Stock Transfer from a plant to another plant in SAP – Intra Company and Cross-Company Codes

For some reasons, we may need to transfer stock from one plant to another plant. In SAP ERP, it can be done using several procedures. Each procedure is different with others and may fit with a certain situation or business requirement. In this post I will explain about the procedures of how to transfer stock between plants in SAP ERP, so you can choose the best procedure according to your business requirement.

In SAP ERP, stock transfer from one plant to another plant can be done through:

1. **STOCK TRANSFER POSTING**

   Stock transfer posting can be done from one plant to another plant. The plants can be in a [same company code](#), or [cross company codes](#).

   Stock transport posting can be done solely with SAP MM Inventory Management component, no other SAP components or modules involved.

   The main advantage of this procedure is the simplicity of the process. We can transfer stock between plant with:

   - **One-step procedure**

     With one-step procedure, we can transfer stock from one plant to another plant in a single transaction. The transaction can be done with MIGO, MIGO_TR, or MB1B tcodes. The movement type for the transaction is 301 (and 302 to cancel it).
     When the transaction is posted, the stock in issuing (from) plant will be decreased and the stock in receiving (destination) plant will be increased directly.

2. **Two-steps procedure**

   With two-steps procedure, we must do two transactions to transfer stock from one plant to another plant. The first one is “Remove from storage” transaction, that will decrease the stock in the issuing plant and increase the stock in transfer in the receiving plant. The transaction can be done with MIGO, MIGO_TR, or MB1B tcodes. The movement type for the transaction is 303 (and 304 to cancel it). The second one is “Place in Storage” transaction that will decrease the stock in transfer and increase the stock in the receiving plant. The transaction can be done with MIGO/MIGO_TR or MB1B tcodes. The movement type for the transaction is 305 (and 306 to cancel it).
Stock transfer posting transaction can be used to transfer stock from one plant to another plant in:

- **A same company code**
  If the plants are in a **same company code** and the **valuation area is on plant level**, then the stock transfer posting will create accounting journals that will credit the inventory account in the issuing plant and debit the inventory account in the receiving plant. If the material valuation procedure is “moving average price”, then the material valuation in the receiving plant will be adjusted accordingly. If the material valuation procedure is “standard price”, then the difference between material standard price in issuing plant and the receiving plant will be posted in the price difference account in the receiving plant.

If the plants are in a **same company code** and the **valuation area is on company code level**, then the stock transfer posting will not create accounting journals and have no effect to material valuation.

- **Cross company codes**
  If the plants are in the different company codes, we have to maintain the clearing account for each company code. We can maintain it with OBYA tcode. The stock transfer posting will create accounting journals in both company codes. In issuing plant company code, it will credit the inventory account and debit the clearing account. In receiving plant company code, it will credit the clearing account and debit the inventory account.

3. **STOCK TRANSPORT ORDER**

Stock Transport Order involves other component such as SAP MM Purchasing and also can involve SAP SD module.

Stock transport order (STO) is actually a Purchase Order (PO) with “Transport (T)” as Control indicator for purchasing document type (in the document type configuration) and “U” item category (in the purchasing document item).

We can process Stock Transport Order between plants:

- **Without Sales and Distribution (SD) Delivery – Intra company** (plants are in a **same company code**) & **Cross company codes** (plants are in different company codes)
  STO is created in receiving plant. Based on STO, Goods Issue is posted in issuing plant. Goods Receipt (GR) is posted in receiving plant.

- **With SD Delivery – Intra company**
  STO is created in receiving plant. Based on STO, Delivery is created in SD module. Based on Delivery, Goods issue is posted in the issuing plant. Goods Receipt (GR) is posted in receiving plant.
• With SD Delivery and Billing – **Cross company codes**
  STO is created in receiving plant. Based on STO, Delivery is created in SD module. Based on Delivery, Goods issue is posted in the issuing plant. Based on Delivery, Billing document is created in the issuing plant. Goods Receipt (GR) is posted in receiving plant. Based on STO, Invoice document is created in the receiving plant.

In Stock Transport Order we can enter the delivery costs.

Stock Transport Order can be included in Material Requirement Planning (MRP).

