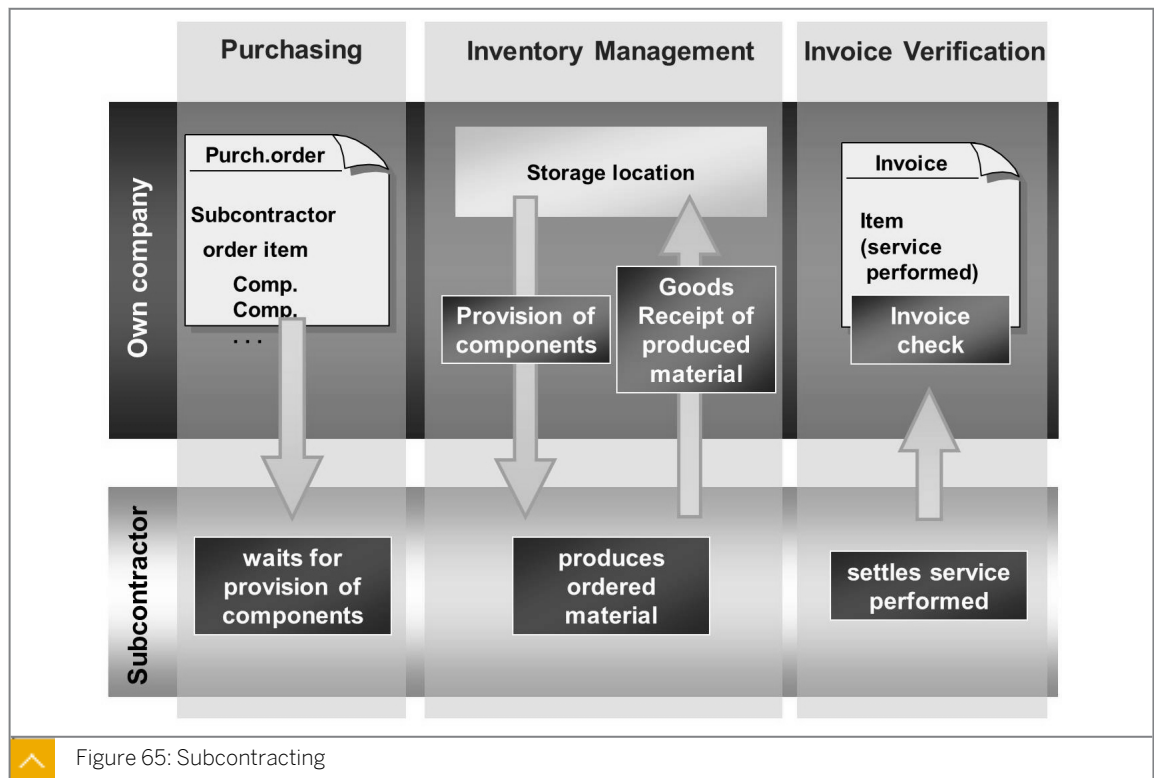


LESSON OBJECTIVES

After completing this lesson, you will be able to:

- Provide components to a subcontractor
- Post a GR to a subcontract PO and further goods movements for subcontracting stock

Overview – Special Procurement Subcontracting



During subcontracting, your company orders material from an external vendor. Unlike a normal external procurement process, your company makes the components for the production of the materials partially or completely available to the vendor (subcontractor).

The subcontracting process has the following characteristics:

- You order the finished product with a subcontracting order that also contains entries about the components to be provided for the subcontractor.
- In inventory management, you post the components in the stock of material provided to the subcontractor.
- The subcontractor supplies the service and delivers the manufactured or processed material. You enter the GR for the finished product in inventory management. The consumed components are cleared by the system from the stock of material provided to the subcontractor.
- **If the subcontractor reports an excess consumption or underconsumption of components after the GR posting, you can correct the GR with a subsequent adjustment.**
- The subcontractor shows the service actually planned in the invoice. You enter the invoice in Logistics Invoice Verification.

Subcontracting in Purchasing

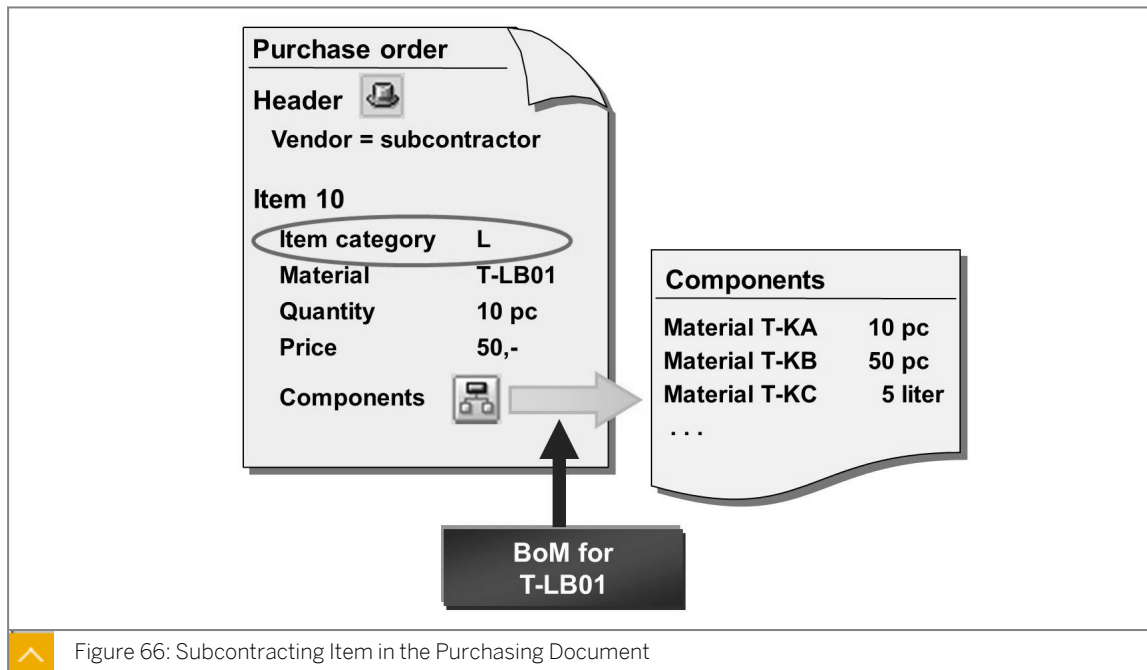


Figure 66: Subcontracting Item in the Purchasing Document

You represent subcontracting items in purchasing documents with a special item category. For each subcontracting item, you must enter one or several subitems for the components to be provided. When there is a bill of material (BOM) with the components for the material to be procured, then the components are copied from this BOM into the subcontracting item. You can also enter the components manually or add the components from the BOM.

The PO price is the price of the vendor subcontracting work and the materials that the subcontractor provides. You can define conditions for subcontracting in a subcontracting purchasing info record.



Hint:

For more information about subcontracting in Purchasing, see the SAP Library under *SAP ERP Central Component* → *Logistics* → *Materials Management (MM)* → *Inventory Management (MM-IM)* → *Managing Special Stocks* → *Subcontracting*.

Subcontracting in Inventory Management – Stock of Material Provided to Vendor

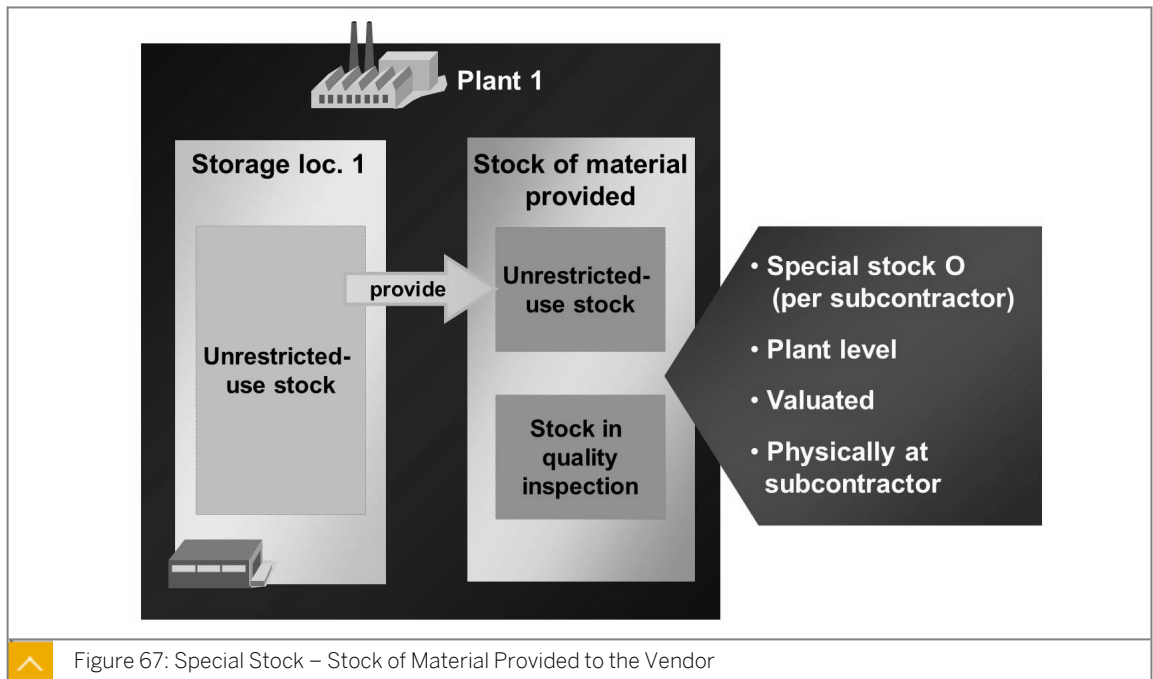


Figure 67: Special Stock – Stock of Material Provided to the Vendor

Inventory management supports the following functions within subcontracting:

- Provision of components, special stock form (stock of material provided by vendor)
- GR for finished product with consumption of components
- Subsequent adjustment in the case of excess consumption or underconsumption of components
- Transfer postings (material to material, stock to stock, and plant to plant)

Stock of Material Provided to the Vendor

The components that you provide for a vendor are managed in a vendor-related special stock, O (stock of material provided to the vendor). The system updates this special stock at plant level because the material is not stored in your own company but is with the vendor. However, this special stock is valuated and available for planning.



Hint:

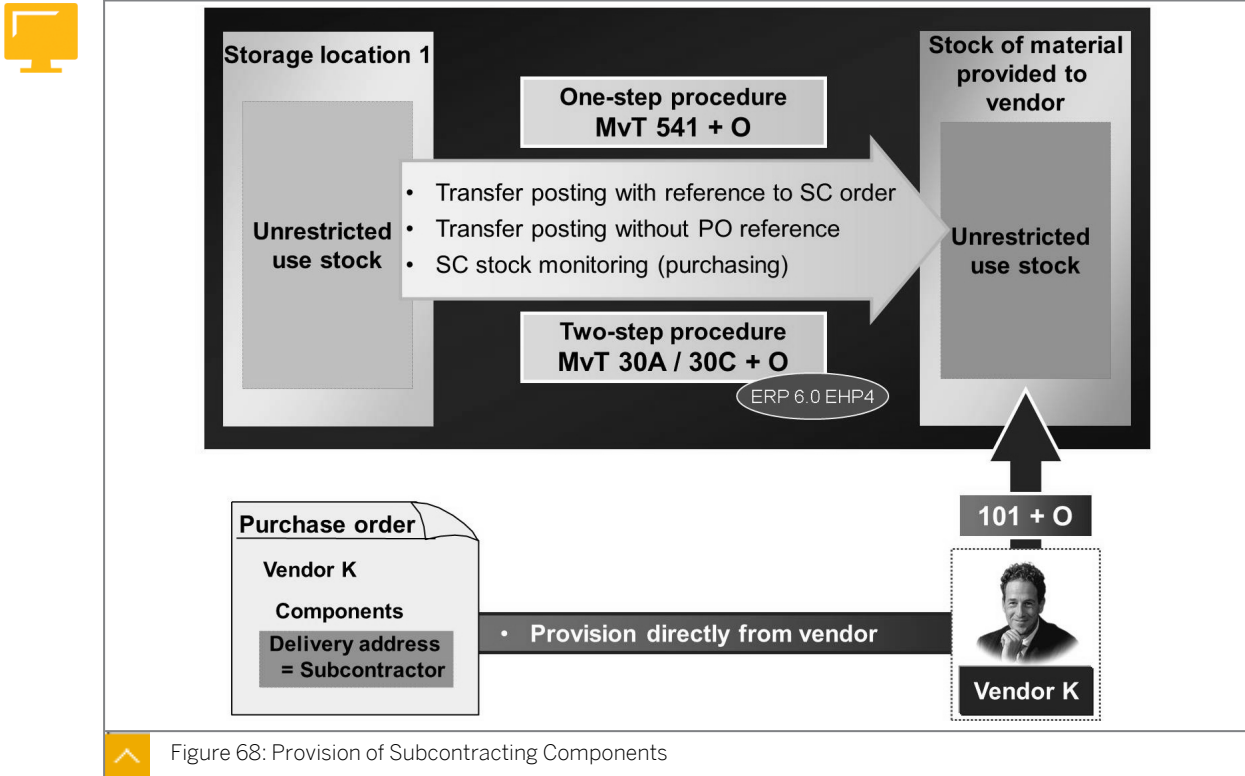
In materials planning, you can work with subcontractor material requirements planning (MRP) areas.

The advantage is that you can separate the stock of material provided for the individual subcontractors. The provided material quantities are not in the available plant stock, so you can include these material quantities in materials planning at plant level.

For the stock of material provided to vendors, the available stock types are unrestricted-use stock and stock in quality inspection. The quantities consumed by the subcontractor can be withdrawn only from the unrestricted-use stock. A physical inventory for the stock of material provided to the vendor.

To analyze the stocks of material provided, in the *Inventory Management* menu, choose *Environment* → *Stock* → *Stock with Subcontractor* (MBLB), you can then choose with both the name of the subcontractor (vendor) and with the plant, material, or company code.

Subcontracting – Provision of Components



Posting a provision of components in inventory management corresponds to a transfer posting from unrestricted-use stock to the stock of material provided to the vendor (movement type 541).

Options for Posting the Provision of Components

New Features of Subcontracting as of SAP ERP 6.0 Enhancement Package 4

The following are the new features of Subcontracting as of SAP ERP 6.0 Enhancement Package 4:

- You can use business function LOG_MM_OM1 to perform stock transfers to the stock of material provided to the vendor in the two-step procedure. After being withdrawn from storage, the components display in the stock in transfer for the subcontractor, that is, at special stock level.

You can use the two-step procedure to transfer postings both with and without PO references (transactions MIGO, MIGO_TR, and MB1B). You can also use the subcontracting cockpit (transaction ME2ON) and movement type 30A to complete the stock removal step.

The corresponding reversal movement types are 30B (for MvT 30A) and 30D (for MvT 30C).

- You can use the subcontracting cockpit (transaction ME2ON) to monitor stocks in the subcontracting process. You can access the subcontracting cockpit from the *SAP Easy*

Access screen by choosing *Logistics* → *Materials Management* → *Purchasing* → *Purchase Order* → *Reporting* → *Subcontracting Cockpit*.

- When you use subcontracting in conjunction with plant maintenance for the refurbishing process, you can also use the subcontracting monitor (transaction `ADSUBCON`). The subcontracting monitor was previously available only in some industry solutions. To use the monitor, you must activate the `LOG_EAM_ROT``SUB` business function.

Provide Components to a Subcontractor

Business Example

In your company, the pump casings required for production are procured through subcontracting. The gaskets and screws required for producing the pump casing are provided to the subcontractor in large quantities. The slug for the casing is made available to the subcontractor only as required.

Vendor **T-K510A##** manufactures material **R-B1##** (casing) within subcontracting. Provide the required components as listed on the bill of material (BOM) for this material.

1. Display the BOM (usage 1) for material **R-B1##** in plant **1000**.

Note the listed components and the component quantities in the following table:

Component	Component Quantity
R-	
R-	
R-	

2. Display the stock overview for the components. Note the unrestricted-use stock and the stock of the materials provided to the vendor in plant **1000**, storage location **0001**.



Hint:

Stocks of provided material with stock level 0 are not shown in the stock overview.

3. Vendor **T-K510A##** receives flat gaskets and hexagon head screws in large quantities. Make **250** pieces of material **R-T2##** and **800** pieces of material **R-T3##** available to the vendor from the stock in plant **1000**, storage location **0001**. Note the movement type.

4. Is a transfer posting into the stock of material provided to the vendor relevant for posting in Financial Accounting (FI)?

Provide Components to a Subcontractor

Business Example

In your company, the pump casings required for production are procured through subcontracting. The gaskets and screws required for producing the pump casing are provided to the subcontractor in large quantities. The slug for the casing is made available to the subcontractor only as required.

Vendor *T-K510A##* manufactures material **R-B1##** (casing) within subcontracting. Provide the required components as listed on the bill of material (BOM) for this material.

1. Display the BOM (usage 1) for material **R-B1##** in plant **1000**.

Note the listed components and the component quantities in the following table:

Component	Component Quantity
R-	
R-	
R-	

- a) On the *SAP Easy Access* screen, choose *Logistics* → *Production* → *Master Data* → *Bills of Material* → *Bill of Material* → *Material BOM* → *Display* (CS03).

- b) On the *Display material BOM: Initial* screen, enter the following data:

Field	Value
<i>Material</i>	R-B1##
<i>Plant</i>	1000
<i>BOM Usage</i>	1

- c) Choose *Enter*.

- d) The following components with the appropriate quantities display:

Component	Component Quantity
<i>R-T1##</i>	1
<i>R-T2##</i>	1
<i>R-T3##</i>	8

2. Display the stock overview for the components. Note the unrestricted-use stock and the stock of the materials provided to the vendor in plant **1000**, storage location **0001**.



Hint:

Stocks of provided material with stock level 0 are not shown in the stock overview.


- a) On the *SAP Easy Access* screen, choose *Logistics → Materials Management → Inventory Management → Environment → Stock → Stock Overview* (MMBE).

- b) Enter the following data:

Field	Value
<i>Material</i>	R-T1##
<i>Plant</i>	1000
<i>Storage location</i>	0001

- c) Choose  (Execute).

- d) Note the requested stock quantities. For material R-T1## the stock level is zero.

- e) On the *Stock Overview: Basic List* screen, enter **R-T2##** in the *Material* field and choose  (New Selection).

- f) Enter **R-T3##** in the *Material* field and choose  (New Selection).

3. Vendor **T-K510A##** receives flat gaskets and hexagon head screws in large quantities. Make **250** pieces of material **R-T2##** and **800** pieces of material **R-T3##** available to the vendor from the stock in plant **1000**, storage location **0001**. Note the movement type.


- a) On the *SAP Easy Access* screen, choose *Logistics → Materials Management → Inventory Management → Goods Movement → Goods Movement* (MIGO).

- b) Enter transaction *Transfer Posting* and, as the reference, enter *Other*.

- c) Enter movement type **541** (*Transfer Posting to Stock with Subcontractor from Unrestricted-Use Stock*), and choose *Enter*.

- d) On the *Transfer Posting* tab page, enter the following data:

Field	From Area	Dest. Area
<i>Material</i>	R-T2##	
<i>Plant</i>	1000	1000
<i>Stor. Loc.</i>	0001	
<i>Vendor</i> (below special stock O)		T-K510A##
<i>Qty in UnE</i>	250 PC	

- e) Select the *Item OK* checkbox.
- f) Choose  (*Next Item*).
- g) On the *Transfer Posting* tab page, enter the following data for the second item:

Field	From Area	Dest Area
<i>Material</i>	R-T3##	
<i>Plant</i>	1000	1000
<i>Stor. Loc.</i>	0001	
<i>Vendor</i> (below special stock O)		T-K510A##
<i>Qty in UnE</i>	800 PC	

- h) Select the *Item OK* checkbox.
- i) Choose *Enter*.
- j) Choose the *Post* pushbutton.
4. Is a transfer posting into the stock of material provided to the vendor relevant for posting in Financial Accounting (FI)?

The stock of material provided to the vendor is part of your own valuated stock. The transfer posting is only relevant to FI if you also change the plant assignment for the stock when providing the material.

Create and Analyze a Subcontract PO

Business Example

In your company, the pump casings required for production are procured through subcontracting. The gaskets and screws required for producing the pump casing are provided to the subcontractor in large quantities. The slug for the casing is made available to the subcontractor only when required.

Create a subcontracting order. Analyze the stock of material provided to the vendor to determine whether all components for production are available to the subcontractor.

1. Create a subcontracting order for subcontractor **T-K510A##**. Order **100** pieces of material **R-B1##** for plant **1000** with a delivery date in 4 weeks. The net price is **EUR 100**. You work for purchasing organization **1000** and purchasing group **T##**.

Note the item category used.

Display the assembly components specified in the PO, and note the requirement quantities of the individual components in the following table:

Component/Material	Requirement Quantity
R-	
R-	
R-	
PO Number	

2. Analyze the subcontracting orders for vendor **T-K510A##** in plant **1000**. Check whether the necessary components and the correct quantities are available to the vendor for the production of assembly **R-B1##**.

What is the required quantity of components specified in the PO, and what quantities of the components are available to the subcontractor?

Note the quantities of the components are available to the subcontractor in the following table:

Material	Requirement Quantity	SC Stock
R-T1##		
R-T2##		
R-T3##		

3. You must make component **R-T1##** available for subcontractor *T-K510A##* as it is necessary for the manufacture of material *R-B1##*. Post the component from plant **1000**, storage location **0001** to the vendor. Use analysis *SC stocks per vendor*.
Note the posted movement type.

4. Display the material document.

Create and Analyze a Subcontract PO

Business Example

In your company, the pump casings required for production are procured through subcontracting. The gaskets and screws required for producing the pump casing are provided to the subcontractor in large quantities. The slug for the casing is made available to the subcontractor only when required.

Create a subcontracting order. Analyze the stock of material provided to the vendor to determine whether all components for production are available to the subcontractor.

1. Create a subcontracting order for subcontractor **T-K510A##**. Order **100** pieces of material **R-B1##** for plant **1000** with a delivery date in 4 weeks. The net price is **EUR 100**. You work for purchasing organization **1000** and purchasing group **T##**.

Note the item category used.

Display the assembly components specified in the PO, and note the requirement quantities of the individual components in the following table:

Component/Material	Requirement Quantity
R-	
R-	
R-	
PO Number	



- a) On the SAP Easy Access screen, choose *Logistics → Materials Management → Purchasing → Purchase Order → Create → Vendor/Supplying Plant Known (ME21N)*.
- b) Enter **T-K510A##** in the *Vendor* field.
- c) On the *Org. Data* tab page, enter the following data:

Field	Value
<i>Purchasing Organization</i>	1000
<i>Purchasing Group</i>	T##

- d) In the item overview, enter the following data:

Field	Value
<i>Item category</i>	L

Field	Value
Material	R-B1##
Quantity	100 PC
Delivery Date	<Today + 4 weeks>
Net price	EUR 100
Plant	1000
Storage Location	0001

- e) Save your data.
- f) To display the PO, choose  (*Other Purchase Order*) and then *Other Document* pushbutton.
- g) In the item details, on the *Material Data* tab page. Choose  (*Components*). The item category is *L*.

The following data displays:

Component/Material	Requirement Quantity
R-T1##	100
R-T2##	100
R-T3##	800

2. Analyze the subcontracting orders for vendor **T-K510A##** in plant **1000**. Check whether the necessary components and the correct quantities are available to the vendor for the production of assembly **R-B1##**.

What is the required quantity of components specified in the PO, and what quantities of the components are available to the subcontractor?

Note the quantities of the components are available to the subcontractor in the following table:

Material	Requirement Quantity	SC Stock
R-T1##		
R-T2##		
R-T3##		

- a) On the *SAP Easy Access* screen, choose *Logistics* → *Materials Management* → *Purchasing* → *Purchase Order* → *Reporting* → *SC Stocks per Vendor* (ME20).
- b) Enter the following data:

Field	Value
Vendor	T-K510A##
Assembly	R-B1##

Field	Value
Plant	1000
PO Number	

- c) Choose  (Execute).

The following data displays:

Material	Requirement Quantity	SC Stock
R-T1##	100	0
R-T2##	100	300
R-T3##	800	1200




Note:
For the next step, stay in the analysis.

3. You must make component **R-T1##** available for subcontractor *T-K510A##* as it is necessary for the manufacture of material *R-B1##*. Post the component from plant **1000**, storage location **0001** to the vendor. Use analysis *SC stocks per vendor*.

Note the posted movement type.

- a) Choose the item for material *R-T1##*, and choose the *Post goods issue* pushbutton. The system displays the movement type value as *541*.
- b) Enter storage location **0001**, and choose *Continue*.
- c) Select Exit twice.

4. Display the material document.

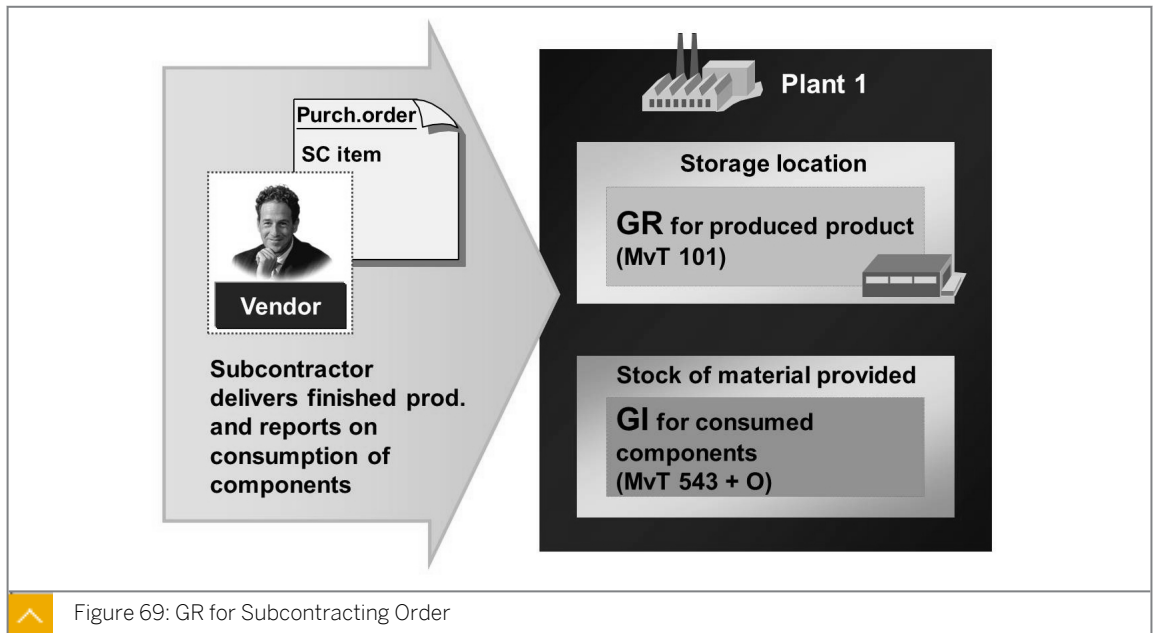
- a) On the *SAP Easy Access* screen, choose *Logistics → Materials Management → Inventory Management → Goods Movement → Goods Movement (MIGO)*.
- b) Enter transaction *Display* and, as the reference, enter *Material Document*.
- c) Choose  (*Find Material Doc.*).
- d) Enter the following data:

Field	Value
Material	R-T1##
Plant	1000
Movement Type	541

- e) Choose  (Execute).

- f) In the search results, double-click the document number to display the material document.

Subcontracting in Inventory Management – GR for the Finished Product



When the subcontractor delivers the ordered material (finished product), you then post the GR for the subcontracting order as you would post a GR for a normal PO (movement type 101). For the subcontracting order item, the system determines the components and creates a GI item internally for each component.

The material document consists of the following items:

- GR item(s) for the material delivered by the vendor
- GI item(s) for the components

After you have copied a PO item, you can still change the component quantities manually in the GI items. These changes are necessary when the vendor informs you of excess consumption or underconsumption of components in the delivery.

The system values the GR with the price of the subcontracting service and the value of the consumed components.

Subcontracting in Inventory Management – Subsequent Adjustment

If the subcontractor reports excess consumption or underconsumption of subcontracting components after delivery of the finished product, you have to post a subsequent adjustment to correct the component consumption.

In the transaction for goods movement `MIGO`, enter *Subsequent Adjustment* from the list of business transactions. As a reference document, the system automatically enters *Purchase Order*. Enter the document number of the PO and the item number for which you want to post a subsequent adjustment. For the selected item, enter the difference quantity specified by the vendor and select the *Underconsumption* or the *Short receipt* checkbox to determine whether it is a receipt or issue. If you select the checkbox, it is an underconsumption or short receipt. If you do not select the indicator, it is then an excess consumption or excess receipt.



Hint:

It is an underconsumption or short receipt when you have planned the receipt of by-products from subcontracting as negative components in the subcontracting order. In the GR to the subcontracting order, the by-products are then posted with movement type 544 into the stock of material provided to the vendor.

Subcontracting in Inventory Management – Transfer Postings of the Stock of Material Provided

The following transfer postings are allowed for the stock of material provided to the vendor special stock:

- Plant to plant in the one-step procedure (movement type 301)
- Material to material (movement type 309)
- Stock in quality inspection to unrestricted-use stock (movement type 321)

To execute these transfer postings for the stock of material provided to the vendor, you must specify the special stock indicator *O*; otherwise, the transfer postings do not differ from normal transfer postings.

Post a GR to a subcontract PO and Further Goods Movements for Subcontracting Stock

Business Example

In your company, the pump casings required for production are procured through subcontracting. The gaskets and screws required for producing the pump casing are provided to the subcontractor in large quantities. You must provide more materials than planned. You also need to post several materials in inspection quality.

Provide components without a PO. Enter a transfer posting into stock in quality inspection.

Task 1

The vendor delivers the ordered material. More hexagonal-head screws are required for production than planned.

1. The vendor delivers manufactured casing *R-B1##*. Enter the GR for your PO into plant 1000, storage location 0001.
2. Display the material document, and note the posted goods movements in the following table:

Material	Movement Type	Direction
<i>R-B1##</i> (Casing)		
<i>R-T1##</i> (Slug for spiral casing)		
<i>R-T2##</i> (Flat gasket)		
<i>R-T3##</i> (Hexagon head screw)		

3. The vendor informs you that during the production of the 100 casings, 10 additional hexagonal head screws *R-T3##* were consumed. Enter the subsequent adjustment for the subcontract order. Display the material document, and note the posted movement type.

4. (Optional) With movement type 541, which type of transactions are posted (transaction – reference document)?

With movement type 541, materials from unrestricted-use stock are posted into the special stock of the vendor. This can be entered with reference to the PO and can be unplanned.

Task 2

Post a transfer of material **R-T3##** from the unrestricted-use subcontract stock of vendor **T-K510A##** into stock in quality inspection.

1. Enter a transfer posting in plant **1000** for **10** pieces of **R-T3##** from the unrestricted-use stock of the material provided to the vendor into stock in quality inspection for subcontractor **T-K510A##**.

2. Display the stock overview for material *R-T3##*.

Note how many pieces of the stock of material provided to the vendor are in quality inspection.

Post a GR to a subcontract PO and Further Goods Movements for Subcontracting Stock



Business Example

In your company, the pump casings required for production are procured through subcontracting. The gaskets and screws required for producing the pump casing are provided to the subcontractor in large quantities. You must provide more materials than planned. You also need to post several materials in inspection quality.

Provide components without a PO. Enter a transfer posting into stock in quality inspection.

Task 1

The vendor delivers the ordered material. More hexagonal-head screws are required for production than planned.

1. The vendor delivers manufactured casing *R-B1##*. Enter the GR for your PO into plant *1000*, storage location *0001*.
 - a) On the *SAP Easy Access* screen, choose *Logistics → Materials Management → Inventory Management → Goods Movement → Goods Movement (MIGO)*.
 - b) Enter transaction *Goods Receipt* and, as the reference, enter *Purchase Order*.
 - c) If necessary, change the movement type to *101* and choose *Enter*.
 - d) Enter the number of the PO you created during previous exercise, and choose  (*Execute*).
 - e) Select the *Item OK* checkbox, and choose  (*Post*).

2. Display the material document, and note the posted goods movements in the following table:

Material	Movement Type	Direction
<i>R-B1##</i> (Casing)		
<i>R-T1##</i> (Slug for spiral casing)		
<i>R-T2##</i> (Flat gasket)		
<i>R-T3##</i> (Hexagon head screw)		

- a) Enter transaction *Display* and, as the reference, enter *Material Document*.

- b) Choose  (Execute).



The following data displays:

Material	Movement Type	Direction
R-B1## (Casing)	101	+
R-T1## (Slug for spiral casing)	543	-
R-T2## (Flat gasket)	543	-
R-T3## (Hexagon head screw)	543	-



Hint:

If the components do not display, choose  (Explode BOM).

- c) Remain in the MIGO transaction for the next exercise
3. The vendor informs you that during the production of the 100 casings, 10 additional hexagonal head screws R-T3## were consumed. Enter the subsequent adjustment for the subcontract order. Display the material document, and note the posted movement type.
-
- a) Enter transaction *Subsequent Adjustment* and, as the reference, enter *Purchase Order*.
- b) Enter the PO number.
- c) Choose  (Execute).
- d) Select the *Item OK* checkbox. Movement type 543 displays.
If the components do not display, choose  (Explode BOM).
- e) For the hexagonal head screw R-T3##, enter **10 PC** in the *Quantity* field.
- f) Choose the *Post* pushbutton.
4. (Optional) With **movement type 541**, which type of transactions are posted (transaction – reference document)?

Unplanned provision of components (transfer posting – others) and planned provision of components with reference to the PO (from subcontracting stocks for vendor).

With movement type 541, materials from unrestricted-use stock are posted into the special stock of the vendor. This can be entered with reference to the PO and can be unplanned.


Task 2

Post a transfer of material **R-T3##** from the unrestricted-use subcontract stock of vendor **T-K510A##** into stock in quality inspection.

1. Enter a transfer posting in plant **1000** for **10** pieces of **R-T3##** from the unrestricted-use stock of the material provided to the vendor into stock in quality inspection for subcontractor **T-K510A##**.
 - a) On the *SAP Easy Access* screen, choose *Logistics* → *Materials Management* → *Inventory Management* → *Goods Movement* → *Goods Movement (MIGO)*.
 - b) Enter transaction *Transfer Posting* and, as the reference, enter *Other*.
 - c) As the default value, enter **322** in the *Movement Type* field and select the *Special stock* checkbox *O* (Parts prov. vendor).
 - d) To confirm the entries, choose *Enter*.
 - e) On the *Transfer posting* tab page, enter the following data:

Field	Value
<i>Material</i>	R-T3##
<i>Plant</i>	1000
Vendor (field under spec. stock <i>O</i>)	T-K510A##
<i>Qty in Unit of Entry</i>	10 PC

- f) Choose the *Post* pushbutton.
2. Display the stock overview for material *R-T3##*.
Note how many pieces of the stock of material provided to the vendor are in quality inspection.

 - a) Enter transaction *Display* and, as the reference, enter *Material Document*.
 - b) Choose *Execute*.
 - c) On the *Transfer Posting* tab page, choose  (*Stock Overview*). The stock value is *10*.



LESSON SUMMARY

You should now be able to:

- Provide components to a subcontractor
- Post a GR to a subcontract PO and further goods movements for subcontracting stock

Considering Vendor Consignment

LESSON OVERVIEW

This lesson introduces the process of vendor consignment, which includes the default settings required to purchase consignment material. The lesson also covers the inventory management transactions regarding **consignment material: goods receipts (GRs), transfer postings, and goods issues (GIs)**. At the end of this lesson there is a description of the settlement of withdrawals from the consignment stores.

Business Example

You have an arrangement with a vendor to supply a particular quantity of consignment material to your company. The vendor still owns the consignment material until you withdraw it from the consignment stores or post it to your own valuated stock. You take ownership of the material when you issue it to a cost center or transfer it into your own stock. You settle your consignment liabilities with the vendor monthly. You now want to test how this can be shown in the SAP ERP application by completing the process for consignment material. For this reason, you require the following knowledge:

- An understanding of the procurement process with consignment
- An understanding of the settings relevant for vendor consignment
- How to post goods movements for consignment stock
- How to settle consignment withdrawals
- How to display consignment stock

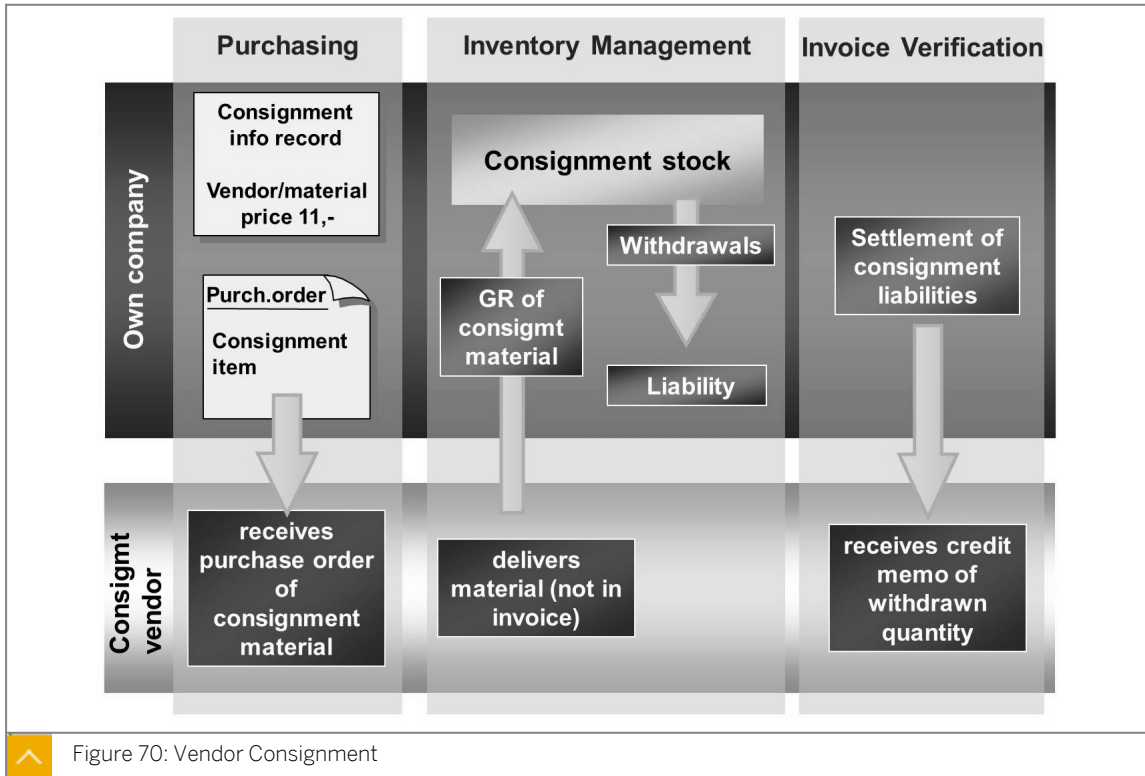


LESSON OBJECTIVES

After completing this lesson, you will be able to:

- Perform a process for vendor consignment

Special Procurement Vendor Consignment



Consignment means that the material that a vendor makes available to you is stored in your company, but belongs to the vendor. A liability toward the vendor only arises when you withdraw material from the consignment stores.

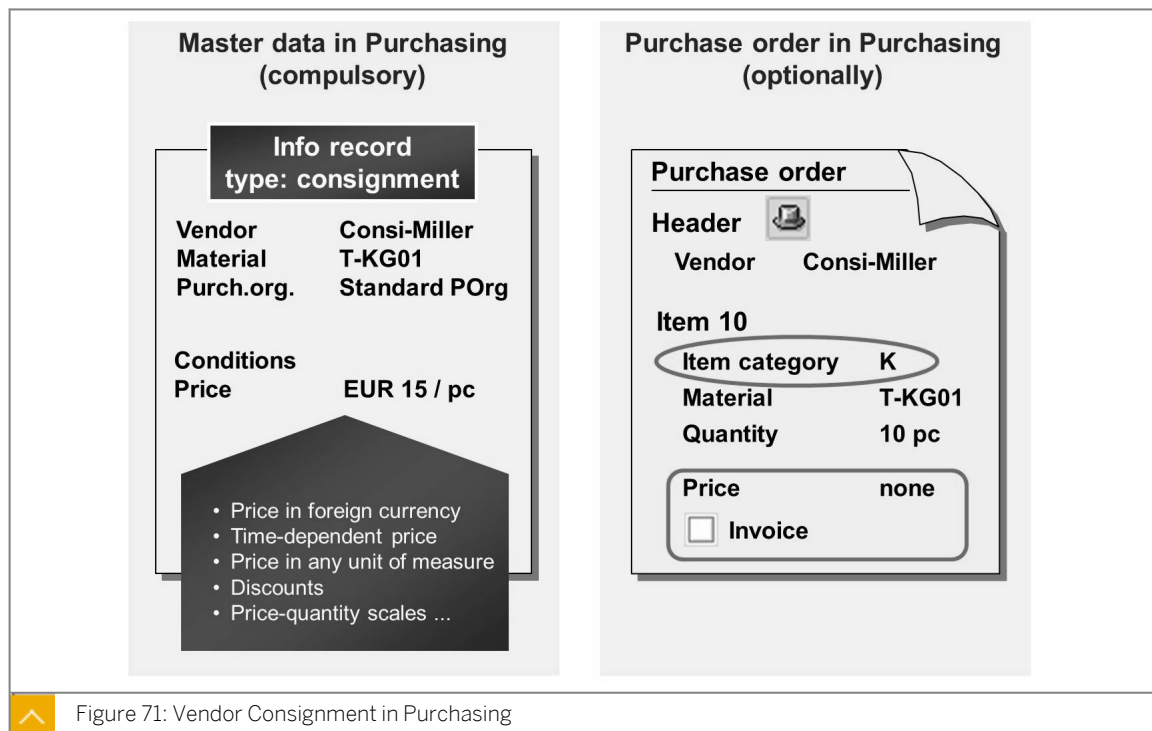
To manage material in the consignment stores, you need the following master data:

- Material master record
If you manage the relevant material as your own material, you do not need to create a new material master record for the consignment material. By using the same material number, you can include the consignment stock in the unrestricted-use stock of a material.
- Vendor master record
You can use the vendor master record for the vendor details of the consignment material.
- Purchasing info record
You can use the purchasing info record with the *Consignment* info category for the consignment vendors and consignment material details.

To request consignment goods from vendors, create a purchase order (PO) with a special consignment item. With reference to the consignment item, the system directly posts to the consignment stock of the affected vendor during GR. You can also post another GR into the consignment stock. **The system does not value the consignment stock during GR.**

When material is withdrawn from the consignment stock, for example, for production, the system values the withdrawal with the vendor price that you define in the consignment info record. There is a special report for settling withdrawals.

Vendor Consignment in Purchasing



Before you can order consignment material at a vendor or post a GR into consignment stock, you must maintain the price of the material for the vendor in a purchasing info record. The price is necessary for the valuation and settlement of material withdrawals. If you procure consignment material from several vendors, you must create a consignment info record for each vendor. **The consignment stock is managed separately for each vendor.**

To create the info record, go to the *Purchasing* menu and choose *Master Data* → *Info Record* → *Create* (ME11). Enter the vendor, material, plant, and the standard purchasing organization of the plant. Choose info category *Consignment*. If there is just one purchasing organization for the plant, you do not need to enter a standard purchasing organization.

Consignment prices can be determined in foreign currency, based on period, and in various units of measure. You can also take advantage of the purchasing condition technique, including the definition of discounts and price or quantity scales.

Consignment Order

To determine whether a material is procured for consignment stores, enter item category **K** (Consignment) in a PO.

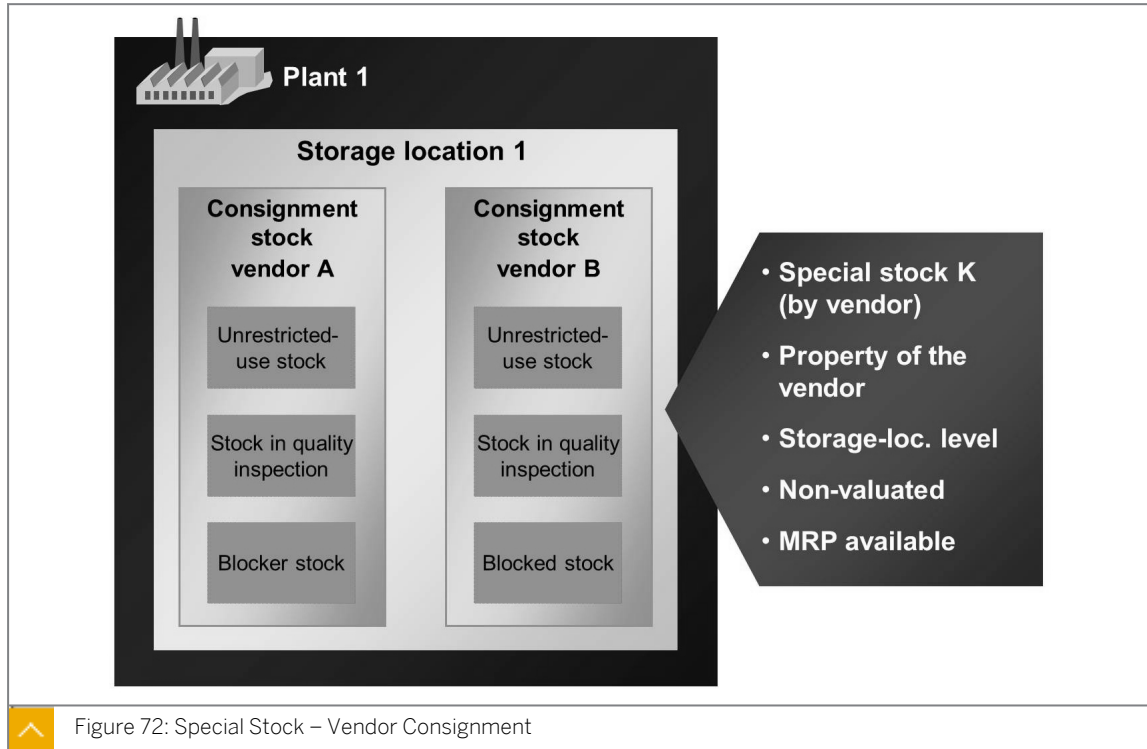
This item category has the following requirements:

- You must enter a material number.
- You cannot enter a PO price or conditions for the item.
- You require a GR for the item. The GR is posted in the vendor consignment stock and is nonvaluated.
- You cannot enter an invoice for the consignment item.

You can use item category **K** in outline agreements and purchase requisitions.

If a material is always procured for the consignment stores of a plant, you can consider this with material requirements planning, using a special procurement key in the material master record. This special procurement key means that the system creates a purchase requisition with item category *K* during the planning run for a demand for this material.

Vendor Consignment in Inventory Management



Inventory management supports the following functions within vendor consignment:

- Special stock type vendor consignment
- GR in the vendor consignment stock with and without reference to a PO
- Transfer postings within the vendor consignment stock and transfer postings from the vendor consignment stock to your own stock
- GIs from the vendor consignment stock

Vendor Consignment Stock

The material that you procure using vendor consignment is managed in a vendor-related special stock, *K* (consignment vendor). The special stock is updated at storage location level because the material is stored at your company facility.

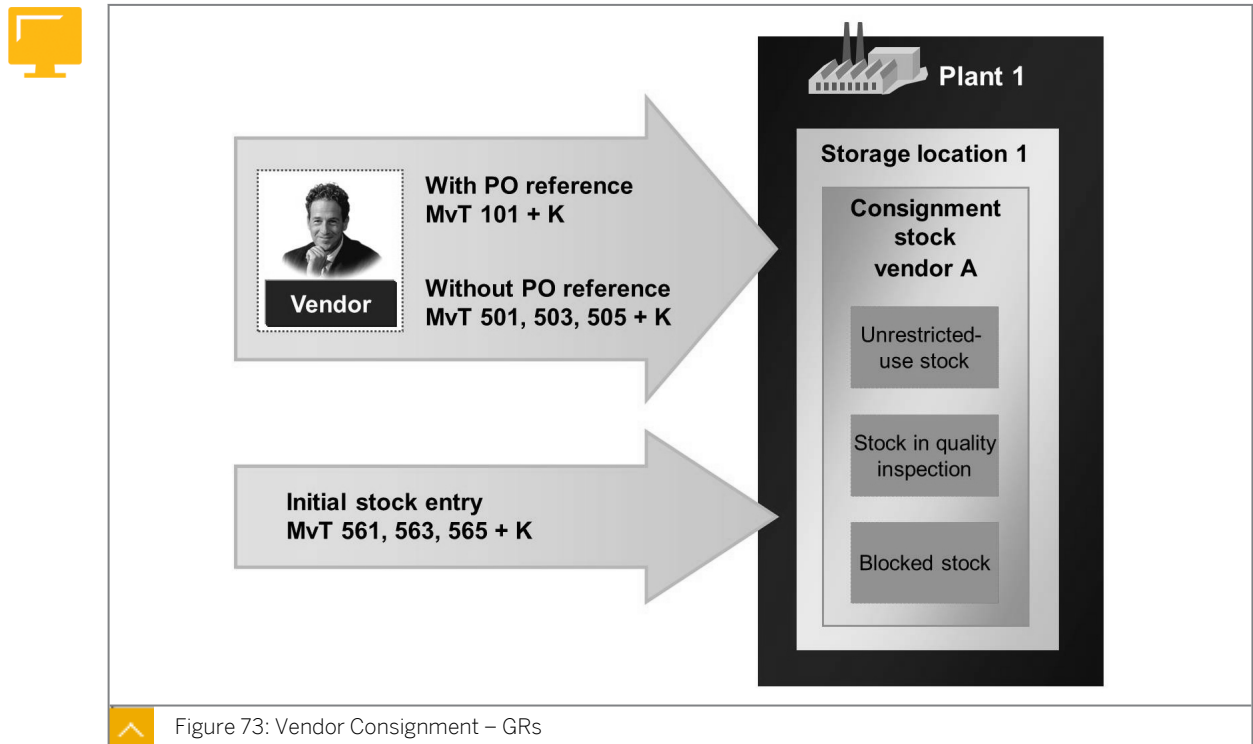
The consignment stock is not valuated because it still belongs to the vendor. For the consignment stock, the stock types are unrestricted use, in quality inspection, and blocked. The consignment stock is considered when you determine the available stock of a material.

If you have consignment stock for a material, it displays in the stock overview (MMBE). At storage location level, there is a list of the totals of all consignment stocks. If you double-click this special stock level, you can see an exact overview of consignment stocks for each vendor.

Unlike the stock overview, with the *Display consignment stocks* function, you can display consignment stocks for several materials at the same time. On the SAP Easy Access screen,

choose *Information Systems* → *General Report Selection* → *Material Management* → *Inventory Management* → *Consignment Stock* (MB54).

GR to the Vendor Consignment Stock

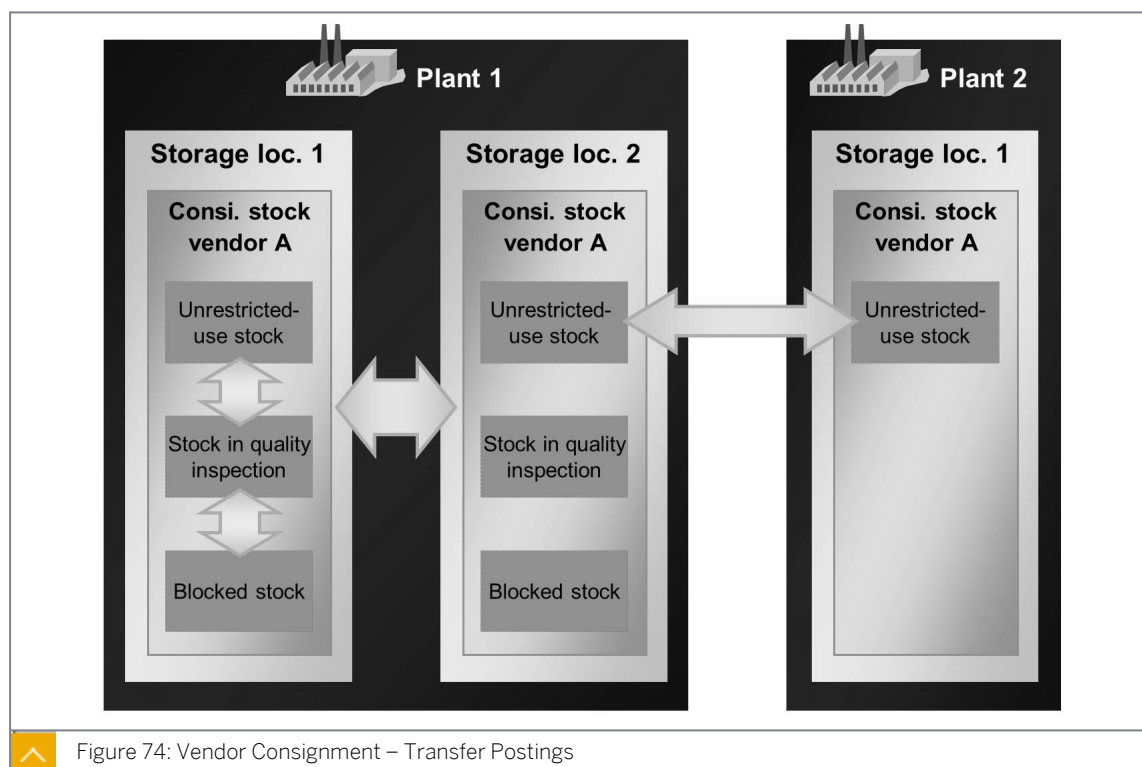


You can enter GRs in your consignment stores with or without PO reference. When you enter a GR for a consignment order, the system automatically posts the delivered quantity to the consignment stock of the vendor. Choose movement type *101* to automatically set special stock indicator *K*. **For a normal GR with a PO, you can post to all three stock types.**

You can also post another GR without a PO and make an initial entry of stock balances in the three stock types for consignment. In addition to the known movement types for these goods movements (501, 503, 505 for GR without PO; 561, 563, 565 for initial entry of stock balances), you must specify the special stock indicator *K* and the vendor of the consignment material.

