



SAP Serial Code Management



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Definition: Number which is assigned apart from the material number in SAP MM in order to differentiate between individual pieces and other material items. The combination of material number and serial number is unique.

Serialized inventory is the tracking of individual units using unique serial numbers. Serial numbers are different from SKU numbers. SKU numbers identify a type of product while serial numbers identify one specific item or a part of an item.

Example: Let us consider mobile phone for this. Each unit of mobile will be having its own serial number.

In this scenario serial number here has uses such as:

- 1) Check warranty details during mobile service.
- 2) To check if your mobile is counterfeit.
- 3) Help in finding your mobile if lost or stolen.

Types of Inventory Management

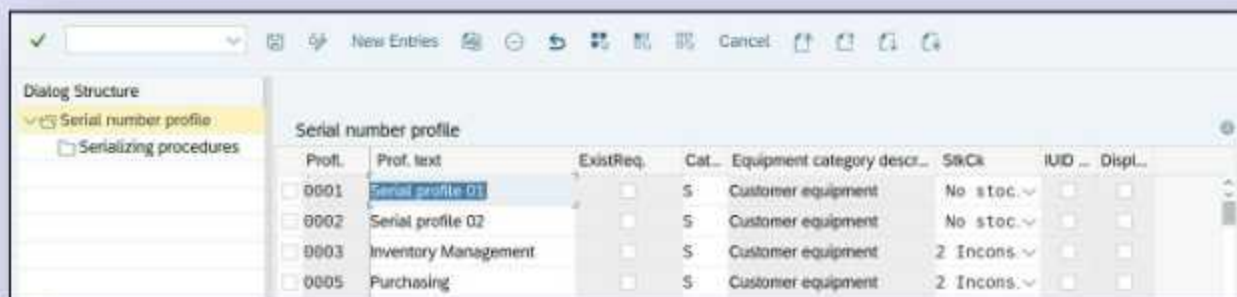
Inventory Management	Plant	Storage Location	Quantity		
Normal	TAGS	L001	1000		
Batch Management	TAGS	L001	Batch 1	400	1000
			Batch 2	600	
Serialized	TAGS	L001	A1	1	4
			A2	1	
			A3	1	
			A4	1	

Configuration Steps:

1. Serial number profile configuration. (OIS2)
2. Assign serial number profile to material master (MM01/MM02) under plant data / storage location 2 view.

SERIAL NUMBER PROFILE CONFIGURATION

Path: (SPRO → SAP Ref IMG → Materials Management → Purchasing) or **OLME** → Serial Numbers → Determine serial number profiles



You can use existing serial number profile or create new and add serializing procedure under that profile as per business requirement.

Important Settings in serial number profile configuration

- **Serial Number Existence Requirement:** Indicator that determines whether the serial numbers entered for a business transaction need to be created first as a master record in the system.

Use:

- If the indicator is set, the serial numbers must be created first as a master record in the system.
- If the indicator is not set, the serial numbers are created during a business transaction.

Serial number profile							
Prof.	Prof. text	ExistReq	Cat.	Equipment category descr...	StkClk	IUID	Displ...
0001	Serial profile 01	☒	S	Customer equipment	No stoc	☐	☐

- **Equipment category:** It is used to categorise your equipment according to broad criteria, such as we have used it as Electrical equipment, Mechanical equipment, Instrumentation equipment, PRT (production resources tool), Vehicles, also some category where material serial no. functionality is used.

Serial number profile							
Profl.	Prof. text	ExistReq.	Cat...	Equipment category descr...	StkCk	IUID ...	Displ...
☐ 0001	Serial profile 01	☐	☒	Customer equipment	No stoc. v	☐	☐
☐ 0002	Serial profile 02	☐	S	Customer equipment	No stoc. v	☐	☐

Equipment category description	
H	Medical Devices
I	IT-Equipment
J	Containers
K	Vehicles
L	Linear equipment
M	Machines
N	Mining Equipment
O	Transmitter Equipments
P	Production resources/tools
Q	Test/measurement equipment
R	Rolling stock
S	Customer equipment

- **Stock Check for Serial Numbers:** This indicator states whether the system should perform a stock check during serial number assignment. If it should, it also establishes with what type of notification (warning or error) the system reacts in the event of stock inconsistencies with Inventory Management.