We can post Goods Receipt of the Stock Transport Order directly to consumption (if we don’t want it increase the receiving plant stock).

We can monitor the transfer process in the purchase order history tab at the item details of the Stock Transport Order.

We can set up Release Strategy for Stock Transport Order documents.

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**Intra and Cross Company-Codes Stock Transfer Posting**

In term of organizational structure level, stock transfer posting between plants can occur in a **same company code** or **cross-company codes**.

**Stock Transfer Posting between plants in a same company code**

- If the material transferred between plants is **not-valuated material** (“value update indicator” is not set in the material type configuration for the plants), the stock transfer posting **does not affect accounting**.
- If the material is **valuated for the plants** where stock transfer posting occurs and the **valuation level is company code**, stock transfer posting also **does not affect accounting**. It’s because the value of a certain material in all plants in the company code is the same.
- If the material is **valuated for the plants** where stock transfer posting occurs and the **valuation level is plant**, stock transfer posting **will affect accounting**. If the procedure used is **one-step transfer posting**, the transaction will create accounting journals when it’s posted. The inventory account in the issuing plant will be credited and the one in
the receiving plant will be debited. If the procedure used is two-steps transfer posting, the "Remove from Storage" transaction will create accounting journal when it’s posted. The inventory account in the issuing plant will be credited, and the one in the receiving plant will be debited (although in term of quantity it’s still on “stock in transfer” in the receiving plant, not in “unrestricted-stock” yet). The “Place in Storage” transaction will not create accounting journal as it only transfers “stock in transfer” to “unrestricted-stock” in the receiving plant (in a same plant).

**Cross-Company Codes Stock Transfer Posting**

Cross-Company Codes stock transfer posting is actually stock transfer posting between plants (from a plant to another plant), but both plants are under different company codes.

- If the material transferred between plants is not-valuated material ("value update indicator" is not set in the material type configuration for both plants), the stock transfer posting does not affect accounting.
- If the material is valuated for the plants where stock transfer posting occurs, stock transfer posting will affect accounting, whether the valuation level is plant or company code (because, if the plants are under different company codes, it means that they must have different valuation areas). In order to make the stock transfer posting can be done cross-company codes, we have to maintain the clearing account for each company code. We can maintain it with **OBYA** tcode.
If the procedure used is one-step transfer posting, the transaction will create two accounting journals (two accounting documents) when it’s posted:

- In the issuing plant’s company code: The inventory account is credited and the clearing account (an Account Receivable/AR account) is debited.
- In the receiving plant’s company code: The inventory account is debited and the clearing account (an Account Payable/AP account) is credited.

If the procedure used is two-steps transfer posting:

- The “Remove from Storage” transaction will create two accounting journals (two accounting documents) when it’s posted:
  - In the issuing plant’s company code: The inventory account is credited and the clearing account (an Account Receivable/AR account) is debited.
  - In the receiving plant’s company code: The inventory account is debited and the clearing account (an Account Payable/AP account) is credited.

In term of quantity it’s still on “stock in transfer” in the receiving plant, not in “unrestricted-stock” yet.

- The “Place in Storage” transaction will not create accounting journal as it only transfers “stock in transfer” to “unrestricted-stock” in the receiving plant (in a same plant).
Procedures of Stock Transfer Posting between plants

SAP One-step and two-steps stock transfer posting procedures

In the previous post about stock transfer between plants in general, I have explained that it can be done with Stock Transfer Posting (which solely in SAP MM Inventory Management component) or Stock Transport Order (which also involves SAP MM Purchasing and SAP SD components).

In this post, I will explain Stock Transfer Posting in more details.

Unlike stock transfer posting from one storage location to another storage location which can be carried out for all stock types, plant to plant stock transfer posting can only be carried out from unrestricted-stock to unrestricted-stock in both plants.

In term of how to do the transaction, stock transfer posting can be done in one-stop procedure or two-steps procedure.

**STOCK TRANSFER POSTING IN ONE-STEP PROCEDURE**

The advantage of one-step stock transfer posting is the simplicity that we only have to do a single transaction for it.

