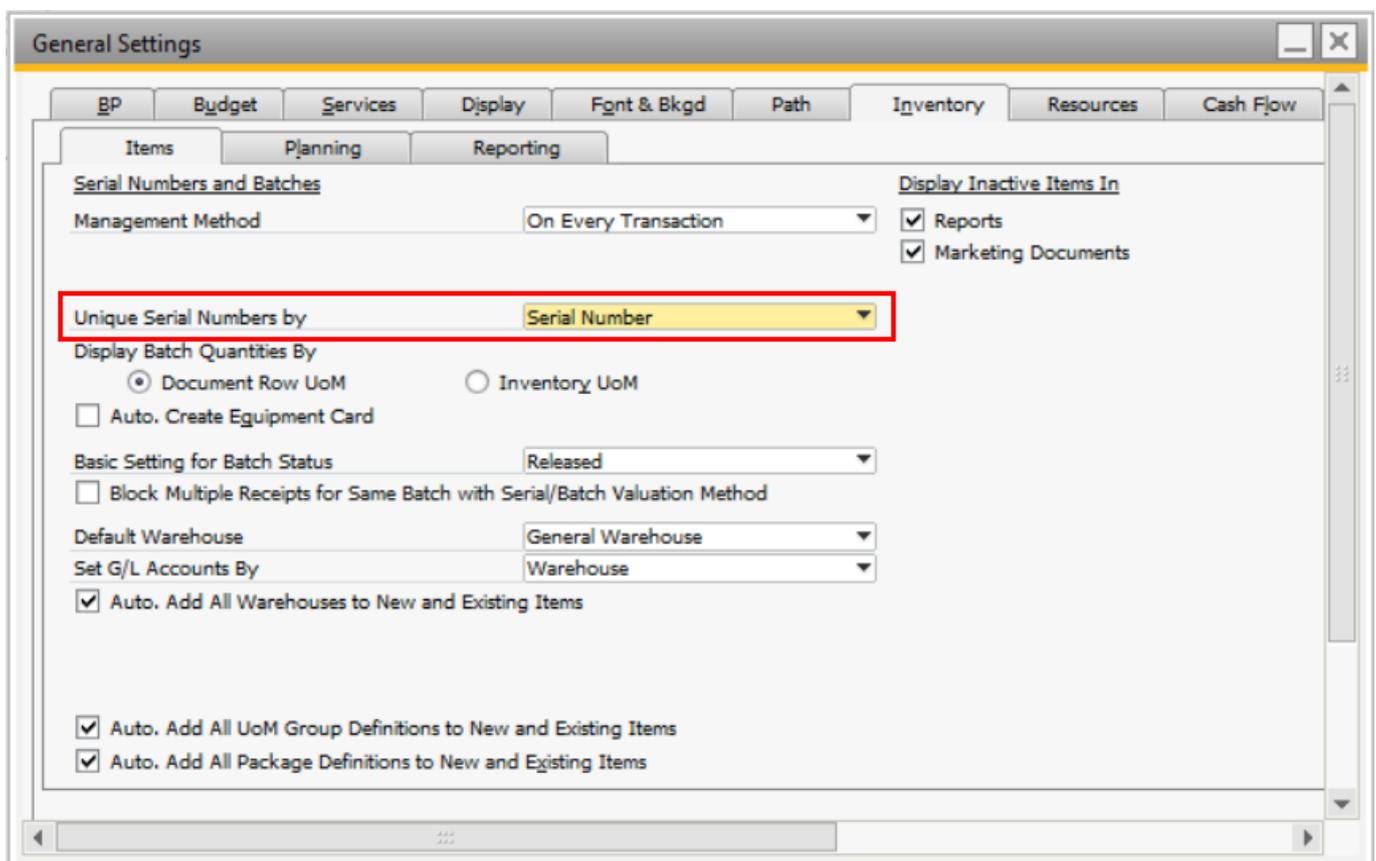# Serial Number Support

Produmex WMS supports the following types of serial numbers:

- SAP serial numbers with the On Every Transaction management method
- SAP serial numbers with the On Release Only management method
- PMX serial numbers to handle items managed by batches and serial numbers as well

When working with SAP serial numbers in Produmex WMS, set the *Unique Serial Numbers by* parameter to *Serial Number* in the General Settings window in SAP Business One.