Serial number profile							
Profl.	Prof. text	ExistReq.	Cat...	Equipment category descr...	StkCk	IUID ...	Displ...
☐ 0001	Serial profile 01	☐	☒	Customer equipment	No stoc. v	☐	☐
☐ 0002	Serial profile 02	☐	S	Customer equipment	No stoc. v	☐	☐

No stock validation
1 Inconsistencies in stock data -> Warning
2 Inconsistencies in stock data -> Error

- **IUID Compatible and Display UII**
 - **IUID Compatible (Serial Number Profile Compatible with IUID)**
Indicates that unique item identifiers (UII) can be created for materials with the relevant serial number profile. **Dependencies**
When you set this indicator, the system checks if the procedure 'MMSL' is assigned to the serial number profile and if this procedure is set to '03' in the column SerUsage (Serial Number Usage).

Serial number profile							
Prof.	Prof. text	ExistReq.	Cat.	Equipment category descr...	StkCk	UID ...	Displ...
☐ 0001	Serial profile 01	☐		Customer equipment	No stoc	☐	☐
☐ 0002	Serial profile 02	☐	S	Customer equipment	No stoc	☐	☐

• Displaying UII

Indicates that the column for UIIs (unique item identifier) will be displayed in relevant transaction (for example, production order).

Serial number profile							
Prof.	Prof. text	ExistReq.	Cat.	Equipment category descr...	StkCk	UID ...	Displ...
☐ 0001	Serial profile 01	☐		Customer equipment	No stoc	☐	☐
☐ 0002	Serial profile 02	☐	S	Customer equipment	No stoc	☐	☐

○ Serializing Procedures

It is a four-digit identification code which describes a **serialization procedure**. Depending on the business requirement you can set different scenarios for a serial number profile.

☒ []

Dialog Structure

☒ Serial number profile
 ☒ Serializing procedures

SerialNoProfile

0001

Profile text

Serial profile 01

Procd	Procedure descriptn	SerUsage	EqReq
☐ MMSL	Maintain goods receipt and issue doc.	02	02
☐ PPAU	Serial numbers in PP order	02	01
☐ PPRL	PP order release	03	01
☐ PPSF	Serial nos in repetitive manufacturing	03	02
☐ QMSL	Maintain inspection lot	03	02
☐ SDAU	Serial numbers in SD order	02	02
☐ SDCC	Completeness check for delivery	03	01
☐ SDCR	Completion check IR delivery	03	01
☐ SDLS	Maintain delivery	02	01
☐ SDRE	Maintain returns delivery	02	01

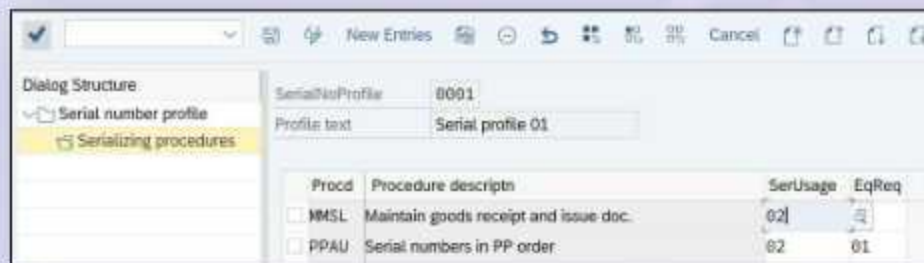
- **SerUsage (Serial number usage)**

Indicator that determines for a **business transaction**, whether

- ☐ No serial numbers are assigned • Serial numbers can be assigned
- ☐ Serial numbers must be assigned
- ☐ Serial numbers are assigned automatically

Dependencies

If the serial numbers are automatically assigned during a transaction, the dialog box for creating serial numbers is not be displayed.