All GRs in the consignment stock are nonvaluated.

Transfer Postings

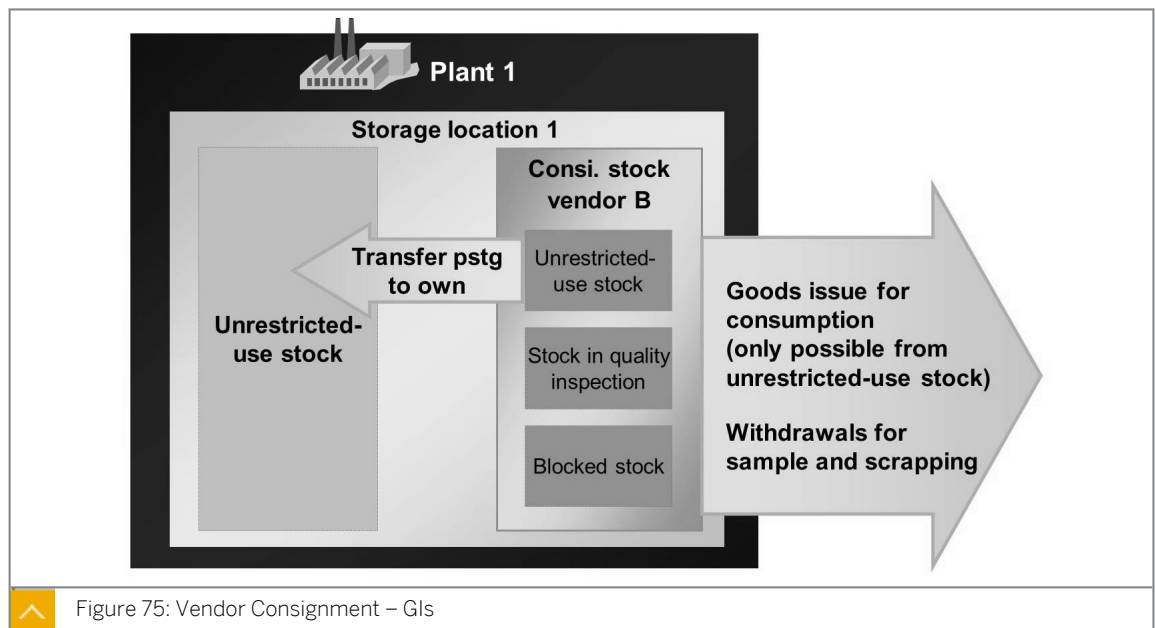


For consignment stocks, you can also execute transfer postings and stock transfers. For these goods movements, you must specify the special stock indicator *K* and the vendor of the consignment material, in addition to the movement types for stock material. These goods movements are also nonvaluated.

The possible stock transfers and transfer postings for consignment stock are as follows:

- Stock-to-stock transfer posting
- Storage-location-to-storage-location stock transfers (one-step procedures only)
- Plant-to-plant stock transfers (one-step procedures only)

GI from the Consignment Stock



You can only post a GI from unrestricted-use consignment stock for consumption. If the consignment material is in stock in quality inspection or in blocked stock, you must first post the consignment material to unrestricted-use stock. You can make withdrawals for samples and scrapping from all three stock types. When entering GIs, you must specify the special stock indicator *K* and the consignment vendor, in addition to the movement type in all goods movements.

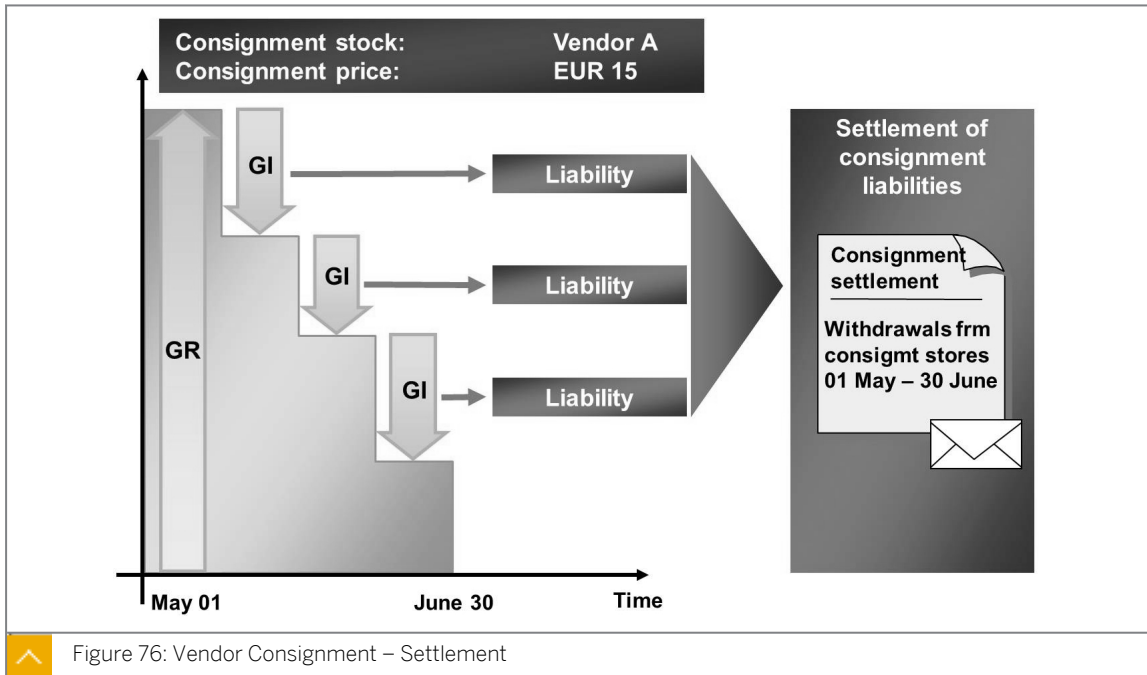
You also have the option of adopting consignment stocks into your own stock. To do this, post a transfer posting with movement type (MvT) 411 and special stock indicator *K*. Unlike the GI for consumption, this transfer posting causes an increase in the valuated stock and no consumption posting.

For both GIs from consignment stock and transfer postings to your own stock, there is a liability towards the consignment vendor. The withdrawal is valuated based on the price in the consignment info record on the day of the withdrawal or transfer posting.

For the scenario in the figure, the results of the goods movement in the vendor consignment for the plant are as follows:

- Consignment stock is reduced on a quantity basis
- There is a liability for the consignment vendors (price from consignment info record)

Vendor Consignment in Invoice Verification



You must regularly clear liabilities towards the vendor that exist because of the issues from the vendor consignment stock. The consignment goods are settled without invoice receipt because the vendor cannot trace the goods withdrawal directly. The vendor can only manage the consignment stock with the deliveries from the vendor, and with your payments.

To settle consignment withdrawals, on the *SAP Easy Access* screen, choose *Logistics* → *Materials Management* → *Logistics Invoice Verification* → *Automatic Settlement* → *Consignment and Pipeline Settlement (MRKO)*.

Obtain a report with which you can display settled and nonsettled consignment withdrawals and settle the nonsettled withdrawals. Possible selection criteria include company code, plant, vendor, material, document date, and posting date of the withdrawal, and the material document number.

The system creates a message with message type **KONS**, in addition to the settlement document, so that you can inform the vendor about the settled withdrawals and the credit memo amount.

Analyze Consignment Stock

Business Example

Your company has an agreement with two vendors to deliver consignment material. You need to determine the stock quantities and the consignment prices for each vendor.

Determine and analyze the stock quantities and the consignment prices for each vendor.

Task 1

Consignment Stock

1. Determine the consignment stock for material **T-M510A##** in plant **1400**. To which vendor does the consignment stock belong, and what consignment price has been negotiated?

Enter the vendor and consignment stock data in the following table:

Field	Value
<i>Vendor</i>	
<i>Quality</i>	
<i>Consignment price</i>	

2. Note the stock quantities according to the stock overview for material **T-M510A##** in plant **1400**, storage location **000** in the following table:

Stock Type	Your Own Stock	Consignment Stock
<i>Unrestricted use</i>		
<i>Quality inspection</i>		
<i>Blocked</i>		



Hint:

For the following exercise step, stay in the stock overview.

3. Display the Accounting view of the material master for material **T-M510A##** in plant **1400**. Note the total stock and total value in the following table:

Accounting Detail	Value
<i>Total stock</i>	
<i>Total Value</i>	

Task 2

Master Data for Vendor Consignment

1. What are the various master data required for the consignment process in SAP ERP?

Analyze Consignment Stock

Business Example

Your company has an agreement with two vendors to deliver consignment material. You need to determine the stock quantities and the consignment prices for each vendor.

Determine and analyze the stock quantities and the consignment prices for each vendor.

Task 1

Consignment Stock

1. Determine the consignment stock for material **T-M510A##** in plant **1400**. To which vendor does the consignment stock belong, and what consignment price has been negotiated?

Enter the vendor and consignment stock data in the following table:

Field	Value
Vendor	
Quality	
Consignment price	

- a) On the *SAP Easy Access* screen, choose *Logistics → Materials Management → Inventory Management → Environment → Consignment → Consignment from Vendor → Stock (MB54)*.

- b) On the *Display Consignment Stocks* screen, enter the following data:

Field	Value
Material	T-M510A##
Plant	1400

- c) Choose  (Execute).

The following data displays:

Field	Value
Vendor	1010
Total Quantity BUn	15 PC
Cnsgt price	EUR 16.00

2. Note the stock quantities according to the stock overview for material **T-M510A##** in plant **1400**, storage location **000** in the following table:

Stock Type	Your Own Stock	Consignment Stock
<i>Unrestricted use</i>		
<i>Quality inspection</i>		
<i>Blocked</i>		



Hint:
For the following exercise step, stay in the stock overview.

- a) On the SAP Easy Access screen, choose *Logistics* → *Materials Management* → *Inventory Management* → *Environment* → *Stock* → *Stock Overview* (MMBE).

- b) Enter the following data:

Field	Value
<i>Material</i>	T-M510A##
<i>Plant</i>	1400
<i>Storage location</i>	0001

- c) Choose  (Execute).

The following data displays:

Stock Type	Your Own Stock	Consignment Stock
<i>Unrestricted use</i>	110	15
<i>Qual. inspection</i>	0	0
<i>Blocked</i>	0	0

3. Display the Accounting view of the material master for material *T-M510A##* in plant *1400*. Note the total stock and total value in the following table:

Accounting Detail	Value
<i>Total stock</i>	
<i>Total Value</i>	

- a) Position the cursor on the *Plant* line and choose *Extras* → *Display Material*.
- b) Choose the *Accounting 1* tab page.
- c) In the *Organizational Levels* dialog box, enter **1400** in the *Plant* field.
- d) Choose *Continue*.

The following data displays:

Accounting Detail	Value
<i>Total stock</i>	<i>110</i>
<i>Total Value</i>	<i>1100</i>

Task 2

Master Data for Vendor Consignment

1. What are the various master data required for the consignment process in SAP ERP?

Material master record, vendor master record, and purchasing info record are required for the consignment process in SAP ERP.

Perform the PO Process for Vendor Consignment

Business Example

You need to order goods from a vendor with whom your company has an agreement.

Order the material from vendor **T-K510A##**. Create a PO and enter the GR.

1. Create a consignment order for vendor **T-K510A##**. Order **100** pieces of material **T-M510A##** for plant **1400**, storage location **0001**, with a delivery date 4 weeks from today. Which item category do you use? What is the PO price? (purchasing organization **1000**, purchasing group **T##**).

Enter the data in the following table:

Stock Detail	Value
Item category	
Order price	

2. Check the entire on-order stock for the material in plant **1400** in the stock overview. Enter the data in the following table:

Stock Detail	Value
On-order stock	
Consignment ordered	

3. The vendor **T-K510A##** delivers the consignment material from the PO to plant **1400**. The packing is damaged. Enter a GR of **10** pieces into blocked stock and **90** pieces into stock in quality inspection in storage location **0001**.

Then, display the stock overview from the material document and check the consignment stock of material **T-M510A##**.

Perform the PO Process for Vendor Consignment

Business Example

You need to order goods from a vendor with whom your company has an agreement.

Order the material from vendor **T-K510A##**. Create a PO and enter the GR.

1. Create a consignment order for vendor **T-K510A##**. Order **100** pieces of material **T-M510A##** for plant **1400**, storage location **0001**, with a delivery date 4 weeks from today. Which item category do you use? What is the PO price? (purchasing organization **1000**, purchasing group **T##**).

Enter the data in the following table:

Stock Detail	Value
Item category	
Order price	


- a) On the *SAP Easy Access* screen, choose *Logistics* → *Materials Management* → *Purchasing* → *Purchase Order* → *Create* → *Vendor/Supplying Plant Known (ME21N)*.
- b) On the *Create Purchase Order* screen, enter **T-K510A##** in the *Vendor* field.
- c) On the *Header data* or *Org. Data* tab page, enter the following data:

Field	Value
<i>Purch. Org.</i>	1000
<i>Purch. Group</i>	T##

- d) On the item overview, enter the following data:

Field	Value
<i>Item category</i>	K (Consignment)
<i>Material</i>	T-M510A##
<i>PO Quantity</i>	100 pieces
<i>Deliv. Date</i>	<Today + 4 weeks>
<i>Plnt</i>	1400

Field	Value
Stor. Location	0001

- e) Save your data.
- f) To display the PO, choose  (*Other Purchase Order*).
- g) In the *Select Document* dialog box, enter your PO number in the *PO* field.
- h) Choose the *Other Document* pushbutton.

The following data displays:



Stock Detail	Value
Item category	K
Order price	None

2. Check the entire on-order stock for the material in plant **1400** in the stock overview. Enter the data in the following table:

Stock Detail	Value
On-order stock	
Consignment ordered	

- a) On the *SAP Easy Access* screen, choose *Logistics* → *Materials Management* → *Inventory Management* → *Environment* → *Stock* → *Stock Overview* (MMBE).
- b) Enter the following data:

Field	Value
Material	T-M510A##
Plant	1400

- c) Choose  (*Execute*).
- d) Position the cursor on the *Plant* line and choose  (*Detailed Display*).

The following data displays:

Stock Detail	Value
On-Order Stock	0
Consgt ordered	100







3. The vendor *T-K510A##* delivers the consignment material from the PO to plant *1400*. The packing is damaged. Enter a GR of **10** pieces into blocked stock and **90** pieces into stock in quality inspection in storage location *0001*.
Then, display the stock overview from the material document and check the consignment stock of material *T-M510A##*.

- a) On the *SAP Easy Access* screen, choose *Logistics* → *Materials Management* → *Inventory Management* → *Goods Movement* → *Goods Movement (MIGO)*.
- b) On the *Goods Receipt Purchase Order – SCM510-##* screen, enter transaction *Goods Receipt* and, as the reference, enter *Purchase Order*.



Hint:

Check the proposed values for the plant (*1400*) and movement type (*101*)

- c) Enter the PO number and choose  (*Execute*).
- d) Select the *Item OK* checkbox.
- e) Choose  (*Distribute Quantity*).
- f) Enter the quantities and stock types mentioned in the exercise, and choose  (*Adopt*).
- g) Choose the  *Post* pushbutton.
- h) Enter transaction *Display* and, as the reference, enter *Material Document*.
- i) Choose  (*Execute*).
- j) To display the consignment stock, on the *Where* tab page, choose  (*Stock Overview*).

Unit 6

Exercise 31

Post a Transfer Posting to Consignment Stock

Business Example

You need to transfer a stock, for which you carried out the quality inspection, to the unrestricted-use consignment stock.

After quality inspection, transfer the stock in quality inspection to unrestricted-use stock.

1. For the **90** pieces of material **T-M510A##** from vendor **T-K510A##**, the quality inspection in plant **1400** is now complete. Transfer the stock to unrestricted-use consignment stock.

Note the movement type and the *Special stock* checkbox in the following table:

Detail	Value
Movement type	
Special stock indicator	

2. Display the stock overview.

Note the details for the consignment stock of vendor **T-K510A##** in plant **1400**, storage location **0001** in the following table:

Stock Type	Value
Unrestricted use	
Quality inspection	
Blocked	

Post a Transfer Posting to Consignment Stock

Business Example

You need to transfer a stock, for which you carried out the quality inspection, to the unrestricted-use consignment stock.

After quality inspection, transfer the stock in quality inspection to unrestricted-use stock.


1. For the **90** pieces of material **T-M510A##** from vendor **T-K510A##**, the quality inspection in plant **1400** is now complete. Transfer the stock to unrestricted-use consignment stock.

Note the movement type and the *Special stock* checkbox in the following table:

Detail	Value
Movement type	
Special stock indicator	

- a) On the *SAP Easy Access* screen, choose *Logistics* → *Materials Management* → *Inventory Management* → *Goods Movement* → *Goods Movement (MIGO)*.
- b) On the *Display Material Document – SCM510-##* screen, enter transaction *Transfer Posting* and, as the reference, enter *Other*.
- c) On the *Where* tab page, enter **321** in the *Movement Type* field.
- d) On the *Transfer posting* tab page, enter the following data:

Field	Value
<i>Material</i>	T-M510A##
<i>Plant</i>	1400
<i>Stor. Loc.</i>	0001
<i>Spec. Stock</i>	K
<i>Vendor (field under spec. stock K)</i>	T-K510A##
<i>Qty in Unit of Entry</i>	90 pieces

- e) Choose the  *Post* pushbutton.
2. Display the stock overview.
Note the details for the consignment stock of vendor **T-K510A##** in plant **1400**, storage location **0001** in the following table:


Stock Type	Value
Unrestricted use	
Quality inspection	
Blocked	

a) On the SAP Easy Access screen, choose *Logistics* → *Materials Management* → *Inventory Management* → *Environment* → *Stock* → *Stock Overview* (MMBE).

b) Enter the following data:

Field	Value
<i>Material</i>	T-M510A##
<i>Plant</i>	1400
<i>Storage location</i>	0001

c) Choose  (Execute).

d) On the *Stock Overview: Basic List* screen, choose the *Vendor Consignment* line, and choose  (*Detailed Display*).

The following data displays:

Stock Type	Value
<i>Unrestricted use</i>	90
<i>Qual. inspection</i>	0
<i>Blocked</i>	10

Post a GI from Consignment Stock and Settle the Liabilities

Business Example

You have agreed on a bimonthly settlement with a vendor. You must evaluate the goods movements of the consignment stock and settle the liabilities.

Create and post a reservation for cost center **T-L##** that needs **50** pieces of material **T-M510A##** immediately and settle the liabilities.

Task 1

1. Create a reservation for today for **50** pieces of material **T-M510A##** in plant **1400**, storage location **0001**, for cost center **T-L##**.

Note the reservation number.

Check whether you can preplan a withdrawal from the consignment stock in the reservation.

2. The **50** pieces required according to the reservation are taken from the consignment stock for the vendor **T-K510A##**. Post the corresponding GI with reference to the reservation created in step 1.

Display the accounting document.

Note the descriptions of the updated G/L accounts in the following table:

Detail	Value
Debit (S)	
Credit (H)	

Task 2

1. Note the movements of the consignment stock of material **T-M510A##** over the past two months consignment. Note the goods movements relevant for the consignment settlement.

Enter the data in the following table:

Movement Type	Quantity	Relevant for Settlement
.	.	.
.	.	.
.	.	.

Movement Type	Quantity	Relevant for Settlement
.	.	.
.	.	.
.	.	.

2. Settle your consignment liabilities with vendor T-K510A# in company code 1000. Note the invoice number.

Post a GI from Consignment Stock and Settle the Liabilities

Business Example

You have agreed on a bimonthly settlement with a vendor. You must evaluate the goods movements of the consignment stock and settle the liabilities.

Create and post a reservation for cost center **T-L##** that needs **50** pieces of material **T-M510A##** immediately and settle the liabilities.

Task 1


1. Create a reservation for today for **50** pieces of material **T-M510A##** in plant **1400**, storage location **0001**, for cost center **T-L##**.

Note the reservation number.

Check whether you can preplan a withdrawal from the consignment stock in the reservation.

- a) On the *SAP Easy Access* screen, choose *Logistics → Materials Management → Inventory Management → Reservation → Create (MB21)*.
- b) On the *Create Reservations: Initial* screen, enter **201** in the *Movement Type* field and **1400** in the *Plant* field, and choose *Enter*.
- c) On the *Create Reservations: New Items* screen, enter the following data:





Field	Value
<i>Cost Center</i>	T-L##
<i>Material</i>	T-M510A##
<i>Quantity in</i>	50 PC
<i>SLoc</i>	0001

- d) Choose  (*Post*).
 - e) Note that in the reservation, you cannot specify whether the withdrawal is be made from anonymous warehouse stock or from a special stock.
2. The **50** pieces required according to the reservation are taken from the consignment stock for the vendor **T-K510A##**. Post the corresponding GI with reference to the reservation created in step 1.

Display the accounting document.

Note the descriptions of the updated G/L accounts in the following table:

Detail	Value
Debit (S)	
Credit (H)	

- a) On the SAP Easy Access screen, choose *Logistics* → *Materials Management* → *Inventory Management* → *Goods Movement* → *Goods Movement (MIGO)*.
- b) Enter transaction *Goods Issue* and, as the reference, enter *Reservation*.
- c) Enter the reservation numbers and choose  (*Execute*).
- d) Select the *Item OK* checkbox.
- e) In the position details, choose the *Where* tab page and enter **K** as the *special stock indicator*. Confirm your entries by choosing *Enter*.
- f) On the *Partner* tab page, you can now enter **T-K510A##** in the *Vendor* field. Choose  (*Post*)
- g) Enter transaction *Display* and, as the reference, enter *Material Document*.
- h) Choose  (*Execute*).
- i) In the header data, choose the *Doc. info* tab page.
- j) Choose the  *FI Documents* pushbutton.
- k) View the accounting document.

The following data displays:

Detail	Value
Debit (S)	<i>Consumption raw material 1</i>
Credit (H)	<i>Accounts Payable – Consignment</i>

Task 2

1. Note the movements of the consignment stock of material **T-M510A##** over the past two months consignment. Note the goods movements relevant for the consignment settlement.

Enter the data in the following table:

Movement Type	Quantity	Relevant for Settlement
.	.	.
.	.	.
.	.	.
.	.	.
.	.	.

Movement Type	Quantity	Relevant for Settlement
.	.	.

- a) On the *SAP Easy Access* screen, choose *Logistics → Materials Management → Inventory Management → Environment → List Displays → Material Documents (MB51)*.
- b) Enter material **T-M510A##**, special stock indicator **K**, and the posting date.
The following data displays:


Movement Type	Quantity	Relevant for Settlement
101	+90	No
101	+10	No
201	-50	Yes
321	-90	No
321	+90	No
561	+15	No

2. Settle your consignment liabilities with vendor T-K510A# in company code 1000. Note the invoice number.

- a) On the *SAP Easy Access* screen, choose *Logistics → Materials Management → Inventory Management → Environment → Consignment → Consignment from Vendor → Liability (MRKO)*.

- b) Enter the following data:

Field	Value
<i>Company Code</i>	1000
<i>Vendor</i>	T-K510A##

- c) Select the *Consignment* checkbox and the *Settle* radiobutton.
- d) Choose  (*Execute*). The system settles a withdrawal of 50 pieces of material.



LESSON SUMMARY

You should now be able to:

- Perform a process for vendor consignment

Learning Assessment

1. Which of the following actions can you perform during subcontracting?

Choose the correct answer.

- A You can skip entering subitems for a subcontracting item.
- B You can copy only one component from a bill of material (BOM) to a new subcontract item.
- C You cannot perform manual generation and entry of components for subcontracting.
- D You can define system conditions for subcontracting.

2. Which of the following transfer postings are allowed for the stock of material provided to the vendor special stock?

Choose the correct answers.

- A Plant to plant in the one-step procedure
- B Material to material
- C Stock in quality inspection to unrestricted-use stock
- D Vendor to vendor

3. Which of the following data do you need to manage a material in the consignment stores?

Choose the correct answers.

- A Vendor master record
- B Purchasing info record
- C Material master record
- D Customer master record
- E Source list

Learning Assessment - Answers

1. Which of the following actions can you perform during subcontracting?

Choose the correct answer.

- A You can skip entering subitems for a subcontracting item.
- B You can copy only one component from a bill of material (BOM) to a new subcontract item.
- C You cannot perform manual generation and entry of components for subcontracting.
- D You can define system conditions for subcontracting.

2. Which of the following transfer postings are allowed for the stock of material provided to the vendor special stock?

Choose the correct answers.

- A Plant to plant in the one-step procedure
- B Material to material
- C Stock in quality inspection to unrestricted-use stock
- D Vendor to vendor

3. Which of the following data do you need to manage a material in the consignment stores?

Choose the correct answers.

- A Vendor master record
- B Purchasing info record
- C Material master record
- D Customer master record
- E Source list

Lesson 1

Conducting Physical Inventory	310
Exercise 33: Conduct a Physical Inventory with Recount	319

Lesson 2

Analyzing Determination of Book Inventory	324
Exercise 34: Conduct a Physical Inventory with Posting Block	331

Lesson 3

Simplifying Physical Inventory	339
Exercise 35: Create and Run a Batch Input Session to Create Physical Inventory Documents	345



UNIT OBJECTIVES

- Create physical inventory documents, enter count results, and post differences
- Explain the factors influencing the determination of book inventory
- Create an inventory document with a batch input session

Conducting Physical Inventory

LESSON OVERVIEW

This lesson explains the basic process of conducting physical inventory in the SAP ERP application. Conducting physical inventory is divided into three phases, regardless of the physical inventory procedure chosen: creation of physical inventory documents, stock count, and analysis of differences.

Business Example

For legal reasons and to facilitate maximum precision in material requirements planning (MRP), you are conducting a physical inventory of the stock management units in SAP ERP. For this reason, you require the following knowledge:

- How to make preparations for physical inventory
- How to create physical inventory documents, enter count results, and post differences
- An understanding of conducting physical inventory
- An understanding of postings for physical inventory



LESSON OBJECTIVES

After completing this lesson, you will be able to:

- Create physical inventory documents, enter count results, and post differences

Physical Inventory

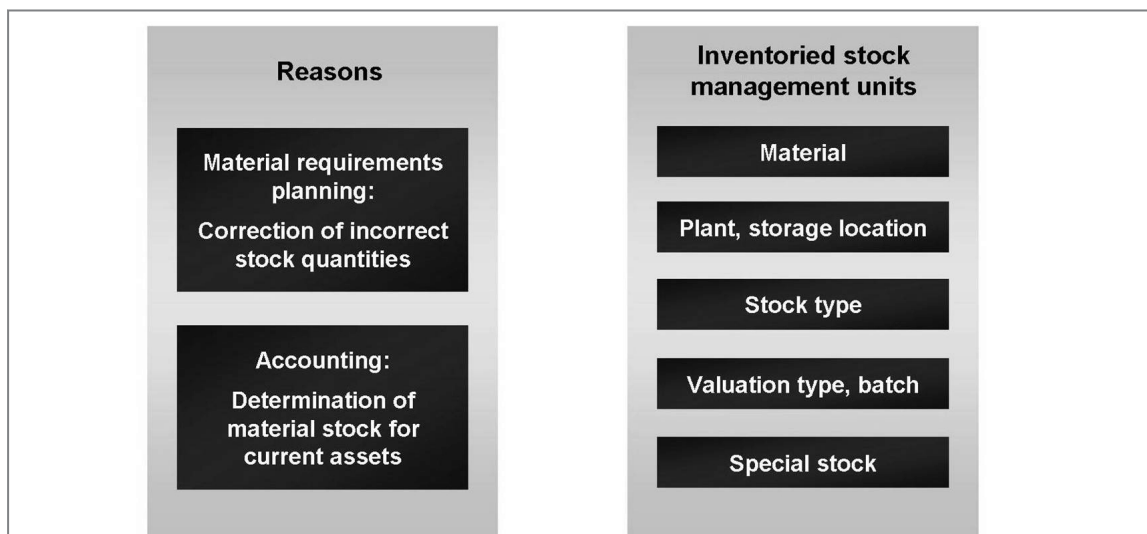


Figure 77: Physical Inventory

There are at least two reasons why an enterprise must make an inventory of its stocks at regular intervals. Many countries require by law that each company takes a physical inventory of its material stocks. This physical inventory checks the material stocks for the current assets shown in the financial statement of the company.

It is also important for internal reasons to establish the correct stock quantities available. It is the goal of MRP, for example, to ensure the availability of materials at all times while at the same time minimizing stockholdings. Incorrect stock data leads to faulty availability figures.

The physical inventory is conducted on the basis of stock management units. A stock management unit is the nondivisible part of a stock of materials for which a separate book inventory exists.

A stock management unit is defined by the following criteria:

- Material
- Plant and storage location
- Stock type
- Valuation type and batch
- Special stock

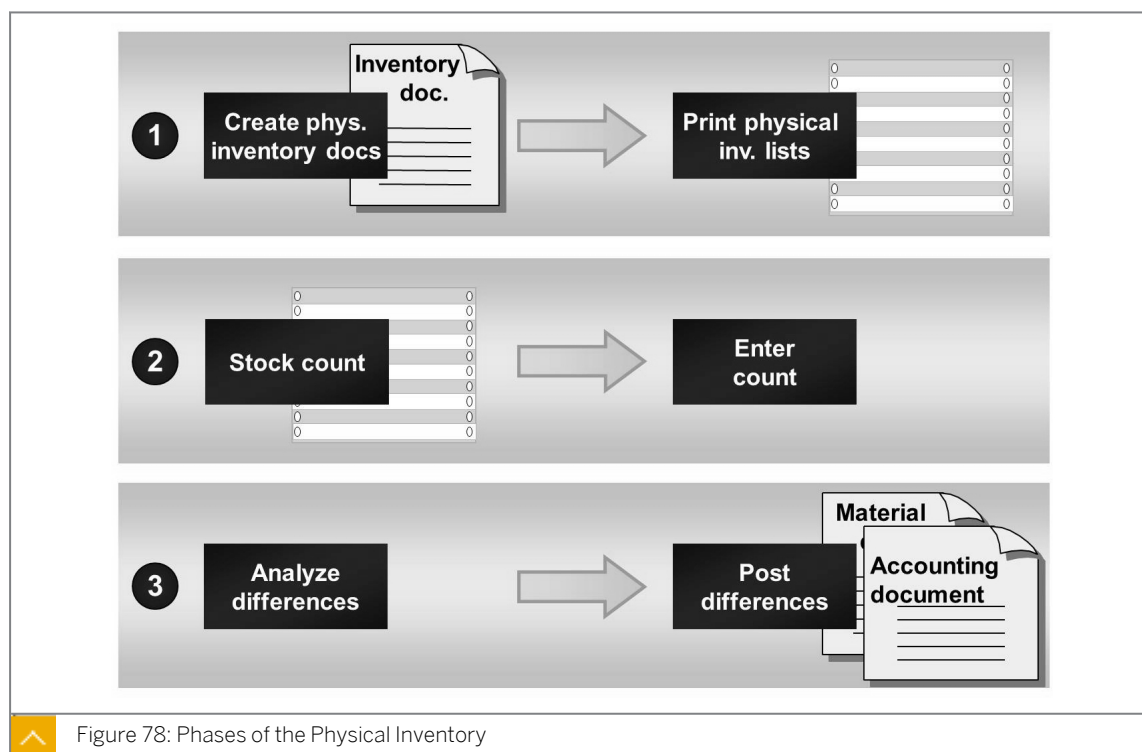
For a material, each stock management unit of a material is counted separately, and the inventory differences are posted per stock management unit. For example, you must separately record the quantity of material at each storage location of a plant that is in each of these stock types: unrestricted-use stock, stock in quality inspection, and blocked stock.



Note:

In a warehouse that is subject to warehouse management, the physical inventory is conducted on the basis of quantities and storage bins.

Three Phases of the Physical Inventory Process



The physical inventory process comprises the following phases:

- **Creation of physical inventory documents**

Generate inventory documents in large quantities using batch input. After selecting the stocks to be counted and creating the physical inventory documents, print the documents to start the counting process.

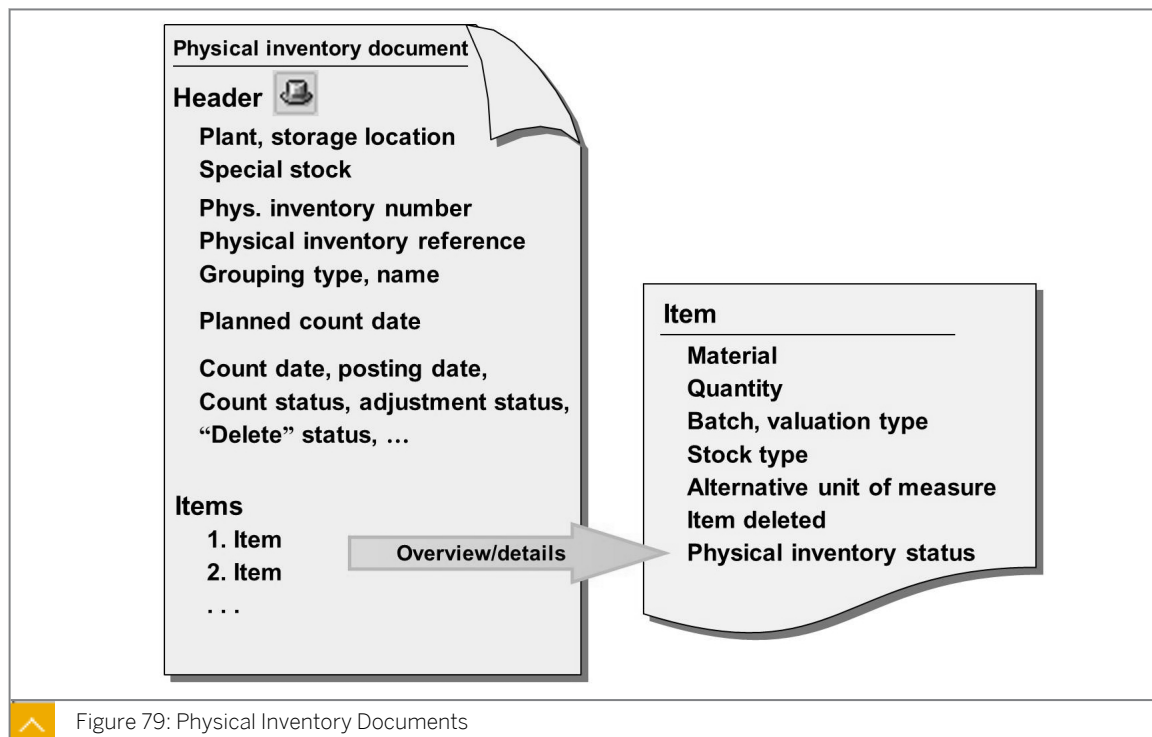
- **Entry of count**

Enter the count results in the system. The system calculates the inventory differences. If some of the results seem doubtful, you can arrange for a recount of the affected stock management units. In such a case, you can generate follow-up physical inventory documents.

- **Analysis and posting inventory differences**

Post the inventory differences that have been identified. The system updates the quantities and values of the stock in Financial Accounting.

Physical Inventory Documents



A physical inventory document contains the following data:

- Plant and storage location where the stock is to be counted (place of physical inventory)
- Date on which the count is to take place (planned count date)
- Materials to be counted
 - Batches to be counted (in the case of a material subject to a batch management requirement)
 - Partial stock to be counted (in the case of split valuation)
- Stock types to be counted
- Status of the item
- Status of the physical inventory document

Creation of Physical Inventory Document

Create physical inventory documents for each plant and storage location. To inventory special stocks, create physical inventory documents customized to the stock to be inventoried (for example, plant, storage location, and vendor or customer or project). You can specify the storage bin or the material group as further grouping values. The items of a physical inventory document are then assigned to a material group or a storage bin in addition to the mentioned groupings.

When you create a physical inventory document, specify a physical inventory number in the document header. Do not confuse this physical inventory number with the number of the physical inventory document.

The physical inventory number facilitates the selection of the physical inventory documents to be processed for a material during entry of the count results, posting of differences, and during evaluations. You have free choice in assigning the physical inventory number. For example, you may want to use the ID of the count group, the processor, the department, or the month and/or date of the physical inventory. If the physical inventory transaction references a document that lies outside the system or, conversely, if a document that lies outside the system references the physical inventory transaction, enter the document number in the *Physical Inventory Reference* field.

As of SAP ERP 6.0 Enhancement Package 2, there is a *Description text* field in the header of the physical inventory documents. You can enter data in this field if you create or change physical inventory documents manually (transactions MI01 and MI02).

The status of an item indicates whether the item has been processed, counted, posted, or recounted, and an overview of the status can be viewed in the document statistics. You can use the status of a physical inventory document item as a selection criterion when searching physical inventory documents.

Changes to a Physical Inventory Document

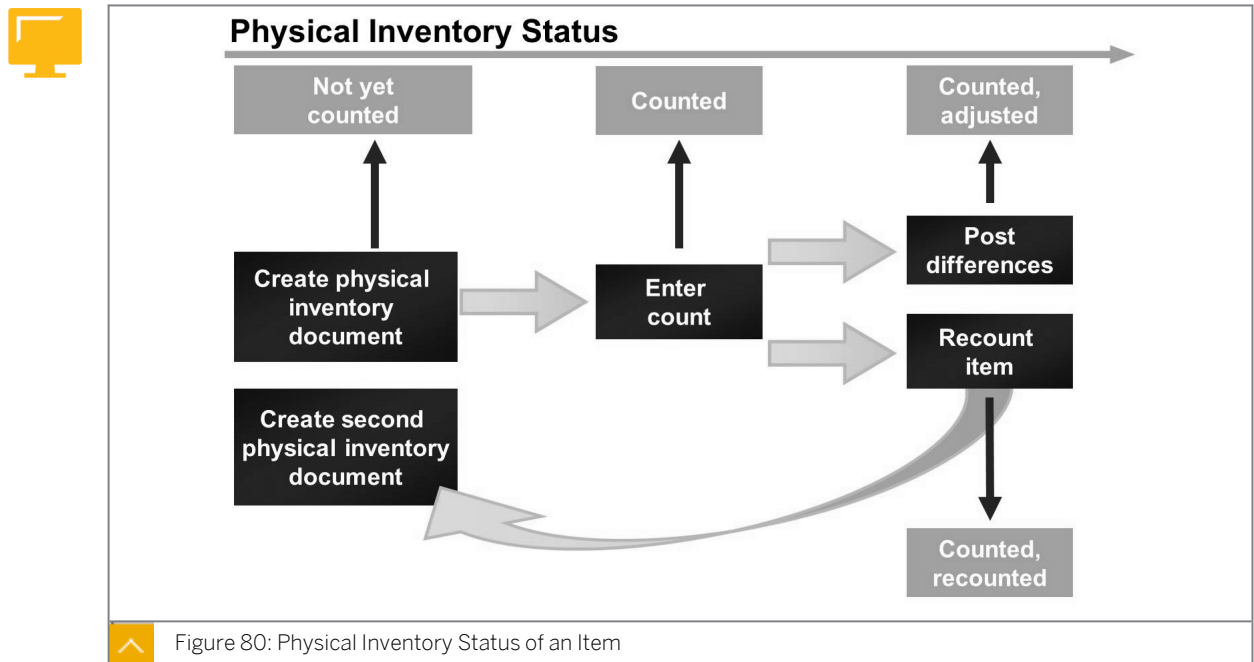
You can make the following changes to a physical inventory document, provided you have not yet entered an inventory count result:

- In the document header
 - Change the planned count date.
 - Set or unset the posting block.
 - Freeze or unfreeze the book inventory.
 - Specify or change the physical inventory number, reference, and name.
- In an item record
 - Change the stock type.
 - Change the count unit of measure.
 - Set the deletion indicator.
- Enter new items.
- Delete the document.

If you have already entered the physical inventory count results in a physical inventory document (but not for all items), you can only make the following changes:

- Set or remove the posting block.
- Freeze the book inventory or remove the freeze.
- Set the deletion indicator for individual items or delete the document completely.
- Enter or change the physical inventory count results.

Physical Inventory Count



For the inventory count, the **physical inventory document is printed** so that the physical inventory can be conducted and recorded. Once physical inventory is complete, the physical inventory list containing the count results in written form is returned to the person responsible for entering the count results in the corresponding physical inventory document in the system. When the count result is entered in a physical inventory document, the count date must be specified.

The count date is used to perform the following tasks:

- Determine the book inventory

If the count date lies in the current period, the book inventory is the quantity at the relevant stock level at the current time, that is, when the count results are entered.

If the count date lies in the previous period, the book inventory is the quantity at then set the po time of the last period-end closing.

- Determine the posting period for the difference posting

The count date is used to determine the period in which the differences have to be posted, for example, if the count date is December 30, 2008, the posting period is December 2008.

If the differences are not posted until January 2009, posting back to the previous period must be permitted.

When you enter the count results on the initial screen of the transaction, you can also specify a tolerance for inventory difference as a percentage variance. If the difference between the count result and the book inventory exceeds the value derived from the percentage variance, the system issues a warning message.

Note that you cannot enter 0 as a count result. If zero stock is counted for a stock management unit, you must specify this using the *Zero Count* checkbox in the physical inventory document. In a physical inventory document, you can select the *Zero Count*

checkbox for a single item or simultaneously for all items for which no count result has been entered.



Hint:

Using the zero stock count and the variance warning can cause the system to issue an undesirably large number of warning messages.

If the count result for an item is posted in the physical inventory document, the count status of the item changes to *Counted* and the difference between the count and book inventory values is calculated. You can simultaneously analyze inventory differences for multiple physical inventory documents using the list of differences.

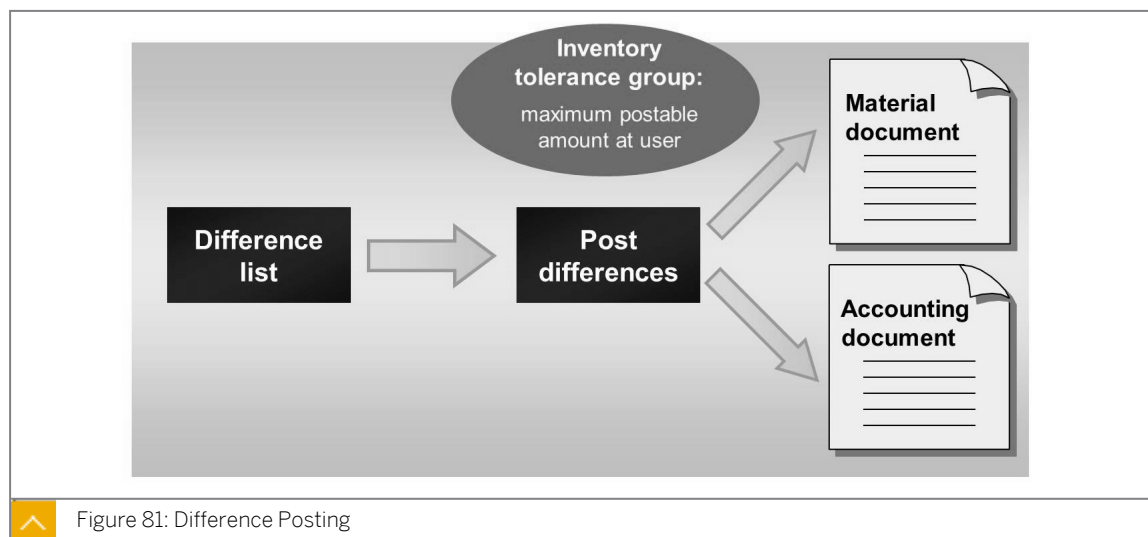
The list of inventory differences contains the following information for each item:

- Quantity counted
- Book inventory
- Difference quantity
- Difference amount

You can perform the following functions with the list of inventory differences:

- Enter, change, and display counts
- Post the differences
- Display and change documents
- Identify items or documents for recount

Difference Posting



You can post the inventory differences either by using the list of differences or through separate transactions. When an inventory difference is posted, the system creates a material document that corrects the stock figures and an accounting document that records the necessary account movements. If the physical inventory document for an item is completed in a different posting, the status of the item changes to *counted, posted*.

The difference posting must be made for all items of a physical inventory document, even if there is no inventory difference. The physical inventory for a stock management unit is only complete once the difference posting is made.

You can define tolerances for the posting of inventory differences for a user group in Customizing for *Inventory Management and Physical Inventory* under *Physical Inventory* → *Define Tolerances for Inventory Differences* (OMJ2).

In a user group, you can define the following tolerances for posting inventory differences:

- Maximum postable difference amount for each inventory document
- Maximum postable difference amount for each inventory document item

If an inventory difference exceeds the tolerance defined for the user group, you, who is assigned to this physical inventory tolerance group, may not post any inventory differences for this document. If the total value of the document is within the inventory tolerance but certain items exceed the tolerance for the specific item, you cannot post the differences for those items but you can process the differences for other items in the physical inventory document.

The system automatically sets the posting period of the accounting document when you enter the first count for the physical inventory document. The inventory difference must, therefore, either be posted in the same period or, if backposting to the previous period is allowed, in the preceding period.



Caution:

The fiscal year is specified by the planned count date set in the physical inventory document. All postings for this document must be made in this fiscal year or in the first period of the following year if back posting is allowed.

Conduct a Physical Inventory with Recount

Business Example

You want to conduct a periodic physical inventory in your company. The count results show an actual stock that is much less than the book inventory. You want to ensure the accuracy of the count.

Conduct physical inventory for material **T-INV2##** in plant **1000**, storage location **0001**. If the difference between the actual stock and the book inventory exceeds the tolerance for inventory differences, you must order a recount.

1. Create physical inventory documents for plant **1000**, storage location **0001**. Assign the physical inventory number **IN##** to your group. Enter only the unrestricted-use stock for material **T-INV2##**.

Note the physical inventory document number.

2. Enter the following count results:

Material	Stock type	Stock
T-INV2##	1	220

3. Display the differences in the list of differences. If the difference is greater than *50 PC*, create a physical inventory document for the recount.

Note the document number.

4. Display the physical inventory statistics for your first physical inventory document for material **T-INV2##**, and record the data. Display the physical inventory statistics for the item.

Note the number of the recount document and the physical inventory status in the following table:

Status	Recount number
Open	
Counted	
Cleared	
Recounted	
Deleted	

Conduct a Physical Inventory with Recount

Business Example

You want to conduct a periodic physical inventory in your company. The count results show an actual stock that is much less than the book inventory. You want to ensure the accuracy of the count.

Conduct physical inventory for material **T-INV2##** in plant **1000**, storage location **0001**. If the difference between the actual stock and the book inventory exceeds the tolerance for inventory differences, you must order a recount.

1. Create physical inventory documents for plant **1000**, storage location **0001**. Assign the physical inventory number **IN##** to your group. Enter only the unrestricted-use stock for material **T-INV2##**.

Note the physical inventory document number.

- a) On the SAP Easy Access screen, choose *Logistics → Materials Management → Physical Inventory → Physical Inventory Document → Create (MI01)*.

- b) On the *Create Physical Inventory Document: Initial* screen, enter the following data:

Field	Value
<i>Planned count date</i>	<Today>
<i>Plant</i>	1000
<i>Storage Location</i>	0001
<i>Phys. inventory no.</i>	IN##

- c) Choose *Enter*.


- d) On the *Create Physical Inventory Document: New Items* screen, enter the following data:



Field	Value
<i>Material</i>	T-INV2##
<i>Stock Type</i>	1

- e) Choose  (*Post*).

2. Enter the following count results:


Material	Stock type	Stock
T-INV2##	1	220

- a) On the SAP Easy Access screen, choose *Logistics → Materials Management → Physical Inventory → Inventory Count → Enter* (MI04).
 - b) Enter the inventory document number and choose *Enter*.
 - c) Enter the inventory count result **220 PC**.
 - d) Choose  (*Post*).
3. Display the differences in the list of differences. If the difference is greater than 50 PC, create a physical inventory document for the recount.
Note the document number.

- a) On the SAP Easy Access screen, choose *Logistics → Materials Management → Physical Inventory → Difference → Difference List* (MI20).
- b) Enter **IN##** in the Physical Inventory Number field.
- c) Choose  (*Execute*).
- d) Select the physical inventory item.
- e) Choose *Goto → Recount Document*.
- f) Choose *Enter*.
- g) Choose  (*Post*).

4. Display the physical inventory statistics for your first physical inventory document for material T-INV2##, and record the data. Display the physical inventory statistics for the item.
Note the number of the recount document and the physical inventory status in the following table:

Status	Recount number
Open	
Counted	
Cleared	
Recounted	
Deleted	

- a) On the SAP Easy Access screen, choose *Logistics → Materials Management → Physical Inventory → Physical Inventory Document → Display* (MI03).
- b) Enter the number of your first inventory document and choose  (*Stock Overview*).
- c) Note the information in the table given in the exercise.

- d) Close the dialog box for *Statistics* and choose the *Physical Inventory History* pushbutton. The physical inventory history for the item displays both the inventory status *counted*, *recounted* and the number of the recount document.

The following recount document numbers display:

Status	Recount number
Open	0
Counted	1
Cleared	0
Recounted	1
Deleted	0



LESSON SUMMARY

You should now be able to:

- Create physical inventory documents, enter count results, and post differences

Analyzing Determination of Book Inventory

LESSON OVERVIEW

This lesson explains the basic process of physical inventory in the SAP ERP application. It explains the processes of adjusting, posting and analyzing differences in physical inventory documents.

Business Example

You are conducting a physical inventory of the stock management units in your company using SAP ERP. For this reason, you require the following knowledge:

- How to adjust the book inventory in a physical inventory document
- How to conduct the physical inventory
- How to make postings for the physical inventory
- How to analyze the physical inventory documents

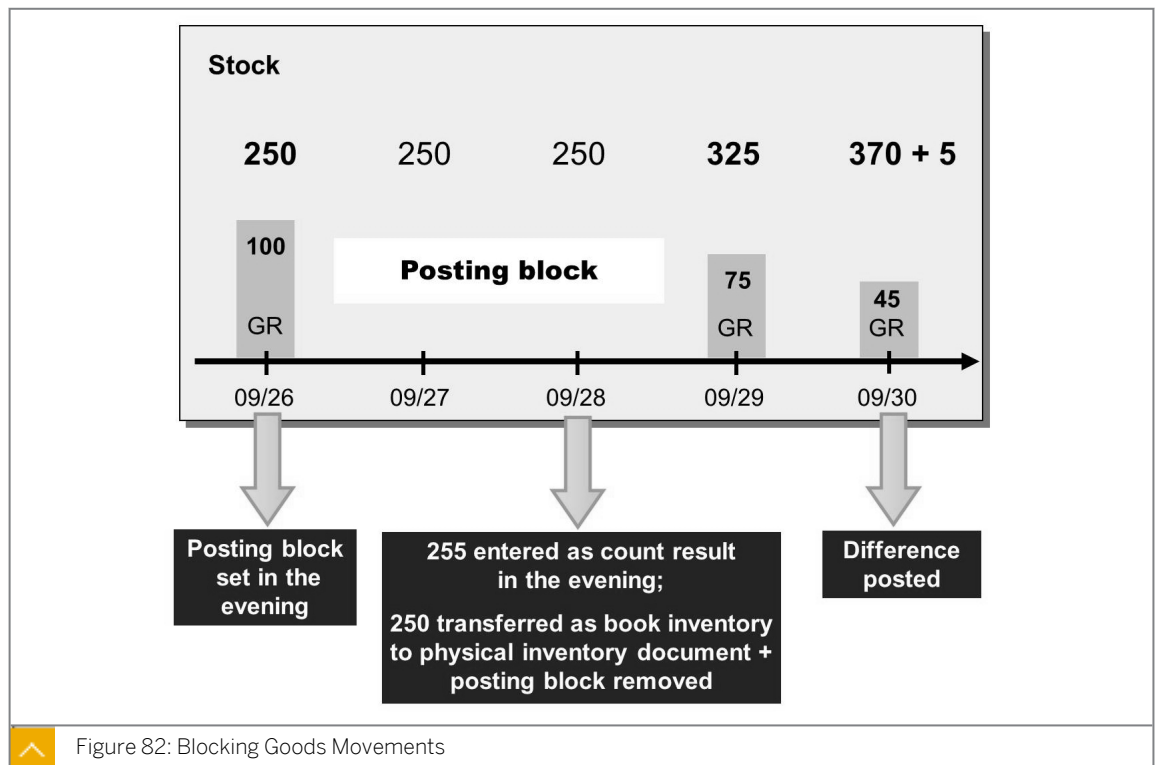


LESSON OBJECTIVES

After completing this lesson, you will be able to:

- Explain the factors influencing the determination of book inventory

Goods Movements Blocking

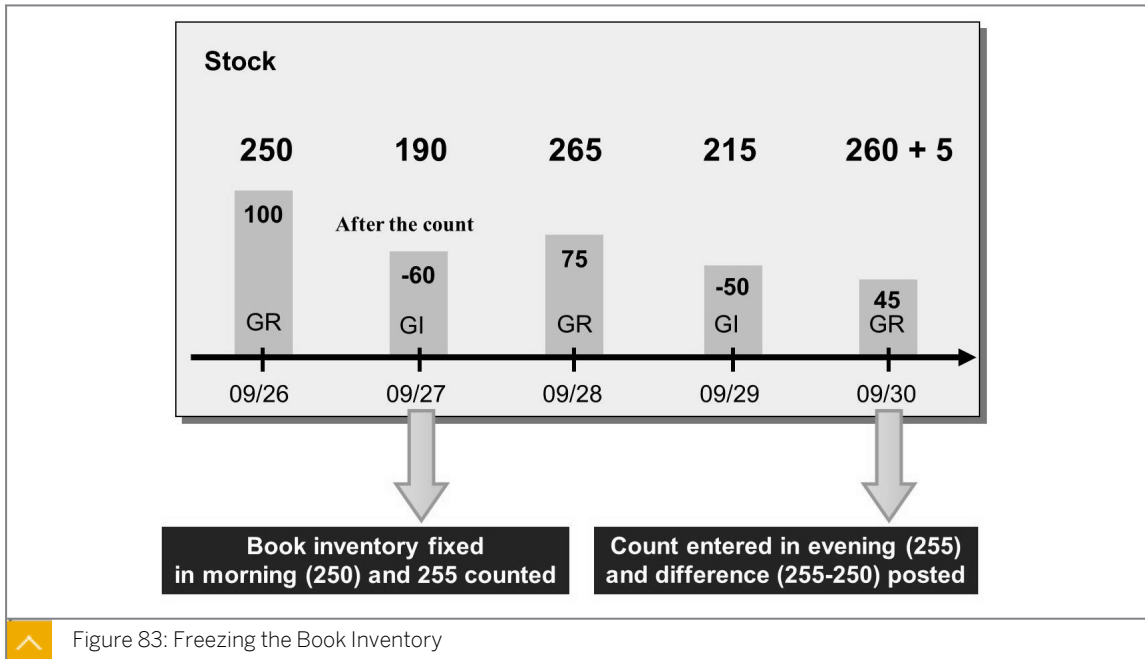


You can block all goods movements related to a stock management unit for the purposes of a physical inventory. The system blocks all the stock management units of the relevant physical inventory document for which the *Posting Block* checkbox is selected in the physical inventory document header. In the material master, the block displays in the *Physical Inventory Lock* indicator as X (material is blocked for movement for purposes of physical inventory) in the *Storage Location Stock* view.