Note: Changing the serial numbers of an item that has stock in a Produmex WMS warehouse, or changing the management method, or other serial number related parameters of the item master data is not supported and it can cause data inconsistency.

1. On Every Transaction method

With the Every Transaction management method it is mandatory to define the serial number for the item in inventory receipt and inventory issue documents. It is also mandatory to provide the serial

number of the item whenever the item is moved. With the method it is possible to manage items with or without track location as well.

2. On Release Only method

With the On Release Only management method it is mandatory to define the serial number for the item only in inventory issue documents. With the method it is possible to receive and move stocks without providing serial numbers and it is also possible to manage the items with or without track location.

Produmex WMS supports serial numbered items with the On Release Only management method only if the *Automatic Serial Number Creation on Receipt* option is enabled on the Item Master Data screen. In this case SAP Business One creates *blank* serial numbers when receiving stocks. When creating outbound transactions, Produmex WMS first checks if there are already existing *real* serial numbers. If not, the system updates the *blank* serial numbers in SAP Business One with the serial numbers that will be issued and the transaction will be booked with these updated serial numbers.

3. Track and No Track

If the *Track Location of Serial Numbers* option is enabled on the General tab of the Item Master Data window, Produmex WMS keeps track of the location of items with serial numbers. The setting applies to SAP serial numbers and Produmex serial numbers as well.

The system keeps track of the location of items by forcing the stock to be on an SSCC as Produmex WMS requires the use of LUIDs to know the physical location of items with serial numbers.

4. Functions supporting serial numbers

| | PMX serial numbers | | SAP serial numbers | | | |
| | | | On every transaction | | On release only | |
Function	**track**	**no track**	**track**	**no track**	**track**	**no track**
Picklist	Y	Y	Y	Y	Y	Y
Picking for Production Flow	N	Y	N	Y	N	N
Move to Production Line Flow	Y	Y	Y	Y	Y	Y
Receipt from Production Flow	Y	Y	Y	Y	Y	Y
Receipt from Production Flow (Disassembly)	Y	Y	N	N	Y	Y
Disassembly Flow	Y	Y	Y	Y	Y	Y
Production Flow (receive)	Y	Y	Y	Y	Y	Y
Production Flow (consume)	Y	Y	Y	Y	Y	N
Production Consume (manager)	Y	Y	Y	Y	N	N
Production Consume (manager multi-line)	N	N	N	N	N	N
Direct Cycle Count Flow (Count a Location)	Y	Y	Y	N	Y	Y

Function	PMX serial numbers		SAP serial numbers			
			On every transaction		On release only	
	track	no track	track	no track	track	no track
Direct Cycle Count Flow (Adjust Logistic Unit)	N*	N*	N*	N*	N*	N*
Direct Cycle Count Flow (Count Item on Location)	N*	N*	N*	N*	N*	N*
Cycle Count Flow	Y	Y	Y	N	Y	Y
Cycle Count Flow (Adjust Items on Stock)	Y	Y	Y	N	Y	Y
Inventory Transfer (from PDMX Whs to PDMX Whs)	Y	Y	Y	Y	N	N
Inventory Transfer (from Non-PDMX Whs to PDMX Whs)	Y	Y	Y	Y	N	Y
Inventory Transfer (from PDMX Whs to non-PDMX Whs)	N	N	Y	Y	N	Y
Warehouse Transfer (Ad Hoc Movement in the Office)	N	Y	N	N	N	N
Warehouse Transfer (Ad Hoc Movement on the Shop Floor)	Y	Y	Y	Y	N	N
Warehouse Transfer (Move Order)	Y	Y	N	N	N	N
Local Move (Ad Hoc Movement in the Office)	N	Y	N	Y	N	Y
Local Move (Ad Hoc Movement on the Shop Floor)	Y	Y	Y	Y	Y	Y
Local Move (Move Order)	Y	Y	Y	Y	Y	Y
Receive from Whs Flow	Y	Y	Y	Y	Y	Y
Mobile Packing Flow	Y	Y	Y	Y	Y	Y
Packing Flow	Y	Y	Y	Y	Y	Y
Item Packing Flow	Y	Y	Y	Y	Y	Y
Consolidated Packing Flow	Y	Y	Y	Y	Y	Y
Sales Shipping Flow	Y	Y	Y	Y	Y	Y
Cross Docking Flow	Y	Y	Y	Y	Y	Y
Undo Picking (full quantity)	Y	Y	Y	Y	Y	Y
Undo Picking (partial quantity)	N	N	N	N	N	N