The screenshot shows the 'Serializing procedures' tab in the 'Serial number profile' dialog. It lists two procedures: 'MMSL Maintain goods receipt and issue doc.' and 'PPAU Serial numbers in PP order'. The 'SerUsage' field for 'MMSL' is set to '02' and for 'PPAU' it is set to '02'. The 'EqReq' field for 'PPAU' is set to '01'.



Serial number usage	Short Descript.
01	None
02	Optional
03	Obligatory
04	Automatic

- **EqReq (Equipment Requirement)**

Entry that determines whether or not an equipment master record should be created for each number when assigning **serial numbers**.

Use

- ☐ If you choose the indicator "Default: Without Equipment", the user can later decide when assigning serial numbers in the dialog box, whether an equipment master record should still be created.
- ☐ If you choose the indicator "With equipment" this is binding for the user. The indicator cannot be reset.



ProcId	Procedure description	SerUsage	EqReq
MMSL	Maintain goods receipt and issue doc.	02	02
PPAU	Serial numbers in PP order	02	01



Equipment requirement	Short Descript.
01	Proposal: w/o equipment
02	always with equipment

○ Central Control Parameters for Serial Numbers

Path: (SPRO → SAP Ref IMG → Materials Management → Purchasing) or **OLME** → Serial Numbers → Central Control Parameters for Serial Numbers

In this step, you define a central **default equipment category** for the **serial number management**. This equipment category is proposed by the system if the system cannot find an equipment category in the **serial number profile** for a serialization operation.

Note: If you create master records for serial numbers **manually** the system automatically proposes the default equipment categories defined here. The internal number range of the equipment category you selected is copied automatically.



Cat	IntNR	Equipment category description
Customer equipment	01	Customer equipment

- **Serial number range (Internal Number Assignment)**

Number that determines how documents are to be numbered by the system. It indicates which **number range** is relevant for a **document type**.

The numbers assigned via this setting are irrelevant for actual serial number management, since you work with serial numbers or material numbers in the application transactions. The numbers assigned here, however, are keys for the equipment file, as a basic equipment master record is created in the background for each serial number.

For this reason, the internal number range of the selected equipment category will be proposed.

SERIAL NUMBER WITH EXAMPLE

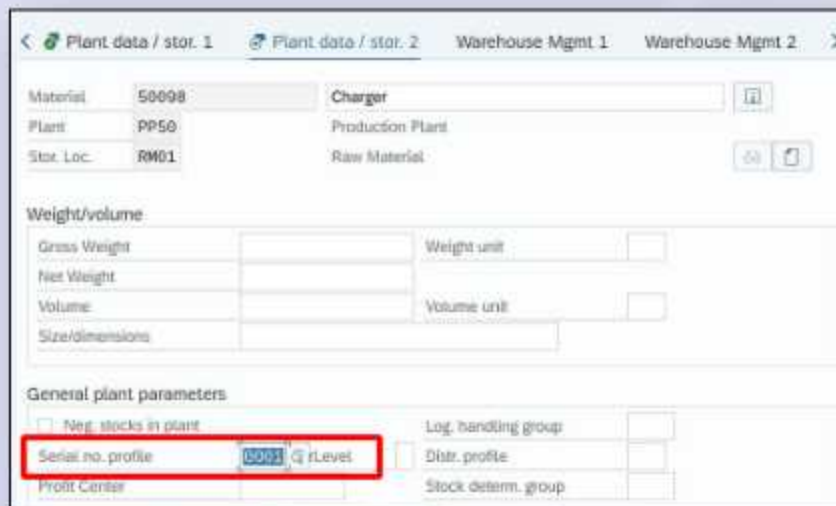
Let us assume a scenario in which a charger is procured from a vendor and we want to serialize the charger stock after we receive it i.e., during Goods receipt. Serial number can be given by us or sometimes vendor gives us serial numbers.

During **material master creation**, enter the **serial number profile** in the **plant / storage location view**.

Material Number



50098



The screenshot shows the SAP Material Master creation interface for Material 50098. The 'Serial no. profile' field is highlighted with a red box and contains the value '0001'. The 'rLevel' field is also visible next to it. The 'General plant parameters' section includes checkboxes for 'Neg. stocks in plant', 'Log. handling group', 'Distr. profile', and 'Stock determ. group'.

Let us assume that purchase order (5500000154) has been sent to vendor (100600). Vendor has received the PO and he supplies charger in quantity mentioned. Now we do the Goods Receipt when we receive the material (charger).

Case 1: When **SerUsage** (Serial number usage) is maintained as **02 optional** for goods receipt



Dialog Structure: Serial number profile, Serializing procedures

SerialNoProfile: 0001
Profile text: Serial profile 01

Proc	Procedure description	SerUsage	EqReq
☐ NMSL	Maintain goods receipt and issue doc.	02	01
☐ PPAU	Serial numbers in PP order	02	01

Serial number usage Short Descript.

01	None
02	Optional
03	Obligatory
04	Automatic

When we do goods receipt, even though serial number tab is appearing in MIGO screen. It is not mandatory to enter and we can do goods receipt without entering serial numbers for material (charger) received.

GR Number: 5000001476

Case 2: When SerUsage (Serial number usage) is maintained as 03 obligatory for goods receipt



Dialog Structure: Serial number profile, Serializing procedures

SerialNoProfile: 0001
Profile text: Serial profile 01

Proc	Procedure description	SerUsage	EqReq
☐ NMSL	Maintain goods receipt and issue doc.	03	01
☐ PPAU	Serial numbers in PP order	02	01

Serial number usage Short Descript.

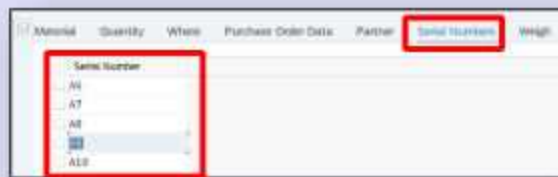
01	None
02	Optional
03	Obligatory
04	Automatic

Let us create another PO (5500000156) for same the same vendor (100600) for **10 quantities**.

When we do goods receipt, serial number tab is appearing in MIGO screen. It is mandatory to enter it and we can do goods receipt only after entering serial numbers for material (charger) received. If we try to post without entering the serial number. We will get the below error.

Typ	Item	Message text	LTxt
●	1	Exactly 10 serial numbers/UIIs must be selected (instead of 0)	②

In order to proceed we need to enter the serial numbers for 10 quantities manually as shown below.