In the case of the stock of your company, goods movements are blocked at the levels of the plant and the storage location. In the case of a special stock, blocking takes place at the level of the plant, storage location, special stock, and additional data (customer, vendor, order, or project).

When the count result for the relevant stock management is entered, the block is lifted. In the material master record, the *Physical Inventory Blocking* indicator is set to A (physical inventory of the material not yet completed). The indicator is unset when the inventory difference is posted.

Book Inventory Freezing



If it is not possible to block the goods movement for organizational reasons, you can freeze the book inventory in the physical inventory document at the time of the count. To do so, set the *Freeze Book Inventory* indicator in the physical inventory document. This prevents the goods movements from changing the book inventory figure that is relevant to the inventory-taking process.



Hint:

Specify whether book inventories freezing is permitted at the storage location in Customizing for *Materials Management* under *Inventory Management and Physical Inventory* → *Physical Inventory* → *Allow Freezing of Book Inventory Balance in Storage Location (OMBF)*.

Book Inventory Adjustment in a Physical Inventory Document

In this scenario, the physical inventory is being conducted for a stock management unit of a material.

The book inventory for the stock management unit is already included in the physical inventory for the following reasons:

- The *Freeze Book Inventory* indicator is set in the physical inventory document.
- The count result is entered in the physical inventory document.

After a goods movement is posted in the system for this stock management unit, the *Adjust Book Inventory* function allows you to adjust the book inventory by the relevant quantity in the physical inventory document.

If the *Adjust Book Inventory* function is active, the system checks whether a goods movement has an effect on the book inventory in the physical inventory document in the event of a timely and correct posting. In this case, adjust the book inventory in the physical inventory

document by the quantity booked in or out by the goods movement. The inventory difference of the item changes accordingly.

During the check, the system compares the posting date of the goods movement with the count date (planned or actual) in the physical inventory document. If the goods movement posting date is before the count date, the system then adjusts the book inventory in the physical inventory document. If the posting date of the goods movement and the count date are the same, the indicator that you selected to activate the function determines whether an adjustment takes place.

To activate the function in Customizing, choose *Materials Management* → *Inventory Management and Physical Inventory* → *Physical Inventory* → *Settings for Physical Inventory* and enter a value for the *Adjust Book Inventory* field.

The Adjust Book Inventory indicator has the following values:

- Not active (“_”)
- Active (“1”)

If the dates of the goods movement and the count date of the physical inventory are the same, the physical inventory was before the goods movement.

- Active (“2”)

If the dates of the goods movement and the count date of the physical inventory are the same, the goods movement was before the physical inventory.

For example, the following is a sequence of events:

1. On 12/27

The stock of the material is 31 PC; the physical inventory document is created.

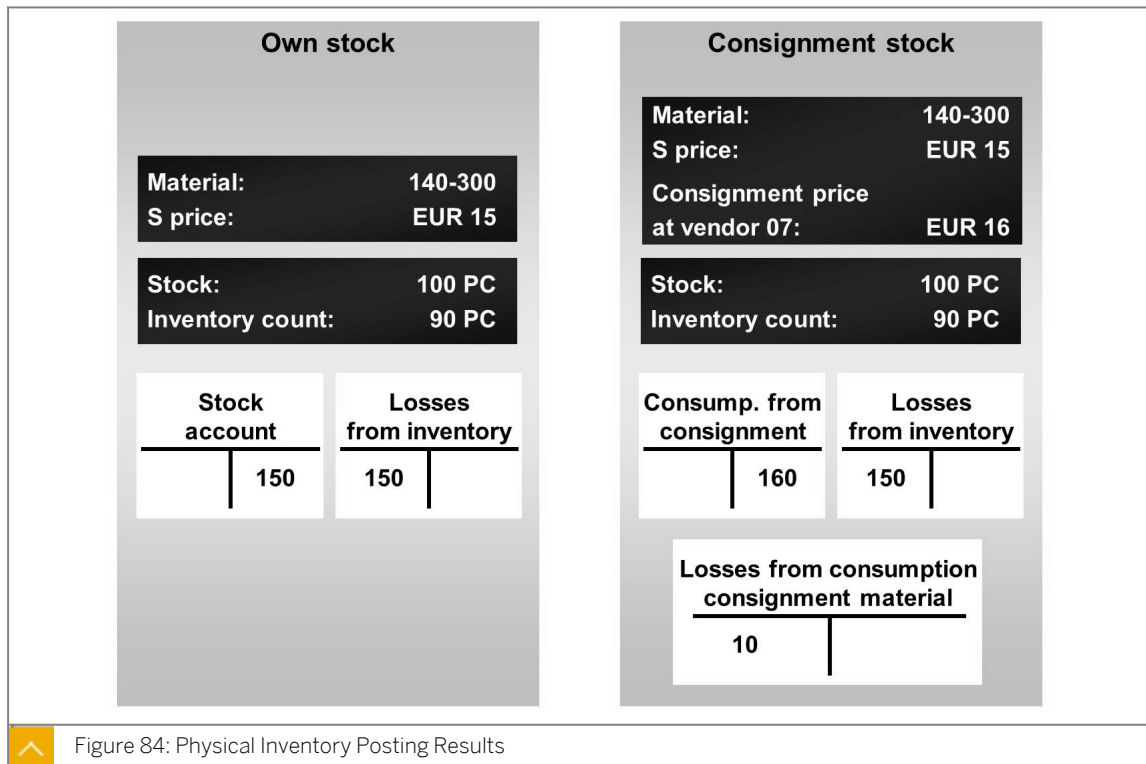
2. On 12/28

The count result of 35 PC is entered; 31 PC is used as the book inventory in the physical inventory document, and an inventory difference of +4 PC is returned.

3. On 12/29

A goods receipt (GR) of 5 PC is entered with the posting date of 12/26; the book inventory in the physical inventory document is adjusted to 31 + 5, or 36 PC; the inventory difference is +1 PC.

Physical Inventory Posting Results



Account movements that take place when the physical inventory differences are posted depend on the stock inventoried.

The method for posting physical inventory differences depends on the following stock type:

- Own stock
- Consignment stock belonging to a vendor

Own Stock

When inventory differences are posted, the stock figures in the material master record are updated. The total stock is automatically adjusted to the counted quantity. For accounting, the difference is the same as a GR or goods issue (GI). The stock account is debited or credited when the inventory difference is posted.

When the inventory difference is posted, the stock account is debited or credited as follows:

- If the count result is less than the book inventory, the stock account is credited with the value of the inventory difference multiplied by the price. The offsetting entry is made to the "Expense from Physical Inventory" account.
- If the count result is greater than the book inventory, the stock account is debited with the value of the inventory difference multiplied by the price. The offsetting entry is made to the "Revenue from Physical Inventory" account.

Because the posting amount is calculated based on the current valuation price in the material master record, posting the inventory difference does not change the valuation price.

Vendor Consignment

When the inventory differences are posted, the vendor consignment stock is automatically adjusted to the actual inventory. Because this stock is managed on a nonvaluated basis, there is initially no posting to the accounting side. An accounting document is nevertheless created. This depends on how SAP ERP interprets the difference.

SAP ERP interprets the inventory differences based on the following results:

- **Count result less than book inventory**

If the count result of consignment stock is less than the book inventory, it is assumed that the difference was withdrawn from consignment stock and subsequently cannot be traced. The inventory difference is, therefore, posted as a withdrawal. The vendor must be paid for the withdrawal. For this reason, when an inventory difference is posted, the same account movements take place as for a transfer posting from consignment to own stock. There is one exception; that is, the amount that would be posted to the stock account at the time of the transfer posting goes to the "*Expense from Inventory Differences*" account when the inventory differences are posted.

- **Count result greater than book inventory**

If the count result of consignment stock exceeds the book inventory, it is assumed that larger withdrawals from consignment stores are posted than actually took place. The inventory difference is, therefore, posted as a reversal (cancellation) of withdrawals. Since withdrawals are posted to the "*Liabilities from Consignment Stores*" account, this account must also be posted when the inventory difference is posted. The system, therefore, makes postings that contrast completely to the case "*Count quantity less than book inventory*".

Conduct a Physical Inventory with Posting Block

Business Example

You want to carry out a periodic physical inventory in your company. Goods movements are to be blocked during the physical inventory.

Carry out the physical inventory for material **T-INV1##** in plant **1000**, storage location **0001**. Monitor the settings for the physical inventory indicator in the master record for material **T-INV1##**.

1. Determine the physical inventory checkbox status change for material **T-INV1##** in plant **1000**, storage location **0001** before the inventory.

To gain an overview of the physical inventory status changes through individual inventory phases, record the status in the following table after each step:

Exercise step	Physical Inventory Block
Step 1 Before inventory	
Step 3 Physical inventory document created	
Step 5 Goods movement blocked	
Step 8 Count entered	
Step 11 Difference posted	

2. Create a physical inventory document for plant **1000**. The count is to take place in two days. Assign physical inventory number **GR##** for your group. Enter the count data for all three stock types for material **T-INV1##** at storage location **0001**.
Note the physical inventory document number.

3. Note the physical inventory indicator for material **T-INV1##** in plant **1000**, storage location **0001**, and complete the table in step 1.
4. Set the posting block for the physical inventory document.
5. Note the inventory block indicator for material **T-INV1##** in plant **1000**, storage location **0001**, and complete the table in step 1.

6. Which of the following goods movements related to material *T-INV1##* can still be posted?

Choose the correct answers.

- A GR against the PO in plant 1000, storage location 0002
- B Sample from stock in quality inspection, plant 1000, storage location 0001
- C Stock transfer from storage location 0001 to storage location 0002 in plant 1000
- D GI for cost center, plant 1000, storage location 0001
- E GI from consignment stores, plant 1000, and storage location 0001
- F GR in the GR blocked stock in plant 1000

7. Enter the physical inventory count.

Material	Stock type	Stock
<i>T-INV1##</i>	1	490
<i>T-INV1##</i>	2	10
<i>T-INV1##</i>	4	0

8. Note the physical inventory indicator for material *T-INV1##* in plant 1000, storage location 0001, and record it in the table in step 1.

9. Display the differences in the list of differences. Post the physical inventory difference.

10. Display the physical inventory statistics of the physical inventory document.

Note the physical inventory statistics values in the following table:

Status	Value
Open	
Counted	
Cleared	
Recounted	
Deleted	

11. Note the physical inventory indicator for material *T-INV1##* in plant 1000, storage location 0001, and record it in the table in step 1.

Conduct a Physical Inventory with Posting Block

Business Example

You want to carry out a periodic physical inventory in your company. Goods movements are to be blocked during the physical inventory.

Carry out the physical inventory for material **T-INV1##** in plant **1000**, storage location **0001**. Monitor the settings for the physical inventory indicator in the master record for material **T-INV1##**.

1. Determine the physical inventory checkbox status change for material **T-INV1##** in plant **1000**, storage location **0001** before the inventory.

To gain an overview of the physical inventory status changes through individual inventory phases, record the status in the following table after each step:

Exercise step	Physical Inventory Block
Step 1 Before inventory	
Step 3 Physical inventory document created	
Step 5 Goods movement blocked	
Step 8 Count entered	
Step 11 Difference posted	

- a) On the *SAP Easy Access* screen, choose *Logistics* → *Materials Management* → *Material Master* → *Material* → *Display* → *Display Current* (MM03).
- b) On the *Display Material (Initial)* screen, enter **T-INV1##** in the *Material* field.
- c) Choose the *Select View(s)* pushbutton.
- d) In the *Select View(s)* dialog box, choose *Storage Location Stock*.
- e) Choose the *Org.Levels* pushbutton.
- f) In the *Organizational Levels* dialog box, enter the following data:

Field	Value
<i>Plant</i>	1000
<i>Stor. Location</i>	0001




- g) Choose *Continue*.
 - h) Note the value in the physical inventory *Blocking* indicator field.
2. Create a physical inventory document for plant **1000**. The count is to take place in two days. Assign physical inventory number **GR##** for your group. Enter the count data for all three stock types for material **T-INV1##** at storage location **0001**.
Note the physical inventory document number.

- a) On the *SAP Easy Access* screen, choose *Logistics → Materials Management → Physical Inventory → Physical Inventory Document → Create (MI01)*.
- b) On the *Create Physical Inventory Document: Initial* screen, enter the following data:

Field	Value
<i>Planned count date</i>	<Today + 2 days>
<i>Plant</i>	1000
<i>Storage location</i>	0001
<i>Phys. inventory no.</i>	GR##

- c) Choose *Enter*.
- d) On the *Create Physical Inventory Document: New Items* screen, enter the following data:

Item	Field	Value
1	<i>Material</i>	T-INV1##
1	<i>STy</i>	1
2	<i>Material</i>	T-INV1##
2	<i>STy</i>	2
3	<i>Material</i>	T-INV1##
3	<i>STy</i>	4

- e) Choose  (*Post*).
3. Note the physical inventory indicator for material **T-INV1##** in plant **1000**, storage location **0001**, and complete the table in step 1.
- a) Repeat steps 1a–1h.
4. Set the posting block for the physical inventory document.
- a) On the *SAP Easy Access* screen, choose *Logistics → Materials Management → Inventory → Physical Inventory Document → Change (MI02)*.
 - b) Enter the inventory document number from step 2 and choose  (*Header*).
 - c) Select the *Posting Block* checkbox.
 - d) Choose  (*Post*).


5. Note the inventory block indicator for material *T-INV1##* in plant *1000*, storage location *0001*, and complete the table in step 1.
a) Repeat steps 1a–1h.
6. Which of the following goods movements related to material *T-INV1##* can still be posted?
Choose the correct answers.


- A GR against the PO in plant *1000*, storage location *0002*
- B Sample from stock in quality inspection, plant *1000*, storage location *0001*
- C Stock transfer from storage location *0001* to storage location *0002* in plant *1000*
- D GI for cost center, plant *1000*, storage location *0001*
- E GI from consignment stores, plant *1000*, and storage location *0001*
- F GR in the GR blocked stock in plant *1000*

All goods movements involving storage location *0001* in plant *1000* are affected by the physical inventory at storage location *0001*, plant *1000*. Also, you cannot post goods movements of special stocks, despite the fact that you created separate physical inventory documents for the special stocks.

7. Enter the physical inventory count.

Material	Stock type	Stock
<i>T-INV1##</i>	1	490
<i>T-INV1##</i>	2	10
<i>T-INV1##</i>	4	0


- a) On the *SAP Easy Access* screen, choose *Logistics → Materials Management → Physical Inventory → Inventory Count → Enter (MI04)*.
- b) On the *Enter Inventory Count: Initial* screen, enter the physical inventory document number in the *Phys.Inventory Doc.* field and choose *Enter*.
- c) On the *Inventory Count ##: Collect. Processing* screen, enter the physical inventory count results.
- d) Select the *ZC* checkbox for the third item.
- e) Choose  (*Post*).
8. Note the physical inventory indicator for material *T-INV1##* in plant *1000*, storage location *0001*, and record it in the table in step 1.
a) Repeat steps 1a–1h.
9. Display the differences in the list of differences. Post the physical inventory difference.
a) On the *SAP Easy Access* screen, choose *Logistics → Materials Management → Physical Inventory → Difference → Difference List (MI20)*.

- b) On the *List of Inventory Differences* screen, enter the number of your physical inventory document or physical inventory number **GR##**.
- c) Choose *Execute*.
- d) Choose all items.
- e) Choose the *Post Difference* pushbutton.
- f) Choose  (*Post*).

10. Display the physical inventory statistics of the physical inventory document.

Note the physical inventory statistics values in the following table:

Status	Value
Open	
Counted	
Cleared	
Recounted	
Deleted	

- a) On the *SAP Easy Access* screen, choose *Logistics → Materials Management → Physical Inventory → Physical Inventory Document → Display (MI03)*.
- b) On the *Display Physical Inventory Document ##: Overview* screen, enter your physical inventory document number and choose  (*Overview*).
- c) Choose the *Statistics* pushbutton.

The following physical inventory values display:

Status	Value
Open	0
Counted	3
Cleared	3
Recounted	0
Deleted	0

11. Note the physical inventory indicator for material *T-INVI##* in plant *1000*, storage location *0001*, and record it in the table in step 1.

- a) Repeat steps 1a–1h.

Exercise Step	Physical Inventory Block
Task 1 Before inventory	blank (no physical inventory)
Task 3 Physical inventory document created	A (physical inventory not yet completed)
Task 5 Goods movement blocked	X (blocked for movement)

Exercise Step	Physical Inventory Block
Task 8 Count entered	A (physical inventory not completed)
Task 11 Difference posted	blank (no physical inventory)



LESSON SUMMARY

You should now be able to:

- Explain the factors influencing the determination of book inventory

Simplifying Physical Inventory

LESSON OVERVIEW

This lesson introduces various ways of simplifying the physical inventory. For example, you can combine individual steps, such as the creation of the physical inventory documents and the entry of the count results. In the event of a large number of stock management units, you can use batch input sessions during the physical inventory to reduce entry time and effort.

Business Example

To save effort, physical inventory documents are typically mass processed instead of individually, using batch input. In exceptional situations, however, it may be necessary to simplify the physical inventory for individual stock management units in other ways. The individual phases can be conducted in a different order or combined. For this reason you require the following knowledge:

- How to combine steps in the physical inventory
- An understanding of the process of physical inventory with batch input sessions
- How to create and run a batch input session

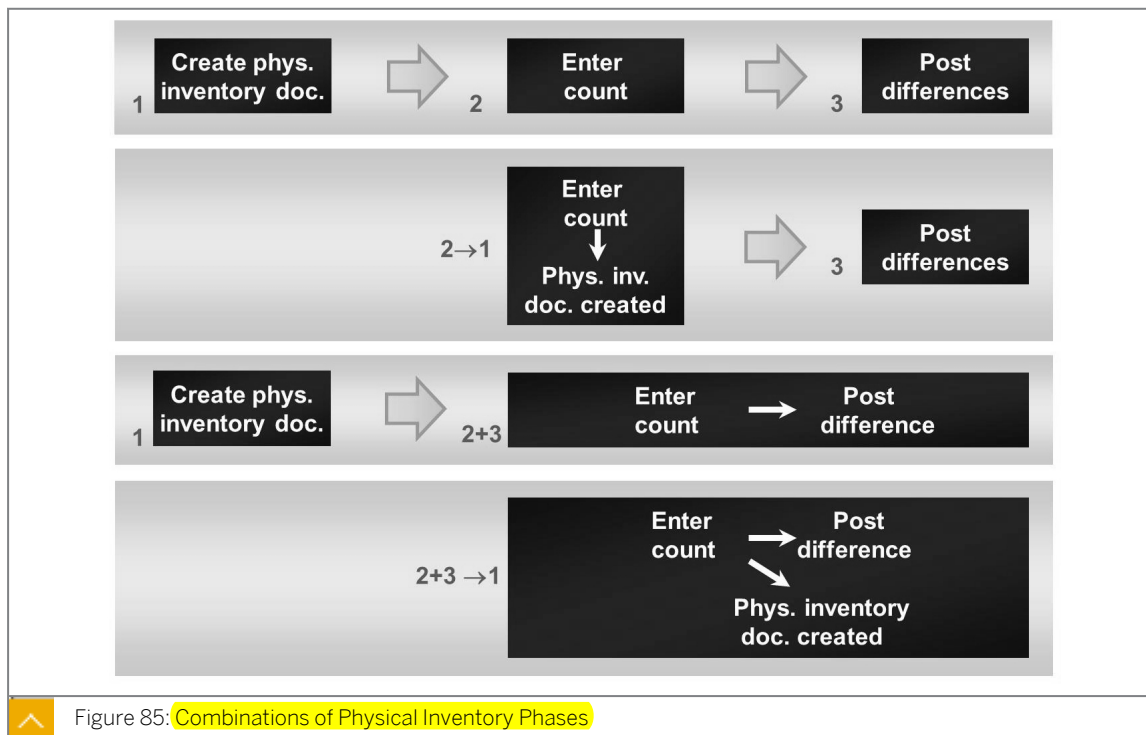


LESSON OBJECTIVES

After completing this lesson, you will be able to:

- Create an inventory document with a batch input session

Combinations of Physical Inventory Phases



Physical inventory has the following phases:

1. Creation of physical inventory documents
2. Stock count
3. Posting and analysis of difference

In the SAP ERP application, you can combine individual phases and conduct more than one phase of physical inventory in one step.

The following options are available for combining steps in the physical inventory:

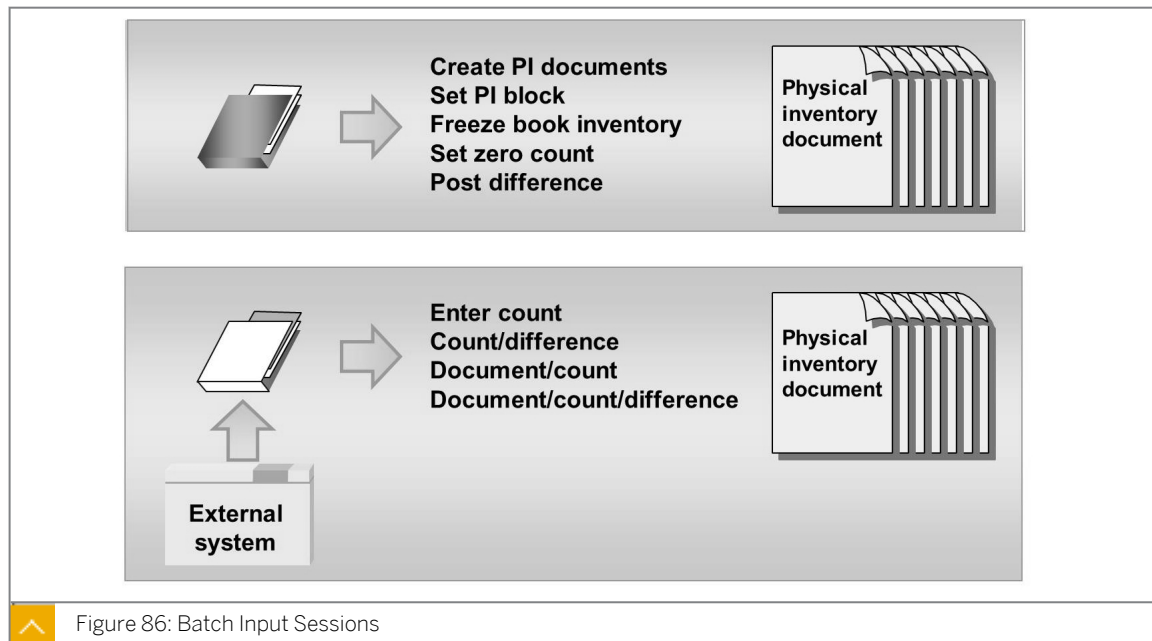
- Enter the count results without the physical inventory documents (1 and 2), transaction **MI09**.
When you enter the count result without a document, the system automatically creates a physical inventory document when you save the entries. Post the difference with reference to this physical inventory document.
- Enter the count results and post physical inventory differences (2 and 3), transaction **MI08**.
Enter the count results for an existing physical inventory document.
When you save the count results, the system automatically posts inventory differences.
- Enter the count results without physical inventory document and post inventory difference (1, 2, and 3), transaction **MI10**.
You can conduct all three phases in one step. After you enter the count results and post the results, the system generates a physical inventory document and posts the inventory difference.



Hint:

In the standard system, a physical inventory document is not automatically created when you post a goods movement. You can activate the automatic saving function in Customizing for the movement type.

Administration of Batch Input Sessions



You can perform various steps of the physical inventory by using batch input sessions. Batch input is a standard procedure for transferring large amounts of data to SAP ERP. The transaction process is simulated in this way. The data is transferred as if it had been entered online. The advantage of this procedure is that all transaction checks are performed, which ensures data consistency.

The batch input procedure is performed as follows:

1. A batch input session containing all relevant data is generated.
2. The batch input session is processed and the data it contains is imported into SAP ERP.

Batch input is typically used for one-time import of data from a legacy system into a newly installed SAP ERP. It is also used for periodic data transfers (hourly, daily) from non-SAP systems or from legacy systems into SAP ERP in which all enterprise data is consolidated. Batch input offers the advantage of automating the process steps. With batch input, data is not manually entered.

To access the main menu of the batch input service, choose *System* → *Services* → *Batch Input* → *Sessions* or *transaction SM35*.

A batch input session consists of one or more transaction calls with the data to be processed by the transactions. Usually, the system does not perform the transactions in an interactive session. Consequently, a large volume of data can be imported in a very short time. Batch input sessions are usually started automatically, not manually.

In a physical inventory, this procedure can be used for the mass processing of data and for transferring count result data.

Batch Input Sessions in Physical Inventory

Batch input sessions are differentiated between sessions that can only be run in SAP ERP and those systems that transfer data from other systems.

The following sessions accept data from SAP ERP:

- Create physical inventory documents

To create physical inventory documents for batch input, materials that will be subject to the physical inventory are selected based on predefined selection criteria. When you run the session, the system creates the inventory documents.

When batch input sessions are created, a distinction is made between normal stock (without special stock) and each type of special stock.

- Create physical inventory documents for special procedures (cycle counting (CC), sample-based physical inventory)

In the case of the CC procedure and the sample-based physical inventory, always generate physical inventory documents using the batch input procedure. With CC, the selections contain data such as the cycle-counting indicator (CC indicator) in the material master record.

With sample-based physical inventory, the stock management units to be inventoried are determined using a random number generator and a session is created with this data.

- Block material and freeze book inventory

The *Physical Inventory Block* and *Freeze Book Inventory* checkboxes can be selected and also deselected in many physical inventory documents with batch input.

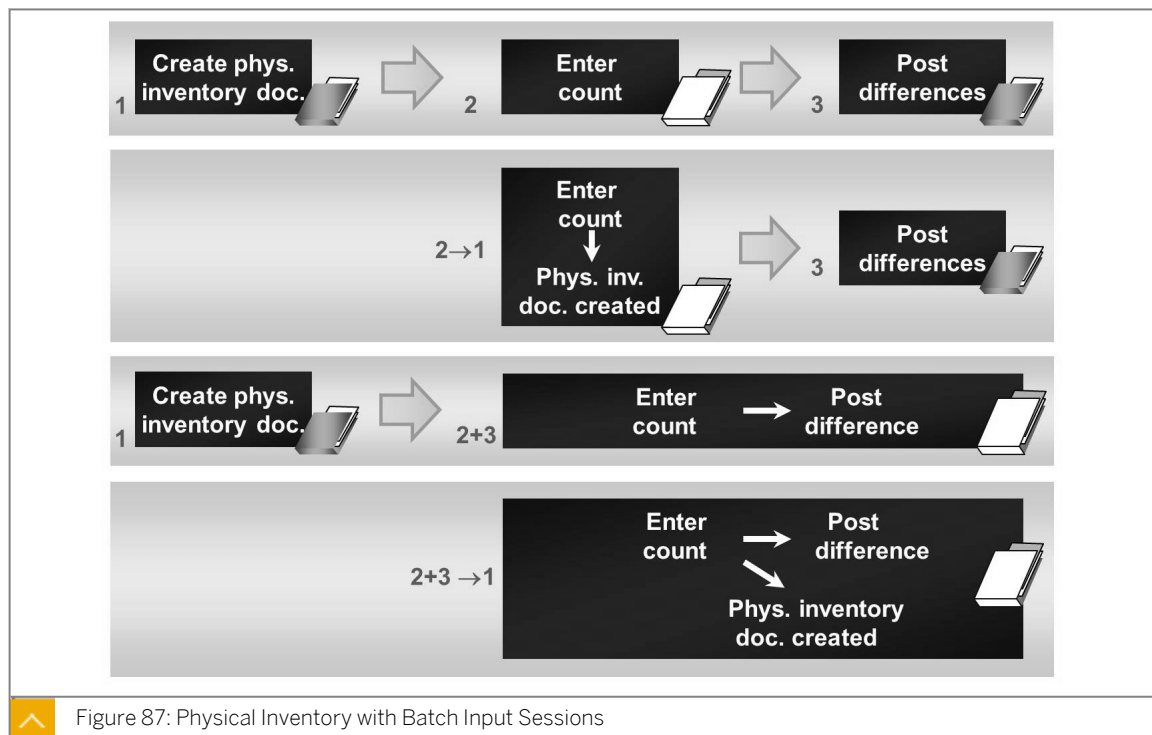
- Set zero count

You can also select the *Zero Count* checkbox by using a batch input report. As a result, the zero count is set for all items of a physical inventory document for which no count result has been entered.

- Post difference

After the difference has been analyzed in the list of differences, and if necessary, a recount triggered for individual items, the differences can be posted using the list. However, this procedure can unnecessarily overload system performance during the hours of operation. If materials are locked by other processes, the difference cannot be posted. For these reasons, you will want to post the differences by processing a batch input session.

Physical Inventory with Batch Input Sessions



If count results were manually recorded on the physical inventory documents, the count results must be transferred from these lists to the system.

Count results can then be transferred to SAP ERP by using a batch input session.

You must complete a test run before importing the sequential file. For this purpose, you must maintain relevant test data in Customizing for *Inventory Management*.

The following sessions accept data from other systems:

- Enter count

This program was developed in consideration of the special requirements of SAP Retail. If the scope of functions provided fail to satisfy your needs, you must transfer the mobile data entry (MDE) inventory count data to SAP ERP using BAPIs (Business Application Programming Interfaces). Use the business object MaterialPhysInv (material physical inventory) (object type BUS2028 - material physical inventory), method Count: Enter Count for Certain Items of a PI Document (function module BAPI_MATPHYSINV_COUNT).
- Post count results and differences

To be able to enter material count results using a batch input session, the relevant physical inventory documents must have been created in the system. If an attempt is made to enter result counts for items for which no physical inventory document has been created, an error is caused when the session is run, resulting in the termination of processing.
- Enter count without reference

This report generates a batch input session that creates physical inventory documents and simultaneously enters the count results when it is run. Before starting the report, you must ensure that the file specified on the selection screen has been created at the operating system level in the specified directory.

- Enter count without reference and posting of difference

This report generates a batch input session that creates physical inventory documents and simultaneously enters the count results and posts inventory differences when the session is run.

Default Values for Batch Input in Customizing

In Customizing, you can define default values for the individual batch input reports that enable mass processing of data in SAP ERP. For the *Create Phys. Inventory Doc. w/o Special Stock* report, for example, you can preassign default values for the session name, the planned count date, and the selection of stock types.

Go to Customizing, for *Materials Management* under *Inventory Management and Physical Inventory* → *Physical Inventory* → *Default Values for Batch Input (OMCN)* and then choose the relevant batch input report.

Create and Run a Batch Input Session to Create Physical Inventory Documents

Business Example

You are making preparations for a periodic (for example, annual) physical inventory in plant **1000**.

Create physical inventory documents by running a batch input session. When entering the count, also post the inventory difference.

1. Create a batch input session for physical inventory documents without special stock. Select the materials to be inventoried based on the following values:

Field	Value
<i>Plant</i>	1000
<i>Storage location</i>	0001
<i>Material type</i>	ROH
<i>Storage bin description</i>	BL##
<i>Selection according to stock: Stock type</i>	Unrestricted use


Change the name of the session to **MB_MI##**. Select the *Hold Processed Sessions* checkbox to hold the session after it has been run. When you create the physical inventory documents, enter the physical inventory number **BIM##**.

2. Run the session you created in the background. Display only the errors while the session is running and choose the extended log. Display the log and note the physical inventory document number.
3. Manually enter the count result for the physical inventory. Post the inventory difference immediately after you enter the following data:

Material Number	Count
<i>T-INV3##</i>	28
<i>T-INV4##</i>	40
<i>T-INV5##</i>	51
<i>T-INV6##</i>	60
<i>T-INV7##</i>	69



Hint:

To scroll to the next items of the document, choose  (Next Page).

4. Display the physical inventory document and note the status in the document header:

Status	Value
Count	
Inventory adjustment posting status	

Create and Run a Batch Input Session to Create Physical Inventory Documents

Business Example

You are making preparations for a periodic (for example, annual) physical inventory in plant **1000**.

Create physical inventory documents by running a batch input session. When entering the count, also post the inventory difference.







1. Create a batch input session for physical inventory documents without special stock. Select the materials to be inventoried based on the following values:

Field	Value
<i>Plant</i>	1000
<i>Storage location</i>	0001
<i>Material type</i>	ROH
<i>Storage bin description</i>	BL##
<i>Selection according to stock: Stock type</i>	Unrestricted use


Change the name of the session to **MB_MI##**. Select the *Hold Processed Sessions* checkbox to hold the session after it has been run. When you create the physical inventory documents, enter the physical inventory number **BIM##**.


- a) On the *SAP Easy Access* screen, choose *Logistics → Materials Management → Physical Inventory → Sessions → Create Physical Inventory Documents → Without Special Stock (MI31)*.
- b) On the *Selected Data for Physical Inventory Documents W/o Special Stock* screen, enter the following data:

Field	Value
<i>Plant</i>	1000
<i>Storage Location</i>	0001
<i>Material Type</i>	ROH
<i>Storage Bin Description</i>	BL##
<i>Name of Session</i>	MB_MI##
<i>Physical Inventory Number</i>	BIM##


- c) Select the *Hold Processed Sessions* checkbox.
 - d) Choose  (*Acc. to Stock*).
 - e) Deselect the *In Quality Inspection* checkbox.
 - f) Choose  (*Execute*).
2. Run the session you created in the background. Display only the errors while the session is running and choose the extended log. Display the log and note the physical inventory document number.
- a) Choose *System* → *Services* → *Batch input* → *Sessions*.
 - b) To select your session, enter **-##* in the *Created by* field.
 - c) Confirm your entry by choosing *Enter*.
 - d) Choose the session and choose  (*Process*).
 - e) In the *Process Sessions MB_M##* dialog box, select the *Display errors only* radiobutton and select the *Extended Log* checkbox and choose the *Process* pushbutton. When the sessions have run, a dialog box is displays.
 - f) Choose  (*Session Overview*).
 - g) Choose session *MB_MI##* and then choose  (*Log*).
 - h) On the *Batch Input: Log Overview* screen, choose the log and then choose  (*Display*).
 - i) In the details, find the number of the physical inventory document generated by running the batch input session.
3. Manually enter the count result for the physical inventory. Post the inventory difference immediately after you enter the following data:

Material Number	Count
T-INV3##	28
T-INV4##	40
T-INV5##	51
T-INV6##	60
T-INV7##	69




Hint:
To scroll to the next items of the document, choose  (*Next Page*).


- a) On the SAP Easy Access, choose *Logistics* → *Materials Management* → *Physical Inventory* → *Difference* → *Count/Difference (MI08)*.
- b) Enter the physical inventory document number from step 2.

- c) Choose *Enter*.
 - d) Enter the results of the inventory count.
 - e) Choose  (*Post*).
4. Display the physical inventory document and note the status in the document header:

Status	Value
Count	
Inventory adjustment posting status	

- a) On the *SAP Easy Access* screen, choose *Logistics → Materials Management → Physical Inventory → Physical Inventory Document → Display (MI03)*.
- b) Enter the physical inventory document number from step 2 and choose  (*Header*).
The status in the document header is as follows:

Status	Value
Count	X (all items counted)
Inventory adjustment posting status	X (all items posted)



Hint:
You can find the meaning of both the indicators used in the exercise by pressing F1.



LESSON SUMMARY

You should now be able to:

- Create an inventory document with a batch input session

Learning Assessment

1. Which of the following actions can you perform during a physical inventory?

Choose the correct answer.

- A You can set the posting block before entering the physical inventory count results in a physical inventory document.
- B You create a single generic physical inventory document for all available plants and storage locations.
- C You can post the inventory differences by using the list of differences only.
- D You can freeze the book inventory before entering an inventory count result.

2. Which of the following statements regarding the blocking of goods movements is true?

Choose the correct answer.

- A The Posting Block checkbox is present in the material management (MM) document header.
- B The system displays a locked block in the Physical Inventory Lock indicator as L.
- C Blocking can be done at plant level and storage location levels.
- D The Physical Inventory Blocking indicator is set when the inventory difference is posted.

3. Which of the following options must you adopt to avoid incorrect physical inventory differences?

Choose the correct answers.

- A Blocking goods movement
- B Freezing book inventory
- C Delaying count result
- D Cancelling postings of goods

4. Which of the following advantages does batch input have?

Choose the correct answers.

- A It is used for one-time import of data from a legacy system.
- B It is used for periodic data transfers.
- C It automates process steps.
- D Batch input sessions start manually.

Learning Assessment - Answers

1. Which of the following actions can you perform during a physical inventory?

Choose the correct answer.

- A You can set the posting block before entering the physical inventory count results in a physical inventory document.
- B You create a single generic physical inventory document for all available plants and storage locations.
- C You can post the inventory differences by using the list of differences only.
- D You can freeze the book inventory before entering an inventory count result.

2. Which of the following statements regarding the blocking of goods movements is true?

Choose the correct answer.

- A The Posting Block checkbox is present in the material management (MM) document header.
- B The system displays a locked block in the Physical Inventory Lock indicator as L.
- C Blocking can be done at plant level and storage location levels.
- D The Physical Inventory Blocking indicator is set when the inventory difference is posted.

3. Which of the following options must you adopt to avoid incorrect physical inventory differences?

Choose the correct answers.

- A Blocking goods movement
- B Freezing book inventory
- C Delaying count result
- D Cancelling postings of goods

4. Which of the following advantages does batch input have?

Choose the correct answers.

- A It is used for one-time import of data from a legacy system.
- B It is used for periodic data transfers.
- C It automates process steps.
- D Batch input sessions start manually.

Lesson 1

Applying Stock Lists and Document Lists	356
Exercise 36: Work with Document Lists	363
Exercise 37: Work with Stock Lists	367

Lesson 2

Applying Periodic Processing	370
------------------------------	-----



UNIT OBJECTIVES

- Analyze goods movements and the stock situation
- Execute a report from periodic processing

Applying Stock Lists and Document Lists

LESSON OVERVIEW

This lesson provides an overview of the analyses in inventory management which helps you monitor your stock situation and track warehouse movements.

Business Example

You require an overview of the stock situation of your materials, so you test the different lists in the SAP ERP application. If you require analyses for the individual goods movements, use the material document list. For this reason, you require the following knowledge:

- How to use different lists to analyze stock
- How to analyze documents created during goods movements
- An understanding of the Customizing settings for reporting in inventory management



LESSON OBJECTIVES

After completing this lesson, you will be able to:

- Analyze goods movements and the stock situation

Analyses in Inventory Management



The screenshot shows the 'Environment' menu in SAP. It is divided into two main sections: 'List displays' and 'Stock'. Under 'List displays', there are 'Evaluations of' with sub-points 'Material documents' and 'Accounting documents', followed by 'for example' with sub-points 'Material document list', 'Accounting documents for material', 'Cancelled materials documents', and '...'. Under 'Stock', there are 'Evaluations of stocks' with sub-points 'of each material' and 'of several materials', followed by 'for example' with sub-points 'Stock overview', 'Plant stock availability', 'Warehouse stock', and '...'.

Figure 88: Analyses in the Environment Menu

In the Inventory Management menu, analyses are listed under the following heads:


- *Environment*
- *Periodic Processing*

This lesson deals with analyses in the *Environment* menu.

Your first step is to decide whether you need information about the stock situation or want to track goods movements. The analyses for material and accounting documents for goods movements are listed under *Environment* → *List Displays*. The analyses for stocks are listed under *Environment* → *Stock*.

Almost all the lists in inventory management display with the SAP List Viewer (ALV). In some lists (such as *Material Documents*, *Cancelled Material Documents*, *Stock in Transit*, or *Stock with Subcontractor*), you can switch to an alternative display by choosing *Goto* → *Detail Lists*. The detail list is nonhierarchical. In this list, you can generate accurate subtotals of any columns or totals of different units.

If you display a list with the SAP List Viewer, you can expand the current layout or select one that has been created by choosing *Settings* → *Display Variants* or *Settings* → *Layout*. For more information about all SAP List Viewer functions, see the SAP Library under *SAP ERP Central Component* → *SAP ERP Cross-Application Functions* → *Cross-Application Components* → *General Application Functions (CA-GTF)* → *SAP List Viewer (ALV)*.

For more information on the individual analyses, see the program documentation for the respective function. To display this documentation from the analysis selection screen, choose  (*Program Documentation*).

Document List

The document list types are as follows:

- List of material documents (MB51)

This report displays a list of material documents that were posted for one or more materials.

The available selection fields include the plant, storage location, movement type, and the special stock indicator. You can also restrict the selection according to the user, the posting date, and the transaction type. In addition, you can select whether you want to read a material document directly from the database or from the archive.

- Accounting documents for material (MR51)

This report issues a list with all accounting documents that are relevant for a selected material. You can make selections based on the material, company code, valuation area, posting date, document date, and the document type of the accounting document.

- Archived material documents (MBAL)

This report reads archives for material documents and issues the corresponding documents according to the selection criteria.

- Canceled materials documents (MBSM)

This report issues a list with reversal documents and the corresponding original documents. You can make selections based on the number of the reversal document or the number of the original document, as well as the material, plant, posting date, and name of the user who created the document.



Caution:

This report selects only reversal documents that were created with the *Cancel Material Documents* function.

- Material documents with reason for movement (MBGB)

According to your selection, this report displays a list of all goods movements in which a reason for movement was specified during entry.

The material documents with reason for movement are selected according to the criteria, such as documents without reference to purchase orders (POs) and documents with reference to POs.

The system analyzes all document items that have a reason for movement. If you select the *No vendor* radio button on the initial screen, the system analyzes only the documents without reference to a PO or a vendor.

This criterion is valid if at least one item has a reason for movement in a document and if it has a reference to a PO. Using the PO history, the system reads all other goods receipt (GR) documents for the PO item.


You can restrict the selection using the material, plant, posting date, vendor, and purchasing document. For items with purchase order reference, the system displays the total delivered and returned quantities and their values, and the percentage of the returned quantity to the total delivered quantity.

Stock Lists

Stock list types are as follows:

- Stock overview (MMBE)

This report gives you an overview of the stocks for one material across all organizational levels. You can restrict your selection according to the material, plant, storage location, and batch (for materials subject to the batch management requirement). On the initial screen, you can decide whether you want to display special stocks in the stock overview and, if so, which ones.

For the list display, you can specify that zero-stock lines are hidden and you can select the levels that display in the basic list. To view the basic list, choose  (Execute).

The stock that displays in the basic list and the detail list for the organizational level is determined by the display version that you specify on the initial screen. This display version also determines the sequence in which the selected stock types display. Display versions are defined in Customizing for *Inventory Management*.



Hint:

The stock overview display has a different layout in SAP ERP 5.0.

- Stock/requirements list (MD04)

The stock/requirements list displays the stock situation and requirements situation that currently applies to a material. The system reads the relevant MRP (material requirements planning) elements (for example, plant stock, purchase requisitions, POs, and reservations) each time the list is created. The stock/requirements list, therefore, always shows the current availability status of the material. The stock/requirements list contains information about one material in one plant.

- **Plant stock availability** (MB53)

This report gives you an overview of the available stock of one material in selected plants using the **static availability** check.

- **Availability overview (CO09)**

This analysis uses a **dynamic availability** check to give you an overview of the stocks that exist for a material. The quantity available on the day of analysis is specified.



Caution:

This function can be used only for materials for which a checking group has been specified for the availability check in the material master record.

- Warehouse stock (MB52)

With this report, you can display the total stock of several materials with quantities and values at plant and storage location level. As with the stock overview, you can make selections based on materials, plants, storage locations, and batches. For this report, you can also make selections based on material type, material group, and purchasing group.

On the initial screen, you can specify whether special stocks are to be analyzed, and if so, which ones. When analyzing warehouse stock, you can monitor materials with negative stocks. To analyze the warehouse stock, select the *Display Negative Stocks Only* radio button on the initial screen. You also decide here whether the list displays hierarchically or nonhierarchically.

- **Stock for posting date (MB5B)**

This report lists stocks in a time interval (00:00 on the start date to 24:00 on the end date). Starting with the current stock, the system uses the existing material documents to calculate the stock on the specified posting date.

The list displays the stock quantity and stock value on the start and end date, the sum and value of all receipts, the sum and value of all issues and a list of the material documents in the selection period.

- Stock in transit (MB5T)

This report displays a list of materials for a plant that are in transit. **It includes both cross-plant stock transport orders and cross-company-code stock transport orders.** On the selection screen, you can choose which types of POs to display. You can also include delivered or deleted POs. If you enter a special stock indicator, you can specifically select stock transfers of the sales order stock.

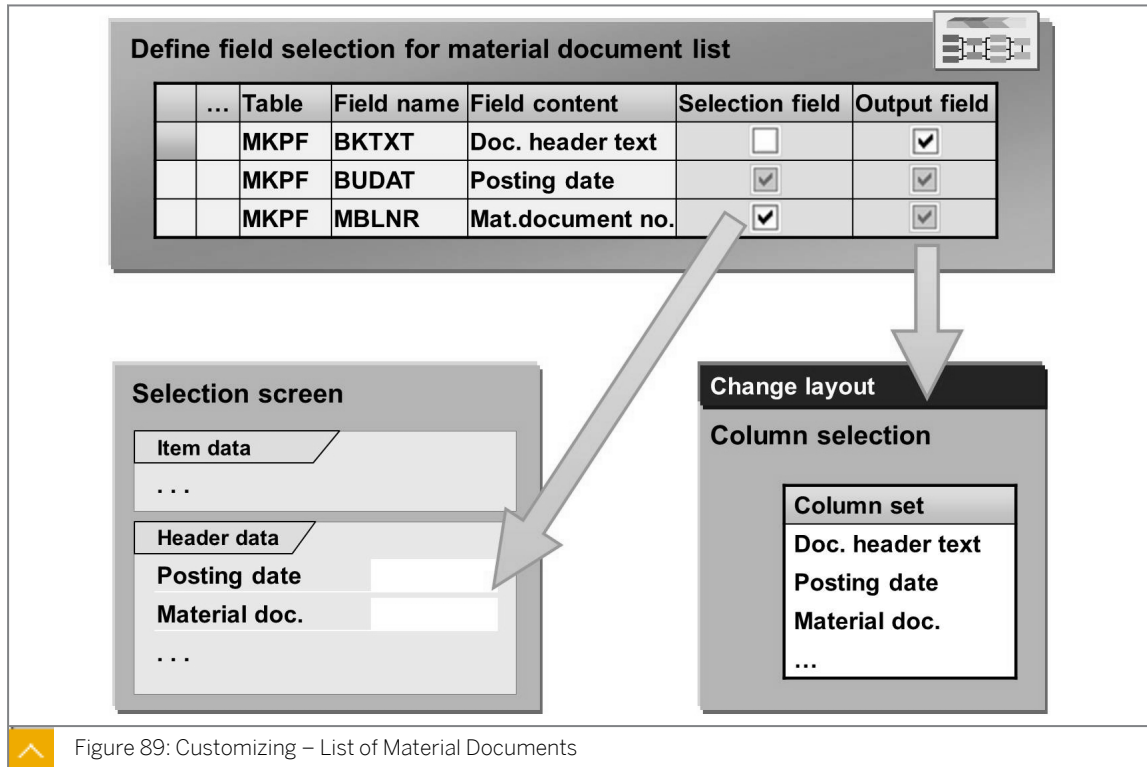
- **Valuated special stock (MBBS)**

This report issues a list with the valuated sales order stock and the valuated project stock.

- **Stock with subcontractor (MBLB)**

This report analyzes which materials and material quantities are found with a particular subcontractor.

Customizing for Lists in Inventory Management



In Customizing for *Inventory Management* and *Physical Inventory*, the *Reporting* node contains the functions for configuring the analyses in inventory management.

Inventory Management – Functions for Configuring Analyses

The functions for configuring the analyses in inventory management are as follows:

- Define stock list display
 - To define the display versions for the stock overview, go to Customizing for *Materials Management* under *Inventory Management and Physical Inventory* → *Reporting* → *Define Stock List Display* (OMBG).
 - Display version
 - You define a display version by allocating a version number with the relevant description.
 - Rules for display of stock balances
 - Depending on the version, the system determines which stocks display in the basic list, and also in which screen and in which column of the screen.
 - Detail screen for stock balance display
 - You determine the stocks and their display sequence for the detail list of the stock overview.
- Define field selection for material document list

For the material document list, you can configure the selection screen and the number of fields in the catalog in Customizing for *Materials Management under Inventory Management and Physical Inventory* → *Reporting* → *Define Field Selection for Material Document List*.

To configure the selection screen and the number of fields in the catalog, perform the following actions:

- Selection screen

You can add additional fields to the selection screen, such as the number of the material document or the material document year.

- Field catalog

In the standard settings, all fields are included in the field catalog. The field catalog includes all fields that can be selected when setting up the display. If necessary, you can improve system performance by decreasing the number of fields in the field catalog.

- Set up print functions for reporting

You can specify which additional information is printed along with the output list for inventory management reports in Customizing for *Materials Management under Inventory Management and Physical Inventory* → *Reporting* → *Set Up Print Functions for Reporting*.

You can also specify whether the detail list (nonhierarchical list) for a report displays in an alternative form (with the ALV Grid Control instead of the SAP List Viewer). Similar to a spreadsheet program, the ALV Grid Control is easy to use and gives you more options for working with the detail lists.

With the ALV Grid Control, you can determine the display of a detail list as follows:

- Reorganize columns by dragging and dropping
- Adjust the column width by dragging and dropping
- Select multiple columns with the CTRL and SHIFT keys
- Generate subtotals with item characteristics

- Group movement types for stock lists

You assign movement types to a movement type group in Customizing for *Materials Management under Inventory Management and Physical Inventory* → *Reporting* → *Group Movement Types for Stock Lists*.

This assignment can be used in the Stock on posting date report for evaluation purposes. You can combine all movement types that affect purchasing into one group. In the output list of the report, you can then filter out material documents from this group without individually specifying all purchasing-relevant movement types.

Work with Document Lists

Business Example

You need an overview of particular goods movements and of the stocks in your plant.

Display the detail list containing all the goods movements that affect the vendor **T-K510A##**. Also, display the reversal postings that were entered with movement type *102* in the current week.








1. Display all material documents for vendor **T-K510A##**. For more display options, go to the *Detail List*. Determine the total quantity posted for each material and movement type.
2. Display the reversal postings for the current week. Filter the list according to reversal postings for GRs with reference.

Work with Document Lists



Business Example

You need an overview of particular goods movements and of the stocks in your plant.

Display the detail list containing all the goods movements that affect the vendor **T-K510A##**. Also, display the reversal postings that were entered with movement type 102 in the current week.

1. Display all material documents for vendor **T-K510A##**. For more display options, go to the *Detail List*. Determine the total quantity posted for each material and movement type.
 - a) On the *SAP Easy Access* screen, choose *Logistics → Inventory Management → Environment → List Displays → Material Documents (MB51)*.
 - b) On the *Material Document List* screen, enter **T-K510A##** in the *Vendor* field and then choose  (*Execute*).
 - c) Choose  (*Detail List*).
 - d) Choose the *Quantity in UnE* column and then choose  (*Add Up Values*).
 - e) To form the subtotals for each material, choose the *Material* column and then choose  (*Subtotal...*).
 - f) To form the subtotal for the movement type, choose *Settings → Layout → Current*.
 - g) In the *Change Layout* dialog box, choose the *Sort Order* tab page.
 - h) In the column set, choose the *Movement Type* columns and then choose  (*Add Sort Criterion*).
 - i) Select the  (*Calculate subtotal*) checkbox for the movement type, and copy these settings by choosing  (*Transfer*).
2. Display the reversal postings for the current week. Filter the list according to reversal postings for GRs with reference.
 - a) On the *SAP Easy Access* screen, choose *Logistics → Inventory Management → Environment → List Displays → Cancelled Material Documents (MBSM)*.
 - b) On the *Cancelled Material Documents* screen, enter the following data:

Field	Value
<i>Posting Date</i>	<Start of week>
<i>to</i>	<today>

- c) Choose  (Execute).
- d) Choose the Movement Type column.
- e) Choose *Edit* → *Set Filter*.
- f) In the *Filter criteria* dialog box, enter **102** in the *Movement Type* field.
- g) Choose  (Execute).

Work with Stock Lists

Business Example

You wish to verify current inventory counts before conducting a physical inventory.

Verify inventory levels for plant **1100** by checking open purchase orders and negative inventory levels.

1. Check the stock overview of material **T-M510B##** to see whether POs in plant **1100** are open.
2. Check if negative stocks are allowed in plant **1100** for the physical inventory.

Stock Type	Allowed
Negative stocks	Yes/No

Work with Stock Lists

Business Example

You wish to verify current inventory counts before conducting a physical inventory.

Verify inventory levels for plant **1100** by checking open purchase orders and negative inventory levels.

1. Check the stock overview of material **T-M510B##** to see whether POs in plant **1100** are open.

- a) On the *SAP Easy Access* screen, choose *Logistics* → *Materials Management* → *Environment* → *Stock* → *Stock Overview* (MMBE).