In that single transaction, the unrestricted-stock in issuing plant is reduced and the unrestricted-stock in receiving plant is increased. The unrestricted-stock quantity in one storage location of a plant can be seen in MARD table – LABST field.

The movement type used in this transaction is 301 (and 302 to cancel it). After posting the stock transfer transaction, SAP will create a material document. For every item we enter in the transaction, SAP will create two material document items:
- one item for reducing the unrestricted-stock in issuing plant
- one item for increasing the unrestricted-stock in receiving plant.

The transaction can be done with MIGO or MIGO_TR, and MB1B tcodes.

The user that performs the one-step stock transfer posting must have authorization to do the goods movement transaction in both plants.
The authorization objects required for this transaction:

- **M_MSEG_BWA** – Goods Movements: Movement Type
  - Activity: 01, 02, 03
  - Movement type: 301-302

- **M_MSEG_WWA** – Goods Movements: Plant
  - Activity: 01, 02, 03
  - Plant: issuing plant, receiving plant

- **M_MSEG_LGO** – Goods Movements: Storage Location
  This authorization object is needed if only you activated “Authorization Check for Storage Locations” on the configuration. To check whether it’s activated or not, go to following SPRO tcode menu path: Materials Management – Inventory Management and Physical Inventory – Authorization Management – Authorization Check for Storage Locations.
  - Activity: 01, 02, 03
  - Movement type: 301-302
  - Plant: issuing plant, receiving plant
  - Storage location: issuing sloc, receiving sloc

On the following image you can see the screenshot of **MIGO / MIGO_TR** tcode to do the stock transfer posting from a plant to another plant in one-step procedure. The red boxes indicate the fields that need to be filled/chosen.

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Click “Check” button to check your input. If there is no error message, click “Post” button.

On the following images you can see the screenshot of **MB1B** tcode to do the stock transfer posting from a plant to another plant in one-step procedure. The red boxes indicate the fields that need to be filled/chosen.
We can plan one-step stock transfer posting with stock transfer reservation (MB21 tcode).

STOCK TRANSFER POSTING IN TWO-STEP PROCEDURE

In two-steps stock transfer posting procedure, we have to do two transactions in order to reduce the stock in issuing plant and increase the stock in receiving plant.

The first one is “Remove from storage” transaction, that will decrease the unrestricted-stock in the issuing plant (MARD table – LABST field) and increase the “stock in transfer (plant)” (MARC table – UMLMC field) in the receiving plant.

The transaction can be done with MIGO, MIGO_TR, or MB1B tcodes. The movement type for the transaction is 303 (and 304 to cancel it).
After posting the “Remove from storage” transaction, SAP will create a material document. For every item we enter in the transaction, SAP will create two material document items:
- one item for reducing the unrestricted-stock in issuing plant
- one item for increasing the stock in transfer (plant) in receiving plant.

On the following image you can see the screenshot of MIGO / MIGO_TR tcode to do the “Remove from storage” transaction. The red boxes indicate the fields that need to be filled/chosen.

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On the following images you can see the screenshot of MB1B tcode to do the “Remove from storage” transaction. The red boxes indicate the fields that need to be filled/chosen.

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The second transaction is “Place in Storage” transaction that will decrease the stock in transfer (MARC table – UMLMC field) and increase the unrestricted-stock in the receiving plant (MARD table – LABST field).

The transaction can be done with MIGO/MIGO_TR or MB1B tcodes. The movement type for the transaction is 305 (and 306 to cancel it).

Although you can post the “place in storage” transaction without any reference documents (as long as there as sufficient “stock in transfer” in the receiving plant) with MIGO/MIGO_TR/MB1B tcodes, it’s better to post it by referring to the material document posted from the related Remove from storage transaction with MIGO/MIGO_TR tcodes. By doing so, you don’t have to re-enter the item details of the transaction, just the reference material document number then SAP will copy the data from the reference document. You can edit the data before posting the “place in storage” transaction, i.e the quantity data in case of partially receipt.

After posting the “Place in storage” transaction, SAP will create a material document. For every item we enter in the transaction, SAP will create only one material document item: 
- one item for reducing the stock in transfer (plant) and increasing the unrestricted-stock in the receiving plant.