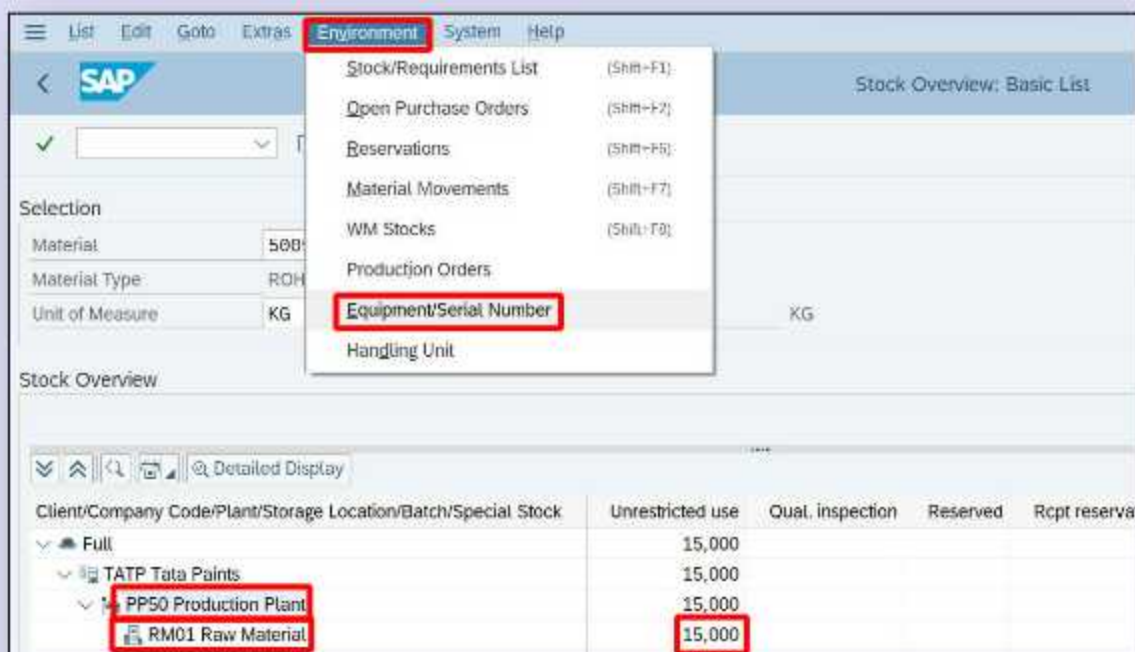


The screenshot shows the SAP Serial Number entry screen. The 'Serial Number' tab is selected and highlighted with a red box. Below the tab, there is a list of serial numbers: A6, A7, A8, A9, and A10. The 'A9' entry is highlighted with a red box.

GR Number: 5000001477

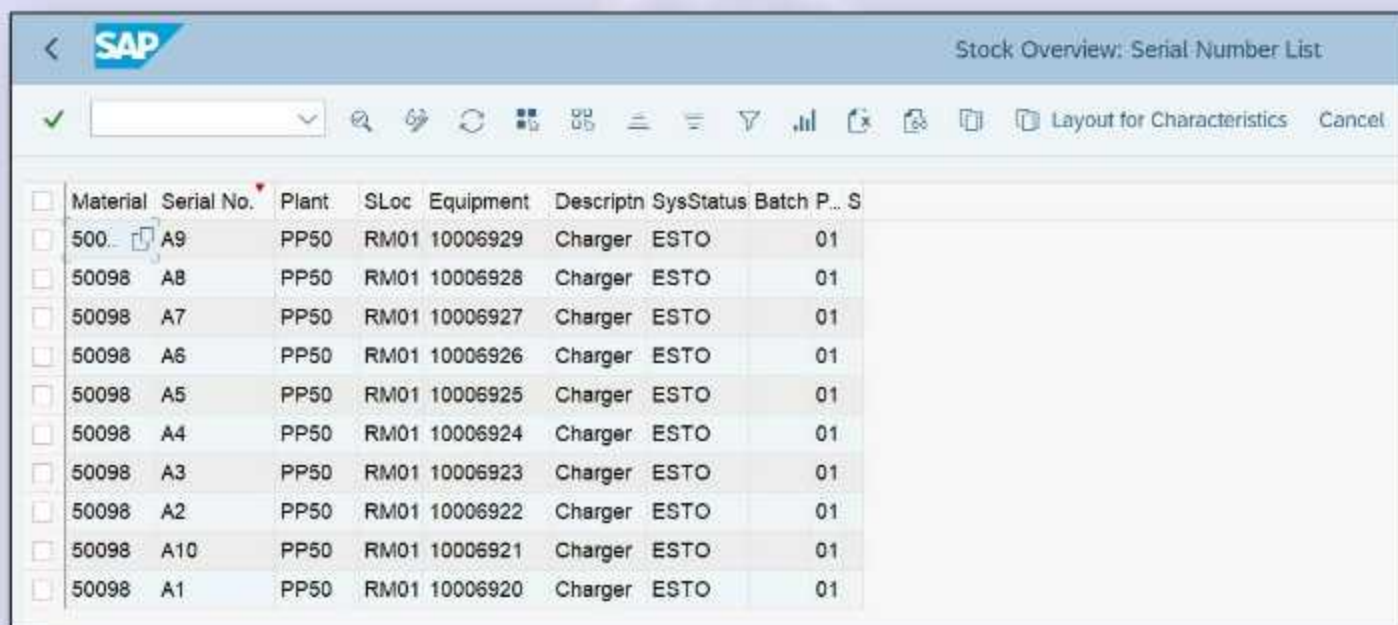
Now in order to see the serialised stock go to **MMBE**, enter material and plant details. Select plant/storage location/stock quantity and click on environment option at the top. Then click on equipment/serial number.