- b) On the *Stock Overview: Company Code/ Plant/ Storage/ Location/ Batch* screen, enter the following data:

Field	Value
Material	T-M510B##
Plant	1100

- c) Choose  (Execute).

- d) On the *Stock Overview: Basic List* screen, position the cursor on the plant line and choose *Environment* → *Open Purchase Orders*.


2. Check if negative stocks are allowed in plant **1100** for the physical inventory.

Stock Type	Allowed
Negative stocks	Yes/No

- a) On the *SAP Easy Access* screen, choose *Logistics* → *Materials Management* → *Inventory Management* → *Environment* → *Stock* → *Warehouse Stock* (MB52).

- b) On the *Display Warehouse Stocks of Material* screen, enter **1100** in the *Plant* field.

- c) In the *Settings* section, select the *Display Negative Stocks Only* checkbox.

- d) Choose  (Execute). Material **T-M510B##** is possibly in negative stock.



LESSON SUMMARY

You should now be able to:

- Analyze goods movements and the stock situation

Applying Periodic Processing

LESSON OVERVIEW

This lesson introduces the analyses in the Periodic Processing menu in the SAP ERP application.

Business Example

You have made changes to your account determination posting process. You need to ensure that all stock postings are posted to the requested accounts by generating the list of stock values. For this reason, you require the following knowledge:

- An understanding of the evaluations in inventory management that must be executed regularly
- An understanding of the purpose of the periodic evaluations

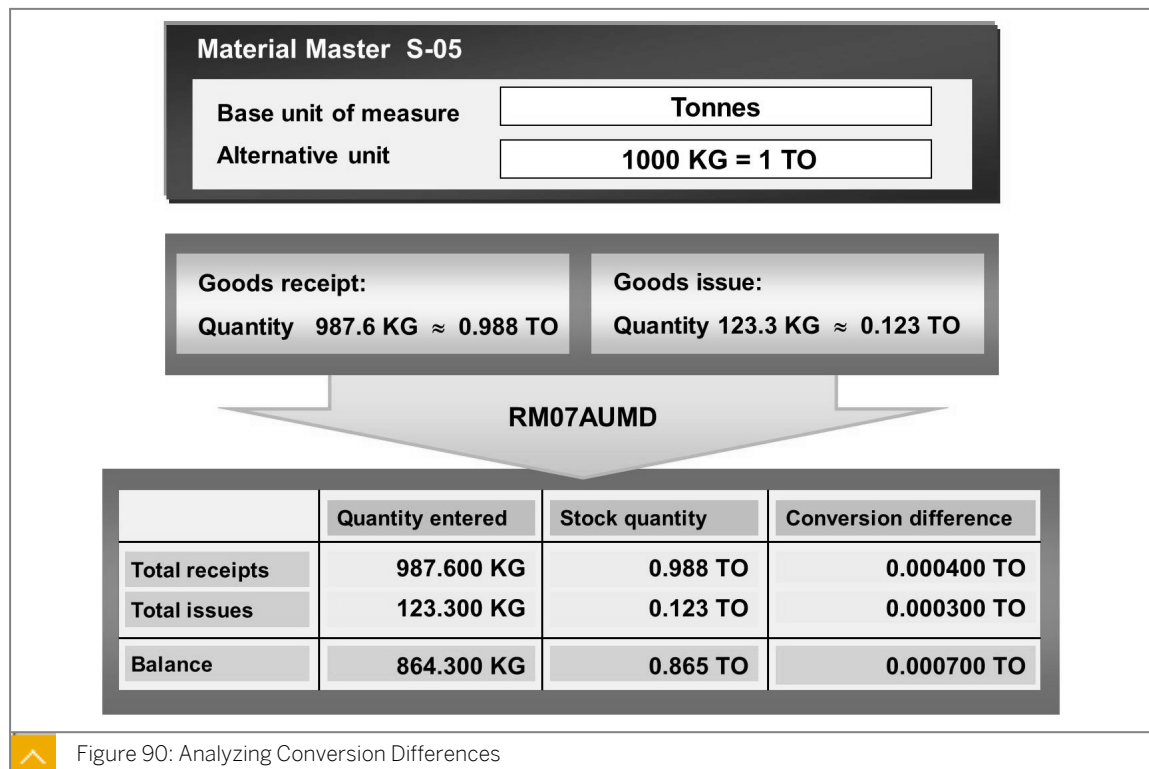


LESSON OBJECTIVES

After completing this lesson, you will be able to:

- Execute a report from periodic processing

Analyzing Conversion Differences (Transaction MB5U)



In SAP ERP, you can manage materials in different units of measure. You must specify a base unit of measure. You then define alternative units of measure with a conversion factor for calculating from this base unit of measure. The system automatically converts all quantities that you enter that are not in the base unit of measure to the base unit of measure.

The conversions may contain the following rounding differences:

- The base unit of measure is a metric unit of measure (such as meter, liter, and kilogram). Goods movements are posted in nonmetric units (such as yard, gallon, and pound).
- The base unit of measure is not the smallest unit of measure, unlike the alternative unit of measure.

To make your selection, you can use the posting date, material, plant, and special stock indicator. You can also specify a threshold value for the conversion difference to exclude negligible differences from the analysis.

In the output list, the system generates the total of all receipts and issues and displays the quantity in the entry unit of measure and the base unit of measure. In the *Conversion differences* column, the system shows the rounding errors that occurred during conversion. With the help of the balance of the conversion differences, you can post the determined differences manually.



Note:

For more information about this report, see the program documentation by choosing (*Program Documentation*) on the initial screen for evaluation.

List of Stock Values – Balance Display (Transaction MB5L)

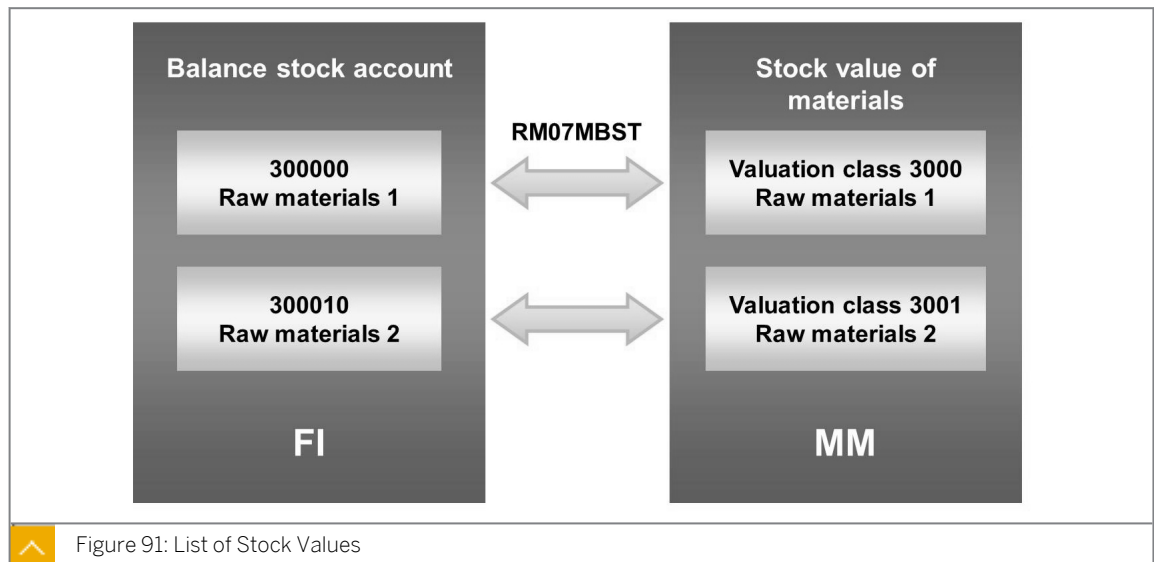


Figure 91: List of Stock Values

You can restrict the search options in the Balance Display report with the following fields:

- *Material*
- *Company code*
- *Valuation area*
- *Valuation type*

- *Valuation class*
- *G/L account*

In addition, you can choose the period for the evaluation (current period, previous period, or previous year) and specify the scope of the list, for example, totals or negative stocks only.

If you select one or more materials, the system displays the total stock quantity and the total stock value at plant level and storage location level for these materials. In addition, the system determines the stock accounts that were posted to during goods movements for the specified materials, and also the balance of these stock accounts.

For each G/L account, the balance is compared with the total stock value of the materials. The difference between the totals displays.

If you start a report without specifying a material, valuation area, and valuation class, the balance for each stock account must match the total of all stock values of the materials for the relevant valuation class.

In the Balance Display report, variances in stock values can occur due to the following reasons:

- You made manual postings to the stock account.
- Other postings besides stock postings are made to the stock account. In this case, you need to check the account determination in the Customizing settings for valuation. Ensure that the stock accounts are used only for transaction key BSX (stock postings).
- You changed the account determination for stock accounts (transaction and event key BSX) in the current operation, but you did not debit the relevant stocks from the old account (movement type 562) and posted to the new account (movement type 561).

If you place the cursor on the G/L account in the output list and choose *Environment* → *Stocks*, the system displays an overview of all materials that are managed in this G/L account. The system also displays the total value and total stock for each material.



Caution:

Postings are possible because you cannot lock the materials when the report is executed and, therefore, the balance values may not equal zero even though there are no inconsistencies. In the current posting system, you get significant results only when you let the report run several times and then compare the results.

Stock Consistency Check (Transaction MB5K)

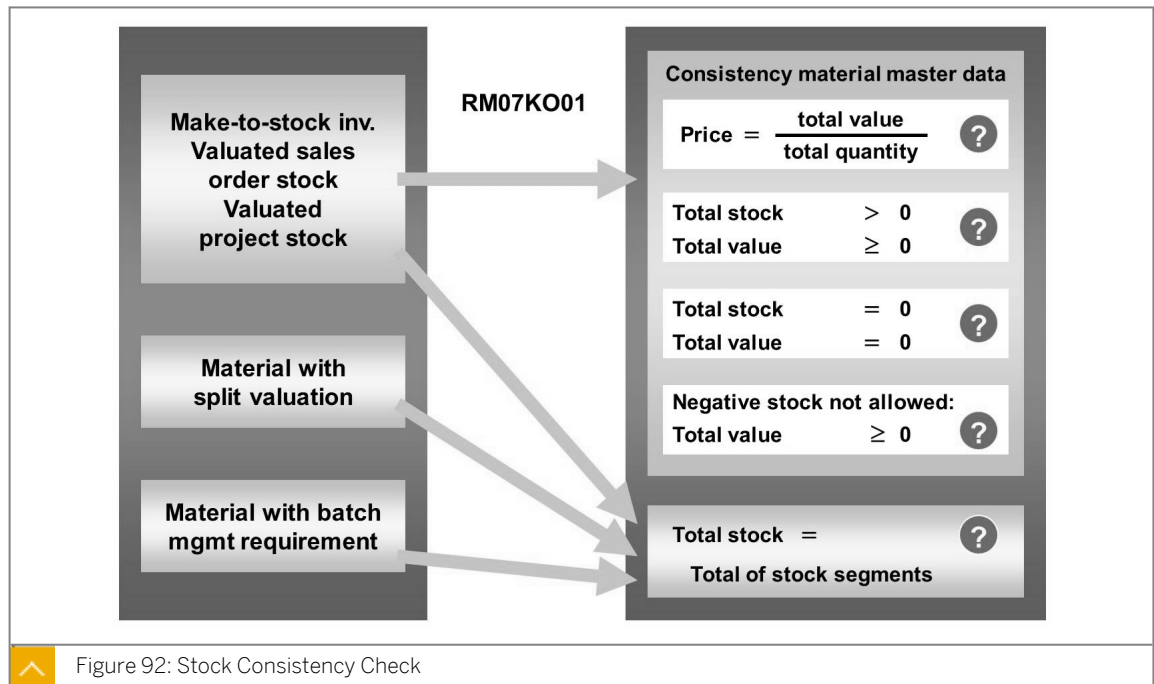


Figure 92: Stock Consistency Check

Using the *Stock Consistency Check* report, you can check the consistency of your stock data at valuation area level or material level. You can, therefore, determine possible errors in your stocks before they cause greater problems.



Note:
For information on all functions provided by the report, see the program documentation.

For the stock values of the make-to-stock inventory, the valuated sales order stock and the project stock, the system verifies the following:

- Whether the valuation data in the material master record is coherent according to the following specifications:
 - Is the specified valuation price the same as the quotient of value and quantity?
 - Does the positive quantity of a material also have a negative price?
 - Does a negative value exist for a material even though negative stocks are not allowed?
 - Is the value unequal to zero even though the relevant material has a stock of zero?
- Whether the quantity of the total valuated stock corresponds to the total of the individual subordinate segments for materials with split valuation.

The program checks, for example, whether the total valuated stock of a material corresponds to the total of all valuation types of this material.



LESSON SUMMARY

You should now be able to:

- Execute a report from periodic processing

Learning Assessment

1. Which of the following lists displays reversal documents and the corresponding original documents?

Choose the correct answer.

- A Stock/requirements
- B Canceled materials documents
- C List of material documents
- D Archived material documents

2. What are the reasons for variances in a report that is being executed?

Choose the correct answers.

- A You made manual postings to the stock account.
- B You made the other postings besides stock postings to the stock account.
- C You enter more than one movement type.
- D You reverse all negative stock balances.

Learning Assessment - Answers

1. Which of the following lists displays reversal documents and the corresponding original documents?

Choose the correct answer.

- A Stock/requirements
- B Canceled materials documents
- C List of material documents
- D Archived material documents

2. What are the reasons for variances in a report that is being executed?

Choose the correct answers.

- A You made manual postings to the stock account.
- B You made the other postings besides stock postings to the stock account.
- C You enter more than one movement type.
- D You reverse all negative stock balances.

Lesson 1

Implementing Settings for Documents

378

Lesson 2

Setting up Movement Types

382

Exercise 38: Create a New Movement Type

387

Lesson 3

Applying Other Customizing Settings

392

Exercise 39: Check the Customizing Settings for Transaction MIGO

397



UNIT OBJECTIVES

- Set up Customizing for documents in inventory management
- Define a new movement type in inventory management
- Customize plant parameters and transaction MIGO

Implementing Settings for Documents

LESSON OVERVIEW

This lesson introduces the Customizing settings for material and physical inventory documents, reservations, and accounting documents.

Business Example

You want an overview of the transactions in inventory management, as well as the document number assignment in inventory management and physical inventory. For this reason, you require the following knowledge:

- An understanding of the number assignment settings for accounting documents, material and physical inventory documents, and reservations



LESSON OBJECTIVES

After completing this lesson, you will be able to:

- Set up Customizing for documents in inventory management

Number Assignment for Accounting Documents

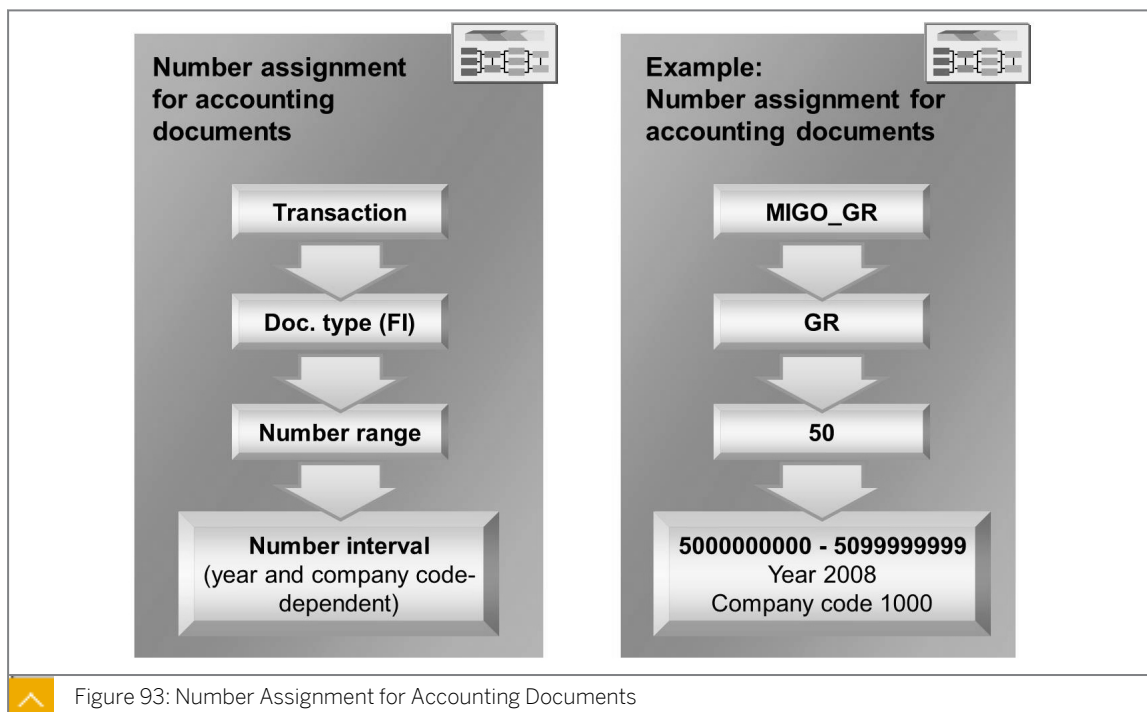


Figure 93: Number Assignment for Accounting Documents

To enable you to assign document numbers differently and, therefore, provide a distinction between accounting transactions, the SAP system contains various document types for accounting documents. In inventory management, the transaction determines the type of

accounting document. The system also allocates a number range to a document type. You define intervals for each company code based on the number range and the fiscal year.

To change the settings for the number assignment for accounting documents, go to Customizing for *Materials Management* under *Inventory Management and Physical Inventory* → *Number Assignment* → *Define Number Assignment for Accounting Documents* (OMBA).

In the standard SAP system, the following document types are predefined for inventory management:

- **WA for goods issues (GIs), transfer postings, and Other goods receipts (GRs)**
- **WE for GRs with reference to purchase orders (POs)**
- WI for inventory differences
- WL for GIs for deliveries
- WN for net postings of GRs
- PR for revaluation documents

Number Assignment for Material and Inventory Documents

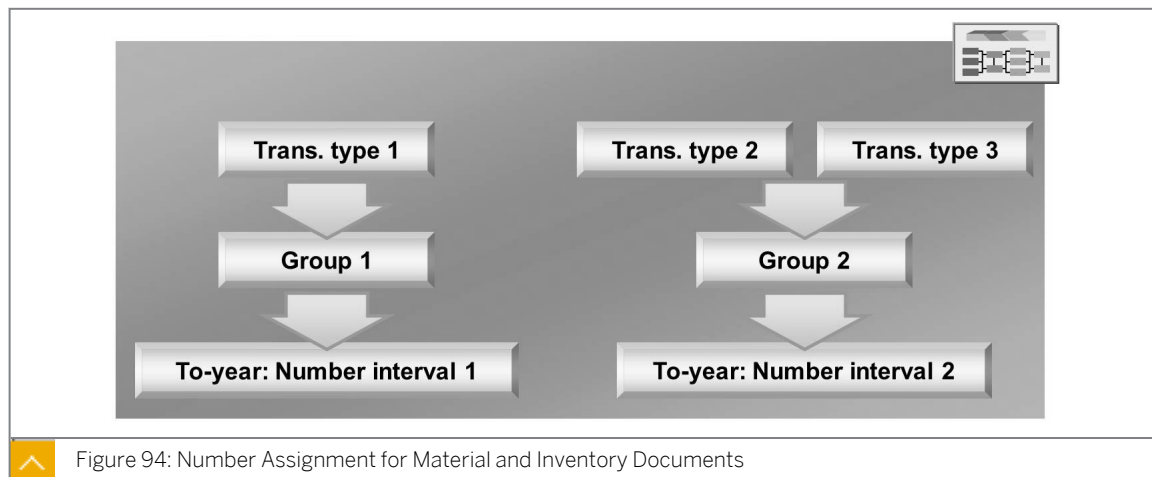


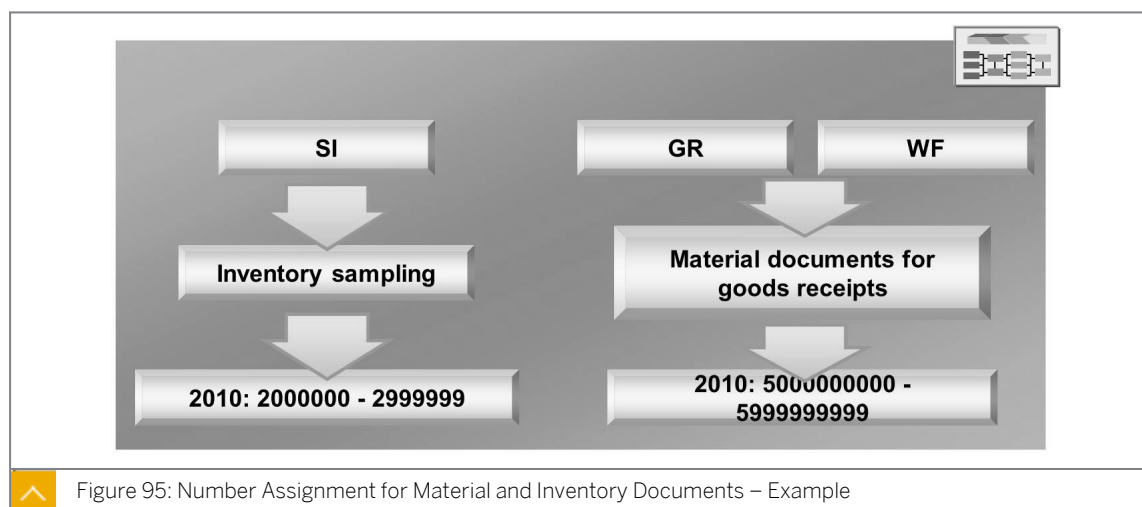
Figure 94: Number Assignment for Material and Inventory Documents

The number assignment of the material and physical inventory documents is assigned to each transaction in inventory management depending on the transaction type. The transaction types are split into number range groups. You must define a number range interval for each group.

You cannot change the transaction types. However, you can change the number range intervals or assign transaction types to new groups.

To change the settings for the number assignment for the material documents, go to Customizing for *Materials Management* under *Inventory Management and Physical Inventory* → *Number Assignment* → *Define Number Assignment for Material and Phys. Inv. Docs* (OMBT).

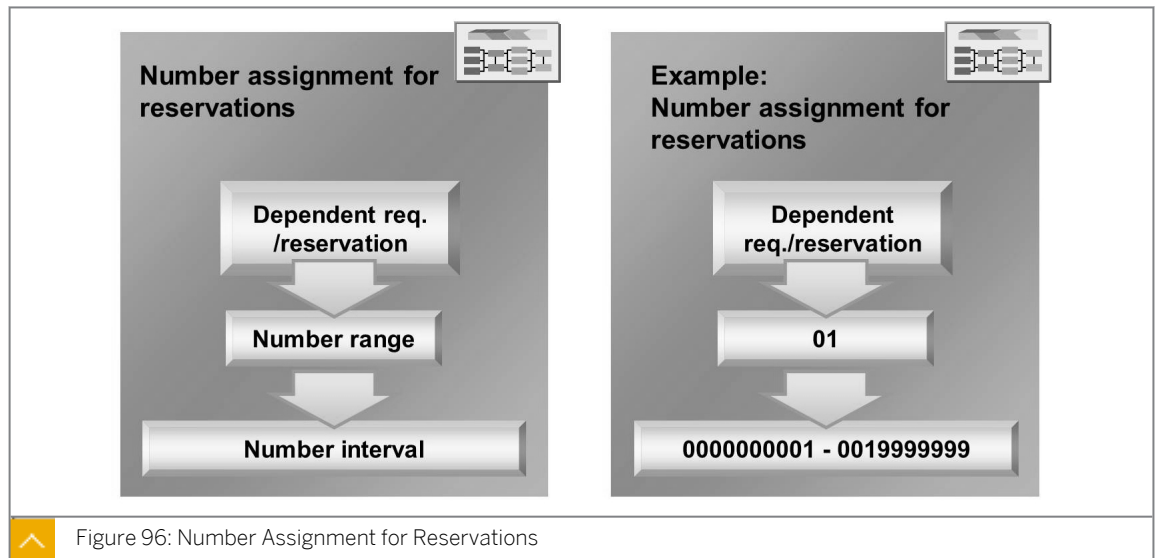
Number Assignment for Material and Inventory Documents – Example



The following segment from the SAP standard system shows the document types with their number range intervals and transaction types in inventory management:

- Physical inventory documents (number range interval of 0100000000 to 0199999999), which include the following transaction types:
 - IB for physical inventory documents
 - ID for physical inventory documents for counts and differences without references
 - IN for physical inventory documents for recounts
 - IZ for physical inventory documents for counts without references
 - WV for physical inventory documents for difference posting (Warehouse Management)
- Material documents for goods movements and physical inventory differences (number range interval of 4900000000 to 4999999999), which include the following transaction types:
 - WA for GIs, transfer postings, and Other GRs
 - WI for material documents for inventory adjustment postings
 - WL for GIs for delivery documents (Sales and Distribution (SD))
 - WR for goods movements for confirmations (Production Planning (PP))
- Material documents for GRs (number range interval of 5000000000 to 5999999999), which include the following transaction types:
 - WE for GRs for POs
 - WF for GRs for production orders
 - WO for subsequent adjustment of subcontract orders
- Inventory sampling numbers (number range interval of 0200000000 to 0299999999), which includes transaction type SI.

Number Assignment for Reservations



When you allocate numbers for reservations, you create multiple number ranges with intervals, but you use only one number range to allocate the numbers.

In the standard SAP system, number range 01 is allocated so that only the interval for number range 01 is defined.

To change the settings for the number assignment for reservations, go to Customizing for *Materials Management* under *Inventory Management and Physical Inventory* → *Number Assignment* → *Define Number Assignment for Reservations* (OMC2).

The setting for the number assignment is valid for all reservations and plants in your client. You can only create an internal number assignment for reservations that are created directly in the SAP ERP application.



Hint:

If you create reservations with method CreateFromData1 (function module BAPI_RESERVATION_CREATE1), use number range RB for external number assignment.



LESSON SUMMARY

You should now be able to:

- Set up Customizing for documents in inventory management

Setting up Movement Types

LESSON OVERVIEW

This lesson shows you how to define movement types which the system uses on entry of goods movements in SAP systems.

Business Example

You want to enable automatic purchase order (PO) generation during GR for selected users and simplify the selection of the relevant material documents. Therefore, you need to create a copy of movement type 101 and allow automatic PO generation for this movement type. For this reason, you require the following knowledge:

- How to define a new movement type
- An understanding of the control functions of the movement type



LESSON OBJECTIVES

After completing this lesson, you will be able to:

- Define a new movement type in inventory management

Movement Type

To differentiate between individual goods movements, you must enter a movement type when entering a movement. The movement type is a three-digit key for identifying a goods movement. The movement type has important control functions in inventory management.

The movement type plays a central role, for example, in the following operations:

- Updating quantity fields
- Updating stock and consumption accounts
- Determining the screen structure of a document entry

To create a new movement type or change an existing one, go to Customizing for *Materials Management* under *Inventory Management and Physical Inventory* → *Movement Types* → *Copy, Change Movement Types*.

Control Function of a Movement Type

You apply the following settings in Customizing to control movement types:



Level	Dependent On	Settings For
Movement type	Movement type	Creation control (Check the <i>Print</i> and <i>Batch</i> checkboxes and the best before date) Update control (Automatic creation of the storage location, consumption, statistics, and inventory)
Short texts	Movement type Special stock indicator Movement indicator Receipt indicator Consumption indicator	Movement type text (Description of movement)
Allowed transactions	Movement type	When you can use the movement type (Suggestion for a movement type despite other KZBEW)
Help texts	Movement type Special stock indicator Transaction	Enhanced text (Text to describe individual movement)
Field selection or batch search	Movement type Special stock indicator	Field sel. control, batch search procedure (Procedure for batch determination)

You can configure several movement type settings in other places in Customizing for *Inventory Management*. You can also access this control indicator in the movement types.

The control indicator allows you to apply the following settings to movement types:

- Shelf life expiration date check
- Automatic creation of storage location data in the material master record
- Automatic generation of PO at time of GR
- Stock determination
- Dynamic availability check
- Field selection

The individual settings for the movement types are split into different views, for example, field selection and update control. Each view contains the relevant control indicator. As some control indicators depend not only on the movement type but also on other parameters (such

as debit/credit indicators, special stock indicator, and indicators for quantity and value update), some views contain several entries for a single movement type. These entries are necessary to cover every possible data constellation in the system.

Customizing for Movement Type

You define the following settings in Customizing for the various movement types:



Level	Dependent On	Settings For
Update control for Warehouse Management movement types	Movement type and indicators for value or quantity update, special stock, movement, receipt, and consumption	Creation control (Availability date and missing part processing) Update control (Last in first out (LIFO), first in first out (FIFO), License Validation System (LVS), Quality Management (QM), and value or quantity string)
Account grouping	Movement type and indicators for special stock, value or quantity update, movement, and consumption	Account modification constant, indicator for <i>Check account assignment</i>
Reversal or follow-on movement types	Movement type, function code	Reversal movement type, indicator for Type of posting
Reason for movement	Movement type, key for reason	Description of reason
Deactivate QM inspection procedure	Movement type and indicator for special stock, movement, receipt, and consumption	Movement type for inactive QM inspection processing
Statistics group Logistics Information Systems (LIS)	Movement type and indicator for special stock and movement	Update control (LIS)

Movement Type Creation

To create a new movement type, copy an existing one first. Select a movement type that meets your requirements for the new movement type, especially in terms of the quantity and value update, to use as a template. After you have copied the template, save the new movement type. Change the control parameters in the new movement type. **The key for the new movement type must start with 9, X, Y, or Z.** When you copy the template, ensure that you also copy all dependent entries of the reference movement type.

Copy the reversal movement type and reference movement type and assign them to the new movement type.

**Note:**

Use the quantity string to control the quantity update of a movement type.

Quantity strings are fixed amounts in the SAP system.

You cannot change the control settings or the assignment to a movement type.

Use the value string to update the value of a movement type. Similar to the quantity string, the value string is also a fixed amount and cannot be changed. The value string is used to determine which transactions are relevant to automatic account assignment.

For certain account determination transactions, you apply different control settings to a G/L account determination using a second amount - the account modifier. Use the account modifier for the offsetting entry to stock posting transaction, for example. It ensures that when goods are issued for a cost center (movement type 201), relevant data is posted to a consumption account other than the one used for withdrawals for scrapping (movement type 551), for example.

Create a New Movement Type

Business Example

You need to post a transaction, but there is no movement type defined for the same. Therefore, you create a new movement type by copying an existing movement type in Customizing.

Copy the movement type *201*. Set the *Goods Recipient* field as a required entry field.

1. Create movement type **z##** by copying movement type **201** with all subentries.
2. Change the field selection of movement type **z##** so that you must specify the goods recipient both when a goods movement is entered and when a reservation is changed.
3. Test the new movement type. Enter a goods issue of **10** pieces of **T-M510C##** from plant **1200**, storage location **0001**, for cost center **T-L##** and goods recipient **SCM510-##**.
Verify whether the *Goods recipient* field is a required entry field.
4. Create a reservation with movement type **z##**. For additional data such as material, plant, quantity, and goods recipient, use the data from step 2.
Verify whether the *Goods recipient* field is a required entry field.

Create a New Movement Type

Business Example

You need to post a transaction, but there is no movement type defined for the same. Therefore, you create a new movement type by copying an existing movement type in Customizing.

Copy the movement type 201. Set the *Goods Recipient* field as a required entry field.

1. Create movement type **z##** by copying movement type **201** with all subentries.
 - a) Go to Customizing for *Materials Management* under *Inventory Management and Physical Inventory* → *Movement Types* → *Copy, Change Movement Types*.
 - b) In the *Field Selection* dialog box, select the *Movement Type* checkbox and choose *Continue*.
 - c) On the *Determine Work Area: Entry* screen, enter the following data:

Field	Value
<i>Movement Type From</i>	201
<i>Movement Type To</i>	zzz

- d) Choose *Continue*.
- e) On the *Change View "Movement Type": Overview* screen, choose entry row 201, and then choose *Copy As*.
- f) On the *Change View "Movement Type": Details of Selected Set* screen, enter **z##** in the *Movement Type* field and confirm your entry by choosing *Enter*.
- g) In the *Specify object to be copied* dialog box, choose the *Copy all* pushbutton.



Note:


If the system issues messages during the copy process, choose *Enter* until all the entries are copied.

You must save the movement type before you can change new movement type Z##.

- h) After you copy the movement type, save it.
2. Change the field selection of movement type **z##** so that you must specify the goods recipient both when a goods movement is entered and when a reservation is changed.
 - a) On the *Change View "Movement Type": Overview* screen, choose the newly created movement type and open the *Field selection (Enjoy)* folder.

- b) Select the *Required Entry* radiobutton for the goods recipient field (*Field Name WEMPF*).
 - c) Open the *Field selection (from 201) /Batch search procedure* folder.
 - d) Choose the first row for movement type *Z##* (without special stock).
 - e) Choose *Goto → Details*.
 - f) To display the details for field status group *General data*, on the *Maintain Field Status Group: Overview* screen, in the *Select Group* section, double-click *General data*.
 - g) To change the field selection for the goods recipient, select the *Req. Entry* radiobutton.
 - h) Save your settings.
3. Test the new movement type. Enter a goods issue of **10** pieces of **T-M510C##** from plant **1200**, storage location **0001**, for cost center **T-L##** and goods recipient **SCM510-##**. Verify whether the *Goods recipient* field is a required entry field.
- a) On the *SAP Easy Access* screen, choose *Logistics → Materials Management → Inventory Management → Goods Movement → Goods Movement (MIGO)*.
 - b) On the *Goods Issue Other – SCM510-##* screen, enter transaction *Goods Issue* and, as the reference, enter *Other*.
 - c) Enter **z##** in the *Movement Type* field.
 - d) To confirm your entry, choose *Enter*.
 - e) Enter the following data:

Tab Page	Field	Value
<i>Material</i>	<i>Material</i>	T-M510C##
<i>Quantity</i>	<i>Qty in Unit of Entry</i>	10 PC
<i>Where</i>	<i>Plant</i>	1200
<i>Where</i>	<i>Storage Location</i>	0001
<i>Where</i>	<i>Goods recipient</i>	SCM510##
<i>Account Assignment</i>	<i>Cost Center</i>	T-L##

- f) Select the *Item OK* checkbox.
 - g) Choose the *Check* pushbutton.
 - h) Choose  (*Post*).
4. Create a reservation with movement type **z##**. For additional data such as material, plant, quantity, and goods recipient, use the data from step 2. Verify whether the *Goods recipient* field is a required entry field.
- a) On the *SAP Easy Access* screen, choose *Logistics → Materials Management → Inventory Management → Reservation → Create (MB21)*.

- b) On the *Create Reservation: Initial* screen, enter the following data:

Field	Value
<i>Movement Type</i>	Z##
<i>Plant</i>	1200

- c) To confirm your entries, choose *Enter*.
- d) Enter **SCM510##** in the *Goods recipient* field.
- e) On the *Create Reservation: New Items* screen, enter the following data:

Field	Value
<i>Cost Center</i>	T-L##
<i>Material</i>	T-M510C##
<i>UnE</i>	10 PC

- f) To confirm the entries, choose *Enter*.
- g) Enter the goods recipient and save the reservation



LESSON SUMMARY

You should now be able to:

- Define a new movement type in inventory management

Applying Other Customizing Settings

LESSON OVERVIEW

This lesson introduces plant parameters and special configuration options for transaction MIGO.

Business Example

You need an overview of the special settings intended for transaction MIGO in Customizing. For this reason, you require the following knowledge:

- How to use plant parameters
- An understanding of the Customizing settings for transaction MIGO



LESSON OBJECTIVES

After completing this lesson, you will be able to:

- Customize plant parameters and transaction MIGO

Plant Parameters

To use plant parameters to set general plant settings for inventory management and physical inventory, go to Customizing for *Materials Management* under *Inventory Management and Physical Inventory* → *Plant Parameters*.

You can also find all the settings that you can make here centrally for each plant in the individual steps of Customizing for *Inventory Management*.



The plant parameters are grouped for each plant as follows:



- According to the settings for goods movements
- According to the settings for the physical inventory
- According to the settings for reservations
- According to the settings for negative stocks



Caution:

You cannot activate negative stocks here.

Do not make the actual settings in the relevant Customizing activities because you cannot maintain dependent entries in the plant parameters.



Hint:

If you create a new plant with the copy function, the plant parameters are also copied from the reference plant.

The settings for goods movements are as follows:

- Set automatic creation of storage location data for materials.
- Set the delivery completed indicator as default.
- Set the missing parts check as active at Goods Receipt (GR).
- Activate or deactivate the batch where-used list.
- Check the remaining shelf life.

The settings for physical inventory are as follows:

- Specify the stock type.
- Propose alternative units of measure.
- Determine the batch in the background.
- Create change documents with changes to count results.
- Adjust the book inventory balance.
- Specify a reason for inventory difference.

The settings for reservations are as follows:

- Activate the Movement allowed checkbox.
- Specify the number of days prior to which movement is allowed.
- Define the retention period for reservation items.

The settings for negative stocks are as follows:

- Allow negative stocks for individual special stocks (to set this, negative stocks must be allowed at plant and storage location levels)

Settings for Enjoy Transactions

The settings for the Enjoy transactions are divided as follows:

- In the first section, set the field selection for header fields in transaction MIGO.
- In the second section, set the field selection depending on the movement type.
- In the last section, influence the allowed transactions and the reference documents.

Field Selection for MIGO



Modifiable field	Input	Req.	Display	HiLi
Bill of lading	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input checked="" type="checkbox"/>
Collective slip	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="checkbox"/>
Delivery	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="checkbox"/>
Delivery note	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="checkbox"/>

Figure 97: Field Selection for Transaction MIGO

In this step, you hide individual fields or buttons that you do not need.

To verify whether an entry is made in the fields, define the fields, such as *Delivery note* and *Bill of lading*, as required entries.

Go to Customizing for *Materials Management* under *Inventory Management and Physical Inventory* → *Settings for Enjoy Transactions* → *Settings for Goods Movements (MIGO)* → *Field Selection for MIGO (OMJX)*.



Hint:

In the standard SAP system, all configurable fields are defined as optional entry fields except for the *Goods Receipt/Issue Slip* field. This field is hidden in the standard system because it is only required in some countries, such as Italy.



Hint:

The characteristic required entry field is evaluated only for fields with the name *GOHEAD* (header fields) and *GOITEM* (item fields). Required entry fields that are not filled display automatically with the attribute *HiLi*. *HiLi* is not supported as an independent attribute.

Field Selection per Movement Type



Mvt type	Field name	Required entry	Optional entry
101	SGTXT	<input type="radio"/>	<input checked="" type="radio"/>
102	GRUND	<input checked="" type="radio"/>	<input type="radio"/>
102	SGTXT	<input type="radio"/>	<input checked="" type="radio"/>
103	GRUND	<input checked="" type="radio"/>	<input type="radio"/>

Figure 98: Field Selection per Movement Type

To make the settings for the movement-type-dependent field selection, go to Customizing for *Materials Management* under *Inventory Management and Physical Inventory* → *Settings for Enjoy Transactions* → *Settings for Goods Movements (MIGO)* → *Field Selection per Mvt Type*. You can also make the settings in the Customizing activity *Copy, Change Movement Types*. You determine for each field whether an entry is optional or required.

The table contains all the fields that are visible on the screen interface. For these fields, choose either the optional entry or the required entry. To hide a field, delete the required entry from the table. There is no difference between the various special stock indicators in the entries. The system displays special stock fields automatically.

To show a hidden field, choose *New Entry* pushbutton. Then, enter the movement type and select the field to be inserted from the list of input options.



Hint:

You cannot change every field for every movement type.

Settings for Transactions and Reference Documents

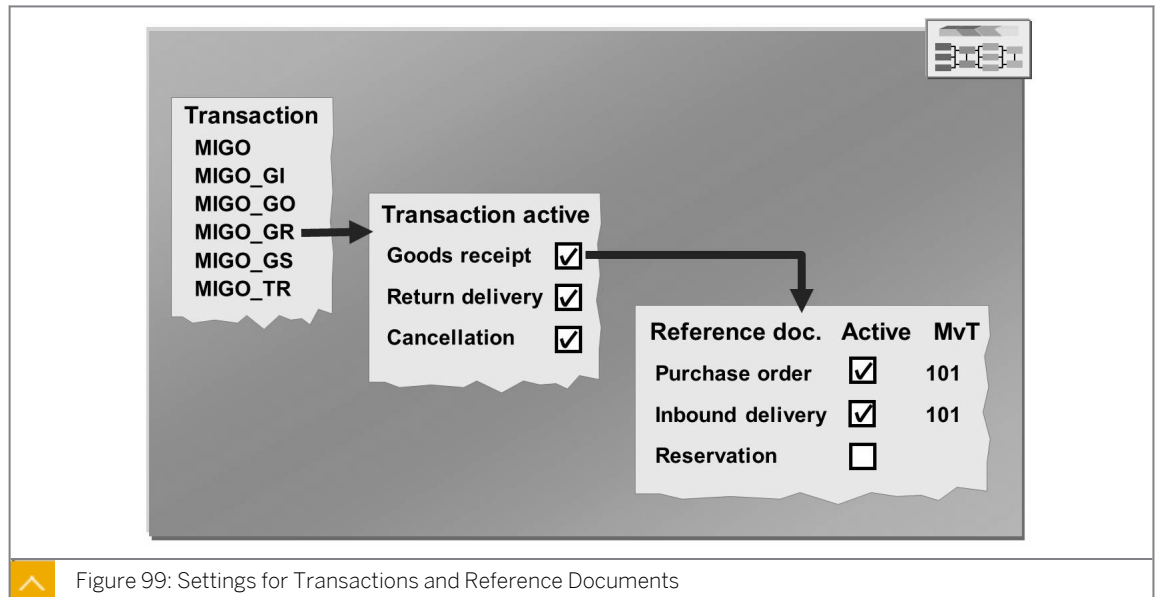


Figure 99: Settings for Transactions and Reference Documents

Configure the Customizing settings to restrict the number of selectable transactions (for example, GR, goods issue (GI), and transfer posting) and reference documents (material document, purchase order (PO), and order) for each Enjoy transaction.

Go to Customizing for *Materials Management* under *Inventory Management and Physical Inventory* → *Settings for Enjoy Transactions* → *Settings for Goods Movements (MIGO)* → *Settings for Transactions and Reference Documents*.

You also specify the movement type that the system proposes for each reference document.

Use the following transactions if you require only certain operations:

- MIGO: Creates all goods movements
- MIGO_GR: Enters all GRs from external procurement
- MIGO_GO: Enters all GRs for production orders

- MIGO_GI: Enters all GIs and other GRs
- MIGO_GS: Performs subsequent adjustment of material provided (subcontracting)
- MIGO_TR: Creates all goods movements

Check the Customizing Settings for Transaction MIGO

Business Example

You want to change the selection of reference documents for particular transactions in your company. Therefore, you want to learn about the relevant Customizing settings that are available.

Outline the Customizing settings for transaction MIGO.

Check the Customizing settings for the transactions and reference documents for transactions MIGO_GR and MIGO_GI. Determine whether an Other GR is allowed for one of these transactions.

1. Make settings for transactions and reference documents in Customizing.
2. Verify whether *Goods Receipt – Other* is chosen for one of the transactions, and whether MIGO_GR or MIGO_GI is chosen for the combination of transaction-reference document.

Check the Customizing Settings for Transaction MIGO

Business Example

You want to change the selection of reference documents for particular transactions in your company. Therefore, you want to learn about the relevant Customizing settings that are available.

Outline the Customizing settings for transaction MIGO.

Check the Customizing settings for the transactions and reference documents for transactions MIGO_GR and MIGO_GI. Determine whether an Other GR is allowed for one of these transactions.

1. Make settings for transactions and reference documents in Customizing.
 - a) Go to Customizing for *Materials Management* under *Inventory Management and Inventory* → *Settings for Enjoy Transactions* → *Settings for Goods Movements (MIGO)* → *Settings for Transactions and Reference Documents*.
2. Verify whether *Goods Receipt – Other* is chosen for one of the transactions, and whether MIGO_GR or MIGO_GI is chosen for the combination of transaction-reference document.
 - a) On the *Change View “Transaction” Overview* screen, in *Transaction* screen area, choose transaction MIGO_GR.
 - b) In the dialog structure, choose *Reference document*.
 - c) Verify whether *Other* is activated in the table.
 - d) Choose *Goods Receipt* in the *Transaction/event* section.
 - e) Verify whether *Other* reference is activated in the table.
 - f) Repeat steps a-e for transaction MIGO_GI.



LESSON SUMMARY

You should now be able to:

- Customize plant parameters and transaction MIGO

Learning Assessment

1. Which of the following statements about customizing documents in inventory management are true?

Choose the correct answers.

- A The number assignment of the material and physical inventory documents depends on the transaction type.
- B In inventory management, the company code determines the type of accounting document.
- C For an accounting document, intervals are defined for each company code based on the number range and the fiscal year.
- D For the allocation of numbers to reservations, you can create multiple number ranges with intervals.

2. When you create a new movement type, the key for the movement type must begin with which of the following characters?

Choose the correct answers.

- A Z
- B 9
- C X
- D C

3. Which of the following actions can you perform while customizing plant parameters and transaction MIGO?

Choose the correct answers.

- A You can activate and deactivate the negative stocks using several plant parameters.
- B You can activate the missing parts check at goods receipt (GR)
- C You can use transaction MIGO_TR to enter all GRs from external procurement.
- D You can restrict the number of selectable transactions for each existing MIGO transaction.

Learning Assessment - Answers

1. Which of the following statements about customizing documents in inventory management are true?

Choose the correct answers.

- A The number assignment of the material and physical inventory documents depends on the transaction type.
- B In inventory management, the company code determines the type of accounting document.
- C For an accounting document, intervals are defined for each company code based on the number range and the fiscal year.
- D For the allocation of numbers to reservations, you can create multiple number ranges with intervals.

2. When you create a new movement type, the key for the movement type must begin with which of the following characters?

Choose the correct answers.

- A Z
- B 9
- C X
- D C

3. Which of the following actions can you perform while customizing plant parameters and transaction MIGO?

Choose the correct answers.

- A You can activate and deactivate the negative stocks using several plant parameters.
- B You can activate the missing parts check at goods receipt (GR)
- C You can use transaction MIGO_TR to enter all GRs from external procurement.
- D You can restrict the number of selectable transactions for each existing Enjoy transaction.

Lesson 1

Defining Settings for Vendor Master Records

404

Exercise 40: Define Settings for Vendor Master Records

419



UNIT OBJECTIVES

- Define settings for vendor master records

Defining Settings for Vendor Master Records

LESSON OVERVIEW

This lesson explains the key settings that are controlled through the account group in a vendor master record. This lesson also explains the settings for partner roles and partner determination in the vendor master record.

Business Example

In the future, your company plans to carry out the subcontracting process externally. Your project team has decided that a separate account group has to be created for subcontractors. You have been asked to create this account group in the system. You want to communicate with the subcontractors using e-mail; therefore, entering an e-mail address for subcontractors needs to be mandatory.

For this reason, you require the following knowledge:

- An understanding of how to make the necessary settings for the vendor master record

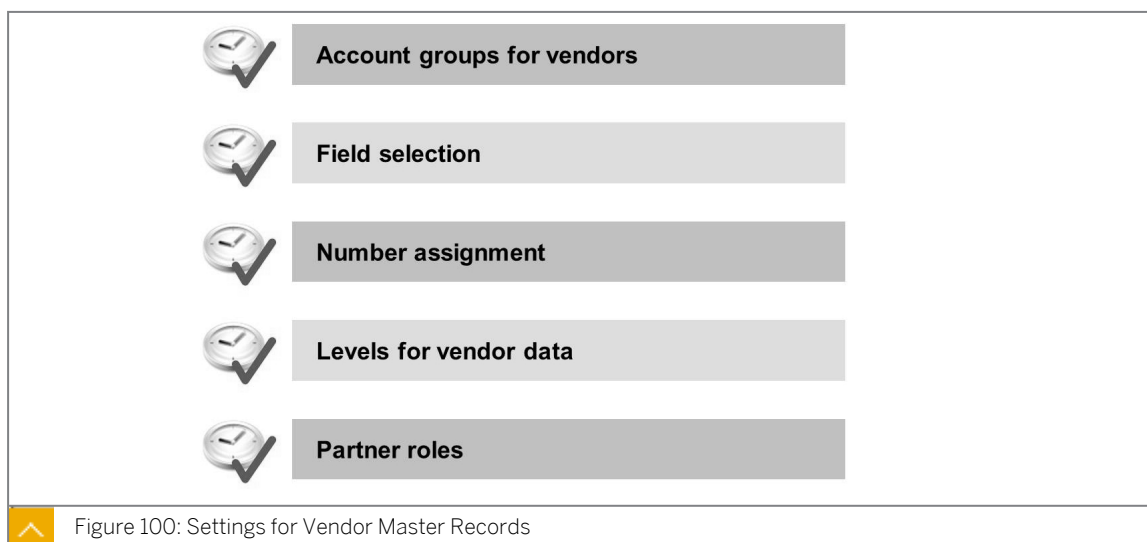


LESSON OBJECTIVES

After completing this lesson, you will be able to:

- Define settings for vendor master records

Overview of Settings for the Vendor Master Record



Just as the material type is the controlling element for a material master record, an account group determines all the key properties for the vendor master record. You can change the field selection for the maintenance of vendor master records according to the requirements

of your enterprise. You can also maintain vendor data on a plant dependent or vendor sub-range dependent basis.

The settings for vendor master records are done in the following steps:

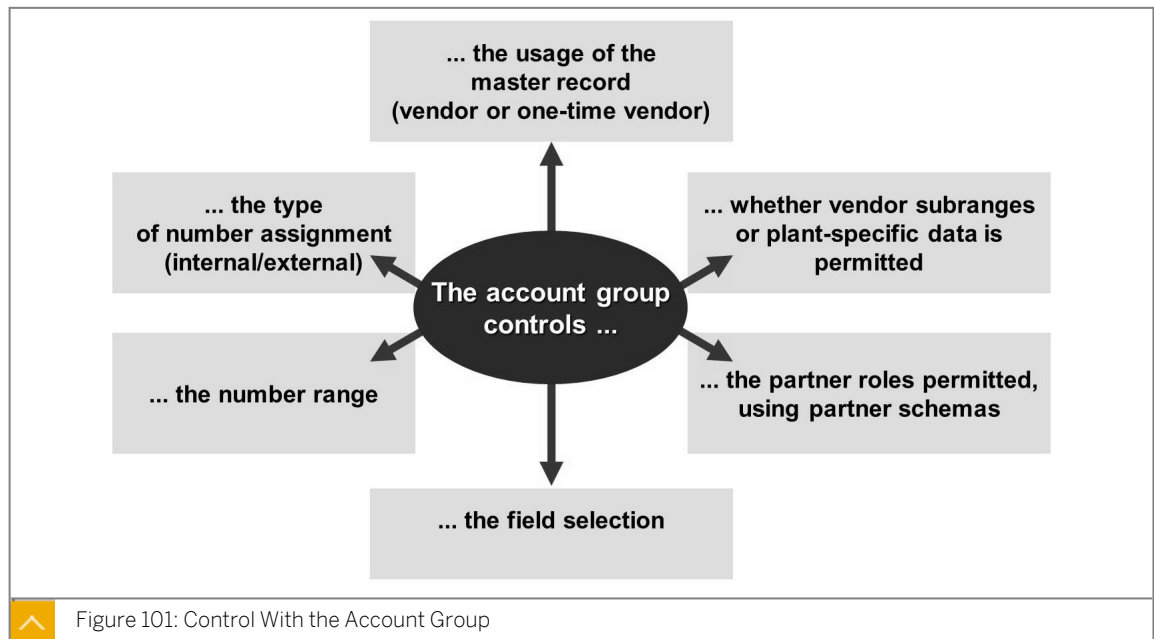
1. Defining account groups and field selection for each account group
2. Determining number ranges and number assignment for each account group
3. Setting partner roles and partner determination for each account group

Account Groups for the Vendor Master Record

The account group represents a collection of attributes that control the creation of master records. In an SAP system, for example, there are account groups for the vendor master, for the customer master and for the G/L account master. Mainly, the account group determines which data is relevant to a master record and the number range from which numbers for the master records are to be taken. Use different settings for the number assignment for each account group to ensure that the system manages different business partners in different number ranges.

The relevant Customizing settings for the vendor master records also include the settings for partner determination, because various partner roles can be stored in a vendor master record.

Control With the Account Group



When you create a business partner in an SAP system, assign the data to an account group. The user creates a new record and assigns it to the account group.



Caution:

You can make subsequent changes to the account group of a vendor but the changes are subject to restrictions.

An account group controls the business usage of a business partner. In a standard system, for example, various account groups exist for vendors, manufacturers, freight forwarders, and invoicing parties. Define new account groups in Customizing.

Using an account group, you specify the following conditions:

- Which fields are ready to accept input or are mandatory when you create or change (field selection) master records
- Whether the record you create is a one-time account (collective account for one-time vendors) or the account group provides for complete vendor master records
- Whether for a vendor master record you can call the data retention levels sub-range and plant (if you do not wish to allow these levels, you must change the field selection accordingly)
- Which number range interval an account group should have

In contrast to the numbering of material master records, only assign a single interval to an account group. This interval can allow either internal or external number assignment. Using the number range of this interval, you can also determine whether the number assignment for vendor master records is numeric or alphanumeric. This means that in the case of internal number assignment, only a numerical number range is possible.

- The allowed partner roles for the account group
- Using partner schemas, which can be assigned to an account group, specify which partner roles can be maintained in the vendor master records, depending on the data retention level.

Settings for Account Groups



The screenshot displays the SAP Customizing settings for an account group named 'LIEF'. The interface is organized into several sections:

- Account Group:** LIEF
- General Data:**
 - Name: Vendors
 - Number Range: XX
 - One-Time Account:
- Field Status:**
 - General Data
 - Company Code Data
 - Purchasing Data
 - Purchasing Sub-Range
 - Purchasing Plant
- Data Retent. Levels: Purchasing:**
 - Vendor sub-range relevant
 - Plant level relevant
- Default Values:**
 - Do not transfer any data
- PartnerDetermProced.:**
 - Partner schema, purch. org. IDE1
 - Partner schema, sub-range IDE2
 - Partner schema: plant level IDE3

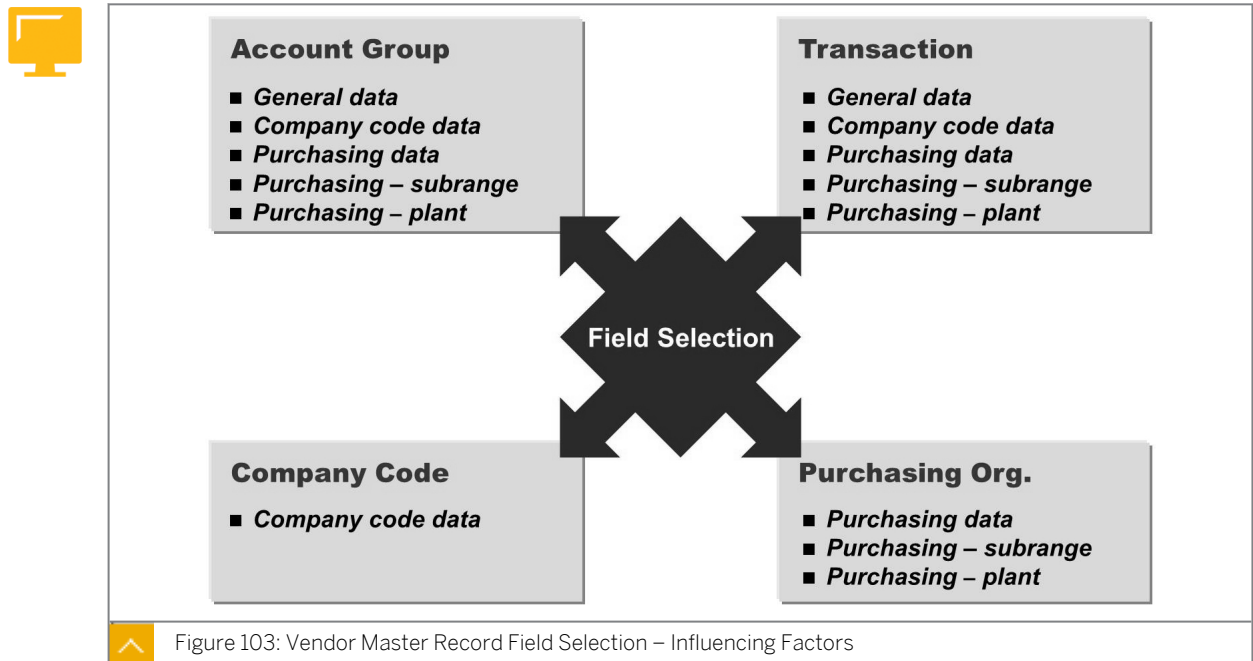
Figure 102: Settings for Account Groups

The figure, from Customizing, shows you the settings for account groups.

The *Number Range* field in the figure is not ready for input because a separate activity in Customizing exists for the assignment of the number ranges in conjunction with interval maintenance.

The settings for field selection are dependent on the account group and are included in the same activity as the definition of the account groups. This is because the vendor master record is not as large as the material master. In the *Field Status* section in the figure, you can select the data retention level for which you wish to check or set up field selection.

Influencing Factors for Field Selection



An account group is just one of four influencing factors that affect field selection.

You use the field status to specify the following fields:

- The fields that should not be displayed (suppress)
- The fields that should only be displayed, but not ready for input (display)
- The fields that data must be entered (required entry)
- The fields that data is optional (optional entry)

As in the case of a material master record, various factors influence the field selection for the vendor master. Control the field status by the transaction used, the account group, the purchasing organization, or the company code. Comparison of the field selection settings for these factors is not as well supported as for the material master record. These settings (field selection references) do not always affect the vendor data and are stored in different tables.

The fields to be defined are subdivided into the following reports:

- General data (at the client level)
- Company code data
- Purchasing data (at the purchasing organization level)
- Purchasing data at the vendor sub-range level (if allowed for account groups)

- **Purchasing data at the plant level (if allowed for account groups)**

Various influencing factors control different areas. The company code, for example, can only influence the group of company code data. On the other hand, you can control the status of all fields by using the transactions.

Specify the field selection for vendor master records, depending on the account group, in the same Customizing activity in which the account groups are defined. These field selection specifications affect all vendor master record data.

There are separate Customizing activities for transaction-dependent and purchasing organization-dependent field selection. You cannot change the field selection for all the fields of purchasing organization-dependent fields in the vendor master record.

At the purchasing organization level, specify the field selection for the purchasing data, vendor sub-range data, and plant-dependent data. The entry asterisk (*) in the Customizing table applies to all purchasing organizations that are not listed individually in this table.

Field Selection Maintenance and Rules for Influencing Factors

Maintain the field selection for the accounting data of company codes (accounting information, payment transactions and so on) in *Customizing* under *Financial Accounting (FI)* → *Define Screen Layout per Company Code (Vendors)*.

The field status depends on various influencing factors; therefore, link rules are necessary. These rules determine which property a field has if the different influencing factors have different values. The link rules for field selection settings for a vendor master record correspond to the settings that apply to material master records.

The rules for individual field selection settings for vendor master record are as follows:

Characteristic	Hide	Display	Required Entry	Optional Entry
Hide	Hide	Hide	Hide	Hide
Display	Hide	Display	Display	Display
Required Entry	Hide	Display	Required Entry	Required Entry
Optional Entry	Hide	Display	Required Entry	Optional Entry

Field Selection General Data



General Data		Page 1 / 2			
Account Group LIEF					
Vendors					
General Data					
Address		Suppress	Req. Entry	Opt. entry	Display
Name 1	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	
Form of address	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	
Search term	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	
Name 2	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	
Name 3, name 4	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	
Postal code, city	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	
Street	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	
District	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	
Region	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	
PO Box	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	
P.O. box postal code	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	
P.O. Box city	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	
Search term B	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
c/o name	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	
Street 2	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	
Street 3	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	

Figure 104: Field Selection General Data

The figure shows the field selection settings for vendor master records, *General Data* for account group *LIEF*.

Number Assignment

When you create a vendor master record, a unique number identifies the relevant master record. This number is derived from the number range (numeric or alphanumeric) that the system assigns to the account group.

The options available for assigning the number are as follows:

- Internal number assignment

The system automatically assigns a sequential number from the defined number range. The last number assigned is logged in the number level.
- External number assignment

In external number assignment, a user must assign a number from the defined number range when creating the vendor master record.

To create a new number range, perform the following steps:

1. Add a new number range interval

The individual number range intervals must not overlap. If a number range is for external number assignment, the appropriate checkbox must be selected.
2. Assign to an account group

Assign the new number range to the desired account groups.

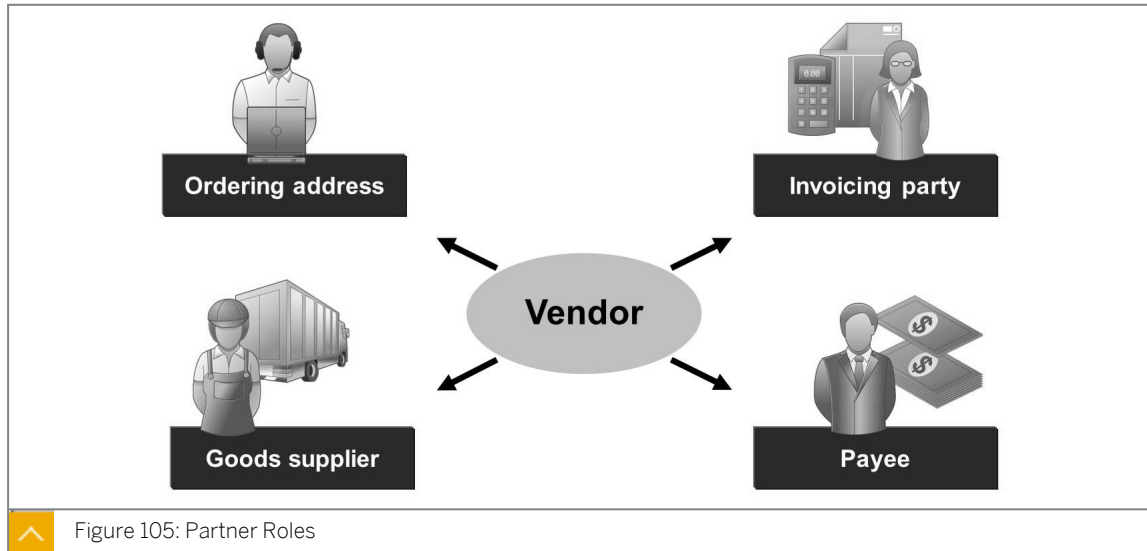


Hint:

You can assign only one number range to each account group.

In a standard SAP system, the numbers for vendor master records are buffered with a total of five (number range object KREDITOR).

Partner Roles for the Vendor Master Record



A business partner can have different roles in a company. For example, during a procurement process, a business partner is the ordering address of a company, the goods supplier, the invoicing party, and the payee. Often it is not the same business partner who assumes these roles, but different business partners who take on different tasks.

You can store the corresponding partner roles in the vendor master record across purchasing organizations, and depending on the plant. These partners appear as default values in various documents. The system transfers a different invoicing party from a vendor master record into a purchase order. The invoicing party appears as a default when you are posting an invoice.

Partner roles, also referred to as partner functions, define the rights, duties, and tasks of each partner when a business transaction is processed. You can use such roles to replicate the relationships between different business partners, for example with customers, vendors, and freight forwarders.

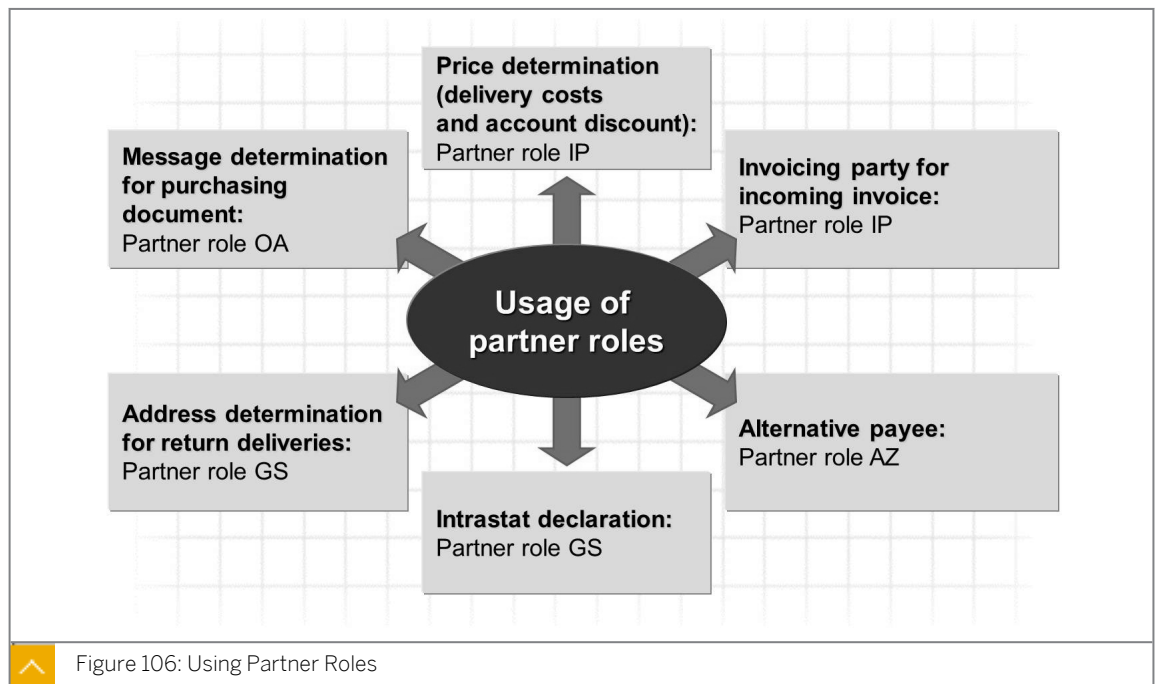
The following partner roles are predefined in a standard SAP system:

- Vendor (*VN*)
- Ordering address (*OA*)
- Goods supplier (*GS*)
- Invoicing party (*IP*)
- Different payee (*AZ*)
- Contact person (*CP*)
- Employee responsible (*ER*)

**Note:**

You usually have to create a separate master record for each partner that you use with a partner role in the master data and documents. Some exceptions are the partner roles *Contact Person* and *Employee Responsible*.

Usage of Partner Roles



If a business partner performs all the roles in the procurement process, you do not have to store each role separately in the partner's vendor master record. You need to maintain only the differing partners.

A prerequisite for the use of partner roles is the existence of a corresponding master record for the required partner.

With partner functions in the area of materials management, you can facilitate the processes of message determination, price determination, address determination, and statistics.

Partner roles can be stored in the vendor master record at the following levels:

- Purchasing organization (org.)
- Purchasing org. + plant
- Purchasing org. + sub-range
- Purchasing org. + plant + sub-range

Partner Determination

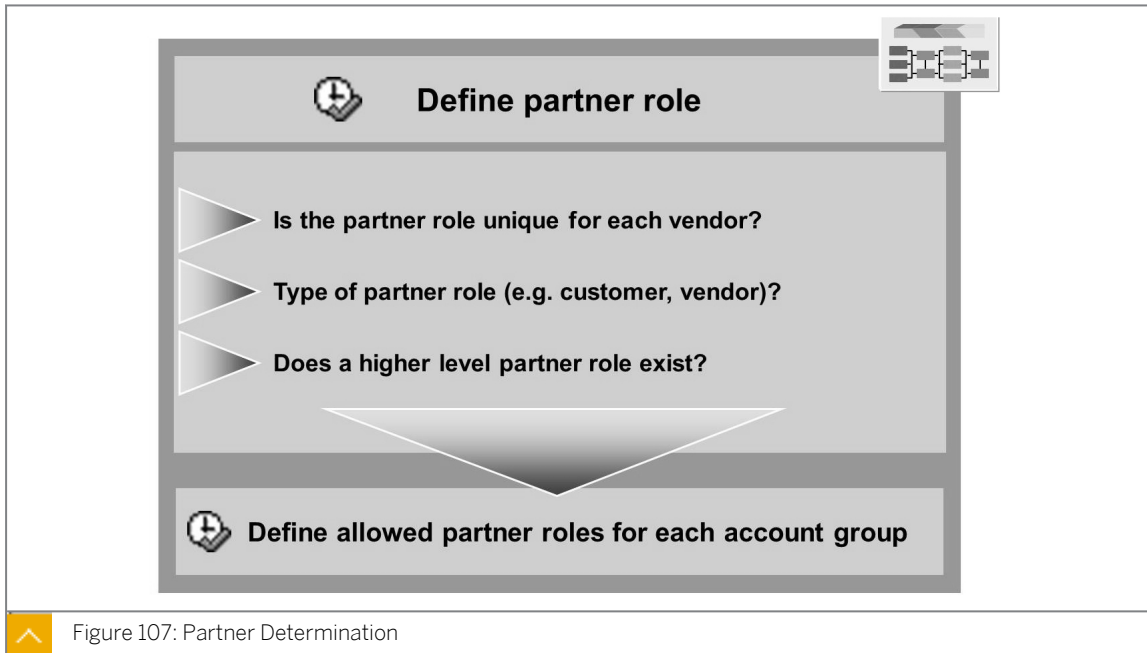


Figure 107: Partner Determination

To make it possible to use partner roles in the vendor master record, you have to specify various settings in Customizing.

Define all the partner roles that you want to use client wide. When defining the roles, specify that a partner role may be used in a vendor's master data only once per organizational level. For example, if the checkbox has not been selected, several ordering addresses may be defined per organizational level. When creating a purchase order, a buyer can obtain a list of all possible ordering addresses and choose the desired address.



Note:

If you define several partners for a partner role, you can designate one of them as the default value. When the user creates a purchasing document, the default value is listed in the selection list and highlighted. Use the default value or a different partner in the document.

After the partner roles are defined, assign them to the relevant account groups. This assignment controls the meaningful use of the roles. It is not very useful, for example, to allow the partner role ordering address for the freight forwarders account group.

To use partner determination, define at least one partner schema for purchasing documents. When you define schemas, the previously created partner roles are assigned to the relevant schema.



Hint:

If the account group for a vendor is assigned a partner schema, the system always checks whether the role you enter is in the schema or not. If the role is not included, you receive an error message. If you are working without a schema, the system does not check the role.

The partner schema enables you to create various groupings for partner roles and assign the groupings to the various account groups and purchasing document types.

Definition of Partner Schema

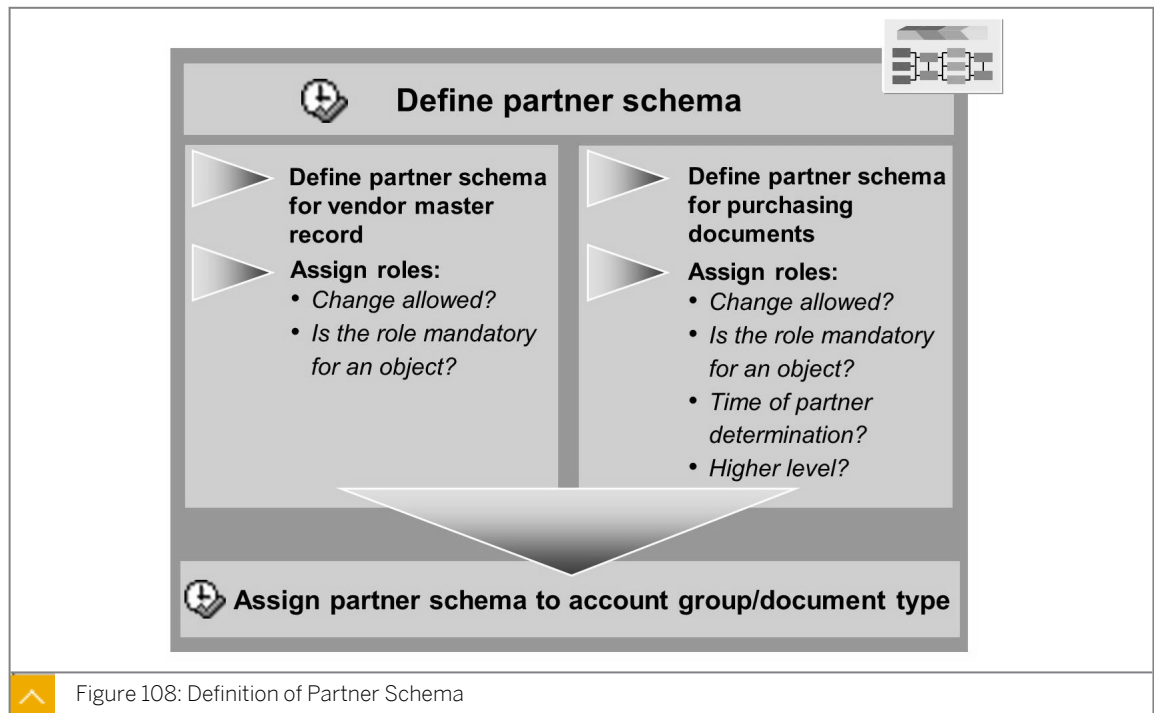


Figure 108: Definition of Partner Schema

When defining partner schemas for either account groups or purchasing documents, set the following indicators:

- *No Change* indicator

If you want to prevent changes in the partner defined in the vendor master record, set the *No Change* indicator in the partner schema for the vendor master records.

However, you cannot delete the partner role. If you want to prevent changes in default partner role in the vendor master record, set the relevant indicator when defining the partner schema for the purchasing document.

- *Mandatory* indicator

The *Mandatory* indicator determines whether a partner role is mandatory in a certain object (such as a vendor master record or purchase order).

Control Parameters of Partner Schemas

When defining the partner schemas for purchasing documents, consider the following control parameters:

- *Higher Level* indicator

If the *Higher Level* indicator is set, the system searches for partner roles at the purchasing organization level if no partner roles exist at the plant or vendor sub-range level.

This indicator is also necessary if you want the system to find partners during the automatic creation of purchase orders (transaction ME59N).

- *End* indicator

The *End* indicator specifies the time of partner determination. If the *End* indicator is set, the partner roles are defaulted from the vendor master record (or, in the case of release orders, from the relevant contract) at the end of the document entry process (when the document is saved or checked). If the indicator is not set, the partner roles are determined when a purchasing document is created, after you enter the vendor number in the document header.

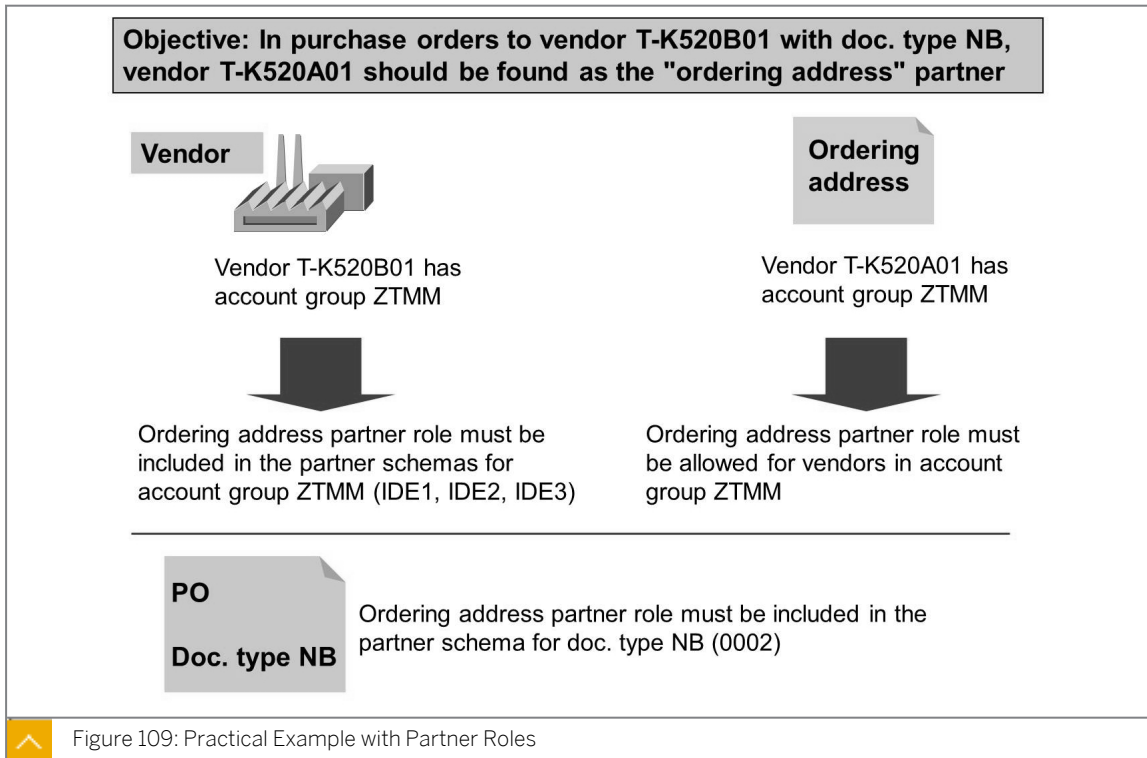
Determining a partner when a document is checked or saved is particularly beneficial if different data has been stored in the vendor master record at the plant and/or vendor sub-range levels (if partners have been maintained at these levels). The system checks whether all document items contain the same plant or sub-range. If all items contain the same plant or sub-range level, the system searches for partners that are defined just at this level.

If a purchase order contains several items with different plants, the partners are determined at the purchasing organization level, irrespective of whether or not the *Higher Level* indicator is selected.

Invoicing parties are not determined until the check or save phase (because the *End* indicator is set) cannot be considered in price determination.

For example, the conditions have been created for a different invoicing party on the *SAP Easy Access* screen, choose *Logistics* → *Materials Management* → *Purchasing* → *Master Data* → *Conditions* → *Discounts/Surcharges* → *By Invoicing Party*. Price determination occurs at the start, but the invoicing party is determined at the end (if the *End* indicator has been set). Therefore, the conditions of the invoicing party are not found. To find the invoicing party's conditions, either implement a new price determination process or cancel the *End* indicator in the partner schema.

Practical Example with Partner Roles



For example, if you want to use partners for message determination, the following steps are required:

1. Determine the vendor account group for which you want to enter the partner. You will find the account group in the administrative data of the vendor master record. In this example, this is account group *ZTMM* for vendor *T-K520B01*.
2. Determine the partner schema for this account group. In the example, the system stores two partner schemas for account group *ZTMM*: *IDE1* in the purchasing organization and *IDE2* for vendor sub-ranges and plant data.
3. Check whether the partner role ordering address is included in the partner schemas. If the role has not already been entered, add it.
4. Determine the account group for the vendor that you want to enter as the ordering address. In this example, this is account group for vendor *T-K520A01*.
5. Check whether the ordering address partner role is allowed for vendors in account group *ZTMM*. If the role is not permitted, add the missing table entry.
6. Enter vendor *T-K520A01* as the partner ordering address (*OA*) in the vendor master record for vendor *T-K520B01* at the purchasing organization level.
7. Check which partner schema is used to determine the partner roles for the purchasing document type with which you want to create the purchasing document. In this example, this is partner schema *0002* for the purchasing document type *NB*.
8. Check whether the ordering address partner role is included in partner schema *0002* for purchasing documents. If the partner role has not been entered, add it.

If you now create a purchasing document with document type *NB* for vendor *T-K520B01*, partner *T-K520A01* is determined as the ordering address.

To output a message to this partner, there must be a message condition record in the purchasing master data to create the message.

For example, to create message condition record using document type *NB*, on the *SAP Easy Access* screen, choose *Logistics* → *Materials Management* → *Purchasing* → *Master Data* → *Messages* → *Purchase Order* → *Create (MN04)*.

The message record must adhere to the following conditions:

- Contain the output type you want to create (for example, *NEU*)
- Specify the dependent information for the message determination (for example, document type, purchasing organization, and vendor)
- Specify, among other things (for example, date and time), when (for example, immediately when document is saved) and how (medium, such as fax) the message is to be output or transferred

Distinctive Points for Planned Delivery

The following are the distinctive points for Planned Delivery Costs:

- For planned delivery costs, enter a vendor directly in the condition details for a condition type that is defined as delivery costs in the purchasing document or information record. This vendor is automatically determined during invoice entry for planned delivery costs. Determination of the vendor does not depend on any partner settings.

- Enter an alternative freight vendor for planned delivery costs when you post a goods receipt.
- During invoice verification, check the partners with two messages – Message M8 776 and Message M8 777.

Check the partners with Message M8 776 in *Customizing* under *Materials Management* → *Logistics Invoice Verification* → *Define Attributes of System Messages*.

Message M8 776 (Payments to partner not allowed for purchase order) allows you to specify whether the invoicing party must have an allowed partner role in *Customizing*. You can configure this message as a warning or an error message.

For example, vendor 1058 is entered as a partner with partner role forwarding agent (FA) in a purchase order for vendor 1000. When you need to post an invoice from vendor 1058 for this purchase order, you must define role FA as an allowed role in *Customizing*. If FA is not defined as an allowed role, this message is displayed. If the message is configured as an error message, the invoice cannot be posted.

Check the partners with Message M8 777 in *Customizing* under *Materials Management* → *Logistics Invoice Verification* → *Incoming Invoice* → *Define Partner Role as Allowed Payee*.

Message M8 777 (invoicing party has no partner role in purchase order) allows you to specify whether an invoicing party has to be entered as a partner in the header of the referenced purchase order. You can configure this message as a warning or an error message.

For example, vendor 1005 is entered as a partner with partner function in a purchase order for vendor 1000. You enter an invoice for this purchase order and change the invoicing party to 1010. If the message is configured as an error, the invoice cannot be posted.

For more frequently asked questions regarding partner determination, see in SAP Note 459350.

Definition of Partner Roles



Funct	Name	NoTpe	Unique	HigherPar.Role	NoTy.	Description
AD	Additional	LI	<input type="checkbox"/>			
CP	Contact persons	AP	<input type="checkbox"/>			
AZ	A.payment recipient	LI	<input checked="" type="checkbox"/>			
OA	Ordering Address	LI	<input type="checkbox"/>			
BU	Buyer	AP	<input type="checkbox"/>			
ET	Label service agent	LI	<input type="checkbox"/>			
HR	Manufacturer	LI	<input type="checkbox"/>		A	Work center
MP	Manufacturing plant	LI	<input type="checkbox"/>		AP	Contact Persons
VN	Vendor	LI	<input type="checkbox"/>		KU	Customer
DP	Delivering plant	LI	<input type="checkbox"/>		LI	Vendor
IP	Invoice presented by	LI	<input type="checkbox"/>		LS	Logical system
ZL	Client Contact	PE	<input type="checkbox"/>		MA	Mail Address
					MP	Mail Partner
					0	Organizational Unit
					PE	Personnel Number
					S	Position
					US	User
					VS	Shipping Point
					WK	Plant

Figure 110: Definition of Partner Roles

In Customizing, define the partner roles you want to use in your company and specify which roles are optional and mandatory. For each partner role, also specify that it must be unique, which means that it may only be used once for each vendor master record and each level.

If you have not maintained any or all of the partner roles in a vendor master record, the data of the role Vendor or the vendor master record is taken for the missing partner roles.

Define partner roles in *Customizing* under *Materials Management* → *Purchasing* → *Partner Determination* → *Partner Roles* → *Define Partner Roles*.

Specify allowed partner roles for each account group in Customizing for *Materials Management* under *Purchasing* → *Partner Determination* → *Partner Roles* → *Define Permissible Partner Roles per Account Group*.

To define and assign partner schema for vendor master records, perform the following steps:

1. In *Customizing*, go to *Materials Management* → *Purchasing* → *Partner Determination* → *Partner Settings in Vendor Master Record* → *Define Partner Schemas*.
2. In *Customizing*, go to *Materials Management* → *Purchasing* → *Partner Determination* → *Partner Settings in Purchasing Documents* → *Assign Partner Schemas to Document Types*.

To define and assign partner schema for purchasing documents, perform the following steps:

1. In *Customizing*, go to *Materials Management* → *Purchasing* → *Partner Determination* → *Partner Settings in Purchasing Documents* → *Define Partner Schemas*.
2. In *Customizing*, go to *Materials Management* → *Purchasing* → *Partner Determination* → *Partner Settings in Vendor Master Record* → *Assign Partner Schemas to Account Groups*.

Define Settings for Vendor Master Records

Business Example

Your company plans to carry out the subcontracting process externally in the future. In your project team, it was decided that a separate account group should be created for subcontractors. You have been asked to create this account group in the system. Since you want to communicate with the subcontractors using e-mails, it should be mandatory that an e-mail address is entered for subcontractors.

Create a new account group for vendors using existing partner schemas and define partner roles.

1. Create a new account group **ZV##** for vendors. To do so, copy account group **ZTMM**. Enter **SC Vendors ##** as the name. The vendors are not to be regarded as one-time vendors.
The *E-mail* field in the *Address (general data)* screen should be a mandatory field for the new account group. Make the relevant field status settings.
Vendors belonging to this account group are to use partner schema *L1* for the maintenance of partner roles at purchasing organization level, *L2* for the vendor sub-range level, and *L3* for the plant level.
2. Vendors belonging to account group **ZV##** are to have external, alphanumeric vendor numbers. Can you specify the relevant settings while creating the account group?

During the creation of an account group, the *Number Range* field is not ready for input. You must maintain and assign the number ranges separately.

3. Specify that partner role **VN** is allowed for account group **ZV##**.
4. Create a new vendor master record with your new *account group ZV##* for *company code 1000* and *purchasing organization 1000*.
Give the vendor the designation **T-K550##**.

Is the *e-mail* field now a required-entry field?

Enter **160000** as the reconciliation account.

The PO currency is **EUR**. Enter the terms of payment key **0001**.

Maintain the following partner roles:

Vendor	Partner Role
T-K550##	VN (regular vendor)
T-K500A##	OA (ordering address)
T-K500C##	IP (invoicing party)

Specify that the two vendors specified earlier are to be adopted as default values.

5. Create a purchase order for your new vendor T-K550##. Use purchasing organization 1000.

Check whether partners T-K500A## and T-K500C## have been adopted in the document header of your purchase order. If not, find out why.

6. Optional:

Effects of the *End* indicator for partner role IP.

Create a 10% discount for invoicing party T-K500C##. Check if the discount is considered in a purchase order.

Define Settings for Vendor Master Records

Business Example

Your company plans to carry out the subcontracting process externally in the future. In your project team, it was decided that a separate account group should be created for subcontractors. You have been asked to create this account group in the system. Since you want to communicate with the subcontractors using e-mails, it should be mandatory that an e-mail address is entered for subcontractors.

Create a new account group for vendors using existing partner schemas and define partner roles.

1. Create a new account group **ZV##** for vendors. To do so, copy account group **ZTMM**. Enter **SC Vendors ##** as the name. The vendors are not to be regarded as one-time vendors.
The *E-mail* field in the *Address (general data)* screen should be a mandatory field for the new account group. Make the relevant field status settings.
Vendors belonging to this account group are to use partner schema *L1* for the maintenance of partner roles at purchasing organization level, *L2* for the vendor sub-range level, and *L3* for the plant level.
 - a) In *Customizing*, go to *Logistics - General* → *Business Partner* → *Vendors* → *Control* → *Define Account Groups and Field Selection (Vendor)*.
 - b) Select **ZTMM** in the *Account group* field and choose the *Copy As ...* pushbutton.
 - c) Enter **ZV##** as the new account group and **SC Vendors ##** in the *Name* field. Do not select the *One-Time Account* field.
 - d) To maintain the field selection, double-click *General Data*, or *Expand Field Status*.
 - e) Under *Select Group*, choose the entry *Communication*.
 - f) Change the attribute of the *Internet Mail Address* from *Suppress* to *Req. Entry*.
 - g) Go back to the detail screen for account group **ZV##** and enter the following data:

Field Name or Data Type	Value
<i>Purchasing Organization</i>	L1
<i>Vendor Subrange</i>	L2
<i>Plant</i>	L3

- h) Save your entries.

2. Vendors belonging to account group ZV## are to have external, alphanumeric vendor numbers. Can you specify the relevant settings while creating the account group?

During the creation of an account group, the *Number Range* field is not ready for input. You must maintain and assign the number ranges separately.

- a) In *Customizing*, go to *Logistics - General* → *Business Partner* → *Vendors* → *Control* → *Define Number Ranges for Vendor Master Records*.
 - b) Choose *Intervals*.
Interval XX is available for external alphanumeric number assignment.
 - c) Return to the previous screen and choose the *Number Range*.
 - d) For account group ZV##, the number range **xx** has already been assigned by copying ZTMM. Therefore, you do not have to change anything.
3. Specify that partner role VN is allowed for account group ZV##.
 - a) In *Customizing*, go to *Materials Management* → *Purchasing* → *Partner Determination* → *Partner Roles* → *Define Permissible Partner Roles per Account Group*.
 - b) Choose the *New Entries* pushbutton.
 - c) Make an entry comprising role **VN** and account group **ZV##**.
 - d) Save your entry. Acknowledge any message about the namespace that may appear by pressing *Continue*.
 4. Create a new vendor master record with your new *account group ZV##* for *company code 1000* and *purchasing organization 1000*.
Give the vendor the designation *T-K550##*.

Is the *e-mail* field now a required-entry field?

Enter **160000** as the reconciliation account.

The PO currency is **EUR**. Enter the terms of payment key **0001**.

Maintain the following partner roles:

Vendor	Partner Role
T-K550##	VN (regular vendor)
T-K500A##	OA (ordering address)
T-K500C##	IP (invoicing party)

Specify that the two vendors specified earlier are to be adopted as default values.

- a) On the *SAP Easy Access* screen, choose *Logistics* → *Materials Management* → *Purchasing* → *Master Data* → *Vendor* → *Central* → *Create* (XK01).

b) Enter the following data:

Field Name or Data Type	Value
<i>Vendor</i>	T-K550##
<i>Company code</i>	1000
<i>Purchasing Organization</i>	1000
<i>Account group</i>	ZV##

c) Enter any address data of your choice.

The *e-mail* field is now a required-entry field.

d) On the *Accounting Information* screen, enter **160000** in the *Reconciliation Account* field.

e) On the *Partner Functions* screen, enter **T-K550##** as regular vendor (partner role *VN*), **T-K500A##** as *ordering address* (partner role *OA*), and **T-K500C##** as *invoicing party* (partner role *IP*).

f) In the case of the partner roles *OA* and *IP*, select the *DP* (default partner) field.

g) Save your entries.

5. Create a purchase order for your new vendor *T-K550##*. Use purchasing organization *1000*.

Check whether partners *T-K500A##* and *T-K500C##* have been adopted in the document header of your purchase order. If not, find out why.

a) On the *SAP Easy Access* screen, choose *Logistics* → *Materials Management* → *Purchasing* → *Purchase Order* → *Create* → *Vendor/Supplying Plant Known* (ME21N).

b) Enter **T-K550##** in the *Vendor* field and choose *Continue*.

c) Choose the *Partners* tab page in the *PO* header.

Only partners *OA* and *VN* are displayed.

d) Create an item without account assignment for any material (for example, *M-01*) at a price of your choice for plant *1000*.

Then choose *Check*.

Now the partner role *IP* is also displayed in the header.

Reason: The End indicator has been set for role *IP* in the partner schema.

e) In *Customizing*, go to *Materials Management* → *Purchasing* → *Partner Determination* → *Partner Settings in Purchasing Documents* → *Define Partner Schemas*.

f) Select partner schema *0002* (standard purchase orders), and choose *Partner Functions* under the *Procedure* node in the *Dialog Structure* tree. The End indicator means that partner determination for this role does not take place until the purchase order is checked or saved. The other partner roles were determined as soon as you entered the vendor and choose *Continue*.

**Note:**

Late partner determination is advantageous if you have maintained different data in the vendor master record, that is, partners at plant and/or vendor sub-range level. The system checks whether all document items have the same plant or sub-range level. If the items have the same level, the system searches for partners that are defined at this level.

If partners are not maintained at the plant or vendor sub-range level and the *Higher Level* indicator is selected, the system searches for partners at the purchasing organization level.

If you do not select the indicator, the partner roles are determined when a purchasing document is created.

6. Optional:

Effects of the *End* indicator for partner role *IP*.

Create a 10% discount for invoicing party *T-K500C##*. Check if the discount is considered in a purchase order.

- a) Create a discount of 10% for invoicing party *T-K500C##*.
 - a) On the *SAP Easy Access* screen, choose *Logistics → Materials Management → Purchasing → Master Data → Conditions → Discounts/Surcharges → By Invoicing Party (MEKJ)*.
 - b) Enter **1000** in the *Purchasing Organization* field and **T-K500C##** in the *Invoicing Party* field, then choose *Execute*.
 - c) Select the row of your vendor and choose the *Create* pushbutton.
 - d) Enter **10** in *Amount* field and save your entry.
- b) Check if the discount is considered in a purchase order.
 - a) On the *SAP Easy Access* screen, choose *Logistics → Materials Management → Purchasing → Purchase Order → Create → Vendor/Supplying Plant Known (ME21N)*.
 - b) Enter vendor **T-K550##** and then choose *Continue*.
 - c) Create an item without account assignment for any material (for example, *M-01*) at a chosen price for plant *1000*.
 - d) Choose *Check*.

Result is that the discount is not considered.

**Caution:**

If a partner role is found at the end, the system does not update the prices.

You have to either update the prices manually on the *Condition* tab page in the item detail or deselect the *End* checkbox in the partner schema. Do not change the partner schema without your instructor's permission.



LESSON SUMMARY

You should now be able to:

- Define settings for vendor master records

Learning Assessment

1. What do account groups for vendor master records control?

Choose the correct answers.

- A Screen sequence
- B Field reference
- C Permitted partner roles
- D Mandatory partner roles

2. For which of the following options can alternative purchasing data in vendor master records be allowed?

Choose the correct answers.

- A Plants
- B Vendor sub-ranges
- C Material groups
- D Material types

3. For which of the following can you define field selection for address fields in vendor master records?

Choose the correct answers.

- A Transactions
- B Purchasing organizations
- C Company codes
- D Account groups

4. Which partner role can be used for price determination?

Choose the correct answer.

- A Ordering address
- B Alternative Payee
- C Invoicing Party
- D Goods Supplier

5. To which of the following can you assign partner schemas?

Choose the correct answers.

- A Vendors
- B Account groups
- C Document types
- D Vendor sub-ranges

Learning Assessment - Answers

1. What do account groups for vendor master records control?

Choose the correct answers.

- A Screen sequence
- B Field reference
- C Permitted partner roles
- D Mandatory partner roles

2. For which of the following options can alternative purchasing data in vendor master records be allowed?

Choose the correct answers.

- A Plants
- B Vendor sub-ranges
- C Material groups
- D Material types

3. For which of the following can you define field selection for address fields in vendor master records?

Choose the correct answers.

- A Transactions
- B Purchasing organizations
- C Company codes
- D Account groups

4. Which partner role can be used for price determination?

Choose the correct answer.

- A Ordering address
- B Alternative Payee
- C Invoicing Party
- D Goods Supplier

5. To which of the following can you assign partner schemas?

Choose the correct answers.

- A Vendors
- B Account groups
- C Document types
- D Vendor sub-ranges

Lesson 1

Creating Document Types in Purchasing	433
Exercise 41: Create Document Types in Purchasing	443

Lesson 2

Using Document Types in Purchasing	456
Exercise 42: Use Document Types in Purchasing	461

Lesson 3

Creating Account Assignment Categories	467
Exercise 43: Create Account Assignment Categories	471

Lesson 4

Adjusting the Screen Layout of Purchasing Documents	481
Exercise 44: Adjust the Screen Layout of Purchasing Documents	485

Lesson 5

Outputting Messages in Purchasing	490
Exercise 45: Maintain Message Schema and Message Types	495

Lesson 6

Using Condition Technique for Message Determination	499
Exercise 46: Create Condition Records and Message Types	509



UNIT OBJECTIVES

- Create document types in Purchasing
- Use document types in Purchasing
- Create account assignment categories
- Adjust the screen layout of purchasing documents
- Adjust message determination and output control

- Use condition technique for message determination

Creating Document Types in Purchasing

LESSON OVERVIEW

This lesson explains how to create new document types for purchase requisitions and purchasing.

Business Example

You need to set up a new document type for which only subcontracting items are allowed. You do not want to enter long texts for each subcontracting item, but just once at the header level. For this reason, you require the following knowledge:

- How to create new document types for purchase requisitions and purchasing documents



LESSON OBJECTIVES

After completing this lesson, you will be able to:

- Create document types in Purchasing

Documents in Purchasing

The standard SAP system includes document types for all standard business processes. Sometimes, however, you need to create your own document types. For example, if a purchase order (PO) originates from a program such as SAP Supplier Relationship Management (SAP SRM), you need to use a different document type. For this purpose, you need to create new document types.

The SAP system distinguishes between purchase requisitions and purchasing documents.

Purchase requisitions are internal documents, some of which the system creates automatically. The system distinguishes **purchase requisitions internally using document category B.**

All purchasing documents (Requests for Quotations (RFQs), POs, contracts, and scheduling agreements) have the same structure, comprised of a header and item data (as well as other additional data). The system distinguishes different purchase documents through the use of internal indicators with document categories A, F, K, and L.

Number Assignment for Purchasing Documents

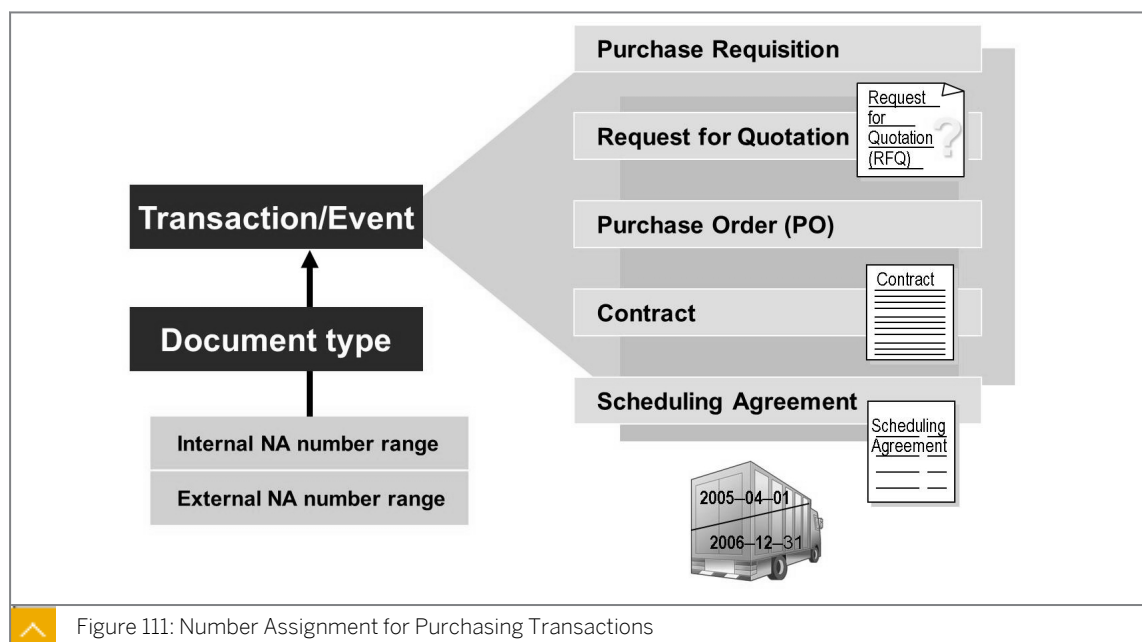


Figure 111: Number Assignment for Purchasing Transactions

Perform number assignment for purchasing documents by performing the following steps:

1. Set up number ranges.

For a number range, you must specify the interval for number assignment (defined by lower and upper limits) and indicate whether the system should assign the numbers internally or externally. The individual intervals defined for a Customizing activity must not overlap.

The numbers can have a maximum length of 10 characters.

2. Assign number ranges to the individual document types of a document category.

You can assign a number range for internal number assignment and a second number range for external number assignment to each document type of a document category.

You use separate number ranges for purchase requisitions and external purchasing documents.

Number Range for Number Assignment



Note:

Consider the following points regarding number assignments:

- The system stores RFQs, POs, contracts, and scheduling agreements in the same database (logical database MEPOLDB).
- The system does not assign a number for purchase requisitions in the planning run using the number range of the purchase, but using the number range of the planning run. Go to *Customizing for Production* under *Material Requirements Planning* → *Number Ranges* → *Define Number Ranges for Planning Run*.

You can configure the number ranges to depend on the relevant plant.

To allow only internal number assignment for a certain document type, you do not need to enter any external number range interval for that document type.

For contract types that you distribute among decentralized (local) systems, such as Application Link Enabling (ALE) systems, you must specify a number range for internal number assignment. The numbers of contract release orders in the local systems are not unique in the central system, and therefore, the system assigns new keys to such orders.

The SAP standard system does not buffer the numbers of the purchasing documents. For purchase requisitions, the system uses a main memory buffer to transfer 10 document numbers to the buffer of an application server.

Document Types in Purchasing

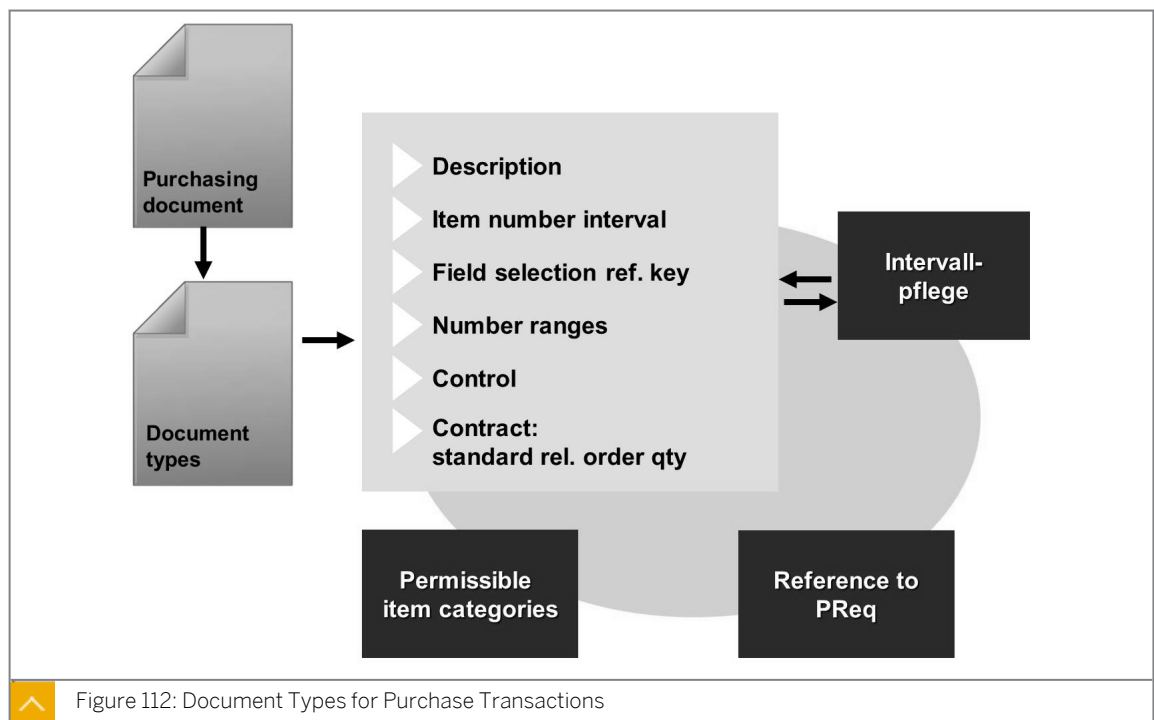


Figure 112: Document Types for Purchase Transactions

Document types in Purchasing have a control function. Use this control function to set up your own document types for special procurement types, such as consignment and subcontracting. For example, you can define the field selection control at the header level

differently for these procurement transactions than for others. You also use the document type to influence the layout of the document output (for example, the PO printout).

The system defines separate document types for each document category, such as PO, requisition, contract, and so on.

You must also assign the permissible item categories for each document type.

If you want to create documents of a purchasing document type with reference to a purchase requisition, you must also permit the transfer of the purchase requisition items with the different item categories for the relevant document type and for each item category to the purchase requisition.

You must assign at least one number range to each document type.

You can create new document types and assign user authorizations for the individual document types that belong to a document category, such as objects M_ANFR_BSA, M_BANF_BSA, and so on.

Use the control indicator of the document type to define special indicators dependent on the document category in Customizing.



Hint:

To use partner roles for purchasing documents with a new document type, assign a partner schema to this document type. In Customizing, go to *Materials Management* → *Purchasing* → *Partner Determination* → *Partner Settings in Purchasing Documents* → *Assign Partner Schemas to Document Types*. The system does not copy the assignment with the other data while copying a document type.

Definition of Document Types – Overview



Type	Description	No. int.	No. ext.	Field selection
EC	Electronic commerce	30	PO	NBF
NB	Standard order	45	41	NBF
FO	Framework order	45	41	FOF
UB	Stock transfer order	45	41	UBF

Figure 113: Defining Document Types – Overview

To define a new document type for a document category, perform the following steps:**1. Define document types.**

Define the general settings for each document type, for example, number assignment and field selection.

2. Define the permissible item categories.

Define the permissible item categories that are dependent on the document type.

3. Define the linkage of the requisition document type to the purchasing document type.

Define, depending on the document types and item category of the purchase requisition and purchasing document, which purchase requisition items to convert to which purchasing document items.

Step 1 – Define Document Types

Document Types Purchase order Change										
Type	Doc. type descript.	ItmInt.	NoRgeInt	NoRge Ext	FieldSel.	Control	Trfr Vdr	Sltml	Updat...	
EC	Electronic commerce	10	45	P0	NBF		<input type="checkbox"/>		SAP	
F0	Framework order	10	45	41	F0F		<input type="checkbox"/>		SAP	
NB	Standard PO	10	45	41	NBF		<input type="checkbox"/>		SAP	
UB	Stock transport ord.	10	45	41	UBF	T	<input type="checkbox"/>		SAP	

Figure 114: Defining Document Types

You can define the following general parameters at the document type level:

- Item number interval

The item number interval determines the size of the steps between default item numbers.

- Field selection

The attributes of the individual fields in the document (field selection) are dependent on this document type.

The figure, an excerpt from the Implementation Guide, displays the dialog structure for the definition of document types using the PO as an example.

The document type level contains further control indicators that vary depending on the document category.

Purchase Requisition and Special Features for RFQ and PO**You can define the following features for purchase requisitions:**

- Control

To specify that an outline purchase agreement needs a follow-on document to the purchase requisition instead of a standard PO, use the *Control* column to assign indicator *R* to a document type for purchase requisitions. A purchase requisition with document type RV is neither relevant for material requirements planning nor an assurance for an item with an account assignment.

- Overall Release

Use the *Overall Release* indicator to specify that the system cannot release the purchase requisitions of this document type item by item, but only in their entirety, in the course of a release procedure.

You can define the following features for RFQs:

- Global percentage bid

Define an RFQ document type for external services as a global percentage bidding document type. In this case, the price is preset in the RFQ. You then expect the vendor to quote only percentage additions to, or deductions from, the agreed prices for each outline level.

- Time-dependent conditions

To define a validity period as well as scales for the conditions in the offer, set the time-dependent condition indicator for the RFQ document types.

You can define the following features for POs:

- Control

To indicate that a document is for stock transport orders, assign indicator *T* in the Control column to a document type for POs.

- Stock transfer: Include vendor data

To work with vendor master records when processing stock transport orders as well (provided such records are present for the supplying plants in question), select the *Stock Transfer: Take Vendor Data into Account* checkbox.

To make additional settings for stock transport orders, in *Customizing*, go to *Materials Management* → *Purchasing* → *Purchase Order* → *Set up Stock Transport Order*.