On the following image you can see the screenshot of MIGO / MIGO_TR tcode to do the “Place in storage” transaction that refers to a “remove from storage” material document. The red boxes indicate the fields that need to be filled/choosen.
Click “Check” button to check your input. If there is no error message, click “Post” button.

On the following images you can see the screenshot of MB1B tcode to do the “Place in storage” transaction (we can’t refer to “remove from storage” material document in order to post the “place in storage” transaction with MB1B tcode). The red boxes indicate the fields that need to be filled/chosen.
Why should we do two transactions if we can do it with only one transaction? Although it seems more complicated, actually by doing two transactions we can:

- Monitor the stock in transfer between plants. It’s better to do this in two transactions if there are difference between plants in terms of *place* (location) and *time* when the issuing and receiving process occur.
- Separate the authorization between the one who removes from storage (issues) the stock in issuing plant, and the one who places in storage (receives) the stock in receiving plant. So, we can set that the one who issues the stock in issuing plant can’t receive the stock in receiving plant, and vice versa.

The authorization objects required for these transactions:

- **M_MSEG_BWA** – Goods Movements: Movement Type
  - Activity: 01, 02, 03
  - Movement type: 303-304 (for Remove From Storage transaction) or 305-306 (for Place In Storage transaction)

- **M_MSEG_WWA** – Goods Movements: Plant
  - Activity: 01, 02, 03
  - Plant: issuing plant (for Remove From Storage transaction) or receiving plant (for Place In Storage transaction)

- **M_MSEG_LGO** – Goods Movements: Storage Location
  - This authorization object is needed if only you activated “Authorization Check for Storage Locations” on the configuration. To check whether it’s activated or not, go to following SPRO tcode menu path: Materials Management – Inventory Management and Physical Inventory – Authorization Management – Authorization Check for Storage Locations.
  - Activity: 01, 02, 03
  - Movement type: 303-304 (for Remove From Storage transaction) or 305-306 (for Place In Storage transaction)
  - Plant: issuing plant (for Remove From Storage transaction) or receiving plant (for Place In Storage transaction)
  - Storage location: issuing sloc (for Remove From Storage transaction) or receiving sloc (for Place In Storage transaction)
To carry out a stock transfer from plant to plant for a material that is subject to split valuation at the receiving point, we have to use the one-step procedure or a stock transport order.

In the next article, I will explain about stock transfer posting between plants in term of organization level (within a company code and cross-company codes). Stay visiting this blog.

Automated procurement in SAP ERP software

An SAP MM user can create a Purchase Requisition (PR) with ME51N transaction code (t-code). In SAP, the PR can be processed automatically into a Purchase Order (PO) with less effort by buyer/purchaser (which often the different party than the PR creator). But, to make this run well, there are some prerequisites that must be fulfilled before, which are:

- The PR item must contain a material number (which means there must be a material master data for the item).
- The “Automatic PO” indicator must be ticked for the material master (on the General Data section of “Purchasing” view of the material master). You can check it with MM03/MM02 t-codes.
- The user must choose one of the possible sources at “source of supply” tab of the PR item (on ME51N/ME52N). The source can be an outline agreement or info record.
- The “Automatic Purchase Order” indicator must be ticked for the vendor master data of the source (on the purchasing data of the vendor). You can check it with MK03/MK02 t-codes.
- The source (outline agreement/info record) must be maintained and valid at the time of PO creation. You can create/update outline agreement with ME31K/ME32K t-codes. You can create/update info record with ME11/ME12 t-codes.
- Depends on your SAP PO screen layout configuration, you should make sure that all the required fields on PO can be populated either from material master data, vendor master data, or outline agreement/info record, such as terms of payment, incoterm, tax code, etc.
- After PR has been successfully saved (and released if needed), the buyer/purchaser or a background job can run ME59N t-code to create Purchase Order (PO) automatically. The PO can be created without the need of buyer/purchaser looking for possible sources as it has been chosen by the PR creator.

If I miss something, or if you have something to say, please leave a comment below. As I said before, I am still learning SAP MM module.