The screenshot shows the SAP Stock Overview: Basic List interface. The 'Environment' menu is open, and 'Equipment/Serial Number' is highlighted. The main table shows stock data for material 50098, unit of measure KG, and plant PP50. The 'RM01 Raw Material' is highlighted in the table.

Client/Company Code/Plant/Storage Location/Batch/Special Stock	Unrestricted use	Qual. inspection	Reserved	Rcpt reserve
Full	15,000			
TATP Tata Paints	15,000			
PP50 Production Plant	15,000			
RM01 Raw Material	15,000			

The screenshot shows the SAP Stock Overview: Serial Number List interface. The table displays serial numbers for material 50098, plant PP50, and storage location RM01. The serial numbers are listed in descending order, with A1 at the bottom.

Material	Serial No.	Plant	SLoc	Equipment	Descriptn	SysStatus	Batch	P...	S
50098	A9	PP50	RM01	10006929	Charger	ESTO		01	
50098	A8	PP50	RM01	10006928	Charger	ESTO		01	
50098	A7	PP50	RM01	10006927	Charger	ESTO		01	
50098	A6	PP50	RM01	10006926	Charger	ESTO		01	
50098	A5	PP50	RM01	10006925	Charger	ESTO		01	
50098	A4	PP50	RM01	10006924	Charger	ESTO		01	
50098	A3	PP50	RM01	10006923	Charger	ESTO		01	
50098	A2	PP50	RM01	10006922	Charger	ESTO		01	
50098	A10	PP50	RM01	10006921	Charger	ESTO		01	
50098	A1	PP50	RM01	10006920	Charger	ESTO		01	

To check **status** of material with serial number → **IQ03** → enter material (50098) and serial number (A1)

<

SAP

Display Material Serial Number : Initial

✓

Cancel

Material

55098

Serial Number

A1

UI

Click on **History**



SAP Display Material Serial Number : SerNo.Detail

Class overview Measuring points/counters Cancel

Material: 50098 Charger
 Serial Number: A1 Type: S Customer equipment
 Ull:
 IUID Type:
 Resp. Plant Ull: PP50
 Description: Charger
 Status: ESTO 0001
 Valid From: 11.12.2022 Valid To: 31.12.9999

< SerData Warranty Configuration data

General
 Equipment: 10006920
 Last SerialNo: History

Stock information
 Stock type: 01 Unrestricted
 Plant: PP50 Production Plant Company Code: TATP
 StorageLocation: RM01 Raw Material
 Stock batch: Master batch:
 Special stock: Date L.GoodsMvt:

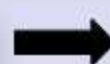


SAP Serial Number History

Document Action Log Cancel

Material: 50098 Material Description: Charger
 Serial Number: A1
 Equipment: 10006920 Equipment description: Charger
 Ull:
 Serial Number History
 11.12.2022 5000001477

To know what green color represents click on Color Legend
 So here green color represents Goods Receipt.



- Serial Number History
- Goods receipt
- Goods issue
- Delivery
- Returns
- Inspection Lot
- Sales Order
- PM order
- Notification
- Refurbishment order
- Production order
- Handling unit
- Inventory
- Purchase Order
- Purchase Requisition
- Installation

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