*compatibility under test

5. General function description

Picking for Production Flow
With the Picking for Production flow you can pick the components for production. The flow uses the production order as an input and the picking is performed without a pick list while the stock to be picked is not locked in the inventory.
Path: scanner > Production >Picking for Production

Move to Production Line Flow
When the necessary items are picked into the input location, you can move the stock from the input

location to the production line with the Move to Production Line flow. The flow only moves the stock, the picked items are not consumed.
Path: scanner > Production > Move to Production Line

Receipt from Production Flow

With the Receipt from Production flow new stock is produced and a production goods receipt is booked while the new product is moved to the output location. After production the system locks the consumed stock and you need to use the Production Manager to perform the material confirmation, the component issues and the closing of the production order.
Path: scanner > Production > Receipt from Production or Touchscreen > Receipt from Production

- **Receipt from Production Flow (Disassembly)**: You can use the Receipt from Production flow to perform Disassembly type of production orders as well.

Disassembly Flow

With the Disassembly Flow you can perform Disassembly type of production orders. During the flow you need to enter the disassembled quantity one by one for each component or you can also add the quantity by scanning the serial numbers.
Path: touchscreen > Disassembly

Production Flow

During the Production flow you need to provide the quantity to be produced and then the production starts. As a next step, the system moves the product to the output line and books a Receipt from Production document. Besides, the system issues the lined up materials and books an Issue for Production document for those components.
Path: touchscreen > Production

Production Managers

Production Manager types are used when the processing of the production is done administratively. There are two types, simple (SPL_CONS_LOCK) and multiple (MPL_CONS_INPUT) and they can be set for production lines.

- **Production Consume (manager / SPL_CONS_LOCK)**: In case of producing on the shop floor, the items to consume are not directly consumed. Instead, they are locked and the system uses the locked stock as a base for consumption when processing the production order administratively. With this setting more than one production order can be started on a production line, but only one production order can be closed on the Stop Production screen at a time.

- **Production Consume (manager multi-line / MPL_CONS_INPUT)**: This option is used when you do not want to move the correct stock to the production line. When processing the production order administratively, all stock on the input location is used as a base for consumption. With this setting you can start the production on more than one production line and all production orders on the production lines with the same input location are processed at a time. When stopping the production, you can close multiple production orders assigned to the different production lines on the Stop Production screen as the screen lists all the active production orders per production line.

Direct Cycle Count Flow

Path: scanner > Logistics > Inventory

- **Count a Location**: You can count all the items on the selected location. The flow results in the

system creating a Goods Issue or a Goods Receipt document immediately, that is, the flow automatically books stock differences as Goods Issues (in case of negative differences) or Goods Receipts (in case of positive differences) in SAP.

- **Adjust Logistic Unit**: You can count all the items on the selected logistic unit.
- **Count Items on Location**: You can count a certain product on the selected location.

Cycle Count Flow

In contrast with the Direct Cycle Count flow, the Cycle Count flow does not book the differences directly into SAP. First, it registers the differences in Produmex WMS according to the cycle count type (Lost and Found, Registration) and then the booking in SAP can be done with the Processing step.
Path: scanner > Logistics > Inventory

- **Cycle Count Flow - Adjust Items on Stock**: If settings *Allow to Adjust Quantity of the Current Stock Items* and *Show Current Stock Items* are allowed on the Cycle Count Controller, the system shows the current items in stock for the selected location when the counting starts. If necessary, you can select the current stock and adjust the quantity as well.