Scheduling Agreement and Contract

You can define the following features for scheduling agreements:

- Control

To indicate that this is a document type for stock transport scheduling agreements, assign indicator *T* to a document type for scheduling agreements.

- Stock transfer: Include vendor data

To work with vendor master records too when processing stock transport scheduling agreements (provided such records are present for the supplying plants in question), select the *Stock Transfer: Take Vendor Data into Account* indicator.

- Time-dependent conditions

To maintain a validity period and scales for the conditions, select the time-dependent condition indicator for the scheduling agreement document types.

- Release documentation

To determine that the system stores the scheduling agreement releases in a separate file and displays the file at any time, select the *Release documentation* indicator for the scheduling agreement document types.

You can define the following features for contracts:

- Shared lock only

Select the *Shared lock* only indicator to set a shared lock, instead of an exclusive lock, when the system creates a release order against a contract of this document type. This enables several users to issue release orders against the contract simultaneously (an advantage); as a result, however, the indicator may exceed the target quantity (a disadvantage).

- ALE-distributed contract

Select the ALE-distributed contract indicator to identify the changes by the pointers when the system transmits the contract via ALE. You then evaluate the changes through the ALE administration facility.

Step 2 – Define Allowed Item Categories



Item category	Item category text
	Standard
B	Limit
K	Consignment
L	Subcontracting
S	Third party
T	Text
D	Service

Which item categories can be used for this document type?

Figure 115: Assigning Item Categories

You must assign all item categories you want to use for the documents of a document type. When used in a business process, the document type only proposes the item categories it has been assigned.

The item categories that the system supports depend on the document category. The system defines some item categories for contracts only, such as *M* (material unknown) and *W* (material group).

Step 3 – Linkage of a Purchase Requisition to an External Purchasing Document



Purchase requisition		Purchasing document			
Document type	Item category	Item category	NAA	R/S	Dial.
NB PReq	Standard	Standard			
NB PReq	Standard	Consignment	✓		✓
NB PReq	Stock transfer	Standard			
...			

..... Content separator

Which combination of document type and item category for a purchase requisition can be converted into which combination of the new document type with which item categories?

Figure 116: Linkage of a Purchase Requisition to an External Purchasing Document

If you create an external purchasing document with reference to a requisition, you must link the document types to each other. In this case, it is best to proceed on an item category basis.

For each item category of the purchase requisition document type, you must specify the type of purchasing documents (document category and document type) and items (with which item types) that the system creates with reference to this purchase requisition item.

When creating a new document type, consider the following things:

- You create a document type *NX* for POs. The system allows the standard and subcontracting item categories in this document type.
- You want to create documents of this document type with reference to purchase requisitions of document type *NB*. It is irrelevant whether the system creates the items of such requisitions with the standard or subcontracting item categories in this process.

In this case, you might have to define the following entries:

- Requisition items of document type *NB* with the item category standard may be converted into purchasing documents of document type *NX* with the item category standard.
- Requisition items of document type *NB* with the item category standard may be converted into purchasing documents of document type *NX* with the item category subcontracting.
- Requisition items of document type *NB* with the item category subcontracting may be converted into purchasing documents of document type *NX* with the item category standard.
- Requisition items of document type *NB* with the item category subcontracting may be converted into purchasing documents of document type *NX* with the item category subcontracting.

Linkage of Requisition Document Type – Purchasing Document Type



The screenshot shows a SAP Customizing dialog titled "Linkage Requisition - Document Type for Document Type NB Standard PO". The dialog has a "Dialog Structure" tree on the left with "Document types" expanded to "Allowed item categories" and "Link purchase" selected. The main area contains a table with the following data:

Purchase requisition = Reference Doc.;				Purchasing document				
DTy.	Description	It...	Dsc.ItmCat.	It...	Dsc.ItmCat.	NAA	R/S	Dialog
NB	Purch.requis. Stand.		Standard	L	Subcontracting	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
NB	Purch.requis. Stand.	L	Subcontracting	L	Subcontracting	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Figure 117: Linkage of Requisition Document Type – Purchasing Document Type

The system maintains and calls this linkage, starting from activity Requisition Document Types or activity (External) Purchasing Document Types.

In addition, you can set the dialog indicator for certain linkages (for example, for combinations that are to be allowed in exceptional circumstances only). In this case, you receive a warning message when you create the purchasing document.



Hint:

You do not need to define a linkage between types of external purchasing document (for example, RFQ and PO).

The figure, which is an excerpt from SAP system Customizing, displays the linkage between Document Type *NB* of Purchase Requisition and Document Type *NB* of PO.

Of the two *Item Category* columns in the figure, the column on the left relates to the purchase requisition. The *Item Category* column on the right relates to the item category of the *NB* standard PO (see title line).



Caution:

Copying a document type does not copy the partner settings (assignment of a partner schema to the document type) and the texts for messages.

Create Document Types in Purchasing

Business Example

You need to create a special document type for procurement through subcontracting.

Check and adjust the settings for purchasing document types and define a new purchasing document type.

Task 1

Assign numbers for purchase requisitions and POs.

1. In the standard system, upon which of the following keys does number assignment for purchasing documents depend?

Key	Yes	No
Purchasing Organization		
Purchasing Group		
Document type		
Company Code		

2. Which number ranges have been defined for number assignment in the case of POs and requisitions of document type *NB*?

	Internal	External
Purchase requisitions		
POs		

3. Define a new number range for the internal number assignment of purchase requisitions. For the key for the new number range, add *50* to your group number (in other words, use number *51* for *group 01*), or use any key that has not already been assigned. Assign the interval from *00010###000* to *00010###999*.

Task 2

Define new document types for purchase requisitions and POs.

Define a new document type for requisitions and another for POs based on the following data. You are only to permit items in item category Subcontracting for the new document types. Other conditions must also be fulfilled. Note that subtasks 1 through 5 deal with the new document type for purchase requisitions, and that from subtask 6, you need to set up the new document type for POs.



Hint:

Since you only need single entries, copy suitable document types without dependent entries and create new dependent entries manually. Otherwise, you must delete a very large number of dependent entries.

1. To create a new document type, **X##**, for purchase requisitions, copy document type *NB*. When you carry out the copying operation, choose the *only copy entry* pushbutton if asked to do so.

Name your new document type **X##-PReq**.

2. Note the effects of the decision to copy with or without dependent entries.

3. Specify that you can use only internal number assignment for purchase requisitions of document type *X##*.

Use either your new number range (created in task 1) or the number range with the interval from *0010000000* to *0019999999*.

To which number range do you assign your document type?

4. Make the necessary setting to ensure that only subcontracting items are allowed for document type *X##*.
5. Make the necessary setting to ensure that items of a requisition of document type *X##* and item category *L* may only be converted into RFQ items (document type *AN*) of item category *L*.
6. Create a new document type, *Y##*, for POs. Name it *Y##-PO*.
7. Make the necessary setting to ensure that the numbers for POs of document type *Y##* are only assigned internally from *4700000000* to *4799999999*.
8. Make the necessary setting to determine that only subcontracting items are allowed for document type *Y##*.
9. Make the necessary setting to ensure that items of order type *Y##* (item category *L*) can be created with reference to items of the purchase requisition document types *X##* (item category *L*) and *NB* (item categories *Standard* and *Subcontracting*).

Which three entries must you define?

10. Optional: Assign the partner schema for standard POs to PO document type *Y##*.

Task 3

Perform a test in the purchasing area to check that your settings for document types *X##* and *Y##* are correct.

1. Create a purchase requisition with document type *NB* and two items for purchasing group *Z##*.

Request two lots of 100 pieces (pc) of material *R-B1##* for plant 1000, one as a standard item and the other as a subcontracting item.

Note the number of the first purchase requisition:

2. Create a second purchase requisition with document type *X##* for purchasing group *Z##*. Request another 100 pc of material *R-B1##* for plant 1000.

Which item categories are allowed?

Number of the second purchase requisition:

3. Check whether it is possible to convert your second requisition into a PO with document type *NB* (vendor *T-K500C##*, purchasing organization 1000, and purchasing group *Z##*). Convert the requisition into a PO using the document overview.

Give reasons for the result.

4. Create a PO of document type *Y##* for vendor *T-K500C##* for purchasing organization 1000, purchasing group *Z##*, and plant 1000. Reference your two purchase requisitions. The price per piece is *EUR 150.00* for all items.

Note the PO number.

5. Can you extend this PO by adding an item of the standard item category (item category “_”)?

Create Document Types in Purchasing

Business Example

You need to create a special document type for procurement through subcontracting.

Check and adjust the settings for purchasing document types and define a new purchasing document type.

Task 1

Assign numbers for purchase requisitions and POs.

1. In the standard system, upon which of the following keys does number assignment for purchasing documents depend?

Key	Yes	No
Purchasing Organization		
Purchasing Group		
Document type		
Company Code		

- a) In the standard system, number assignment for a purchasing document depends only on the document type (and the document category).

2. Which number ranges have been defined for number assignment in the case of POs and requisitions of document type *NB*?

	Internal	External
Purchase requisitions		
POs		

- a) In *Customizing*, go to *Materials Management* → *Purchasing* → *Purchase Requisition* → *Define Document Types* and go to *Materials Management* → *Purchasing* → *Purchase Order* → *Define Document Types*.

- b) Define the following document types:

	Internal	External
Purchase requisitions	01	02
POs	45	41

3. Define a new number range for the internal number assignment of purchase requisitions. For the key for the new number range, add 50 to your group number (in other words, use number 51 for group 01), or use any key that has not already been assigned. Assign the interval from 00010###000 to 00010###999.

- a) On the SAP Easy Access screen, choose *Materials Management* → *Purchasing* → *Purchase Requisition* → *Define Number Ranges*.
- b) On the *Range Maintenance: Purchase requisition* screen, choose the *Change intervals* pushbutton.
- c) On the *Maintain Intervals: Purchase requisition* screen, choose the *Insert Interval* pushbutton.
- d) Enter the following values:

Field Name or Data Type	Value
No	50
From No.	10###000 (or 00010###000)
To Number	10###999 (or 00010###999)

Choose the *Insert* pushbutton.

- e) Save your number range.

Task 2

Define new document types for purchase requisitions and POs.

Define a new document type for requisitions and another for POs based on the following data. You are only to permit items in item category Subcontracting for the new document types. Other conditions must also be fulfilled. Note that subtasks 1 through 5 deal with the new document type for purchase requisitions, and that from subtask 6, you need to set up the new document type for POs.



Hint:

Since you only need single entries, copy suitable document types without dependent entries and create new dependent entries manually. Otherwise, you must delete a very large number of dependent entries.

- 1. To create a new document type, **X##**, for purchase requisitions, copy document type *NB*. When you carry out the copying operation, choose the *only copy entry* pushbutton if asked to do so.
Name your new document type **X##-PReq**.
 - a) In *Customizing*, go to *Materials Management* → *Purchasing* → *Purchase Requisition* → *Define Document Types*.
 - b) On the *Document Types Purchase requisition Change* screen, select the *NB* document type row and choose the *Copy As* pushbutton.
 - c) Enter the following values:

Field Name or Data Type	Value
Type	X##
Doc. Type Descript.	X##-PReq

Press ENTER.

d) In the *Specify object to be copied* dialog box, choose the *only copy entry* pushbutton.

2. Note the effects of the decision to copy with or without dependent entries.

a) If you copy a document type with all dependent entries, all existing assignments and linkages are adopted as well. You can use the new document type immediately.

However, you must delete any undesired entries in this case.

If you copy a document type without dependent entries, you must insert any further entries that are necessary manually before you can use the document type.

3. Specify that you can use only internal number assignment for purchase requisitions of document type X##.

Use either your new number range (created in task 1) or the number range with the interval from 0010000000 to 0019999999.

To which number range do you assign your document type?

a) Place the cursor on the *NoRgeInt* field and press F4.

Copy the number range 01 or your number range from task 1.

b) Position the cursor on the *NoRgeExt* field. Delete the entry in this field.

4. Make the necessary setting to ensure that only subcontracting items are allowed for document type X##.

a) Select document type X##. Choose the *Allowed Item Categories* node in the *Dialog Structure* tree.

The list should be empty.

b) Choose the *New Entries* pushbutton and enter L in the item category field.

c) Save your entry.

5. Make the necessary setting to ensure that items of a requisition of document type X## and item category L may only be converted into RFQ items (document type AN) of item category L.

a) Select document type X## (or the item category L).

- b) Choose the *Link Purchase Requisition - Document Type* in the *Dialog structure* tree. The list should be empty.
- c) Choose the *New Entries* pushbutton. Enter **AN** in the *RFQ document type* field and **L** in the *item category* for the external purchasing document and the purchase requisition.
- d) Save your input.
- e) Exit the activity for defining document types of purchase requisitions.



Hint:

In the training system, you may find an additional entry for Serial Number Profiles in the dialog structure (also true for subtask 9). This is from an activated business function. For more information, see the documentation for the business function LOG_MM_SERNO, which was introduced with ERP6.0 Enhancement Package 4.

You do not need to maintain entries for this exercise.

6. Create a new document type, *Y##*, for POs. Name it *Y##-PO*.
 - a) In *Customizing*, go to Materials Management → Purchasing → Purchase Order → Define Document Types.
 - b) On the *Document Types Purchase order Change* screen, select the document type *NB* row in the screen area.
 - c) Choose the *Copy As* pushbutton and enter the following values:

Field Name or Data Type	Value
<i>Type</i>	Y##
<i>Doc. Type Descript</i>	Y##-PO

Press ENTER.

- d) In the *Specify object to be copied* dialog box, choose the *only copy entry* pushbutton.
7. Make the necessary setting to ensure that the numbers for POs of document type *Y##* are only assigned internally from 4700000000 to 4799999999.
 - a) Place the cursor on the *NoRgeInt* field and press F4. Adopt the number range 47.
 - b) Place the cursor on the *NoRgeExt* field and delete the entry.
 8. Make the necessary setting to determine that only subcontracting items are allowed for document type *Y##*.
 - a) Select document type *Y##*.
 - b) Choose *Allowed Item Categories* node in the *Dialog Structure* tree.
 - c) Choose the *New Entries* pushbutton and enter **L** in the *Item Category* field.
 - d) Save your entries.

9. Make the necessary setting to ensure that items of order type *Y##* (item category *L*) can be created with reference to items of the purchase requisition document types *X##* (item category *L*) and *NB* (item categories *Standard* and *Subcontracting*).

Which three entries must you define?

-
- a) Select item category *L*.
 - b) Choose the *Link Purchase Requisition - Document Type* node in the dialog structure tree.
 - c) Choose the *New Entries* pushbutton.
 - d) For the first entry, enter purchase requisition document type *NB*, the item category *standard* for the purchase requisition, and item category *L* for the purchasing document (PO).
 - e) For the second entry, enter purchase requisition document type *NB* and item category *Subcontracting* for both the purchase requisition and the purchasing document (PO).
 - f) For the third entry, enter purchase requisition document type *X##* and item category *Subcontracting* for both the purchase requisition and the purchasing document (PO).
 - g) Save your entries.
10. Optional: Assign the partner schema for standard POs to PO document type *Y##*.
- a) In *Customizing*, go to *Materials Management* → *Purchasing* → *Partner Determination* → *Partner Settings in Purchasing Documents* → *Assign Partner Schemas to Document Types*.
 - b) On the *Change View "Assignment of Partner Schema to Document type": Overview* screen, enter **0002** in the *ParSc* column for PO document type *Y##*.
 - c) Save your input.

Task 3

Perform a test in the purchasing area to check that your settings for document types *X##* and *Y##* are correct.

1. Create a purchase requisition with document type *NB* and two items for purchasing group *Z##*.

Request two lots of 100 pieces (pc) of material *R-B1##* for plant *1000*, one as a standard item and the other as a subcontracting item.

Note the number of the first purchase requisition:

- a) On the *SAP Easy Access* screen, choose *Logistics* → *Materials Management* → *Purchasing* → *Purchase Requisition* → *Create* (ME51N).
- b) Check whether document type *NB* (*Purch. requis. Stand.*) is selected.
- c) Create the following items:

Item 1

Field Name or Data Type	Value
<i>Material</i>	R-B1##
<i>Quantity</i>	100
<i>Plant</i>	1000
<i>Purchasing Group</i>	Z##

Item 2

Field Name or Data Type	Value
<i>Material</i>	R-B1##
<i>Quantity</i>	100
<i>Plant</i>	1000
<i>Purchasing Group</i>	Z##
<i>Item Category</i>	L

- d) Save the purchase requisition.
2. Create a second purchase requisition with document type *X##* for purchasing group *Z##*. Request another 100 pc of material *R-B1##* for plant 1000.

Which item categories are allowed?

Number of the second purchase requisition:

- a) Choose document type *X##*.
- b) Press F4 to call the *Help* menu for the *Item Category* field. Only item category *L* is allowed.
- c) Create an item with the following values:

Field Name or Data Type	Value
<i>Material</i>	R-B1##

Field Name or Data Type	Value
Quantity	100
Plant	1000
Purchasing Group	Z##
Item Category	L

- d) Save the second purchase requisition.
3. Check whether it is possible to convert your second requisition into a PO with document type *NB* (vendor *T-K500C##*, purchasing organization *1000*, and purchasing group *Z##*). Convert the requisition into a PO using the document overview.

Give reasons for the result.

-
- a) In *Customizing*, go to *Logistics* → *Materials Management* → *Purchasing* → *Purchase Order* → *Create* → *Vendor/Supplying Plant Known (ME21N)*.
- b) Choose the *Document Overview On* pushbutton.
- c) Choose the *My Purchase Requisitions* option from the *Selection Variant* pushbutton.
- d) Check whether document type *NB (Standard PO)* is selected.
- e) Enter **T-K500C##** in the *Vendor Number* field.
- f) Copy the purchase requisition from subtask 2 to your PO. (Drag and drop the purchase requisition into the shopping cart). Enter **EUR 150.00** in the net price field.
You receive an error message because there is no linkage between PO document type *NB* and purchase requisition document type *X##*.
Do not exit this transaction. Do not make any changes yet.
4. Create a PO of document type *Y##* for vendor *T-K500C##* for purchasing organization *1000*, purchasing group *Z##*, and plant *1000*.
Reference your two purchase requisitions. The price per piece is *EUR 150.00* for all items.

Note the PO number.

-
- a) Change the document type to *Y##*. Do not make any changes to the faulty items.
The first PO item now shows no errors.
- b) Copy the first purchase requisition with both items to the PO too (drag and drop the first purchase requisition into the shopping cart too).
- c) Enter **EUR 150** as the net price in each case.

- d) Convert both requisitions into *Y##-PO*.
 - e) Save the PO.
5. Can you extend this PO by adding an item of the standard item category (item category “_”)?

a) No. In the settings for document type *Y##*, you have only allowed item category *L*.



LESSON SUMMARY

You should now be able to:

- Create document types in Purchasing

Using Document Types in Purchasing

LESSON OVERVIEW

This lesson explains how to generate different document types in automatic purchase order (PO) generation, manage document type versions, and specify item categories in Purchasing.

Business Example

You need to convert a group of purchase requisitions into a PO and manage the document type version for your company's goods and different items.

For this reason, you require the following knowledge:

- How to use document type in automatic PO and specify item categories in Purchasing
- How to use a document type for version management purposes



LESSON OBJECTIVES

After completing this lesson, you will be able to:

- Use document types in Purchasing

Document Type in Automatic Purchase Order

You define the document type the system uses in automatic PO generation in Customizing for *Materials Management* under *Purchasing* → *Define Default Values for Document Type*. Choose the entry for transaction MB01. The entry for transaction MB01 is also relevant for transaction MIGO.

The system determines the document type for POs for the automatic conversion of purchase requisitions in transaction ME59N according to certain logic.

For example, you want to convert a group of purchase requisitions into a PO.

The system derives the document type of the PO from the first purchase requisition in the group according to the following rules:

- If there is a PO document type identical to the purchase requisition type, the system uses that document type first.
- If there is only one allowed document type, the system uses that document type.
- If there are multiple allowed document types, the system uses the default document type for transaction ME21.
- If there is no document type specified, or if the system does not allow the default document type, the system selects the first allowed document type.

Special cases sometimes arise during stock transport orders and order splitting by item category.

The system derives the document type from the combination of the supplying plant and the receiving plant (defined in table T161W) for stock transport orders.

If order splitting by item category is active, the system uses the item category in the following document type determination process:

- If there is a PO document type that is identical to the purchase requisition document type, and the same item category is allowed in the purchase requisition, then the system selects this combination.
- If there are multiple options, the system selects the first document type with the same item category as is allowed in the purchase requisition.
- If this conversion does not yield any results (as is generally the case), the system selects the same document type if available (albeit with another item category), or the default document type for ME21.
- If all other conditions fail, the first selects the first allowed document type.

In particular, you cannot configure a special document type using the default mechanism in table T160 for automatic PO generation.

Version Management

In some situations, you need to use a document type for version management.

For procurement transactions that take place over lengthier periods (for example, the procurement of capital goods), you need to be able to distinguish between different versions of a PO document. You use version management to create and manage versions for purchase requisitions and PO documents.

A version represents a collection of change documents that the system generates during further processing of a purchasing document. Versions allow users to track the changes made to a purchasing document over time. Version management enhances the change documentation previously available for purchasing documents.

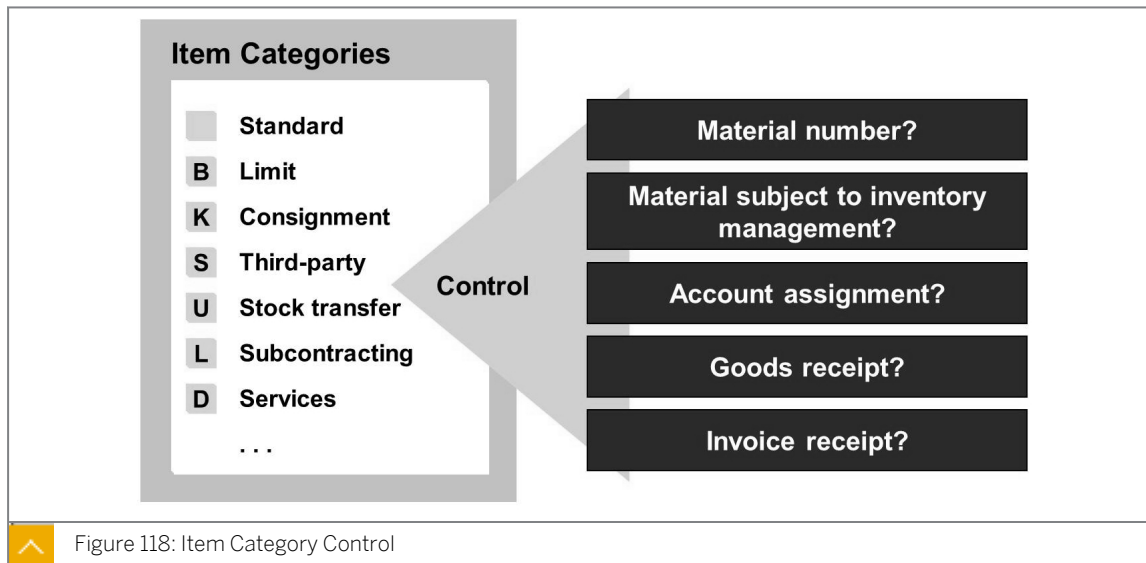
Version management is the only way to track changes to long texts.



Hint:

For more information about version management, refer to the SAP Library under *SAP ERP → SAP ERP Central Component → Logistics → Materials Management → Purchasing → Version Management*.

Item Categories in Purchasing



The item category specifies the following conditions in purchasing documents:

- Whether items are possible, even without a material number
- Whether items can or must contain an account assignment
- Whether a goods receipt can or must be posted for an item
- Whether an invoice receipt is possible or necessary for an item

The SAP System Item Categories and Attributes of Item Categories

The SAP system includes the following item categories:

- Standard

Use this category for materials that your company procures externally. In this case, material number and account assignment are possible, Goods Receipt (GR) is possible or necessary for warehouse material, and Invoice Receipt (IR) is possible.
- Limit

Use this category to procure consumable materials or services with a value limit. In this case, account assignment and IR are required, and GR is not possible.
- Consignment

Use this category to manage materials, which the vendor provides, on your premises as part of consignment stock. Until you withdraw the material from stock for use, it belongs to the vendor. For this reason, the system creates a liability not when the material first enters consignment stores, but when it is taken out of storage. In this case, the material number is necessary, and account assignment and IR are not possible.
- Subcontracting

Use this category if the vendor orders the finished product. Enter the components that the vendor requires to produce the end product in "material to be provided" items. In this case, the material number, account assignment, and IR are possible, and GR is required.
- Stock transfer

Use this category to transfer material from one plant to another. In this case, the material number and GR are required.

- Third-party

Use this category if the ordered material is to be delivered directly to a third-party (for example, a customer). You receive the material invoice from the vendor. In this case, the account assignment and IR are required.

You cannot create any new item categories, nor can you delete or change item categories in Customizing.

You only change the external representation (that is, the key the system uses in purchase requisitions and purchasing documents for the relevant item categories) and the designation in Customizing.



Hint:

If you want to use item categories for release strategies, you must always use the internal representation there.

Use Document Types in Purchasing

Business Example

You need to create a special document type is to be used for procurement through subcontracting. This will allow a different field selection and a separate number range for subcontract purchase orders. Furthermore, different headings and texts can be used for message output.

You are the member of the project team responsible for this issue.

Task 1

Optional: Define document types for a new material type.

1. What should you do if you wanted purchase requisitions for your material type GR## to be generated with PReq. document type X##?

2. How do you convert purchase requisitions of document type X## into POs of PO document type Y## during their automatic conversion into POs using transaction ME59N?

Task 2

Define properties of item categories.

1. In Customizing, determine which indicators are defined for the item category subcontracting.

ItmCat (Int.): _____

ItmCat (Ext.): _____

2. State which of the following can or must be done for items of the subcontracting item category:

- Material master records _____ be used.
- Goods receipts _____ be entered.
- Invoice receipts _____ be entered.

- Additional account assignments _____ be made.

Give reasons for your answer to question on why goods receipts can or must be entered.

Use Document Types in Purchasing

Business Example

You need to create a special document type is to be used for procurement through subcontracting. This will allow a different field selection and a separate number range for subcontract purchase orders. Furthermore, different headings and texts can be used for message output.

You are the member of the project team responsible for this issue.

Task 1

Optional: Define document types for a new material type.

1. What should you do if you wanted purchase requisitions for your material type GR## to be generated with PReq. document type X##?

-
- a) Create a new MRP group.

On the *SAP Easy Access* screen, choose *Customizing* → *Materials Management* → *Consumption-Based Planning* → *MRP Groups* → *Carry out Overall Maintenance of MRP Groups*.

- b) Assign the new MRP group to material type GR##.

In *Customizing*, go to *Materials Management* → *Consumption-Based Planning* → *MRP Groups* → *Define MRP Group For Each Material Type*.

- c) Enter document type **x##** as the default document type for the MRP group (see partial solution a) under *Scheduling/Document Type* in the *External Procurement* screen area. Enter X## in the column *Doc type SC*.

2. How do you convert purchase requisitions of document type X## into POs of PO document type Y## during their automatic conversion into POs using transaction ME59N?

-
- a) To perform the conversion, only allow combination X## (PReq) - Y## (PO) in the *PReq Document Types - Purchasing Document Types* link table.

Task 2

Define properties of item categories.

1. In Customizing, determine which indicators are defined for the item category subcontracting.

ItmCat (Int.): _____

ItmCat (Ext.): _____

- a) In *Customizing*, go to *Materials Management* → *Purchasing* → *Define External Representation of Item Categories*.
- b) On the *Change View "Item Categories": Overview* screen, select the row for which the value of *Text for Item Cat. Column is Subcontracting*. The values of the column are displayed as follows:

ItmCat (Int.): 3

ItmCat (Ext.): L



Hint:

You use the internal representation in classification.

To set up a document release procedure that is dependent on the item category, for example, you must use the internal representation as the characteristic value.

2. State which of the following can or must be done for items of the subcontracting item category:

- Material master records _____ be used.
- Goods receipts _____ be entered.
- Invoice receipts _____ be entered.
- Additional account assignments _____ be made.

Give reasons for your answer to question on why goods receipts can or must be entered.

- a) On the *Change View "Item Categories": Overview* screen, enter the L item category and choose the *Details* pushbutton.

On the *Display Attributes: Item Category Subcontracting* screen, consider the following screen elements:

- In the *Material Required* screen area, select the *Possible* radio button.
This means that material master records can be used, but they are not mandatory.
- In the *GR Indicator Firm* screen area, select the *Firm In PO* checkbox.
This means that the Goods receipts (GRs) must be entered for subcontracting items. This is because only then are the materials provided to the subcontractor automatically booked out of the SAP system as consumption.
- In the *IR Indicator Firm* screen area, select the *Chgble in PO* checkbox.

This means that Invoice receipts (IRs) can be entered but are not mandatory because the IR indicator can be changed in the PO item.

- In the *Addit. Acct Assignmmt* screen area, the *Possible* radio button is selected.

This means that additional account assignments are allowed, but are not mandatory.



LESSON SUMMARY

You should now be able to:

- Use document types in Purchasing

Creating Account Assignment Categories

LESSON OVERVIEW

This lesson explains the process of creating account assignment categories and their attributes.

Business Example

You need to change the attributes of your company's account assignment categories for purchasing documents and create new categories according to your company's requirements.

For this reason, you require the following knowledge:

- How to create account assignment categories

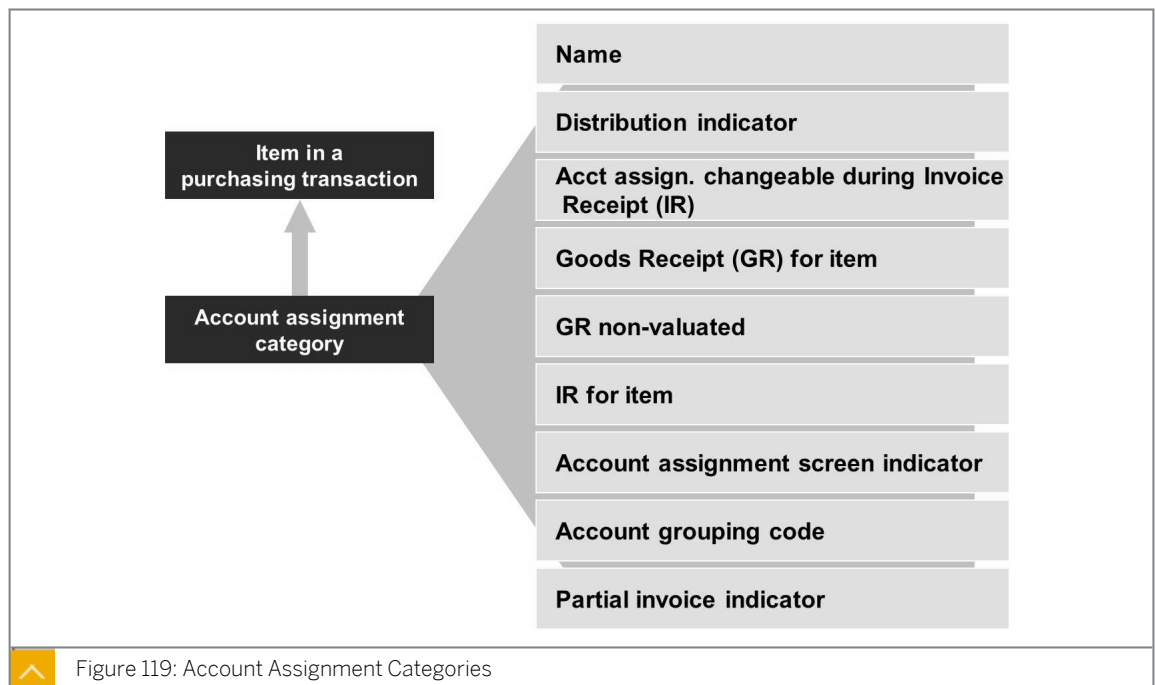


LESSON OBJECTIVES

After completing this lesson, you will be able to:

- Create account assignment categories

Account Assignment Categories and Their Attributes



The account assignment category in purchasing documents indicates whether you need to assign an item an auxiliary account assignment, such as a cost center. You can change the attributes of the account assignment categories for purchasing documents and create new categories.

The user assigns the account assignment category at the item level in purchasing documents.

The system uses the account grouping code of the account assignment category to propose a General Ledger (G/L) account number when it creates a document item with account assignments.

Note:
The account grouping code is also called the account modifier or account modification.

Assign this account number under the settings for automatic postings for transaction Offsetting Entry to Stock Posting.

Note:
In the system, this transaction is also referred to by the name Offsetting Entry to Inventory Posting.

In addition, you can set up a field selection that is dependent on the account assignment category. These field selection specifications apply only to those fields that are shown in addition to the account assignment category.

Details of Account Assignment Category K



Field Label	Mand. Ent.	Opt. Entry	Display	Hidden
Asset	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
Asset subnumber	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
Business area	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
Business partner	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
Business process	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
CO/PP order	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
Commitment item	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
Cost Center	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Cost object	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>

Figure 120: Details of Account Assignment Category K

The figure, an excerpt from the Implementation Guide displays the setting options for account assignment categories taking the category K (cost center) as an example.

You can make the following specifications for each account assignment category:

- Whether you select the *Goods receipt* checkbox as default, binding, or both (this setting must agree with the definitions for the item category.)
- Whether you select the *GR non-valuated* checkbox as default, binding, or both
- Whether the fields for the entry of a single or multiple account assignment appear in the item detail data of the account assignment specifications for purchasing documents
- The distribution indicator (quantity, percentage, or amount) the system proposes in the case of multiple account assignment
- How partial invoices are posted in the case of multiple account assignment

Combination of Item Categories and Account Assignment Categories



Item cat.	Acct assgmt cat.	Item cat. text	Acct assgt cat. description
	K	Standard	Cost center
L	K	Subcontracting	Cost center
U	A	Stock transfer	Asset
D	U	Service	Unknown
...

Figure 121: Combination of Item Categories/Account Assignment Categories

You specify the permissible account assignment categories for each item category. You also enter all combinations of item categories and account assignment categories allowed in your company in the relevant Customizing activity.

To perform these tasks, in *Customizing*, go to *Materials Management* → *Purchasing* → *Account Assignment* → *Define Combination of Item Categories/Account Assignment Categories*.

You define the fixed control parameters that you cannot change in Customizing in the item category. For each account assignment category, specify the associated control parameters, such as the goods receipt indicator on a company-specific basis.

If the specifications you make for the account assignment category differ from the specifications of the item category, then the specifications for the item category have a higher priority.

For the Goods receipt, Goods receipt nonvaluated, and Invoice receipt indicators, the following special conditions apply:

- If the indicator for the item category is mandatory, the specification for the account assignment category for this indicator must not contradict the indicator.
- If the indicator for the item category is defined as changeable, the specification of the account assignment applies.

Create Account Assignment Categories

Business Example

You need to create further account assignment categories for Purchasing to provide a different account assignment and a changed field selection.

Check the settings for account assignment categories and create new account categories.

Task 1

Make the settings for account assignment category *K*.

1. Inspect the settings for account assignment category *K*. Which changeable default or mandatory preset values for the *Goods Receipt* and *Invoice Receipt* checkboxes does this category contain?

Goods Receipt: _____

Invoice Receipt: _____

2. Which account grouping code (account modification) has been assigned to account assignment category *K*?

3. Determine the account numbers in the settings for automatic account determination, in the case of transaction key GBB, supplemented by the account grouping code for the account assignment category *K* and the valuation class of material *R-T1##*.

Which G/L account number does the system suggest as a result if material *R-T1##* is ordered in plant *1000* for a cost center?

4. Can you use account assignment category *K* for the following items in purchasing documents?

Standard items:

5. Test these settings by ordering material *R-T1##* from vendor *T-K500D##* using order type *NB*. The material is for purchasing organization *1000*, purchasing group *Z##*, and plant *1000*. Assign the order to cost center *1000*.

Note the purchase order (PO) number: _____

Task 2

Define account assignment category.

1. To define account assignment category, use the following account assignment categories:

Group	Account Assignment Category
01	2
02	3
03	4
04	5
05	6
06	7
07	8
08	H
09	I

Group	Account Assignment Category
10	J
11	L
12	R
13	S
14	V
15	W
16	Y
17	Z
18	+

Copy account assignment category *K* to perform this step.

2. The purpose of the new account assignment category is to allow assignment to a cost center or a production order. You need to define the goods recipient field as a required field. Set up the field selection accordingly.



Hint:

The table refers to the production order as a CO/PP order.

3. Based on your account assignment categories, the system suggests the following default G/L accounts for PO items for plant 1000:
- For materials assigned to valuation class 3000, the G/L account is 400080.
 - For items without a material number or valuation class, the G/L account is 0000400* (as a template).

Name the necessary steps for this.



Hint:

Ignore the warning message to the effect that G/L account 400*** has not been created. The user does not need to enter a valid G/L account for a template until the item with account assignment is entered.

4. Your account assignment category needs to be used exclusively for standard items. How do you ensure this?

5. Test the settings for your new account assignment category by extending your PO from task 1, subtask 5. Add two new items.
Use the new account assignment category for both items. Order 100 pieces of material R-T1## and 1 piece of a material without a material number (order this material by its name). Assign each item to cost center 1000. Enter material group 001 and a short text of your choice.

Which G/L accounts does the system suggest?

General ledgers: _____

Change the default account from 0000400* to 0000400010.

Create Account Assignment Categories

Business Example

You need to create further account assignment categories for Purchasing to provide a different account assignment and a changed field selection.

Check the settings for account assignment categories and create new account categories.

Task 1

Make the settings for account assignment category *K*.

1. Inspect the settings for account assignment category *K*. Which changeable default or mandatory preset values for the *Goods Receipt* and *Invoice Receipt* checkboxes does this category contain?

Goods Receipt: _____

Invoice Receipt: _____

- a) In *Customizing*, go to *Materials Management* → *Purchasing* → *Account Assignment* → *Maintain Account Assignment Categories*.
- b) On the *Change View "Account Assignment Categories": Overview* screen, select the *Acct Assignment Cat.* row that contains the value *K* and choose the *Details* pushbutton. The *Change View "Account Assignment Categories": Details* screen contains the following default values for the goods receipt:
 - In the *Detailed Information* screen area, the PO item involves a *Goods Receipt* checkbox, but the checkbox can be selected or unselected.
 - In the *Detailed Information* screen area, the *GR non-valuated* checkbox is not selected, but can be selected (only for items with account assignment and not for subcontracting items).

The default value for the invoice receipt is as follows:

- In the *Detailed Information* screen area, the PO item involves an *Invoice Receipt* checkbox, but the checkbox can be selected or unselected.
2. Which account grouping code (account modification) has been assigned to account assignment category *K*?

-
- a) The account grouping code (account modification) for account assignment category *K* is *VBR*.

3. Determine the account numbers in the settings for automatic account determination, in the case of transaction key GBB, supplemented by the account grouping code for the account assignment category K and the valuation class of material R-T1##.

Which G/L account number does the system suggest as a result if material R-T1## is ordered in plant 1000 for a cost center?

- a) The program determines the G/L account with the following keys:

- Chart of accounts of the company code
- Valuation grouping code for the valuation area
- Account grouping code for the account assignment category
- Valuation class from the material master record or the material group

Company code 1000 is assigned to chart of accounts INT.

Valuation grouping code 0001 is assigned to plant 1000 (valuation area 1000).

Account grouping code VBR is assigned to account assignment category K.

In the material master record for valuation area 1000, the valuation class 3000 is assigned for material R-T1##.

With this information, you can determine the G/L account from the account determination table.

- b) In *Customizing*, go to *Materials Management* → *Valuation and Account Assignment* → *Account Determination* → *Account Determination Without Wizard* → *Configure Automatic Postings*.
- c) If a *Valuation area* dialog box appears, choose *Cancel*.
- d) On the *Automatic Posting* screen, choose the *Account Assignment* pushbutton.
- e) In the *Procedures* screen area on the *Configuration Accounting Maintain: Automatic Posts – Procedures* screen, select the row for which the *Transaction* column value is GBB.
- f) In the *Enter Chart of Accounts* dialog box, enter **INT** in the *Chart of Accounts* field and choose *Continue*.
- g) On the *Configuration Accounting Maintain: Automatic Posts – Accounts* screen, place the cursor on the row that contains the following values:

Field Name or Data Type	Value
<i>Valuation grouping</i>	0001
<i>General modification</i>	VBR
<i>Valuation class</i>	3000

The system has entered G/L account 400000 for this combination.

4. Can you use account assignment category K for the following items in purchasing documents?

Standard items:

- a) In *Customizing*, go to *Materials Management* → *Purchasing* → *Account Assignment* → *Define Combination of Item Categories/Account Assignment Categories*.

Account assignment category *K* may be used for both item categories in your training system.

5. Test these settings by ordering material *R-T1##* from vendor *T-K500D##* using order type *NB*. The material is for purchasing organization *1000*, purchasing group *Z##*, and plant *1000*. Assign the order to cost center *1000*.

Note the purchase order (PO) number: _____

- a) On the *SAP Easy Access* screen, choose *Logistics* → *Materials Management* → *Purchasing* → *Purchase Order* → *Create* → *Vendor/Supplying Plant Known* (ME21N).

In the case of a PO item with account assignment (material: *R-T1##*) with account assignment category *K*, the system proposes G/L account *400000*.

Task 2

Define account assignment category.

1. To define account assignment category, use the following account assignment categories:

Group	Account Assignment Category
01	2
02	3
03	4
04	5
05	6
06	7
07	8
08	H
09	I

Group	Account Assignment Category
10	J
11	L
12	R
13	S
14	V

Group	Account Assignment Category
15	W
16	Y
17	Z
18	+

Copy account assignment category K to perform this step.

- a) In *Customizing*, go to *Materials Management* → *Purchasing* → *Account Assignment* → *Maintain Account Assignment Categories*.
 - b) On the *Change View "Account Assignment Categories": Overview* screen, select the *Acct Assignment Cat.* row that contains the value K and choose the *Copy As* pushbutton.
 - c) On the *Change View "Account Assignment Categories": Details of Selected Set* screen, enter in the *Acct Assignment Cat.* field according to the table in the exercise. Enter a name in the description field.
 - d) Choose *Continue* and save your entry.
2. The purpose of the new account assignment category is to allow assignment to a cost center or a production order. You need to define the goods recipient field as a required field. Set up the field selection accordingly.



Hint:

The table refers to the production order as a CO/PP order.

- a) Select the new account assignment category.
 - b) Choose the *Details* pushbutton.
 - c) On the *Change View "Account Assignment Categories": Details* screen, in the *Fields* screen area, change the field selection for the specified fields:
 Select the *Opt. Entry* radio button for the *CO/PP Order* and *Cost Center* fields.
 Select the *Mand. Ent.* radio button for the *Goods recipient/ship-to party* field.
 - d) Save your entries.
3. Based on your account assignment categories, the system suggests the following default G/L accounts for PO items for plant 1000:
- For materials assigned to valuation class 3000, the G/L account is 400080.
 - For items without a material number or valuation class, the G/L account is 0000400* (as a template).

Name the necessary steps for this.



Hint:
Ignore the warning message to the effect that G/L account 400*** has not been created. The user does not need to enter a valid G/L account for a template until the item with account assignment is entered.

- a) Assign a new account grouping code (account modification) to the new account assignment category. Remain in the maintenance function for the new account assignment category.
- b) Assign account grouping code (account modification) *K##* to the new account assignment category.
- c) Save your changes.
- d) Enter new entries for transaction/event key *GBB* in account determination.
- e) In *Customizing*, go to *Materials Management* → *Valuation and Account Assignment* → *Account Determination* → *Account Determination Without Wizard* → *Configure Automatic Postings*.
- f) If the *Valuation Area* dialog box appears, choose *Cancel*.
- g) On the *Configuration Accounting Maintain: Automatic Posts – Accounts* screen, observe that the *Transaction* field contains the value *GBB* and the *Chart of Accounts* field contains the value *INT*.
- h) Choose the *New Entries* pushbutton.
- i) In the *Account assignment* screen area, enter the following values in the respective fields:

Valuation grouping code	Account grouping code	Valuation class	Debit	Credit
0001	K##	3000	400080	400080
0001	K##		0000400*	0000400*

Save your entries.



Hint:
As the G/L accounts have 10 digits in character form, use left-hand zeros. Otherwise, the F4 (Help) will not deliver the desired results.

- 4. Your account assignment category needs to be used exclusively for standard items. How do you ensure this?

- a) To ensure that your account assignment category is used exclusively for standard items, you must allow your account assignment types in combination with the item category standard.
 - b) In *Customizing*, go to *Materials Management* → *Purchasing* → *Account Assignment* → *Define Combination of Item Categories/Account Assignment Categories*.
 - c) On the *Change View "Check Item Category/Account Assignment Category": Overview* screen, choose the *New Entries* pushbutton.
 - d) On the *New Entries: Overview of Added Entries* screen, enter data in the *ItCat.*, *AAC*, and *Acc.Assgt. Cat. Dscr.* fields.
 - e) Save your entries.
5. Test the settings for your new account assignment category by extending your PO from task 1, subtask 5. Add two new items.
- Use the new account assignment category for both items. Order 100 pieces of material *R-T1##* and 1 piece of a material without a material number (order this material by its name). Assign each item to cost center 1000. Enter material group 001 and a short text of your choice.
- Which G/L accounts does the system suggest?
- General ledgers: _____
- Change the default account from 0000400* to 0000400010.
- a) On the *SAP Easy Access* screen, choose *Logistics* → *Materials Management* → *Purchasing* → *Purchase Order* → *Change* (ME22N).
 - b) On the *Standard PO NB* screen, in the *Item Details* screen area, choose the *Account Assignment* tab page.

In the case of a PO item with account assignment with the new account assignment category and for material *R-T1##*, the system suggests G/L account 400080 for plant 1000.

In the case of a PO item with account assignment with the new account assignment category for a material without a number, the system suggests G/L account 0000400* for plant 1000.
 - c) Change the proposed G/L account number in the second new item to 400010 and save your entries.



LESSON SUMMARY

You should now be able to:

- Create account assignment categories

Adjusting the Screen Layout of Purchasing Documents

LESSON OVERVIEW

This lesson explains how to set up separate field selections for different purchasing documents depending on the document type and document category. For this purpose, you need to assign a field selection key to the document type for which the field attributes are defined.

This lesson also explains that the field selection is used in Customizing for defining such categories as the account assignment category. Set up new account assignment categories to items with account assignment and use them to control the default values for the General Ledger (G/L) accounts.

Business Example

You want to use a special account assignment category in your company that allows account assignment to both a cost center and a production order. In the process, you also take a look at the other factors that influence field selection in purchasing documents. Finally, you need to establish the default accounts that appear during the creation of purchase orders (POs).

For this reason, you require the following knowledge:

- An understanding of the factors that influence the screen layout of purchasing documents
- How to adjust the field selection for purchase transactions



LESSON OBJECTIVES

After completing this lesson, you will be able to:

- Adjust the screen layout of purchasing documents

Field Selection for Purchasing Documents

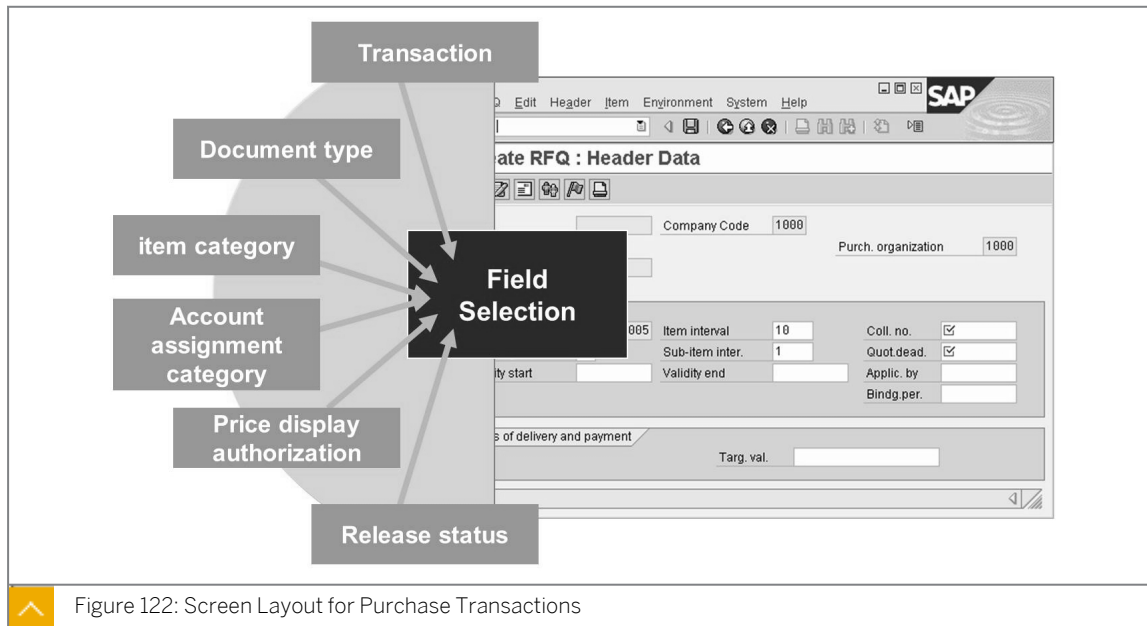


Figure 122: Screen Layout for Purchase Transactions

The following influencing factors control the field selection for purchasing documents:

- The field selection key
- The account assignment categories (only for additional fields for items with account assignment)

With the field selection key, specify the field selection for the header data of the documents (except for purchase requisitions) and for the item data. However, the field selection specifications for the account assignment category apply only to additional fields that depend on the account assignment category. These additional fields are defined directly in *Customizing* for account assignment categories.

Several factors influence the field selection for purchasing documents.

The system stores a separate screen configuration for each of the influencing factors. You can specify the field attributes (that is, whether a field is to be hidden, displayed only, or ready for input, and in the latter case, whether input is required or optional) for each field selection key.

Types of Field Selection Keys for Purchasing Documents

The following sections present the different types of field selection keys for purchasing documents:

- Field selection key for the transaction

This field selection key has a fixed link to the transaction used. For example, for the transaction *Change Contract*, ME32 is the field selection key, and for the transaction *Display Contract*, ME33 is the field selection key ME33.

For the single screen transaction for maintaining POs, there is only the field selection key – ME21N.

- Field selection key for the activity category

The four activity categories that are called internally by the program are AKTH (to add or create a document, or add an item), AKTV (to change a document, or create a PO with an Enjoy transaction), AKTE (for PO extension), and AKTA (to display a document).



Hint:

For more information about the field selection keys for activity categories, consult SAP Notes 30316 and 326125.

- Field selection key for the purchasing document type

Assign each purchasing document type its own field selection key. For example, the field selection key, *UBF* is assigned to the document type *UB* (for stock transport orders within a company code). With this field selection key, the fields *Price* and *Price Unit* are hidden.

- Field selection key for the item category (for each document category)

The item category, in combination with the document category, determines this field selection key. The first two characters of the field selection key are the letters PT, the third character is the item category (internal), and the fourth character is the document category. The characters assigned to item categories are: A, for requests for quotations, B, for purchase requisitions, F, for POs, K, for contracts, and L, for scheduling agreement.

For example, for a subcontracting PO item, the field selection key *PT3F* is used.

- Release Status Field Selection Key

Set the field status of a purchase requisition using the field selection key for the release indicator, depending on the release status of the purchase requisition.

Special Procurement Transactions

For special procurement transactions, such as, those in a retail system, the program includes additional field selection keys. For example, if a vendor offers a discount-in-kind in the form of inclusive or exclusive bonus item quantities, the discount-in-kind items are automatically generated in a PO, provided the conditions are fulfilled.

Control the field selection for the subitems of the PO using the following field selection keys:

- *UP2F* – Subitem inclusive bonus quantity
- *UP4F* – Subitem exclusive bonus quantity

Also, influence the field selection depending upon the user parameter EFB (Function Authorization for Buyers). This parameter is assigned to the user along with a value. For example, one user may have EFB value 98 while another may have value 99 associated.

Each value of EFB has a field selection key associated.

Based on the value, the system controls the display or entry of the price in purchasing documents (like PO and Outline Agreements).

If the authorization for the price display is removed using the EFB parameter without a defined additional field selection key, the field selection key *\$\$\$\$* is used. In addition, use this user parameter to assign an additional field selection key to single-screen transactions for maintaining the purchase requisitions.

Field Selection Priorities

In field selection for a transaction in the purchasing area, the relevant field selection keys are linked together. As in the case of the field selection for material and vendor master records, the same linkage rules apply here.

The following order of priority applies (where 1 = highest and 4 = lowest priority):

- Priority 1: Hide
- Priority 2: Display
- Priority 3: Required entry
- Priority 4: Optional entry

The following table shows the linkage rules for the individual field selection settings for purchasing documents:

Characteristic	Hide	Display	Required Entry	Optional Entry
Hide	Hide	Hide	Hide	Hide
Display	Hide	Display	Display	Display
Required Entry	Hide	Display	Mandatory	Mandatory
Optional Entry	Hide	Display	Mandatory	Optional Entry

If a certain field is defined as a mandatory field by one field selection key and as an optional field by another selection key, apply the mandatory attribute because it has the higher priority.

The field selection keys for the release status apply when you assign a field selection key to the individual release indicators, and, only to purchase requisitions in the release stage.

The field selection keys for the authorization to display price data apply only to users to whom special function authorizations for buyers have been assigned via user parameter EFB. These keys also apply to users for whom a field selection key has been assigned.

Adjust the Screen Layout of Purchasing Documents

Business Example

In your company, a different field selection is required for subcontract POs. You are the member of the project team responsible for specifying the consumption account to be taken as the default account dependent on the account assignment category.

To define the field selection depending on the item category, perform the following task.

Select the field depending on the item category.

1. Through which field selection key can you change the field selection for all subcontracting items in purchase requisitions or POs without items with other item categories being affected?

2. What do you have to do if the *Confirmation Control Key* field is to be a mandatory field for POs of your new document type Y##?

Sketch out the procedure and make the settings.

Create a new field selection key Y##F by copying the entry NBF that was defined for the document type NB. The new field selection key is named Y##-field selection.

3. Test your settings by creating a PO for material R-B1## using your document type Y##. Use vendor T-K500C##, purchasing organization 1000, plant 1000 and purchasing group Z##.

You must use the item category L (subcontracting).

The confirmation control key field should be mandatory.

Select confirmation control key 0001.

PO number: _____

4. Optional:

Try to post a goods receipt against the PO from subtask 3. Which system message appears?

-

Adjust the Screen Layout of Purchasing Documents

Business Example

In your company, a different field selection is required for subcontract POs. You are the member of the project team responsible for specifying the consumption account to be taken as the default account dependent on the account assignment category.

To define the field selection depending on the item category, perform the following task.

Select the field depending on the item category.

1. Through which field selection key can you change the field selection for all subcontracting items in purchase requisitions or POs without items with other item categories being affected?

a) In *Customizing*, go to *Materials Management* → *Purchasing* → *Purchase Requisition* → *Define Screen Layout at Document Level*.

Or

In *Customizing*, go to *Materials Management* → *Purchasing* → *Purchase Order* → *Define Screen Layout at Document Level*.

b) On the *Change View "Screen Layout: Purchase Requisition"*: *Overview* screen, search for rows having *FSel.* values as follows:

- *PT3F* for POs
- *PT3B* for purchase requisitions



Note:

The significance of the various field selection keys is also explained in the online documentation for this Customizing activity.

2. What do you have to do if the *Confirmation Control Key* field is to be a mandatory field for POs of your new document type *Y##*?

Sketch out the procedure and make the settings.

Create a new field selection key Y###F by copying the entry NBF that was defined for the document type NB. The new field selection key is named Y##-field selection.

-
- a) If field selection is to depend on the document type, you must define a new field selection key and assign it to the document type.
In *Customizing*, go to *Materials Management* → *Purchasing* → *Purchase Order* → *Define Screen Layout at Document Level*.
 - b) On the *Change View "Screen Layout: Purchase Orders": Overview* screen, select row having *FSel. Column* value as *NBF* and choose *Copy as*.
 - c) On the *Change View "Screen Layout: Purchase Orders": Details of Selected Set* screen, enter **Y###F** in the *Field Sel. Key* field and choose *Continue*.
 - d) On the *Maintain Table T162: Fields For Field Selection Group* screen, select the new field selection key *Y###F* and choose the *Details* pushbutton.
 - e) On the *Maintain Table T162: Field Selection Group* screen, choose *Deadline Monitoring* from the *Field Selection Group* list.
 - f) Change the attribute of the *Confirmation Control Key* field to mandatory (required entry).
 - g) Choose *Back* to return to the list of field selection keys.
 - h) Choose *Back* again.
 - i) Save your entry.
 - j) In *Customizing*, go to *Materials Management* → *Purchasing* → *Purchase Order* → *Define Document Types*.
 - k) On the *Document Types Purchase order Change* screen, assign the field selection key *Y###F* to your PO document type *Y##*.
 - l) Save your changes.

3. Test your settings by creating a PO for material *R-B1##* using your document type *Y##*. Use vendor *T-K500C##*, purchasing organization *1000*, plant *1000* and purchasing group *Z##*.

You must use the item category *L* (subcontracting).

The confirmation control key field should be mandatory.

Select confirmation control key *0001*.

PO number: _____

- a) On the *SAP Easy Access* screen, choose *Logistics* → *Materials Management* → *Purchasing* → *Purchase Order* → *Create* → *Vendor/Supplying Plant Known (ME21N)*.
- b) In the *Item Details* screen area, select the *Confirmation Control* tab page, and enter **0001** in the *Confirmation Control* field.

4. Optional:

Try to post a goods receipt against the PO from subtask 3. Which system message appears?

- a) On the SAP Easy Access screen, choose *Logistics* → *Materials Management* → *Inventory Management* → *Goods Movement* → *Goods Movement* (MIGO).

The following message appears "No goods receipt possible for purchase order <#####>".

The reason for the message display is confirmation control key 0001 which specifies that a goods receipt cannot take place until an inbound delivery has been entered.



Note:

Enter an inbound delivery with transaction VL31N. It is located in the SAP menu under *Logistics* → *Materials Management* → *Purchasing* → *Purchase Order* → *Inbound Delivery* → *Create*.

- b) To find more on this topic in the documentation, in *Customizing*, go to *Materials Management* → *Purchasing* → *Confirmations* → *Set Up Confirmation Control*.

•



LESSON SUMMARY

You should now be able to:

- Adjust the screen layout of purchasing documents

Outputting Messages in Purchasing

LESSON OVERVIEW

This lesson explains the necessary settings for message determination in Purchasing. The lesson also explains printer determination for purchasing documents.

Business Example

You are asked to give an overview of the current configuration for purchasing document output and create the necessary condition records for your new document type.

For this reason, you require the following knowledge:

- An understanding of the message determination process for purchase transactions



LESSON OBJECTIVES

After completing this lesson, you will be able to:

- Adjust message determination and output control

Output of Messages in Purchasing

The inputs required for message determination in Purchasing are as follows:

- Message schemas in Purchasing
- Message types and fine-tuned control
- Access sequences and condition tables
- Partner roles for outputting messages
- Printer determination
- Change messages

Messages are an important means of communication with vendors in relation to purchase transactions.

You can send messages through the postal service or electronically. A message-control facility, dependent on a number of different criteria, enables you to process and send these messages subject to certain conditions and with predefined restrictions.

The message-determination process enables you to output messages on a variable and differentiated basis. Message determination is a variant of the condition technique. For example, it uses the same algorithm that is used for price determination.

In addition to the settings for message determination, you need to assign a printer for print output.

When you create or change a purchasing document, for example, a Request for a Quotation (RFQ), a purchase order (PO), or an outline agreement, the system checks whether it has to

create an output format for this document. A document in output format represents a message.

Message Output

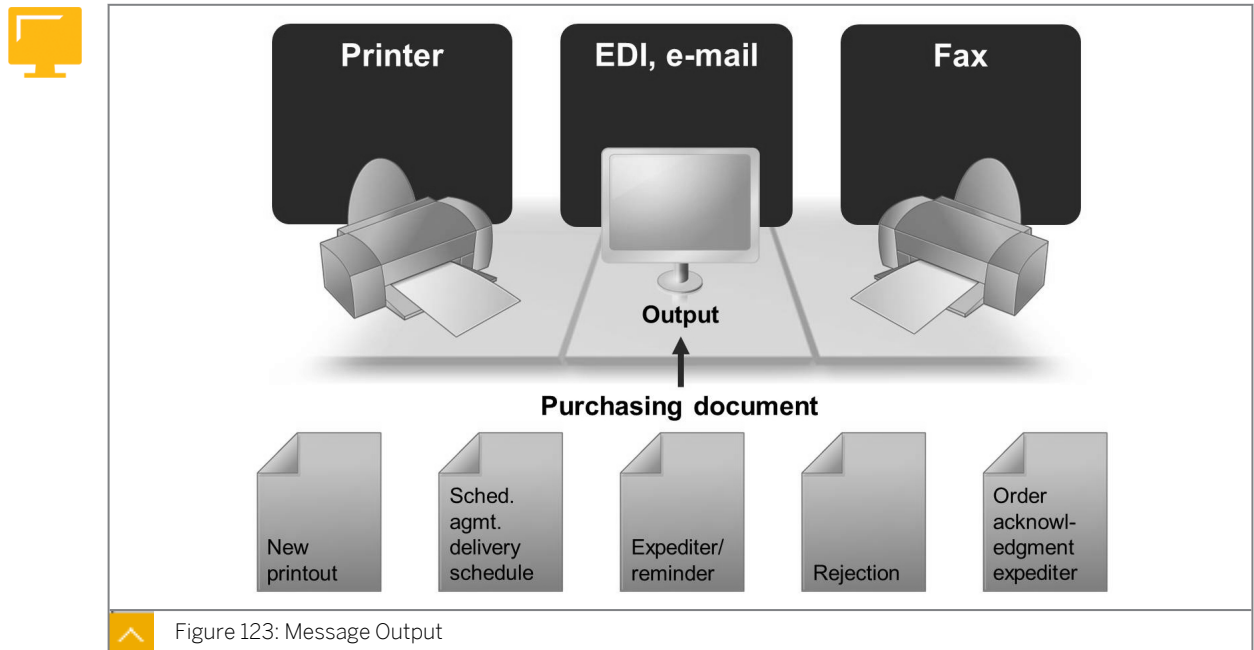


Figure 123: Message Output

You can print this message on a printer or send the message directly through e-mail, Electronic Data Interchange (EDI), or fax.

If you use message determination to output purchasing documents, you can also use condition records to determine under what conditions, with what medium, and at what time a document will be output. You can specify these details for message output individually for each print operation, for example New, Change, or Expediter.

When you create or change a document in the SAP standard system, you can change the proposal from a condition record.

Decide whether to use message determination for the output of purchasing documents after considering the specific conditions in your company.

Message Output Without and With Message Determination



Using message output without message determination results in the following errors or problems:



- No message schema is assigned.
- Only the schema types defined in the standard system can be output, for example, NEU.
- Messages are only generated with the standard parameters output medium PRINT, time-spot 1, and IMMEDIATE OUTPUT. The default values cannot be changed.
- The system defaults to the printer in the following sequence: printer for message group, printer for purchasing group, and printer for user.

You can specify if you want to use message determination for each purchase transaction (document category). If you wish to use message determination, assign a message schema to each purchase transaction (document category).

If you work without message determination, the system only generates the messages with the standard parameters (output medium PRINT). In the process, the printers assigned to the relevant purchasing group (Customizing table) or specified in the relevant user data are taken into account.

To send messages by fax you must manually change the output medium in the document header.

The system does not include condition records in message output without a message schema.

Using message output with message determination results in the following output control:

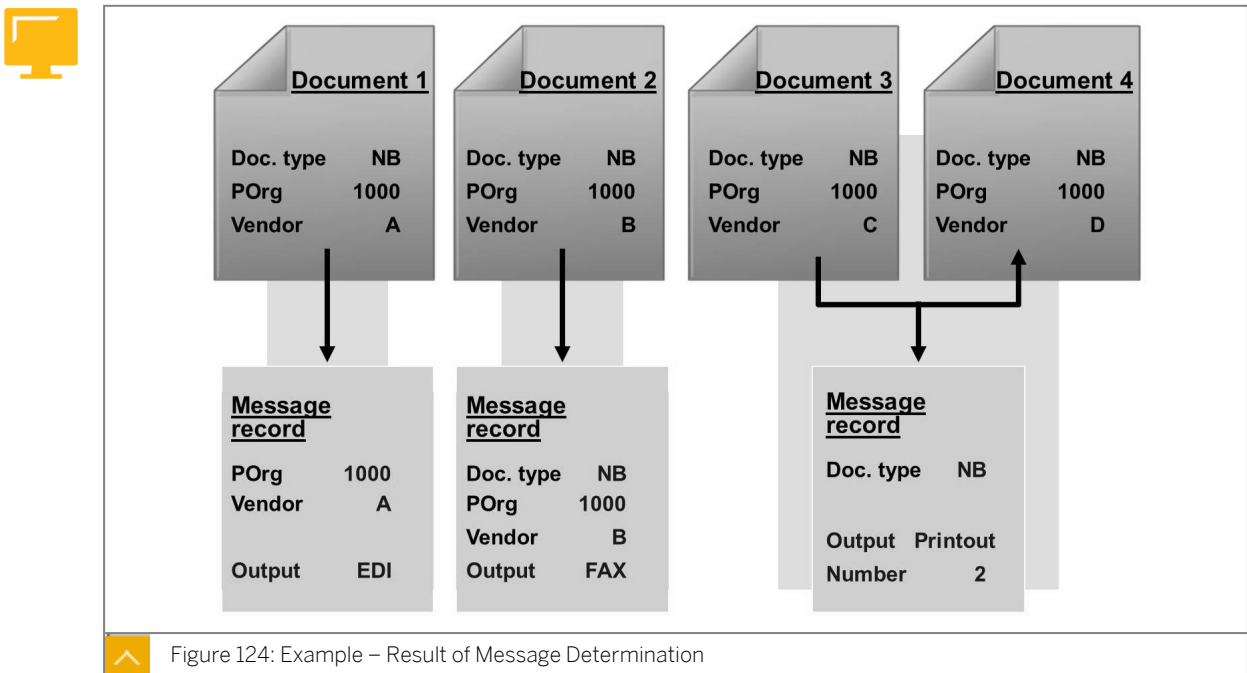
- A message schema is assigned
- Any message type can be output
- The system determines the printer in the following sequence: printer for message record, printer for purchasing group, and printer for user

Additionally, output medium and time-spot can suggested, depending on the concrete values of influencing factors such as document type and vendor.

The purpose of message determination is to output messages in accordance with predefined criteria. You can activate message determination in the SAP system by assigning a message schema. You can specify the schema that control message determination for each separate purchase transaction.

With message determination, the system checks whether condition records exist for the actual application data in a purchasing document. The condition records specify how, when, where, and how often a message should be output. If condition records exist, then the system can generate and process (for instance, send electronically) one or more messages. Without a valid condition record, the system cannot output a message automatically.

Example of Result of Message Determination



What does message determination enable you to do?

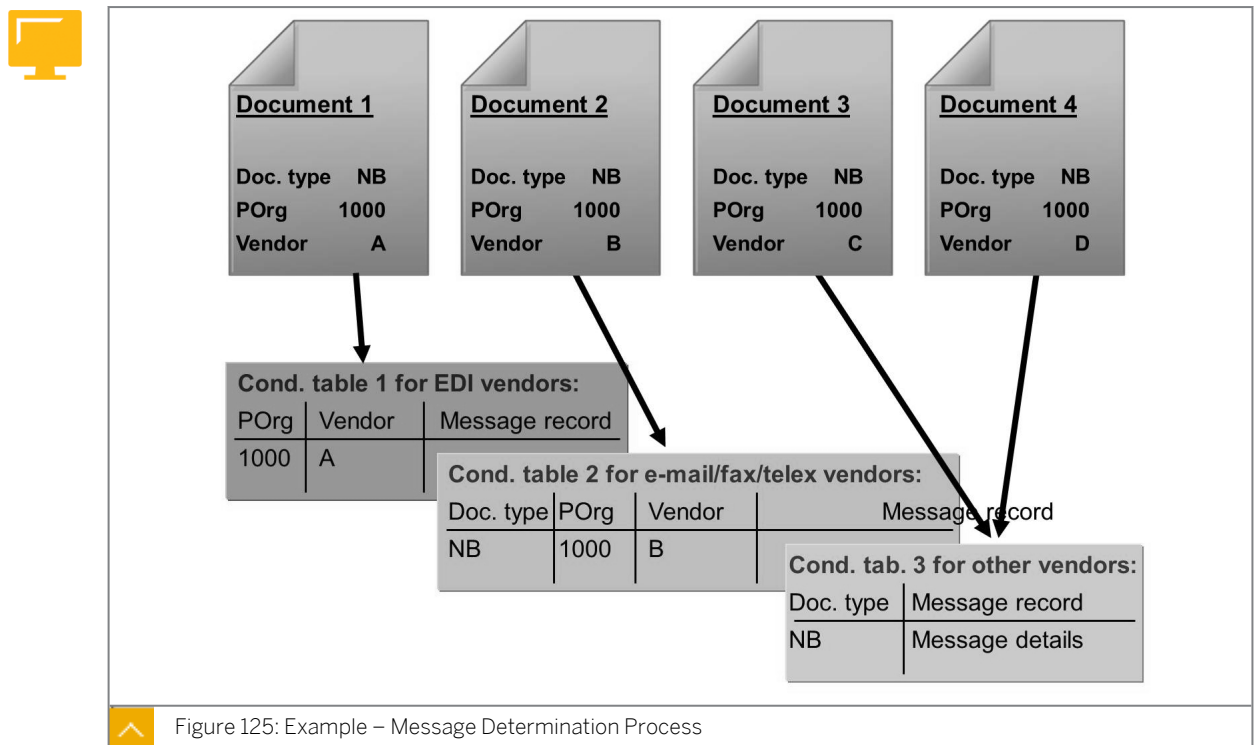
Message determination enables you to control the document output process for each vendor on an individual vendor basis.

Depending on the actual application data in the document, you can perform the following functions:

- Determine message to output purchasing documents for particular vendors by EDI.
- Send purchasing documents with a particular document type to other vendors by fax.
- Print purchasing documents for the remaining vendors.

In this example, the program determines multiple different message records (condition records) for the outputs.

Example of Message Determination Process



With the relevant application data that you want to use for message output, condition tables are created in Customizing.

In the message determination process, the system searches the condition tables for condition records in a predefined sequence (known as the access sequence).

You can take into account various dependencies with the three different condition tables. Thus, vendor A can receive every purchasing document by EDI whereas vendor B only receives purchasing documents belonging to particular document types by fax.

For each message type, you can specify that the document is to be optically archived at the time of output. To do so, use the archive mode Print and Archive for the relevant message type.

Maintain Message Schema and Message Types

Business Example

Your company has decided on its policy for the output of POs. In your project team, you have been assigned the task of maintaining message schema and message types, and making the desired settings.

Maintain message schema and message type.

1. Which message schema has been assigned to the purchasing document category "PO"?

2. Is a new message determination process triggered for printing of change messages? (You will find the relevant switch on the message schema assignment screen).

3. Which message types are contained in the schema determined in subtask one for the transaction's new printout, expediter and order acknowledgment expediter? Which requirements are checked in the case of these message types?

Message Type	Requirement

Maintain Message Schema and Message Types

Business Example

Your company has decided on its policy for the output of POs. In your project team, you have been assigned the task of maintaining message schema and message types, and making the desired settings.

Maintain message schema and message type.

1. Which message schema has been assigned to the purchasing document category "PO"?

a) In *Customizing*, go to *Materials Management* → *Purchasing* → *Messages* → *Output Control* → *Message Determination Schemas* → *Define Message Schema for Purchase Order*.

b) In the *Choose Activity* dialog box, select the *Assign Schema to Purchase Order* row as the *Name of Activity*, and then choose *Continue*.

c) On the *Change View "Assignment of Message Determination Schemas to Application"* screen, you can view that schema *RMBEF1* has been assigned.

2. Is a new message determination process triggered for printing of change messages? (You will find the relevant switch on the message schema assignment screen).

a) No, the indicator *N* for new message determination for change messages has not been set for message schema *RMBEF1*.

3. Which message types are contained in the schema determined in subtask one for the transaction's new printout, expeditor and order acknowledgment expeditor? Which requirements are checked in the case of these message types?

Message Type	Requirement

a) In *Customizing*, go to *Materials Management* → *Purchasing* → *Messages* → *Output Control* → *Message Determination Schemas* → *Define Message Schema for Purchase Order*.

b) In the *Choose Activity* dialog box, choose *Maintain Message Determination Schema Purchase Order* option and choose *Continue*.

- c) On the *Change View "Schemas" Overview* screen, in the Schemas screen area, select the schema *RMBEF1*.
- d) In the *Dialog Structure* tree, choose the *Control data* node.
Schema *RMBEF1* contains the following message types:

Message Type	Requirement
NEU (new printout of purchase order)	101
MAHN (expediter)	103
AUFB (order acknowledgement expediter)	107



LESSON SUMMARY

You should now be able to:

- Adjust message determination and output control

Using Condition Technique for Message Determination

LESSON OVERVIEW

This lesson explains how to use condition technique for message determination in Purchasing.

Business Example

Message determination enables the system to determine the appropriate messages and search for valid condition records for the messages. You can define the output medium, the device, the time of output, and the number of copies.

For this reason, you require the following knowledge:

- An understanding of how to use condition technique for message determination



LESSON OBJECTIVES

After completing this lesson, you will be able to:

- Use condition technique for message determination

Condition Technique for Message Determination

Message determination in Purchasing enables the system to determine the appropriate messages and to search for the valid condition records for them.

In the message records, you can define the output parameters based on certain criteria. The output parameters include the output medium, the time of output, and number of copies. Examples of criteria include document type and purchasing organization.

Schema, message types, access sequences, and condition tables are supplied for message determination. You then have to adapt the schema, message types, access sequences, and condition tables to the specific requirements of your company.

The following terms are used in message determination:

- The permitted message types for each message application are specified in a corresponding message schema. Examples of message types include expediting and new printout.

The system assigns separate message schemas to the individual purchasing document categories, for example, Request for Quotation (RFQ), purchase order (PO), and contract.

- A message type can also be seen as a condition type, and groups together messages of the same kind. It contains parameters that are valid for all the messages that the system assigns to it, for example, the print program, form, and defined partner roles. Each message type represents different messages in the system. Examples of message type include PO printouts or reminders.

- The access sequence is a search strategy that the SAP system uses to search for valid condition records (message records). The access sequence is the sequence in which the message determination accesses the condition tables.
- A condition table contains one or more fields as key fields which you want to use as influential factors (dependencies) for message output. You define the combination of fields for which you want to create message records.

Message Determination Process

In purchasing, the system performs message determination only at the header level for a purchasing document.

Therefore, in message determination, only the fields contained in the header of the PO (document type, vendor or supplying plant, company code, purchasing organization, and purchasing group) can be included.

PO item fields, such as the plant, cannot be included.

There is a separate message schema with its own message type for the output of RFQs, POs, outline agreements, and scheduling agreement delivery schedule lines.

Message Determination Process (1-4)

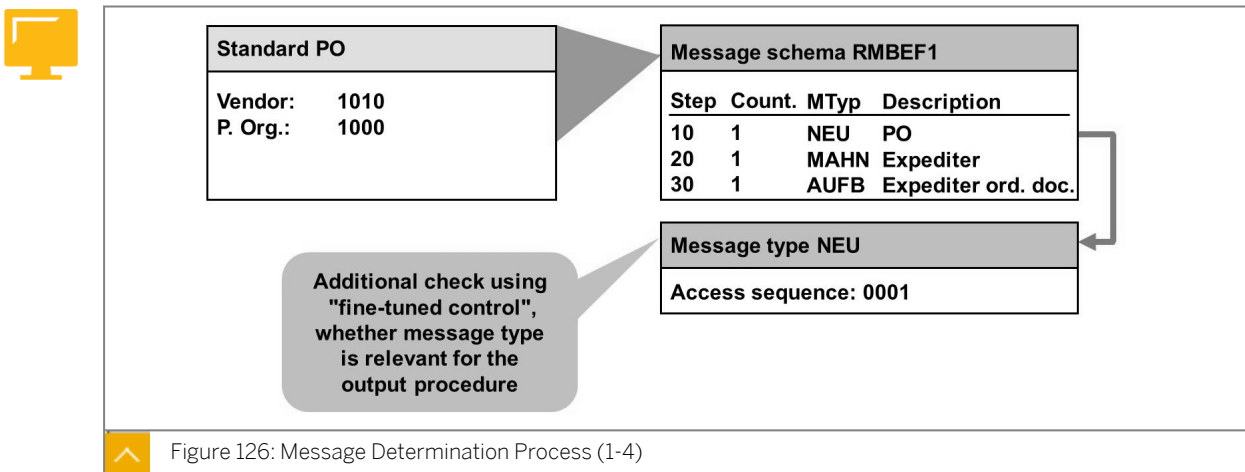


Figure 126: Message Determination Process (1-4)

For example, you create a PO with document type NB for vendor 1010 and purchasing organization 1000.

The process of message determination can be described as follows:

- Depending on the actual operation, the SAP system determines whether a message schema is assigned for this document category. For POs, the message schema in the standard SAP system is RMBEF1.
- The SAP system determines which message types from the message schema are feasible for this transaction. It does this by reference to requirements assigned to the message types. In this example, the SAP system has determined the message type NEU. The assigned conditions are not fulfilled for the other message types.
 The fine-tuned control checks whether the message types for conditions which have been fulfilled are also relevant for the respective print operation: New, Change, Expediter, and Order Acknowledgement.
- The SAP system checks the access sequence you have defined for the message type NEU. In this example, it is the access sequence 0001 in which three condition tables have been

entered. The first table has the purchasing organization and vendor keys (influencing factors). The second table has the document type purchasing organization and vendor keys (influencing factors). The third table only has the document type key (influencing factor).

- The system searches for valid condition records. In the example, no condition record has been defined for the combinations of purchasing organization and vendor or document type, purchasing organization, and vendor. However, there is a condition record for the document type NB.

The system copies the data from this condition record, which can include items such as send medium, printer, and time-spot, to the PO (at header level) and displays it under Messages.

While the system performs message determination in Purchasing at header level, you can only output an entire document.

In the case of message determination with a message schema, you can either change the message parameters that the system determines or delete the message.

Message Determination Process Example

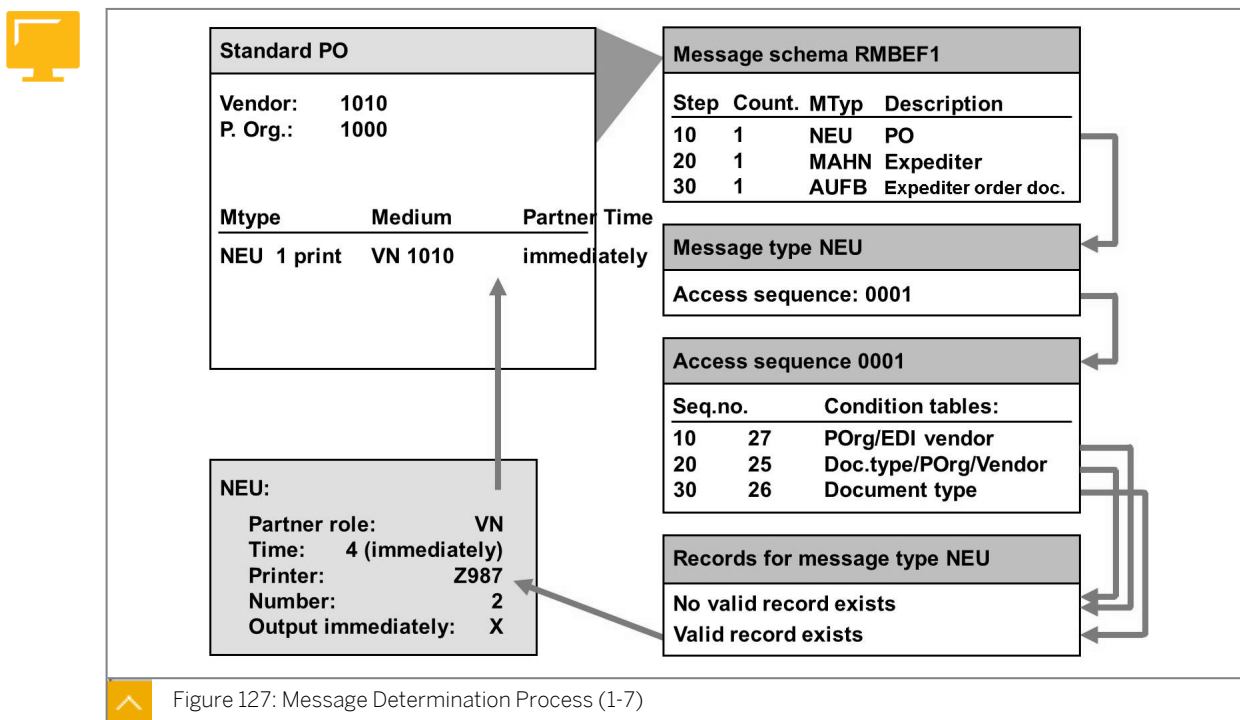


Figure 127: Message Determination Process (1-7)

The figure shows an example of the message determination process.

Determination Analysis

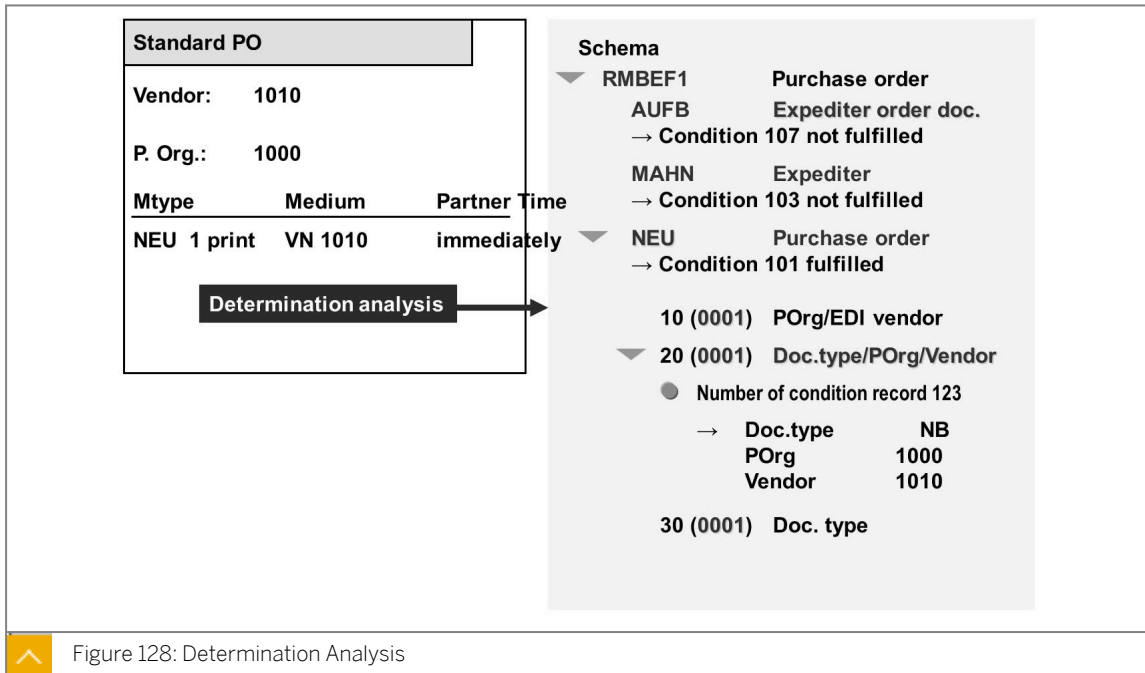


Figure 128: Determination Analysis

You can use determination analysis to check the result of message determination on the message determination screen of *Choose the corresponding item*. Choose the menu path *Goto* → *Determination Analysis* on the message determination screen *Choose the corresponding item*.

You get an overview of all defined message types for your purchasing document. You can see the values for the key fields of the condition tables as well as the originating condition table from which the message record that was found originate. The values for the key fields of the condition tables and the originating condition table are found in the details of message types for which the requirements have been satisfied.

Condition Tables

You can use different dependencies for the condition records for message determination. To use dependencies, you create different condition tables. This means that you can use the document type of the purchasing document, the purchasing organization, and the vendor as keys for these condition tables.

You can also define other criteria for message determination, such as the purchasing group or company code, in Customizing. When creating condition tables select these influencing factors (such as the purchasing group or company code) from a field catalog. **You need to create new condition tables using a table number greater than 500.**

As message determination takes place at header level, you can only include the fields from the document header in the condition records. Message determination based on the document item fields, for example, the plant, is not possible in the standard system.

Condition tables contain the link to the specific message records in which you specify output details such as time and number of outputs. These tables contain, as key fields, the data constellations according to which messages are found and proposed for processing. Each data constellation corresponds to a condition record in the table. The data constellation contains the number of the condition record. The actual message is described in the condition record itself.

Access Sequences

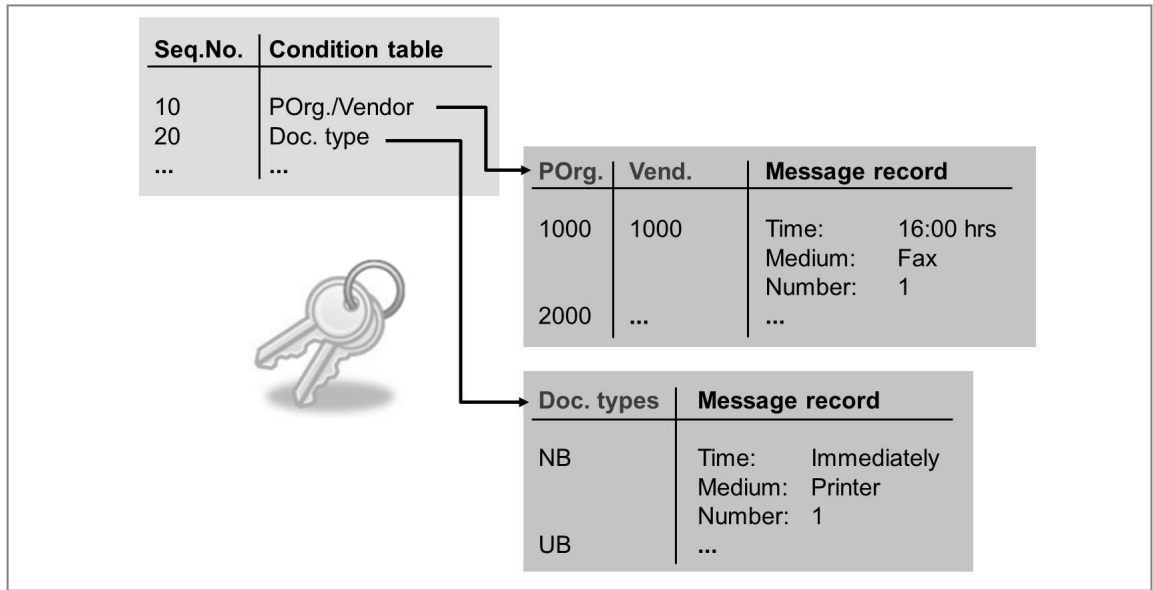


Figure 129: Condition Tables and Access Sequences

You can create condition tables with different key combinations. In the access sequence, you define the condition tables in which the system is to be read and the sequence in which the system reads the tables.

Access Sequences for Purchase Orders



Change View "Accesses": Overview

Access sequence Z987 AS 0001 enhanced by Table B987

AcNo	Tab	Description	Requiremnt	Exclusive
10	27	Purchasing Output Determination: Purch. Org./Vendor for EDI		<input checked="" type="checkbox"/>
20	25	Purchasing Output Determination: Doc.Type/Purch.Org/Vendor		<input type="checkbox"/>
30	26	Purchasing Output Determination: Document Type		<input type="checkbox"/>
40	987	Purchasing Organization		<input type="checkbox"/>

Change View "Fields": Overview

Access Z987 20 AS 0001 enhanced by Table B987
Table 25 Purchasing Output Determination: Doc.Type/Purch.Org/Vendor

Condition	I/O	Doc. struc.	Doc. field	Long field label	Source of constant	Init
BSART	◀	KOMKBEA	BSART	Purchasing Doc. Type		<input type="checkbox"/>
EKORG	◀	KOMKBEA	EKORG	Purch. Organization		<input type="checkbox"/>
LIFNR	◀	KOMKBEA	LIFNR	Vendor		<input type="checkbox"/>

Figure 130: Access Sequences for Purchase Orders

The figure shows an access sequence for the message output of purchase orders.

Message Types

By maintaining message types, you can set indicator for condition access, set partner roles for different recipients such as vendor, ordering address, and supplying plant, and set processing program and form, depending on the output medium.

You can fine-tune control a message type by defining the printing operation for which the message type is planned, for example, for a new printout or for a printout of changes.

You can maintain message schema by entering message type in schema, choosing the purchasing document and the conditions that dictate the creation of the message.

Standard message types are supplied for each purchasing document, for example, NEU is a message type for the output of a new or changed PO (new printout and change printout).

Details of Message Type NEU



Figure 131: Details of Message Type NEU

You can define further message types for each purchasing document category separately. The figure shows details of the message type NEU for purchase orders.

Fine-Tuned Message Control

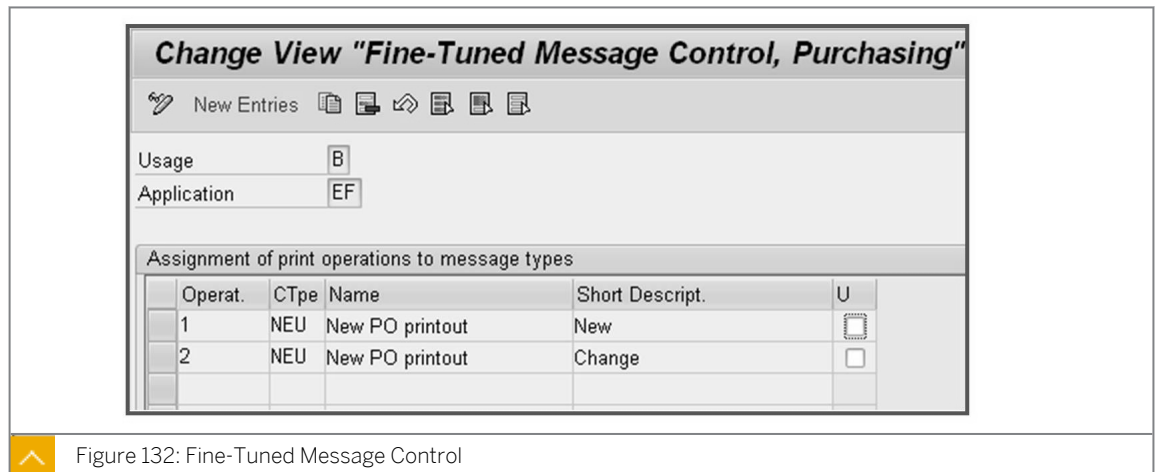


Figure 132: Fine-Tuned Message Control

The figure shows the fine-tuned control function that can be used to define various message types for a document category for output, depending on the relevant transaction.

Condition Records

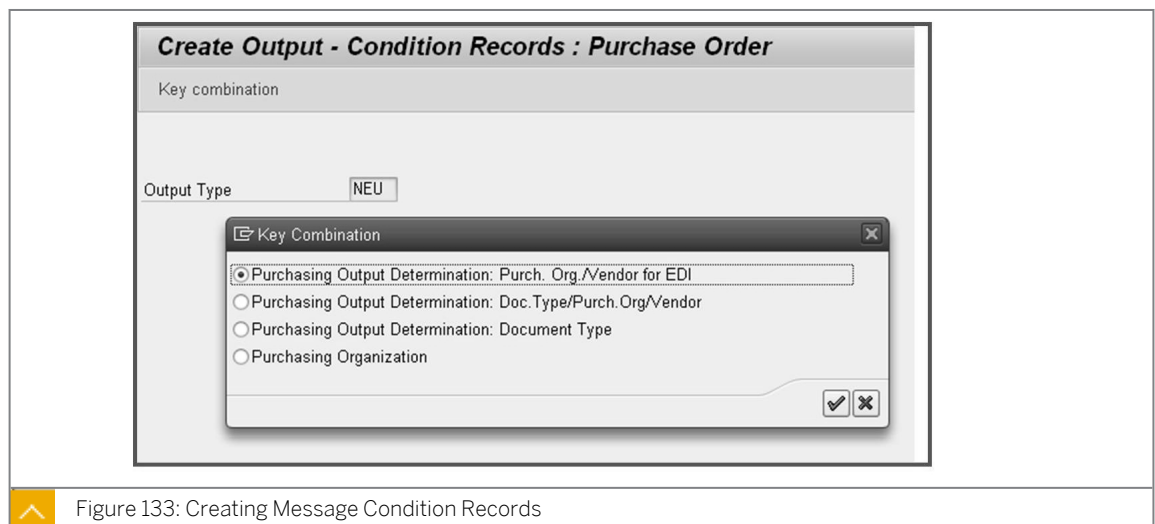


Figure 133: Creating Message Condition Records

You must create message records (condition records) for the individual message types that you wish to use in the application menu.

Message records can be created independently by a key combination. The key combination corresponds to the access sequence in Customizing.

The figure from the Purchasing menu shows the initial screen for maintaining message condition records.

In a condition record, you specify the following options:

- Partner role
- Output medium
- Output time

The system proposes the values from the Customizing values of the message type.

With the output medium *Print*, you can enter an output device and the desired number of messages.

With the output medium *Send Externally* you can store a communications strategy.



Hint:

It is sufficient to enter the partner role in the condition record. The partner will then be determined from the partner role of the purchasing document.

Languages entered in the condition record are ignored. The language in the header of the purchasing document determines the language. For more information on the language of a message, please refer to Note 89899.

Printer Determination

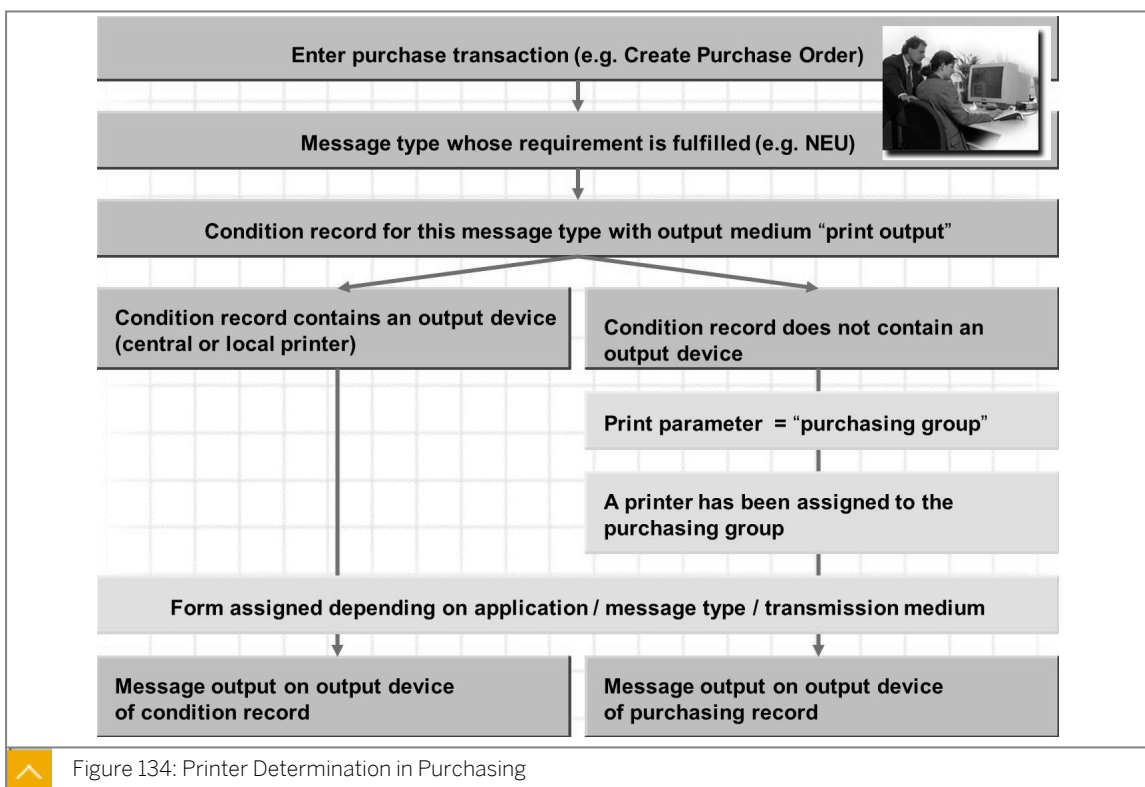


Figure 134: Printer Determination in Purchasing

If a condition record is found for a message type with the medium print output, the system determines the printer in the next step. If the condition record contains an output device, such as a central or local printer, the message is output on this device.

If the condition record does not contain an output device, the system checks whether the purchasing group parameter has been entered for this message type on the *Print* tab page. If the group parameter has been entered the system uses the printer entered for the purchasing group in the Customizing activity. To assign output devices, in Customizing, go to *Materials Management* → *Purchasing* → *Messages* → *Assign Output Devices to Purchasing Groups*.

If you do not want to assign the printers for the individual buyers in the Customizing activity, you can also assign the print parameter S (user default values) for the message type in purchasing (see SAP Note 306385).

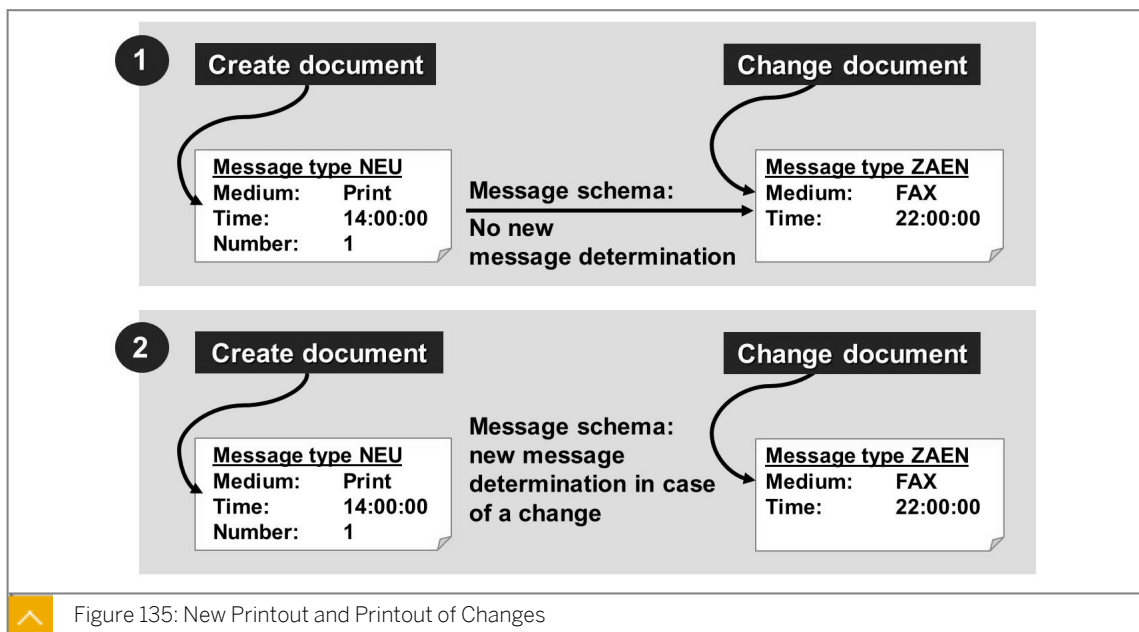


Hint:

If no valid printer is found, the system cannot create a message. The system informs you of this on saving. If no valid printer is found, you can enter the parameters for message output manually.

Once the output medium and the message type are known, the system can determine the print form. The print form can be decided only when the medium is known because the information for the layout in an Electronic Data Interchange (EDI) transmission differs significantly from printing, for example, a PO. You assign the output program and print forms to the message types for each output medium.

Output of Changes to a Purchasing Document



If you change fields that are relevant to printouts of changes (change notices) in a purchasing document in which the messages have already been output, the system generates a new message to convey the changes to the business partner.

The activity Assign Message Schema enables you to specify for each purchase transaction that a new message determination process is to be triggered for printouts of changes (also referred to as change notices or messages).

As a result, you can specify that new documents are to be printed out (due to the need for them to be signed) whereas changes are to be transmitted by fax.

The following are the effects of the new message determination for change messages indicator:

- **Case 1 – The indicator is not set.**

You cannot use different message types for the print operations new and change. You must define the message type NEU for the print operations 1 and 2 (new and change) under *Maintain Message Types* → *Fine-Tuned Control*.

Once you manually change the output parameters for new printouts that the message determination facility determines, the system will use the changed values for the printouts of changes.

- **Case 2 – The indicator is set.**

If the indicator is set, you can use different message types for the print operations **New** and **Change**.

Under *Maintain Message Types* → *Fine-Tuned Control*, you can specify that the message type NEU is to be used for the print operation **New** and the message type ZAEN is to be used for the print operation **Change**.

For the message types NEU and ZAEN, you can enter different media and times for output in the condition records.



Hint:

If the printout gets lost or has to be repeated for any reason, you must select the message that is to be repeated in the message details and then choose **Repeat Output** to output the document as usual.

However, the printout contains no indication that it is a repeat message.

Notice that the output of a change message cannot be repeated. The new change message, created by the function **Repeat message**, does not contain any data. If a change message is still contained in the SPOOL file, you can trigger output from the SPOOL file again (transaction SP01).

Other frequently asked questions for message determination in Purchasing are answered in the FAQ Note 457497.

You can find information about sending messages by mail in Note 191470.

Create Condition Records and Message Types

Business Example

Your company has decided on a policy for the output of POs. According to this policy, either two copies of each PO will be printed (one each for the vendor and the buyer) or, in special cases, one copy of the PO will be faxed directly to the vendor and another copy printed for the buyer.

In your project team, you have been assigned the task of testing message determination and making the settings for the desired changes.

Check the settings for message determination in Purchasing, define a new message type and make the other necessary settings.

Task 1

Provide answers regarding message types.

1. Observe the details for message type NEU. Which access sequence is used for this message type?

Are conditions accessed for this message type? _____

Which indicator controls printer determination? _____

2. For which output operations is this message type used (fine-tuned control)?

Task 2

Display the access sequences and condition records for a message type.

1. Observe the detail screen for the access sequence for message type NEU. In which order are message records accessed in this access sequence (order of condition tables)?

2. In the Purchasing application menu, call up the function for changing message records for POs under master data.

For which key combinations can you maintain message records for message type NEU? Compare the key combinations with the access sequence.

3. Choose the third condition table (Purchasing Message Determination: Document Type) and display the message record (condition record) for message type NEU and document type NB. Record the following data of this message record:

Transmission medium: _____

Date/time: _____

Output Device: _____

Immediate Output: _____

4. Create a PO with document type NB. Enter the following data at header level:

Field Name or Data Type	Value
Vendor	T-K500C##
Purchasing Organization	1000
Purch. Group	Z##

For which message types were messages created? Which medium and time are proposed for the output? What information do you receive on the detail screen for the communication data for this message?

Transmission medium: _____

Date/time: _____

Output device: _____

Why was a message generated for this PO? From which message record (condition record) does this information originate?

Use the determination analysis function to check this information.

Save your data with the function Hold.

Purchase order number 1: _____

5. Create a PO with document type Y##. Enter the following data at header level:

Field Name or Data Type	Value
Vendor	T-K500C##
Purchasing Organization	1000
Purch. Group	Z##

For which message types were messages created? Which medium and time are proposed for the output? What information do you receive on the detail screen for the communication data for this message?

Transmission medium: _____

Date/time: _____

Output device: _____

Save your data with the *Hold* function.

Purchase order number 2: _____

6. Is there a message record for document type Y## in the third condition table (*Message/Purchasing Output Determination: Document Type*) under master data for message type NEU?

7. For document type Y##, specify that two copies are to be printed on the output device of the purchasing group printer at the request of the user.

Create a condition record for document type Y## without maintaining the printer. Instead of maintaining the printer, use the relevant activity in Customizing to assign the printer to the purchasing group. Use printer A000, or ask the instructor for a valid printer.

8. Take another look at the message output for purchase order 2 from subtask 5. Choose the PO change function again. Which information do you receive on the detail screen for the communication data for this message?

Transmission medium: _____

Date/time: _____

Output device: _____

From which message record (condition record) does this information originate?

Task 3

New message type (optional exercise)

1. You need printouts of POs sent by fax for your own files. Therefore, you use message type NEU to carry out the fax transmission to the vendor, and a new message type to print the PO in each case.

You must enter two condition records: one for the fax transmission and one for the printout.

Outline the procedure for adding this new message type for POs, or explain the scenario on the basis of the steps described in the following (if there is enough time).

Step 1

To print copies of fax messages, create and define message type **ZP##**.

Create this message type by copying message type NEU. When copying message type NEU, select *Copy All* when prompted.

Which transmission medium must you define for message type ZP##?

Step 2

Add an entry for this message type in the Table for Fine-Tuned Control. Add an entry for print operation 1 and message type ZP##.

Step 3

Maintain message schema *RMBEF1* to include your message type. Use step 50 and counter ## (or step 50+## and counter 0). Use requirement 101.

Step 4

Check the permitted partner roles for message type ZP##. These partner roles were copied when message type ZP## was created. If necessary, add at least one new entry for partner role *LF* and medium *1*.

Step 5

Ensure that an output program and form have been assigned to message type ZP## for print output. This should have happened as a result of copying message type NEU. If an output program and form have not been assigned to the message type, maintain this data (as for NEU).

Step 1:

Step 2:

Step 3:

Step 4:

Step 5:

2. Message type ZP## is only to lead to a print output if the original purchase order is sent as a fax. You achieve this by creating two condition records for each vendor who is to receive a fax, one with the message type NEU for fax transmission to the vendor and one with the message type ZP## for the printout.

Can you use the same access sequence as for message type *NEU* to localize this condition record?

With which key combinations can or must you maintain the individual message records (condition records)?

Maintain the necessary condition records for vendor *T-K500A##*. Use the condition table containing the vendor, purchasing organization, and document type for message types *NEU* and *ZP##*.

3. Test your settings.

First, enter any fax number in the master data for vendor *T-K500A##*.

Then, create a PO for vendor *T-K500A##* with document type *Y##*. Ensure that the correct message types are displayed, and record the PO number.

Purchase order number: _____

Create Condition Records and Message Types

Business Example

Your company has decided on a policy for the output of POs. According to this policy, either two copies of each PO will be printed (one each for the vendor and the buyer) or, in special cases, one copy of the PO will be faxed directly to the vendor and another copy printed for the buyer.

In your project team, you have been assigned the task of testing message determination and making the settings for the desired changes.

Check the settings for message determination in Purchasing, define a new message type and make the other necessary settings.

Task 1

Provide answers regarding message types.

1. Observe the details for message type NEU. Which access sequence is used for this message type?

Are conditions accessed for this message type? _____

Which indicator controls printer determination? _____

- a) In *Customizing*, go to *Materials Management* → *Purchasing* → *Messages* → *Output Control* → *Message Types* → *Define Message Types for Purchase Order*.
- b) In the *Choose Activity* dialog box, choose *Maintain Message Types for PO* option and choose *Continue*.
- c) On the *Change View "Output Types": Overview* screen, in the *Dialog Structure* tree, choose the *Output Types* node and, in the *Output Types* screen area, select the row containing the *Output Type* value *NEU*.
- d) Choose the *Details* pushbutton.
- e) On the *Change View "Output Types": Details* screen, choose the *General data* tab page and enter the following data:

Field Name or Data Type	Value
<i>Access Sequence</i>	z987
<i>Condition Access</i>	Yes

Choose the *Print* tab page.

The printer is determined according to purchasing group.

2. For which output operations is this message type used (fine-tuned control)?

- a) Choose *Fine-Tuned Control: Purchase Order*.
- b) Message type NEU is used for print operations 1(new) and 2(change).

Task 2

Display the access sequences and condition records for a message type.

1. Observe the detail screen for the access sequence for message type NEU. In which order are message records accessed in this access sequence (order of condition tables)?

- a) In *Customizing*, go to *Materials Management* → *Purchasing* → *Messages* → *Output Control* → *Access Sequences* → *Define Access Sequence for Purchase Order*.
- b) On the *Change View "Access Sequences": Overview* screen, in the *Overview Access Sequence* screen area, select the row containing value Z987 in the AS field.
- c) In the *Dialog Structure* tree, choose the *Accesses* node.
- d) In the *Change View "Accesses": Overview* screen, the message records are determined in the following order:
 - Message determination for purchasing: *Purch. Org. /Vendor for EDI*
 - Message determination for purchasing: *Doc. Type/Purch. Org./Vendor*
 - Message determination for purchasing: *Document type*
 - *Purchasing Organization*

2. In the Purchasing application menu, call up the function for changing message records for POs under master data.

For which key combinations can you maintain message records for message type NEU? Compare the key combinations with the access sequence.

- a) On the *SAP Easy Access* screen, choose *Logistics* → *Materials Management* → *Purchasing* → *Master Data* → *Messages* → *Purchase Order* → *Change (MN05)*.
- b) On the *Change Output – Condition Records: Purchase Order* screen, enter **NEU** in the *Output Type* field and continue.
In the *Key Combination* dialog box, select one of the following options (radio buttons):

Purchasing Output Determination: Purch. Org./Vendor for EDI
Purchasing Output Determination: Doc. Type/Purch. Org /Vendor
Purchasing Output Determination: Document type
Purchasing organization

3. Choose the third condition table (Purchasing Message Determination: Document Type) and display the message record (condition record) for message type NEU and document type NB. Record the following data of this message record:

Transmission medium: _____

Date/time: _____

Output Device: _____

Immediate Output: _____

- a) On the *SAP Easy Access* screen, choose *Logistics* → *Materials Management* → *Purchasing* → *Master Data* → *Messages* → *Purchase Order* → *Display* (MN06)
- b) On the *Display Output – Condition Records: Purchase Order* screen, enter **NEU** in the *Output Type* field and choose *Continue*.
- c) In the *Key Combination* dialog box, choose the *Purchasing Output Determination: Document Type* radio button and choose *Continue*.
- d) On the *Display New PO printout (NEU) Selection* screen, enter **NB** in the *Purchasing Doc Type* field, and then choose the *Execute* pushbutton.
- e) On the *Display Condition Records (New PO printout)* screen, in the *Condition Recs.* screen area, the value of the *Transmission medium* field is 1 (print output), and the value of *Date/time* field is 3.
- f) Choose the *Communication* pushbutton.
- g) On the *Display Condition Records (New PO printout) Communication* screen, the value of the *Output Device* field is Z987, and the *Print Immediately* checkbox is not selected.

4. Create a PO with document type NB. Enter the following data at header level:

Field Name or Data Type	Value
<i>Vendor</i>	T-K500C##
<i>Purchasing Organization</i>	1000
<i>Purch. Group</i>	Z##

For which message types were messages created? Which medium and time are proposed for the output? What information do you receive on the detail screen for the communication data for this message?

Transmission medium: _____

Date/time: _____

Output device: _____

Why was a message generated for this PO? From which message record (condition record) does this information originate?

Use the determination analysis function to check this information.

Save your data with the function Hold.

Purchase order number 1: _____

- a) On the SAP Easy Access screen, choose *Logistics → Materials Management → Purchasing → Purchase Order → Create (ME21N)*.
- b) On the *Create Purchase Order* screen, enter the data specified at header level and then choose the *Messages* pushbutton.
The system displays the message output with the *Transmission medium* as 1, and the *Date/time* as 3.
- c) Choose message type *NEU*.
- d) Choose the *Communication method* pushbutton, and then choose Z987 in the *Logical destination* field to display the printer.
- e) Choose *Goto → Determination analysis* to display the determination analysis.
- f) On the *Analysis Output* screen, there is a message for condition type *NEU*.
- g) Double-click the line with message type *NEU* (Expand) in the overview to observe that the message with access 30 is in the third condition table.
- h) Select the line with access 30 (place your cursor on the line to select it) to observe that a condition record was found for document type *NB*.
- i) Choose the *Hold* pushbutton.

5. Create a PO with document type Y##. Enter the following data at header level:

Field Name or Data Type	Value
<i>Vendor</i>	T-K500C##
<i>Purchasing Organization</i>	1000
<i>Purch. Group</i>	Z##

For which message types were messages created? Which medium and time are proposed for the output? What information do you receive on the detail screen for the communication data for this message?

Transmission medium: _____

Date/time: _____

Output device: _____

Save your data with the *Hold* function.

Purchase order number 2: _____

- a) On the SAP Easy Access screen, choose *Logistics → Materials Management → Purchasing → Purchase Order → Create (ME21N)*.
- b) Enter the following data at header level:

Field Name or Data Type	Value
Vendor	T-K500C##
Purchasing Organization	1000
Purch. Group	Z##

Choose the *Messages* pushbutton.

- c) The system displays the following message output data:

Field Name or Data Type	Value
Transmission medium	1
Date/time	3
Output device	LP01



Note:

This message record was created based on the condition record for purchasing organization 1000.

6. Is there a message record for document type Y## in the third condition table (*Message/ Purchasing Output Determination: Document Type*) under master data for message type NEU?

- a) On the SAP Easy Access screen, choose *Logistics* → *Materials Management* → *Purchasing* → *Master Data* → *Messages* → *Purchase Order* → *Display* (MN06).
- b) Enter **NEU** in the *message type* field.
- c) Choose the *Key Combination* pushbutton, or choose *Continue*.
- d) Choose the *Key Combination Purchasing Output Determination Document Type* option.
- e) Confirm your entries.
- f) Enter **Y##** in the *Document Type* field and then choose *Execute*. The system displays the message: *There are no condition records for the selection entered*.

7. For document type Y##, specify that two copies are to be printed on the output device of the purchasing group printer at the request of the user.

Create a condition record for document type Y## without maintaining the printer. Instead of maintaining the printer, use the relevant activity in Customizing to assign the printer to the purchasing group. Use printer A000, or ask the instructor for a valid printer.

- a) To execute the task, perform the following steps:

- a) On the *SAP Easy Access* screen, choose *Logistics → Materials Management → Purchasing → Master Data → Messages → Purchase Order → Create (MN04)*.
- b) Enter **NEU** in the message type field.
- c) Choose the *Key Combination* field, or choose *Continue*.
- d) Choose the *Key Combination Purchasing Output Determination: Document Type*.
- e) Enter **Y##** in the *Document Type* field and then choose *Execute*.
- f) Enter the following data:

Field Name or Data Type	Value
<i>Transmission Medium</i>	1
<i>Date/Time</i>	3

Choose *Continue*.

- g) Select the entry and choose the *Communication* pushbutton. Enter the following data:

Field Name or Data Type	Value
<i>Output Device</i>	No Entry
<i>Number of messages</i>	2

Save your entries.

- b) The printer must be assigned to the purchasing group.
On the *SAP Easy Access* Screen, choose *Materials Management → Purchasing → Messages → Output Control → Assign Output Devices to Purchasing Groups*.
Assign the value **A000** to the printer field in purchasing group **Z##**.
8. Take another look at the message output for purchase order 2 from subtask 5. Choose the PO change function again. Which information do you receive on the detail screen for the communication data for this message?

Transmission medium: _____

Date/time: _____

Output device: _____

From which message record (condition record) does this information originate?

- a) On the *SAP Easy Access* screen, choose *Logistics → Materials Management → Purchasing → Purchase Order → Change (ME22N)*.
- b) Choose *Purchase Order → Other Purchase Order*.

c) Enter the *PO* number and choose *Other Document*.

d) Choose *Messages*.

Transmission medium: 1

Date/time: 3

Choose *Communication method*.

Output device: A000

Number: 2

The data for transmission medium, time-spot, and number originate from the condition record that you created in subtask 7, the printer from the table *Output Devices for Purchasing Group*.

Task 3

New message type (optional exercise)

1. You need printouts of POs sent by fax for your own files. Therefore, you use message type *NEU* to carry out the fax transmission to the vendor, and a new message type to print the PO in each case.

You must enter two condition records: one for the fax transmission and one for the printout.

Outline the procedure for adding this new message type for POs, or explain the scenario on the basis of the steps described in the following (if there is enough time).

Step 1

To print copies of fax messages, create and define message type *ZP###*.

Create this message type by copying message type *NEU*. When copying message type *NEU*, select *Copy All* when prompted.

Which transmission medium must you define for message type *ZP###*?

Step 2

Add an entry for this message type in the Table for Fine-Tuned Control. Add an entry for print operation *1* and message type *ZP###*.

Step 3

Maintain message schema *RMBEF1* to include your message type. Use step *50* and counter *##* (or step *50+##* and counter *0*). Use requirement *101*.

Step 4

Check the permitted partner roles for message type *ZP###*. These partner roles were copied when message type *ZP###* was created. If necessary, add at least one new entry for partner role *LF* and medium *1*.

Step 5

Ensure that an output program and form have been assigned to message type *ZP##* for print output. This should have happened as a result of copying message type *NEU*. If an output program and form have not been assigned to the message type, maintain this data (as for *NEU*).

- a) Procedure:
 - a) Create new message type
 - b) Maintain fine-tuned control
 - c) Extend message schema
 - d) Check partner roles
 - e) Create condition record

Step 1:

- a) On the *SAP Easy Access* screen, *Customizing* → *Materials Management* → *Purchasing* → *Messages* → *Output Control* → *Message Types* → *Define Message Types for Purchase Order*.
- b) Choose the *Maintain Message Types for PO* option.
- c) Select message type *NEU*.
- d) Choose the *Copy As...* pushbutton.
- e) Enter *ZP##* in the *Message Type* field and enter a name.
- f) Specify the transmission medium print output as the default value (*Default Values* tab page) and choose *Continue*.
- g) Choose *Copy all* if prompted.
- h) Save your entries.

Step 2:

- a) Choose *Fine-Tuned Control: Purchase Order*.
- b) Create an entry for print operation *1* and message type *ZP##*.
- c) Save your entries.

Step 3:

- a) Maintain message schema *RMBEF1*.
- b) On the *SAP Easy Access* screen, choose *Customizing* → *Materials Management* → *Purchasing* → *Messages* → *Output Control* → *Message Determination Schemas* → *Define Message Schema for Purchase Order*.
- c) Choose *Maintain Message Determination Schema: Purchase Order*
- d) Select *RMBEF1*.
- e) Choose *Control data*.
- f) For adding a new entry, enter the following data:

Field Name or Date Type	Value
Step	50
Counter	##
Requirement	101

Save your entries.

Step 4:

- a) In *Customizing*, go to *Materials Management* → *Purchasing* → *Messages* → *Output Control* → *Partner Roles per Message Type* → *Define Partner Roles for Purchase Order*.
- b) Ensure there is an entry for partner role VN and medium 1. Add this entry if necessary.
- c) Save your entries.

Step 5:

- a) In *Customizing*, go to *Materials Management* → *Purchasing* → *Messages* → *Forms (Layout Sets) for Messages* → *Assign Form and Output Program for Purchase Order*.
 - b) Select the *NEU* entry for the *Message Type* field, choose *Medium 1*, and then choose the *Copy as...* pushbutton.
 - c) Enter **ZP##** in the *Message Type* field and choose *Continue*.
 - d) Save your entries.
2. Message type *ZP##* is only to lead to a print output if the original purchase order is sent as a fax. You achieve this by creating two condition records for each vendor who is to receive a fax, one with the message type *NEU* for fax transmission to the vendor and one with the message type *ZP##* for the printout.

Can you use the same access sequence as for message type *NEU* to localize this condition record?

With which key combinations can or must you maintain the individual message records (condition records)?

Maintain the necessary condition records for vendor *T-K500A##*. Use the condition table containing the vendor, purchasing organization, and document type for message types *NEU* and *ZP##*.

- a) Since the determination process is based on the vendor, purchasing organization, and document type, you can use access sequence Z987 as for message type *NEU*. You must maintain the following condition records in the second condition table (depending on vendor, purchasing organization, and document type):

- a) On the *SAP Easy Access* screen, choose *Logistics → Materials Management → Purchasing → Master Data → Messages → Purchase Order → Create (MN04)*.
- b) For the first condition record, enter **NEU** in the *Message Type* field.
- c) Choose the *Key Combination* pushbutton.
- d) Choose *Key combination Purchasing Output Determination: Document type/purchasing org./vendor*.

Enter the following data:

Field Name or Data Type	Value
<i>Document Type</i>	Y##
<i>Purchasing Organization</i>	1000
<i>Vendor</i>	T-K500A##
<i>Medium</i>	2 (fax)

Save your entries.

- e) For the second condition record, enter **ZP##** in the *Message Type* field.
- f) Choose the *Key Combination* pushbutton.
- g) Choose *Key Combination Purchasing Output Determination: Document type/purchasing org./vendor*.
- h) Enter the following data:

Field	Value
<i>Document Type</i>	Y##
<i>Purchasing Organization</i>	1000
<i>Vendor</i>	T-K500A##
<i>Medium</i>	1 (print output)

Save your entries.

3. Test your settings.

First, enter any fax number in the master data for vendor *T-K500A##*.

Then, create a PO for vendor *T-K500A##* with document type *Y##*. Ensure that the correct message types are displayed, and record the PO number.

Purchase order number: _____

- a) On the *SAP Easy Access* screen, choose *Logistics → Materials Management → Purchasing → Master Data → Vendor → Purchasing → Change (Current) (MK02)*.
- b) Choose *T-K500A##* in the *Vendor* field and select *Address*. Enter any fax number and save.

- c) On the SAP Easy Access screen, choose *Logistics* → *Materials Management* → *Purchasing* → *Purchase Order* → *Create* → *Vendor/Supplying Plant Known* (ME21N).
- d) Change the value of the *document type* field to *Y##* and enter **T-K500A##** in the vendor field. Choose *Continue*.
- e) Choose the *Messages* pushbutton. The following data is displayed:

Field Name or Data Type	Value
<i>Message Type</i>	<i>NEU</i>
<i>Transmission Medium</i>	<i>2</i>

Field Name or Data Type	Value
<i>Message Type</i>	<i>ZP##</i>
<i>Transmission Medium</i>	<i>1</i>



LESSON SUMMARY

You should now be able to:

- Use condition technique for message determination

Learning Assessment

1. What is the maximum length of characters for purchasing documents?

Choose the correct answer.

- A 8
- B 10
- C 12
- D 18

2. Which of the following options can you specify for purchase order document types?

Choose the correct answers.

- A Allowed item categories
- B Allowed account assignment categories
- C Linkage to purchase requisition document types
- D Linkage to outline agreement document types

3. For which document categories can you allow time-dependent conditions?

Choose the correct answers.

- A Purchase requisition
- B Purchase order
- C Request for quotation
- D Scheduling agreement

4. For which document category can you define overall release?

Choose the correct answer.

- A Purchase requisition
- B Purchase order
- C Request for quotation
- D Scheduling agreement

5. For which transaction must you define a default document type for automatic purchase order creation during goods receipt?

Choose the correct answer.

- A MIGO_GR
- B MIGO
- C MB11
- D MB01

6. What is the advantage of using version management in purchasing?

Choose the correct answer.

- A Changes to long texts can be tracked.
- B Messages are stored in a special table.
- C Version management can be activated in selected purchase orders.
- D Messages can be output before release.

7. Which of the following must be adapted to use item categories in release procedures?

Choose the correct answer.

- A External representation
- B Internal representation
- C Valuated goods receipt
- D Non-valuated goods receipt

8. What is controlled by item categories in purchasing?

Choose the correct answers.

- A Whether material is allowed
- B Whether inventory management is allowed
- C Whether invoicing plans are allowed
- D Whether return deliveries are allowed

9. For which of the following can you define field selection keys?

Choose the correct answers.

- A Item categories
- B Document categories
- C Document types
- D Account assignment categories

10. Which user parameter can be used for function authorizations in purchasing?

Choose the correct answer.

- A EVO
- B EKG
- C FOB
- D EFB

11. What is controlled by account assignment categories?

Choose the correct answers.

- A Whether material is allowed
- B Whether inventory management is allowed
- C Whether account assignment is changeable at invoice receipt
- D How partial invoices should be handled

12. Regarding account determination, what can you maintain in account assignment categories?

Choose the correct answer.

- A Valuation grouping code
- B Valuation class
- C Account modification
- D Account category reference

13. For which of the following can you define own text types?

Choose the correct answers.

- A Material master
- B Info records
- C Vendor master
- D Purchasing document types

14. Which text type from purchase requisitions cannot be adopted in follow-on documents?

Choose the correct answer.

- A Item text
- B Delivery text
- C Header memo
- D Item note

15. What can you define in the copying rules for text linkages?

Choose the correct answer.

- A Fixed indicator
- B Change indicator
- C Print indicator
- D Deletion indicator

16. To which application can you define linkages for purchase order texts?

Choose the correct answer.

- A Financial accounting
- B Inventory management
- C Logistics invoice verification
- D Controlling

17. Where do you define the key field that you want to use in the output process?

Choose the correct answer.

- A Access sequence
- B Document type
- C Condition record
- D Condition table

18. Which is the correct order for the message determination process?

Choose the correct answer.

- A Access sequence → Message type → Message schema → Condition record
- B Condition record → Access sequence → Message schema → Message type
- C Message Schema → Message type → Access Sequence → Condition record
- D Message type → Message schema → Condition record → Access sequence

19. What is mandatory for message determination analysis?

Choose the correct answer.

- A Condition record
- B Message schema
- C Access sequence
- D Print preview

20. What do you specify in a condition record?

Choose the correct answers.

- A Output language
- B Output medium
- C Output time
- D Output attachments

21. What can you define for change messages?

Choose the correct answers.

- A Deviant shipping time
- B Deviant message schema
- C New message determination process
- D New release procedure

22. The activity Assign Message Schema enables you to specify for each purchase transaction that a new _____ is to be triggered for printouts of changes.

Choose the correct answer.

- A Access Sequence
- B Condition Table
- C Message Determination Process
- D Message Type

Learning Assessment - Answers

1. What is the maximum length of characters for purchasing documents?

Choose the correct answer.

- A 8
- B 10
- C 12
- D 18

2. Which of the following options can you specify for purchase order document types?

Choose the correct answers.

- A Allowed item categories
- B Allowed account assignment categories
- C Linkage to purchase requisition document types
- D Linkage to outline agreement document types

3. For which document categories can you allow time-dependent conditions?

Choose the correct answers.

- A Purchase requisition
- B Purchase order
- C Request for quotation
- D Scheduling agreement

4. For which document category can you define overall release?

Choose the correct answer.

- A Purchase requisition
- B Purchase order
- C Request for quotation
- D Scheduling agreement

5. For which transaction must you define a default document type for automatic purchase order creation during goods receipt?

Choose the correct answer.

- A MIGO_GR
- B MIGO
- C MB11
- D MB01

6. What is the advantage of using version management in purchasing?

Choose the correct answer.

- A Changes to long texts can be tracked.
- B Messages are stored in a special table.
- C Version management can be activated in selected purchase orders.
- D Messages can be output before release.

7. Which of the following must be adapted to use item categories in release procedures?

Choose the correct answer.

- A External representation
- B Internal representation
- C Valuated goods receipt
- D Non-valuated goods receipt

8. What is controlled by item categories in purchasing?

Choose the correct answers.

- A Whether material is allowed
- B Whether inventory management is allowed
- C Whether invoicing plans are allowed
- D Whether return deliveries are allowed

9. For which of the following can you define field selection keys?

Choose the correct answers.

- A Item categories
- B Document categories
- C Document types
- D Account assignment categories

10. Which user parameter can be used for function authorizations in purchasing?

Choose the correct answer.

- A EVO
- B EKG
- C FOB
- D EFB

11. What is controlled by account assignment categories?

Choose the correct answers.

- A Whether material is allowed
- B Whether inventory management is allowed
- C Whether account assignment is changeable at invoice receipt
- D How partial invoices should be handled

12. Regarding account determination, what can you maintain in account assignment categories?

Choose the correct answer.

- A Valuation grouping code
- B Valuation class
- C Account modification
- D Account category reference

13. For which of the following can you define own text types?

Choose the correct answers.

- A Material master
- B Info records
- C Vendor master
- D Purchasing document types

14. Which text type from purchase requisitions cannot be adopted in follow-on documents?

Choose the correct answer.

- A Item text
- B Delivery text
- C Header memo
- D Item note

15. What can you define in the copying rules for text linkages?

Choose the correct answer.

- A Fixed indicator
- B Change indicator
- C Print indicator
- D Deletion indicator

16. To which application can you define linkages for purchase order texts?

Choose the correct answer.

- A Financial accounting
- B Inventory management
- C Logistics invoice verification
- D Controlling

17. Where do you define the key field that you want to use in the output process?

Choose the correct answer.

- A Access sequence
- B Document type
- C Condition record
- D Condition table

18. Which is the correct order for the message determination process?

Choose the correct answer.

- A Access sequence → Message type → Message schema → Condition record
- B Condition record → Access sequence → Message schema → Message type
- C Message Schema → Message type → Access Sequence → Condition record
- D Message type → Message schema → Condition record → Access sequence

19. What is mandatory for message determination analysis?

Choose the correct answer.

- A Condition record
- B Message schema
- C Access sequence
- D Print preview

20. What do you specify in a condition record?

Choose the correct answers.

- A Output language
- B Output medium
- C Output time
- D Output attachments

21. What can you define for change messages?

Choose the correct answers.

- A Deviant shipping time
- B Deviant message schema
- C New message determination process
- D New release procedure

22. The activity Assign Message Schema enables you to specify for each purchase transaction that a new _____ is to be triggered for printouts of changes.

Choose the correct answer.

- A Access Sequence
- B Condition Table
- C Message Determination Process
- D Message Type

Lesson 1

Adjusting the Output of Messages in Inventory Management

540

Exercise 47: Adjust the Output of System Messages

549



UNIT OBJECTIVES

- Adjust the output of messages in Inventory Management

Adjusting the Output of Messages in Inventory Management

LESSON OVERVIEW

This lesson describes message determination in Inventory Management. In addition to printed output, this lesson deals with internal mail messages. You will also gain an overview of the missing parts and the output control of system messages.

Business Example

You have been asked to give an overview of the configuration of the message determination facility in Inventory Management. For this reason, you require the following knowledge:

- An understanding of output of system messages
- An understanding of details relating to message determination in Inventory Management
- An understanding of conditions for message determination
- How to assign printers for the output of goods receipt (GR) and/or issue slips



LESSON OBJECTIVES

After completing this lesson, you will be able to:

- Adjust the output of messages in Inventory Management

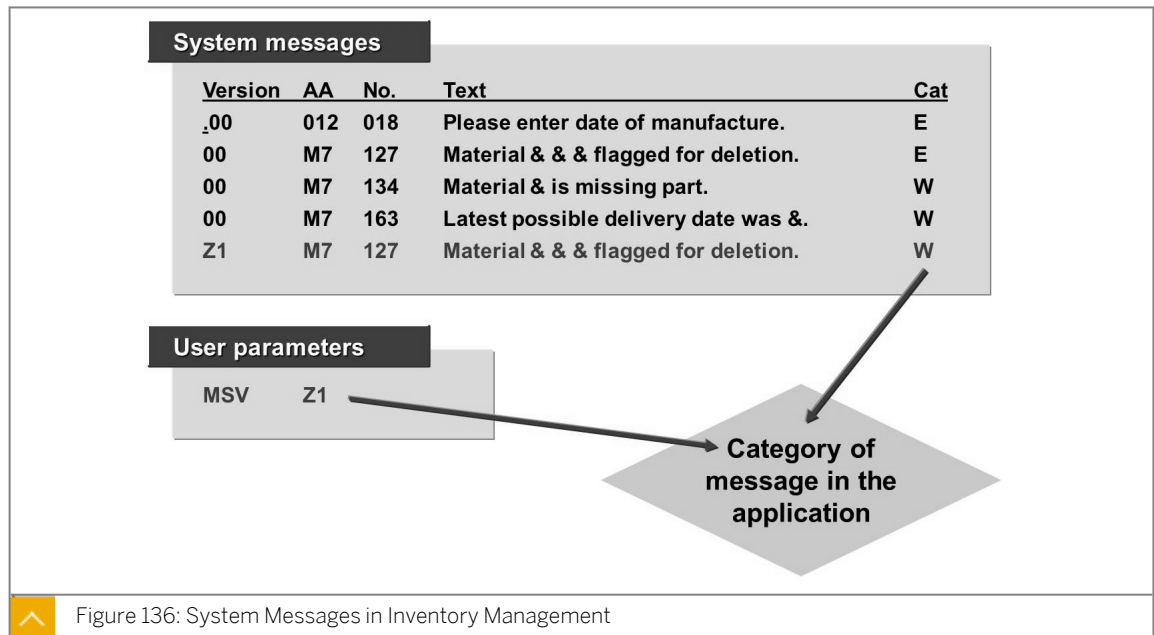
Settings for System Messages

When you enter and post goods movements in Inventory Management, system messages (for example, *Purchase order item is indicated as delivery completed*) are output to inform the user about certain system responses or the status of the data.

You can determine the following types of messages for selected system messages:

- Warning message
- Error message
- No message

System Messages in Inventory Management



The standard system supplies all controllable messages with version 00. Before you change the message type for a particular message, you must check whether the change is valid for all users. You can change the message type for message version 00 or store this message for user-specific output as a new version, such as version Z1, and then change the message type for the new version. The system administrator must ensure that all users to whom this new version applies have the user parameter MSV and the version of the message as the parameter value in their user master records.

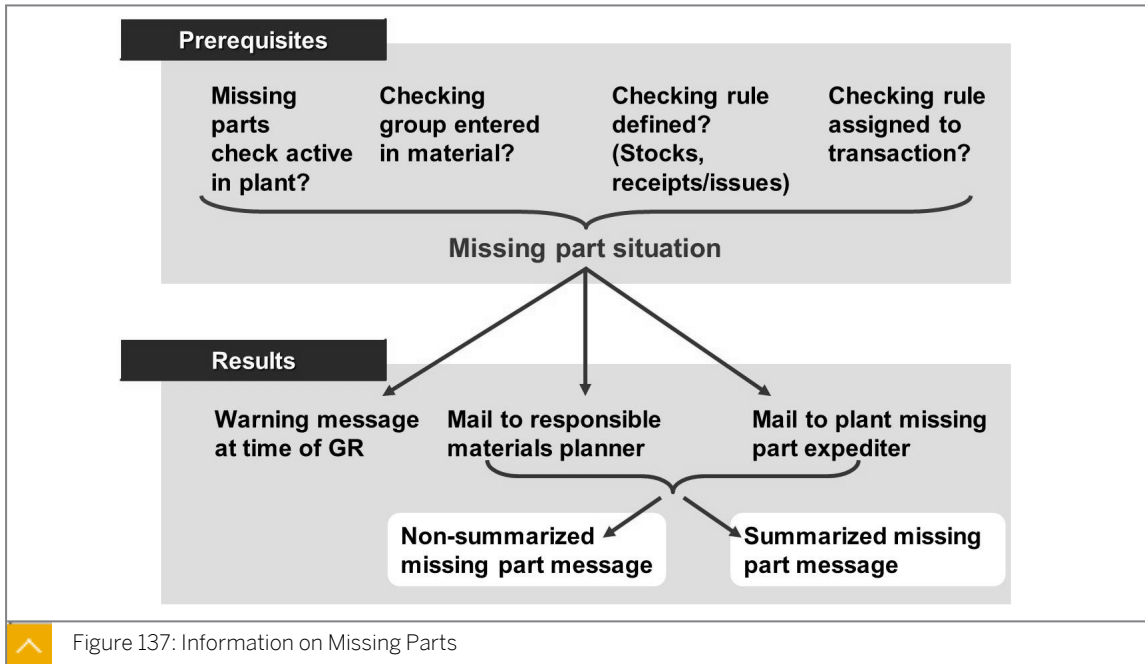
When the parameter MSV has not been maintained for a user, the system uses version 00. When the table does not contain an entry for a particular version for a message, such as Z1, then the message is output with the message type that the system assigns to message version 00.

To determine the number of a message you receive from the system, you can call the long text of the message by double-clicking on it. You see the application area and the message number. The system typically assigns system messages for Inventory Management to the application area (message class) M7.

Do not change the message type for system messages that display with the message type error message. However, hiding warning messages or setting them as error messages for certain users can be useful. For system messages in series (for example, M7 053 Posting only possible in periods YYYY/MM and YYYY/NN in the company code nnnn), you cannot change the message type in Customizing. This means that table T160M is not read to output these messages.

For system messages in series (for example, M7 053 Posting only possible in periods YYYY/MM and YYYY/NN in the company code nnnn), you cannot change the message type in Customizing. This means that table T160M is not read to output these messages.

Missing Part Check



You can use a missing part check in the SAP system. For example, as a result of this check, the system triggers a message to a materials planner or expediter when you post the receipt of a missing part. You can use message determination to generate and transmit this missing part notification.

The system carries out the missing part check if the following conditions are fulfilled:

- You have activated the check for the plant.
- You have defined a checking rule for the transaction.
- You have assigned a checking group for the availability check in the material master record.

Determination of Checking Rule

The system performs the check using checking rules that you have assigned to the various transactions in Inventory Management, in a similar way to the availability check.

Depending on the checking rules and the checking group from the material master record, the system determines which stocks, planned receipts, and requirements are to be included. In addition, you can use the checking horizon for the GR postings to determine for how many days in the future the check must take into account when checking for missing quantities of the material. Within the checking horizon, an e-mail is sent from Inventory Management informing the materials planner that there has been a GR for a missing part.



Hint:

When you post a GR with transaction MIGO, transaction MIGO_GR is executed in the background. You must, therefore, enter the checking rules for GRs for transaction MIGO_GR. For a differentiated missing parts check, you can even assign a (different) checking rule for each movement type, dependent on other indicators.

Control of Warning Message

For a GR posting of a missing part, the system issues messages for the following entities:

- Stores person
- Materials planner

The displayed message is a warning message. You can activate or deactivate this message for specific users.



Caution:

The system does not automatically display warning messages in the MIGO transaction. You can see warning messages only if you call the test function.

The system sends the missing part message to the responsible materials planner identified in the material master record when a workplace user has been assigned to the materials planner. Otherwise, the system searches for the central missing part expediter in the plant and sends the message to the expediter. When no workplace user has been assigned to the central missing part expediter either, the system cannot send any internal message.

At the time of GR, the person entering the receipt receives a warning message stating that the system has notified the materials planner.

Types of Missing Part Messages (Output through Output Determination)

The following table lists the types of missing part messages:

Type of Missing Part Message	Description
Non summarized	The system sends one internal message with a maximum of five MRP elements for each missing part material.
Summarized	The system sends one internal message per material document and plant with the list of missing part materials, but without information about the MRP elements themselves.

You can maintain the general text for the missing part message (for message type MLFH) in Customizing for Inventory Management under Output Determination.

Output of Goods Issue/Receipt Slips

Goods issue/receipt slips are normally output using printers; however, you can also create them in PDF format. You can control the output generation in output determination by assigning forms.

You can print GR and/or issue slips in Customizing for Inventory Management and Physical Inventory.

You can make the following settings for printing:

- Printer settings

You can identify printers by their logical printer names. You specify which printers are bar code-capable and which printers are capable of supporting multiple outputs.

In Customizing, go to *Materials Management->Inventory Management and Physical Inventory → Print Control → General Settings*.

Assign the printers within the output determination settings.

- Print indicator (item printout indicator)

To print a GR or goods issue slip for a goods movement, assign a print indicator to the movement type. This print indicator controls whether it is possible to print a material document item and the message type that the system uses for the slip. You then assign the individual print indicators to the movement types.

You can also define your own item printout indicator, for example, for a return delivery of materials to a vendor, and assign this indicator to the movement type for return deliveries. You can use the various item printout indicators for selection purposes in message determination and thus indirectly for the use of different forms.

Output Determination

The system outputs GR and/or issue slips as well as internal messages for materials planners or buyers. This is done using the message determination technique in Inventory Management. Message determination functions in the same way as in Purchasing.

GR and/or issue slips and internal messages are examples of different output types. You can check all output types using a procedure. The procedure is associated with one or more output types.

Each output type has an access sequence associated. You can use this sequence to search for the condition record(s) in the assigned condition table(s). However, in the case of Inventory Management, the system maintains these condition records (application data) in Customizing and not in the Inventory Management application.

Process of Message Determination in Inventory Management

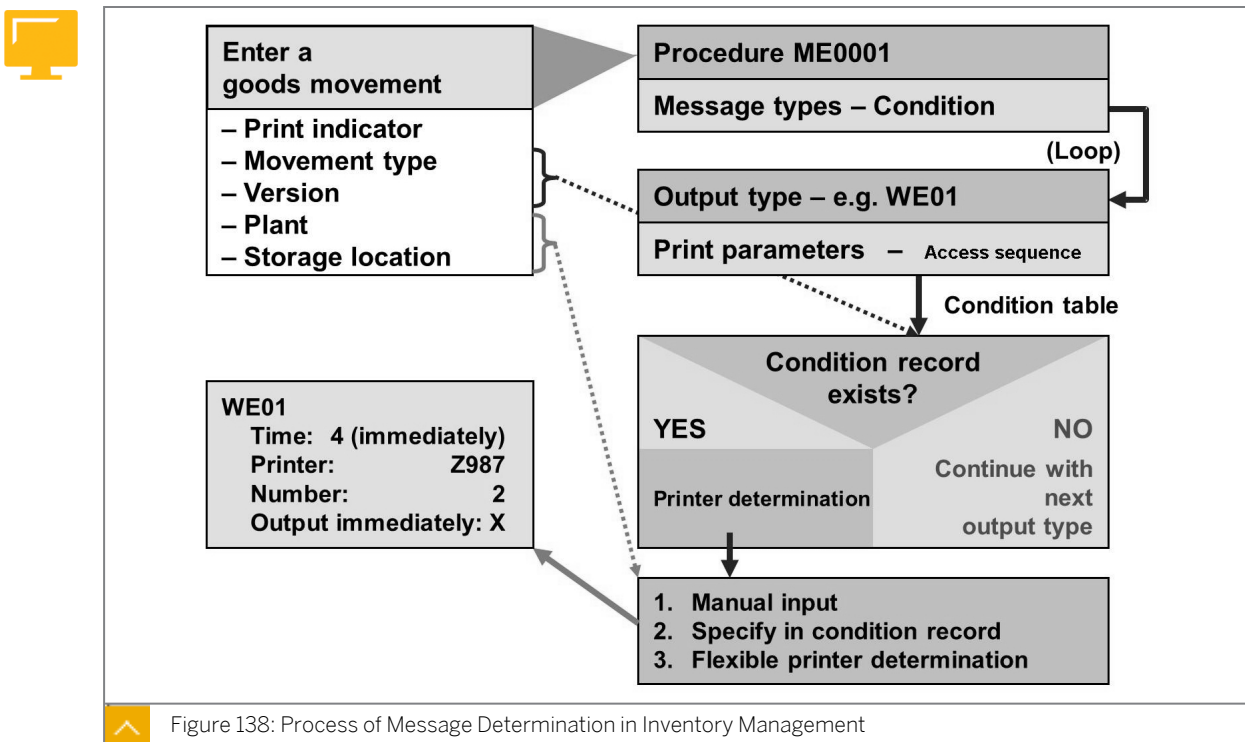


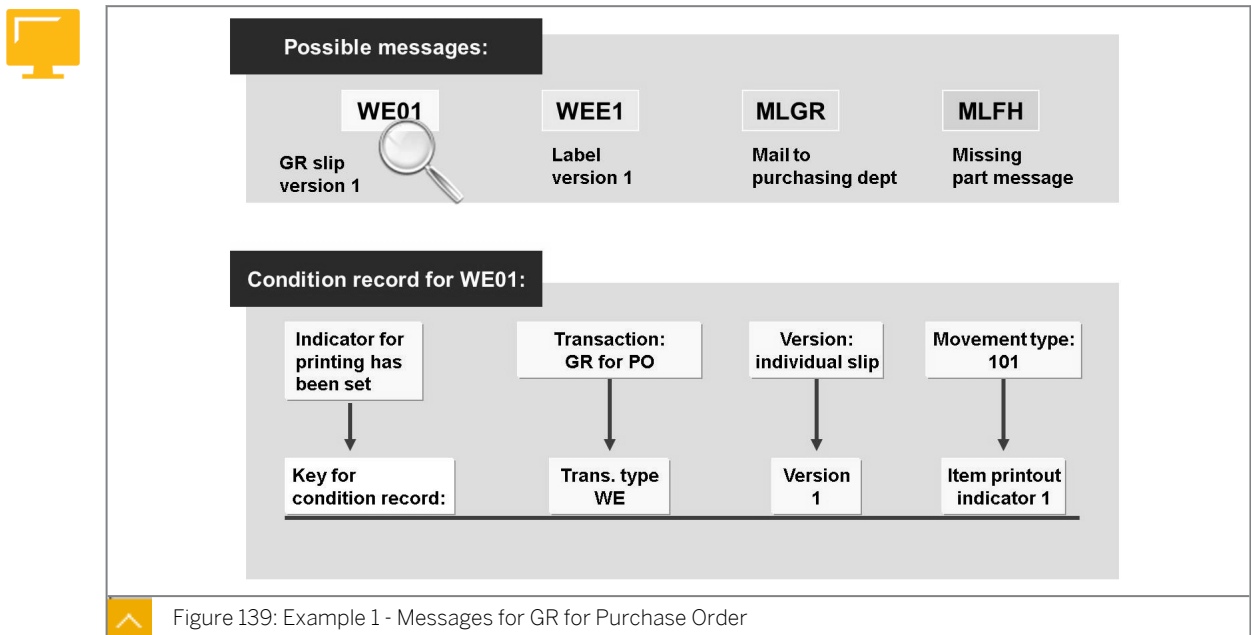
Figure 138: Process of Message Determination in Inventory Management

The procedure ME0001 contains all output types for Inventory Management. With some output types, such as output type MLGR, a check is made against certain conditions that must be fulfilled in order to output the message.

The system assigns an access sequence to each output type for the automatic generation of messages in the standard SAP system. The access sequences of the standard SAP system each contain a single condition table, which must contain the necessary condition records for message output. You therefore must maintain condition records for each output type that you want to use for the output of GR and/or issue slips or internal mails.

To output GR and/or issue slips using printers, you can specify the printer in the message condition record. Alternatively, you can use the print parameters to set how the program determines the printer for each message type.

Example 1 – Messages for Goods Receipt for Purchase Order



The condition table for GR and/or issue slips (individual slips include message types WE01, WE02, WA01) contains the following as the key:

- The transaction or event type the system derives from the transaction or event.
- The print version the system proposes depending on the transaction.
- The item printout indicator the system assigns to the movement type.

Printer Determination

You can determine the printer using following print parameters:

- **Assignment of printer for each output type/plant/storage location**

In this case, you specify the printer for the output of GR and/or issue slips for each combination of output type, plant, and storage location. An entry with Storage Location = ' ' (blank) is necessary for printouts for goods movements without specification of a storage location (for example, with movement type 103) or GR for a purchase order item with account assignment. Entries without an output type are valid for all output types (for the same plant and the same storage location) for which no special entry exists.

- **Assignment of printer per output type/plant/storage location/user group**

In this case, you specify the printer for the GR and/or issue slips for each combination of output type, plant, storage location, and user group. Entries without an output type are valid for all output types (for the same plant and the same storage location) for which no special entry exists. You must enter the user group in the user master record with user parameter ND9.

- **Assignment of printer for each output type/user**

For the application ME (Inventory Management), you can assign a printer for each output type and user.

- **Fixed values for user**

- **Printer determination through USER EXIT**

You can assign a print program and at least one form to each output type for GR and/or issue slips, depending on the output medium. You can either retain the forms supplied in the standard system to print GR and/or issue slips or design some of your own, using SAPscript or SMARTFORMS functions.

Mail Title and Texts



Language	Text	Document title
DE	<input checked="" type="checkbox"/>	Wareneingangsmeldung bei Unter-/Überlieferung
EN	<input checked="" type="checkbox"/>	Goods receipt notification for under/overdelivery
FR	<input checked="" type="checkbox"/>	Confirmation de EM pr livr. incompl./excédentaire
HU	<input checked="" type="checkbox"/>	Árubeérkezési jelentés alul-/túlszállításnál
IT	<input checked="" type="checkbox"/>	Avviso entrata merci per cons. in difetto/eccesso

Figure 140: Example of the Mail Header

The figure displays an example of a mail header.

You can adapt the mail headers and texts for the output types you use to send internal mails to your own company requirements.

Example of a Mail Text



```

&SGF& / &SGH& &EKKO-ERNAM& !

A goods receipt for your Purchase order has been posted.
Unfortunately there was an underdelivery:

Purchase order &MSEG-EBELN&, item &MSEG-EBELP&
for material &MSEG-MATNR&, &EKPO-TXZ01&

Order quantity: &EKPO-MENGE& &EKPO-MEINS&
Delivered quantity: &MSEG-MENGE& &MSEG-MEINS&

Vendor: &MSEG-LIFNR& - &AM07M-NAME1& from &DM07M-ORT01&

&MFG&,
&MKPF-USNAM&#
    
```

Figure 141: Example of a Mail Text

The figure displays an example of a mail text. You can work with variables in the mail text.

Label Printing

When the system maintains a label type and label form for a material, you can print labels when posting a goods movement. There are separate settings for label printing.

In Customizing, go to *Materials Management->Inventory Management and Physical Inventory → Print Control → Set Label Printout*.

For label printing, you must maintain a label text.

The fields for label type and label form are in *Plant Data /Storage 1* view in the material master.

Example 2 – Messages for Goods Receipt for Purchase Order

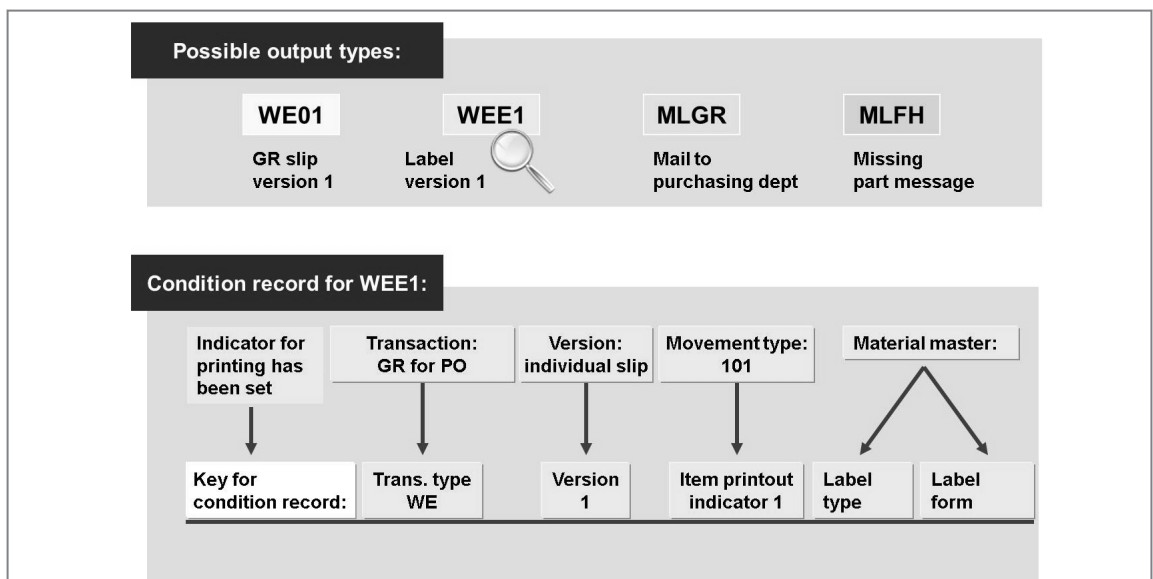


Figure 142: Example 2 - Messages for GR for Purchase Order

You define label types and label forms. To define label types and label forms, enter values in both the label type field and the label form field in the material master record.

The system controls the output of labels using separate output types. For example, the system uses the output type WEE1 to output labels with print version 1 (individual slip without inspection text).

You can specify the number of labels the system must print for every possible combination of label type and form.

You can use the following variants for the number of labels:

- Quantity in the base unit of measure
- Quantity in the unit of entry
- Quantity in the purchase order price unit



Hint:

SAP Note 522591 answers frequently asked questions on message determination in Inventory Management.

Adjust the Output of System Messages

Business Example

You print GR and/or issue slips for various goods movements in your company. In addition to printing GR and/or issue slips using output determination, you want the system to inform the responsible buyer of any return deliveries of goods with an internal message. You are the member of the project team responsible for the settings for output determination in Inventory Management.

In Inventory Management, check and adjust output determination and make further settings for the output of messages.

Task 1

Provide suitable answers regarding procedures and output types.

1. Which procedure does the system assign for output determination in Inventory Management?
2. Which output types does the system provide for sending internal notifications to employees? Are these output types subject to any restrictions or conditions concerning their transmission?

Task 2

Provide suitable answers regarding user-defined output type.

1. Optional:
New output type
How do you send an internal message notifying the buyer that the materials the buyer ordered have been returned to the vendor?
2. Optional:
Requirements
Do you need your own new requirement that must be checked in the event of a return delivery?
3. Optional:
Access sequences and condition tables
View the access sequences for output determination in Inventory Management. Is there a suitable access sequence that you can assign to the new output type RL##? Give reasons for your answer.
4. How can you ensure that the system only generates a message using the new output type with a movement type for return deliveries?

5. What other data must be created prior to a test?
6. Test your Customizing settings. Create a return delivery for one of your GR postings with reference to a purchase order.

Adjust the Output of System Messages

Business Example

You print GR and/or issue slips for various goods movements in your company. In addition to printing GR and/or issue slips using output determination, you want the system to inform the responsible buyer of any return deliveries of goods with an internal message. You are the member of the project team responsible for the settings for output determination in Inventory Management.

In Inventory Management, check and adjust output determination and make further settings for the output of messages.

Task 1

Provide suitable answers regarding procedures and output types.

1. Which procedure does the system assign for output determination in Inventory Management?
 - a) In Customizing, go to *Materials Management->Inventory Management and Physical Inventory → Output Determination → Maintain Output Determination Procedures*.
 - b) In the *Choose Activity* dialog box, choose the row where the *Name of the Activity* field has the value *Conditions: Procedure*. The procedure is *ME0001*.
2. Which output types does the system provide for sending internal notifications to employees? Are these output types subject to any restrictions or conditions concerning their transmission?
 - a) In Customizing, go to *Materials Management->Inventory Management and Physical Inventory → Output Determination → Maintain Output Types*.
 - b) On the *Display View "Output Types": Overview* screen, select the first output type in the table and choose the *Processing routines* node in the *Output Types* tree.
Only one entry for this output type displays. This entry contains the transmission medium 7 (simple mail) and a program for processing the message.
Output types with the transmission medium simple mail and partner role ZP are internal messages.
The following output types are configured for sending messages internally:
MLFH, MLGR, MLMD and MLUD
 - c) You can see the assignment to a requirement in the procedure.
In Customizing, go to *Materials Management->Inventory Management and Physical Inventory → Output Determination → Maintain Output Determination Procedures*.
 - d) In the *Choose Activity* dialog box, choose the row where the *Name of the Activity* field has the value *Conditions: Procedure*.

- e) Select the row where the value of the *Procedure* field is *ME0001*.
- f) Choose the *Control data* node in the *Procedures* tree. The following data displays:

CType	Requirement
MLFH	No requirement
MLGR	171
MLMD	172
MLUD	174

The requirements determine the prerequisites for the generation of a message for the corresponding output type.

Task 2

Provide suitable answers regarding user-defined output type.

1. Optional:

New output type

How do you send an internal message notifying the buyer that the materials the buyer ordered have been returned to the vendor?

- a) You need a new output type, such as **RL##**, to which the partner role you assign ZP (mail partner) together with transmission medium simple mail, a processing program, and a form routine (SAPOFFICE_AUFRUF).
- b) In Customizing, go to *Materials Management* → *Inventory Management and Physical Inventory* → *Output Determination* → *Maintain Output Types*. Switch from display to change mode.
- c) Select output type *MLGR* and choose the *Copy As* pushbutton. Enter **RL##** as the new output type. Confirm any warning messages that display with the *Continue* pushbutton.
- d) Verify the default values for the new output type. Enter a suitable mail title and text. To do this, select your output type and choose the *Mail title and texts* node from the *Output Types* tree.
- e) Save your new output type.
- f) The output type must be included in the ME0001 procedure. Go to for *Materials Management* under *Inventory Management and Physical Inventory* → *Output Determination* → *Maintain Output Determination Procedures*.
- g) In the *Choose Activity* dialog box, choose the row where the *Name of the Activity* field has the value *Conditions: Procedure*.
- h) Select the row where the value of the *Procedure* field is *ME0001*.
- i) Choose the *Control data* node in the *Procedures* tree and create a new entry with step **5##**, counter **10**, and the output type **RL##**.

2. Optional:

Requirements

Do you need your own new requirement that must be checked in the event of a return delivery?

- a) Further query is not necessary because of item printout indicator 2, or a new one that is assigned to movement type 122. The movement type alone can represent the dependency. When informing the buyer that you are making return deliveries, you do not need to specify a requirement when you assign the output type RL## to the procedure.

3. Optional:

Access sequences and condition tables

View the access sequences for output determination in Inventory Management. Is there a suitable access sequence that you can assign to the new output type RL##? Give reasons for your answer.

- a) In Customizing, go to *Materials Management -> Inventory Management and Physical Inventory -> Output Determination -> Maintain Access Sequences*.
An existing access sequence (such as 0003) can be used because the assigned condition table 72 (B072) contains the item printout indicator as one of the keys.
- b) In Customizing, go to *Materials Management -> Inventory Management and Physical Inventory -> Output Determination -> Maintain Output Types*.

c) Switch from display to change mode.

d) Select the output type RL## and choose the *Details* pushbutton. Enter the access sequence 0003 for the new output type RL##.

e) Save your changes.

4. How can you ensure that the system only generates a message using the new output type with a movement type for return deliveries?

- a) You control the dependency for generating this message only for return deliveries using a separate item printout indicator for the movement types 122, 124 and possibly 161.

In Customizing, go to *Materials Management -> Inventory Management and Physical Inventory -> Print Control -> Maintain Print Indicator for Goods Receipt Documents*.

- b) You must use a separate item printout indicator for the movement types 122, 124, and possibly 161, that is not assigned to any other movement type.

Because the indicator 2 for return deliveries is also used for movement type 161, you must create a new indicator when no message is to be generated for movement type 161. In Customizing, go to *Materials Management -> Inventory Management and Physical Inventory -> Print Control -> General Settings* (for example, 9). You then assign this to movement types 122 and 124.



Caution:

Only one course participant can create the indicator 9. When it is already available, you can omit this step.

5. What other data must be created prior to a test?

- a) You must create at least one condition record. The condition record has to be created with the item printout indicator that is assigned to movement type 122, for example.
- b) In Customizing, go to *Materials Management -> Inventory Management and Physical Inventory -> Output Determination -> Maintain Conditions*.
- c) Condition records must be created for the new output type. In the *Choose Activity* dialog box, choose the row where the *Name of the Activity* field has the value *Create Condition: Inventory Mgmt*.
- d) On the *Create Output - Condition Records: Inventory Management* screen, enter **RL##** in the *Output Type* field and choose the *Enter* pushbutton.
- e) Create a new entry with the transaction and/or event type **WE**, print version **1**, item printout indicator **2** (or **9**), and partner role **ZP**. The transmission medium 7 is proposed by the program and you can maintain the DUMMY receiver under the detail data for communication.



Hint:

In Inventory Management, you can maintain the condition records (message records = master data) in Customizing.

6. Test your Customizing settings. Create a return delivery for one of your GR postings with reference to a purchase order.
 - a) On the *SAP Easy Access* screen, choose *Logistics -> Materials Management -> Inventory Management -> Material Document -> Return Delivery*.
 - b) Create a return delivery for a GR for one of your purchase orders. To print GR or goods issue slips, choose version *1*.
 - c) Enter the required data in the *Quantity* field and the *Reason for the Movement* field. Choose the *Detail Data* pushbutton for the item and verify the output determination result.
 - d) Save the return delivery.
 - e) Display the internal message under *SAP Business Workplace*.



LESSON SUMMARY

You should now be able to:

- Adjust the output of messages in Inventory Management

Learning Assessment

1. Which user parameter controls the type of system messages?

Choose the correct answer.

A EVO

B EFB

C MSV

D SAK

2. What is mandatory to perform a missing part check?

Choose the correct answers.

A Checking group in material master

B Checking rule for transaction

C Material must be a missing part on the posting date of the GR

D Mail to purchasing department must be maintained

3. Which combination of printers can be determined in Inventory Management?

Choose the correct answers.

A Plant/user

B Output type/plant/storage location

C Output type/user group

D Output type/user

4. On which view in the material master can you maintain label type and form for label printing?

Choose the correct answer.

- A MRP
- B Warehouse management
- C Plant data/storage location
- D Document data

5. What can you select in transaction MIGO regarding messages in inventory management?

Choose the correct answer.

- A Print version
- B Item printout indicator
- C Printer
- D Message type

Learning Assessment - Answers

1. Which user parameter controls the type of system messages?

Choose the correct answer.

A EVO

B EFB

C MSV

D SAK

2. What is mandatory to perform a missing part check?

Choose the correct answers.

A Checking group in material master

B Checking rule for transaction

C Material must be a missing part on the posting date of the GR

D Mail to purchasing department must be maintained

3. Which combination of printers can be determined in Inventory Management?

Choose the correct answers.

A Plant/user

B Output type/plant/storage location

C Output type/user group

D Output type/user

4. On which view in the material master can you maintain label type and form for label printing?

Choose the correct answer.

- A MRP
- B Warehouse management
- C Plant data/storage location
- D Document data

5. What can you select in transaction MIGO regarding messages in inventory management?

Choose the correct answer.

- A Print version
- B Item printout indicator
- C Printer
- D Message type