Inventory Transfer

It refers to the SAP BO Inventory Transfer function using the SAP BO Inventory Transfer Request document.

Warehouse Transfer

You have different options to move stock between warehouses managed by Produmex:

- **Ad Hoc Movement in the Office**: You can move stock between warehouses managed by PMX without a move order. *Path: Produmex menu > Inventory Report > Move> Perform Move*
- **Ad Hoc Movement on the Shop Floor**: You can move stock between warehouses managed by Produmex without a move order by using the scanner. *Path: scanner > Logistics > Move > Ad Hoc Move > Warehouse Transfer*
- **Move Order**: You can move stock between PMX managed warehouses based on move orders that are created in the office environment. *Path: scanner > Logistics > Move>Move Order*

Local Move You have different options to move stock within a warehouse managed by Produmex:

- **Ad Hoc Movement in the Office**: You can move stock within a warehouse managed by Produmex without a move order. *Path: Produmex menu>Inventory Report>Move>Perform Move*
- **Ad Hoc Movement on the Shop Floor**: You can move stock within a warehouse managed by Produmex without a move order by using the scanner. *Path: scanner > Logistics > Move > Ad Hoc Move > Local Move*
- **Move Order**: You can move stock within a PMX managed warehouse based on move orders that are created in the office environment. *Path: scanner > Logistics >Move > Move Order*

Receive from Whs Flow

With the Receive from Whs flow you can move stock from a warehouse that is not managed by Produmex to a warehouse that is managed by Produmex. The flow uses an SAP B1 Inventory Transfer Request document to move the stock between warehouses.
Path: scanner > Logistics > Move > Receive from Whs

Mobile Packing Flow

With the Mobile Packing flow you can verify if the picked quantities are correct. During the picking process the goods are picked into movable locations. When you select the Mobile Packing function on

the scanner, you are not informed about the exact number of items to be packed from the movable locations. You need to provide the system with the quantity and the system informs you if the quantity is correct or not.
Path: scanner > Sales > Mobile Packing

Packing Flows

You have different options to implement a packing process. The flows below are available on the touchscreen and they use different inputs to identify the items to be packed.

- **Packing Flow**: The Packing flow uses movable locations as an input.
- **Item Packing Flow**: The Item Packing flow uses a moveable location as an input, but the pick lists can be identified by scanning an item.
- **Consolidated Packing Flow**: The Consolidated Packing flow uses pick list(s) and logistic unit(s) as an input.

Sales Shipping Flow

With the Sales Shipping flow you can load goods and ship orders to your customers from the shop floor.
Path: scanner > Sales > Shipping

Cross-Docking Flow

After you receive goods, you can immediately and directly deliver them to the customer with the Cross-Docking flow. You can use the function if you have a sales order which is linked to a purchase order, that is, when you select this function on the scanner, you will see only those purchase orders which have a linked sales order.
Path: scanner > Purchase > Cross-Docking

6. Example(s)

Goods issue item with PMX serial number

Let's explore a business scenario to understand how to remove or correct stock.

In the example, the following options were used:

- Only PMX Serial Numbers
- No SAP Serial numbers
- No track location
- No batch

Step 1.

Initial the stock in SAP B1.

Step 2.

Use the **Direct Cycle Count** to check the location: In this scenario we found 4 pieces instead of

5.

Step 3.

To fix the previous mistake, a **Goods Issue** was created based on the results of the **Direct Cycle Count**. **While creating the Goods Issue, you must manually select the PMX serial number** by clicking the button shown at number 2.

Step 4.

Result:
The stock was corrected and 2703_1 PMX Serial number is now out of stock.

Note: Following these steps, you must manually specify which PMX serial number to issue, and you should avoid making direct updates to the PMX_SENU table.

PMX_SENU table was updated correctly: