

# APAC Procurement Business Module

## Reorder Point Planning Procedure Training Document



### Local Group Companies

Submit Date, 27-Nov-04  
<Confidential>





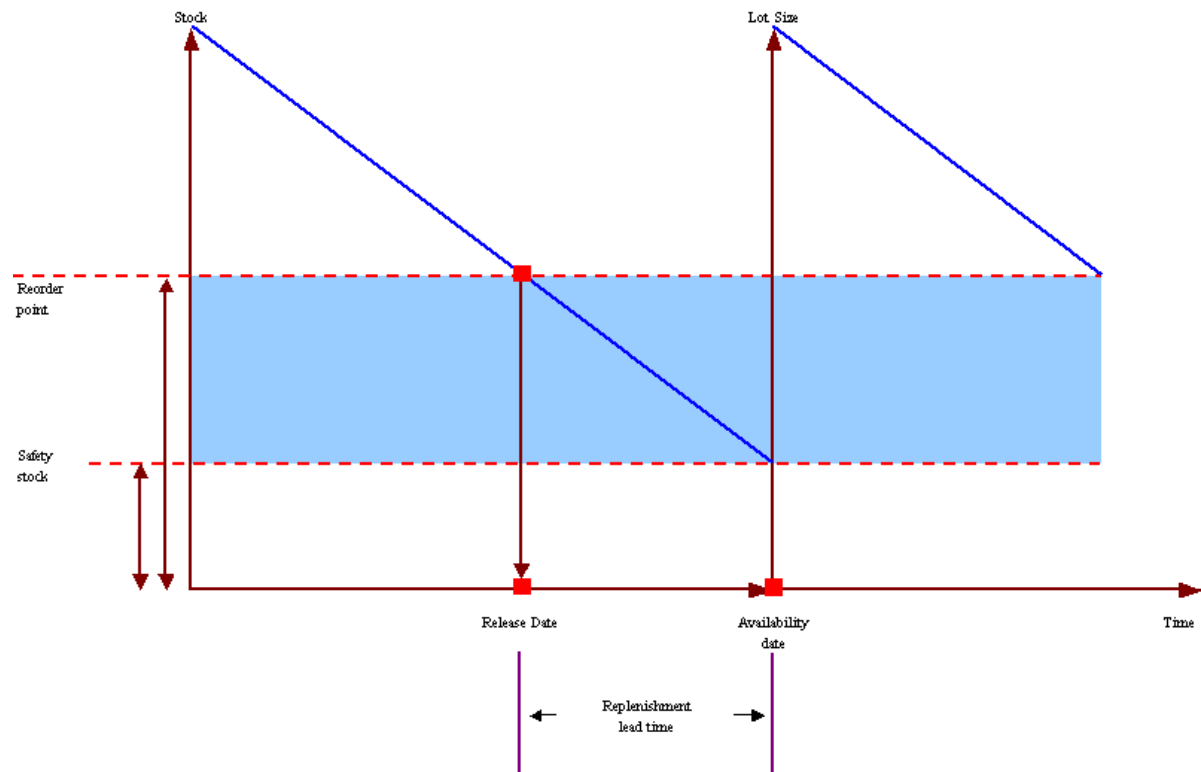
## Table of Contents

<b>PRINCIPLE OF REORDER POINT PLANNING .....</b>	<b>4</b>
<b>NET REQUIREMENTS CALCULATION FOR REORDER POINT PLANNING.....</b>	<b>5</b>
<b>FORWARD SCHEDULING FOR EXTERNAL PROCUREMENT .....</b>	<b>5</b>
<b>BUSINESS PROCESS PROCEDURE.....</b>	<b>7</b>
1. ASSIGNMENT OF REORDER POINT PLANNING MRP TYPE TO MATERIAL MASTER.....	7
2. CREATION OF PLANNING DATA (PROCUREMENT ELEMENTS) AFTER MRP RUN.....	12

## Principle of Reorder Point Planning

The basis of the reorder point planning is the comparison of the available MRP stock (total from plant stock and the fixed receipts) with the reorder point. If the available stock is less than the reorder point, then procurement is triggered.

In reorder point planning, as a rule, only the shortfall of the reorder point causes a planning file entry during reorder point planning, and this then triggers net requirements calculation. To avoid over-planning, sales orders, dependent requirements, reservations, and so on, are not generally included in the net requirements calculation, as these future requirements have already been scheduled with the reorder point.



The **reorder point** should cover the expected average material requirements during the replenishment lead time.

The **safety stock** should cover both excess material consumption during the replenishment lead time, and the additional consumption caused by delayed deliveries. The safety stock is part of the reorder point.

The reorder point is composed of the expected average material requirements during the replenishment lead time and the safety stock. The following points must be considered when defining the reorder point:

- Safety stock
- Previous consumption or future requirements
- Replenishment lead time

In manual reorder point planning, the reorder point and the safety stock will be determined in the material master while in the case of automatic reorder point planning, the integrated forecast program determines the reorder point and safety stock.

During reorder point planning, inventory management continuously monitors the plant stock. At each material withdrawal, the system will check whether the withdrawal falls short of the reorder point. If this is the case, then an entry is created in the planning file for the next planning run. In the

same way, the system checks whether the plant stock still falls short of the reorder point during a material return. If so, a planning flag is created so that the planning run can delete superfluous procurement proposals. If return deliveries become superfluous as a result of fixed scheduled receipts, the planning run proposes that these receipts are deleted. In this case, the MRP controller must check with Purchasing whether the purchase order can be retracted.

## Net Requirements Calculation for Reorder Point Planning

During reorder point planning, the **existing MRP warehouse stock** is a result of:  
**Warehouse stock + on-order stock**

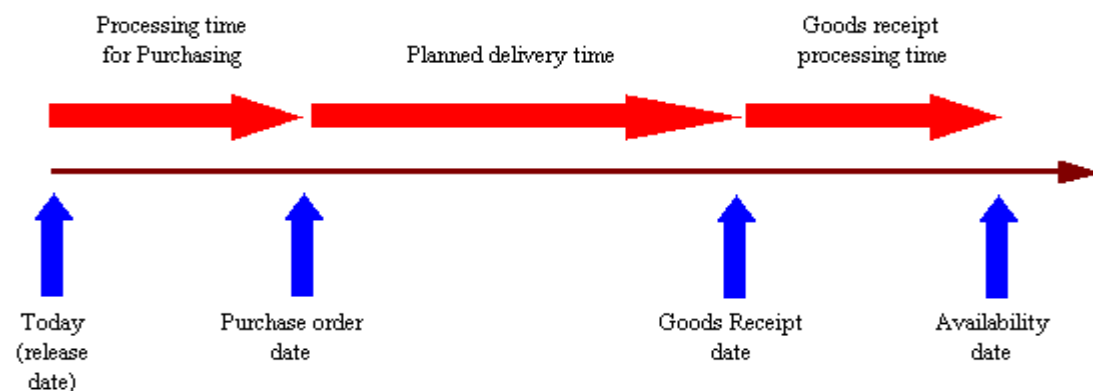
The on-order stock is composed of fixed and firm receipt elements (purchase orders, firm planned orders, firm planned orders, firm purchase requisitions). The plant stock also includes the safety stock.

There will be a material shortage if the available warehouse stock level is lower than the reorder point.

The shortage quantity is the difference between the reorder point and the available warehouse stock. The purchase order quantity is created from the lot-sizing procedure in the material master record.

After the net requirement calculations and the lot-size calculation, the system schedules the procurement proposal during the planning run and calculates the date when the purchase order has to be sent, and the date when the vendor must deliver the corresponding quantity.

## Forward Scheduling for External Procurement



The shortage quantity date for materials planning using reorder points is the date of the planning run. If the reorder point is fallen short of, then procurement is carried out immediately. During scheduling, the system defines the date on which the material will be available, starting from the date of the planning run. This procedure is called forward scheduling.

Forward scheduling starts on the current date. This date specifies the order start date for planned orders and the release date for purchase requisitions (Release in this context means the release of the purchase requisition for conversion into a purchase order as a result of Purchasing). The purchasing department processing time is calculated in workdays, and the planned delivery time in calendar days. The delivery date therefore stands firm (for planned orders, this means the order finish date). Finally, the goods receipt processing time is calculated in workdays with the delivery date; thus the availability date is known.

The purchasing department processing time is the time available for the buyer to convert a purchase requisition into a purchase order.

The planned deliver time is the number of days required to procure the material from external procurement.

The goods receipt processing time is the timeframe between receiving the material and the receipt in the warehouse. This is required to place the material in storage.

The planned delivery time and the good receipt processing time are determined for each material. (This planned delivery time information can also be determined in the purchasing info record with specific vendor).

## Business Process Procedure

### 1. Assignment of Reorder Point Planning MRP Type to Material Master

#### 1.1. Access transaction by

<b>Via Menu</b>	Logistics → Materials Management → Material Master → Material → Change → Immediately
<b>Via Transaction Code</b>	MM02

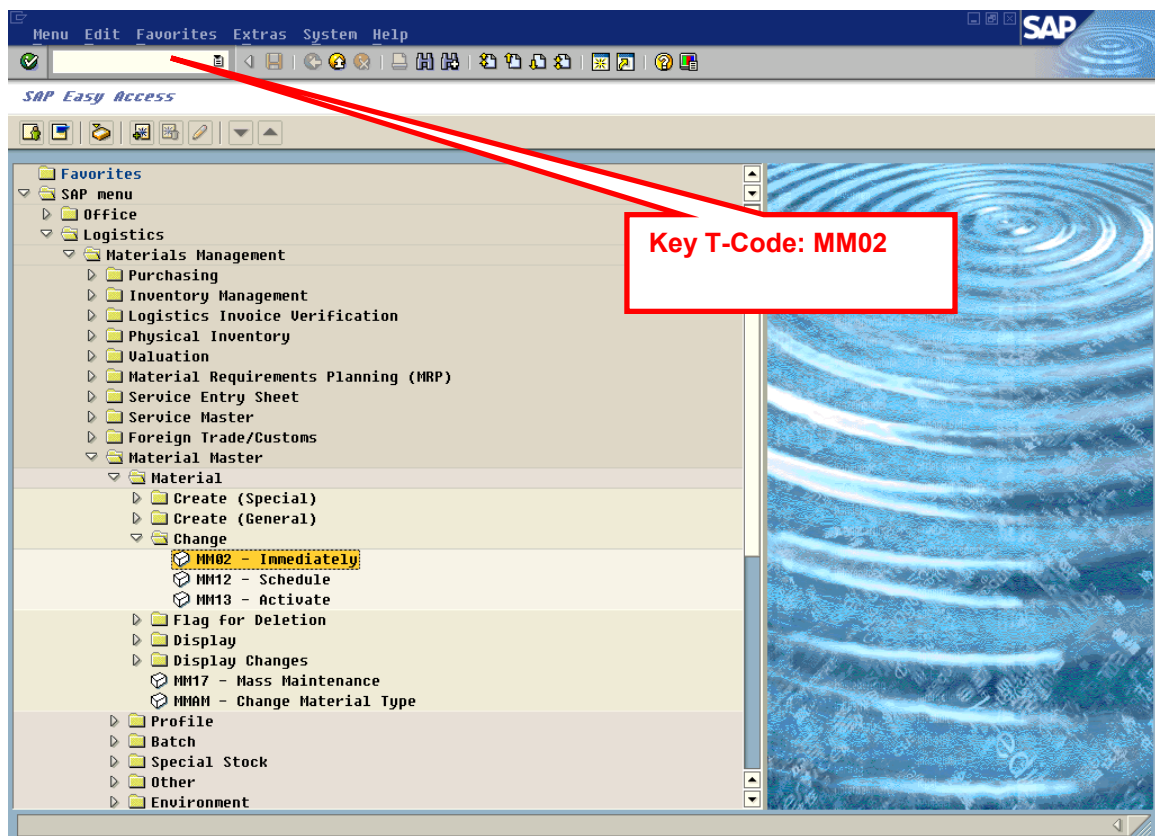


Fig-01

1.2. On “Change Material (Initial Screen)” screen, fill in the data as below:

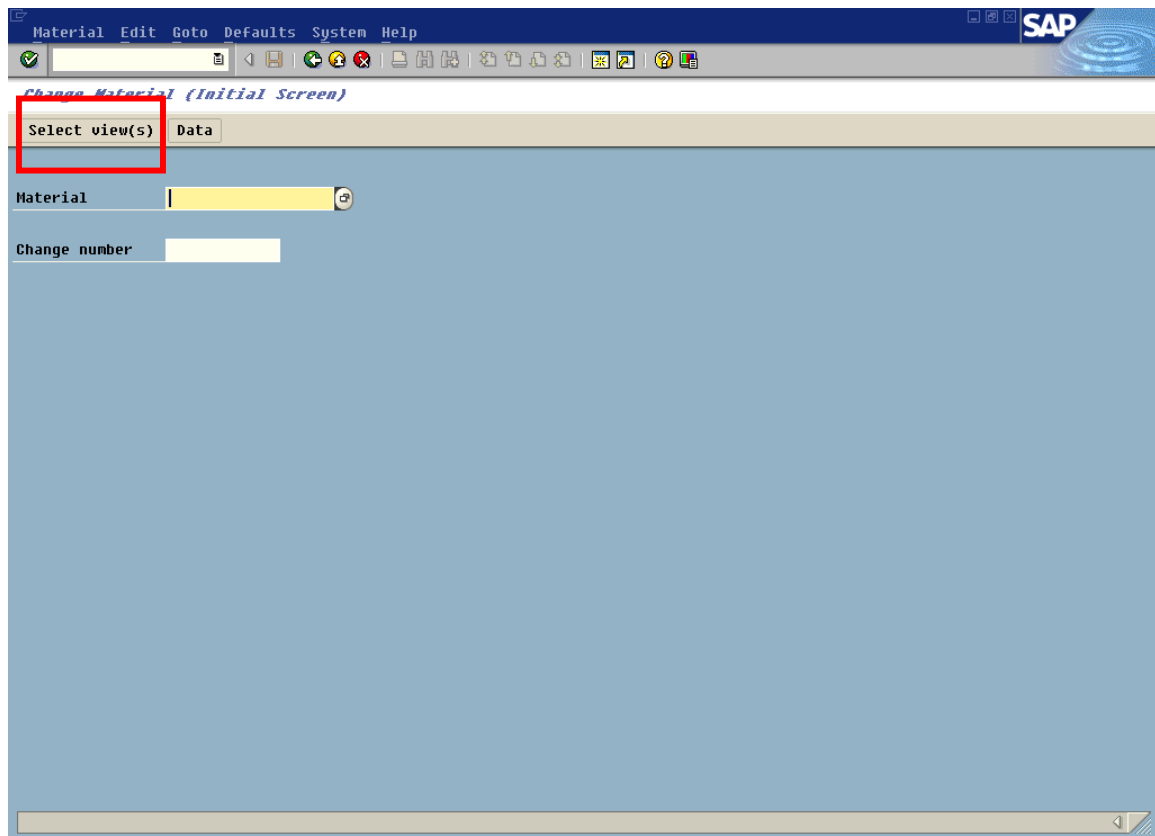


Fig-02

Field Name	Description	R/O/C/D	User Action and Values
Material	Alphanumeric key uniquely identifying the material	R	Enter the material number
			Click on <b>Select view(s)</b> icon

**Legend:** R = Required, O = Optional, C = Conditional, D = Display



1.3. On the pop up screen, make the selection of 'MRP 1, 2, 3 and 4' and then click on  icon:

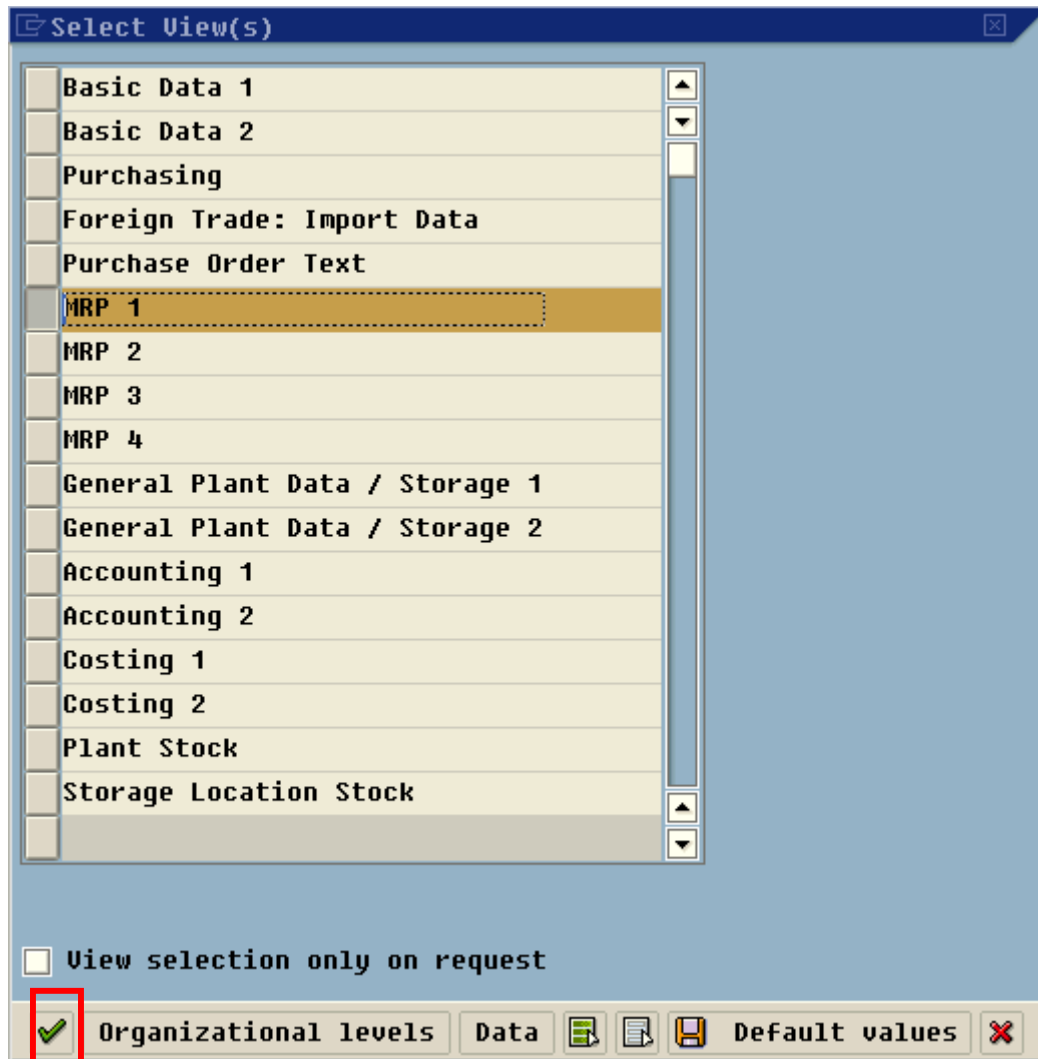


Fig-03

1.4. On the pop up screen, fill in the data as below:

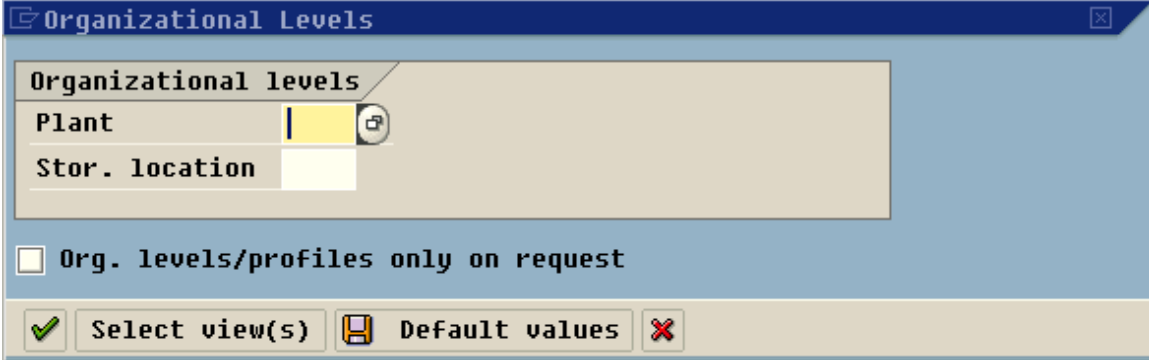


Fig-04

Field Name	Description	R/O/C/D	User Action and Values
Plant	Key uniquely identifying a plant	R	Enter the plant
Stor. location	Number of the storage location at which the material is stored	R	Enter the storage location number
			Press 'ENTER'

**Legend:** R = Required, O = Optional, C = Conditional, D = Display

1.5. On “Change Material XXXXXXXXXXXX (TM-Spare Parts)” screen, maintain information as specified in the table below:

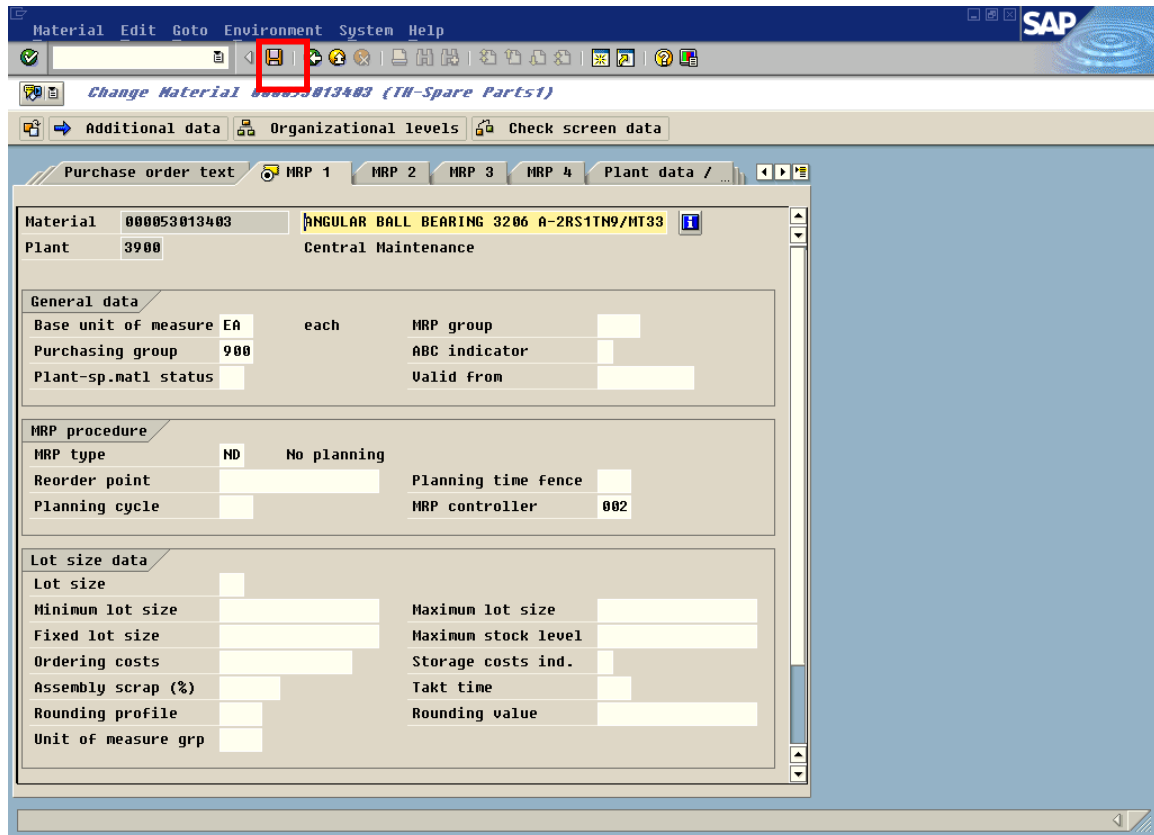



Fig-05

Field Name	Description	R/O/C/D	User Action and Values
			Make sure that the MRP Type should be chosen as V1, V2, VB or VM subject to the actual business requirements
			Click on  icon to save the setting in material master

**Legend:** R = Required, O = Optional, C = Conditional, D = Display

## 2. Creation of planning data (procurement elements) after MRP run

### 2.1. Access transaction by

<b>Via Menu</b>	Logistics → Materials Management → Material Requirements Planning (MRP) → MRP → Planning → Single-Item, Single-Level
<b>Via Transaction Code</b>	MD03

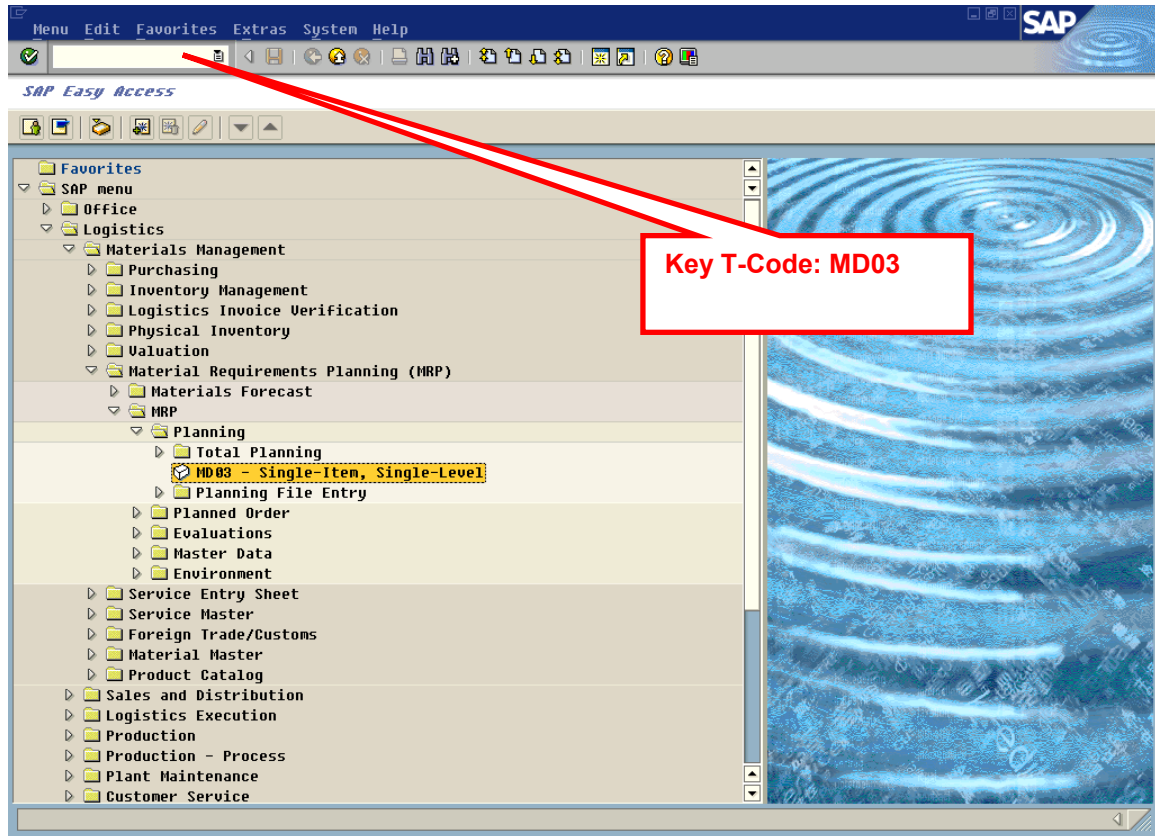
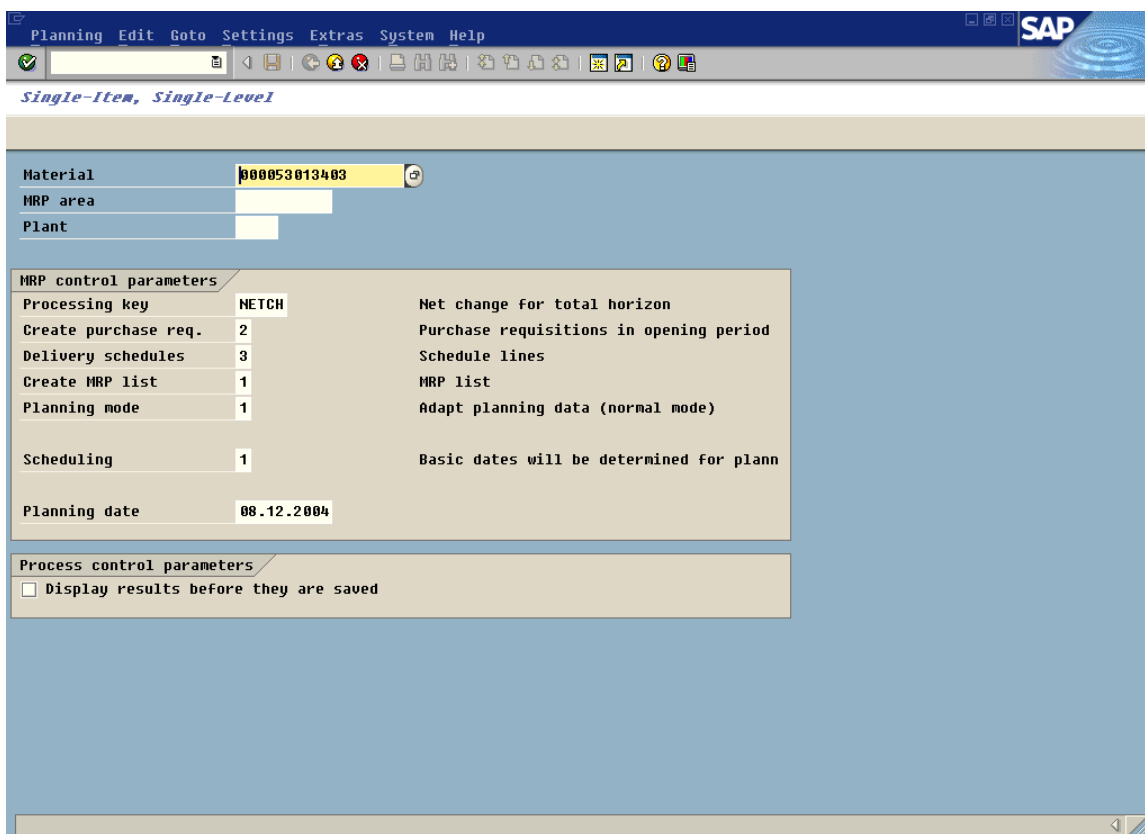


Fig-06

## 2.2. On “Single-Item, Single-Level” screen, fill in the data as below:



The screenshot shows the SAP MRP Single-Item, Single-Level screen. The title bar includes 'Planning Edit Goto Settings Extras System Help' and the SAP logo. The main area contains the following fields and parameters:

**Material:** 000053013403

**MRP area:** [Empty]

**Plant:** [Empty]

**MRP control parameters:**

Processing key	NETCH	Net change for total horizon
Create purchase req.	2	Purchase requisitions in opening period
Delivery schedules	3	Schedule lines
Create MRP list	1	MRP list
Planning mode	1	Adapt planning data (normal mode)
Scheduling	1	Basic dates will be determined for plann
Planning date	08.12.2004	


**Process control parameters:**

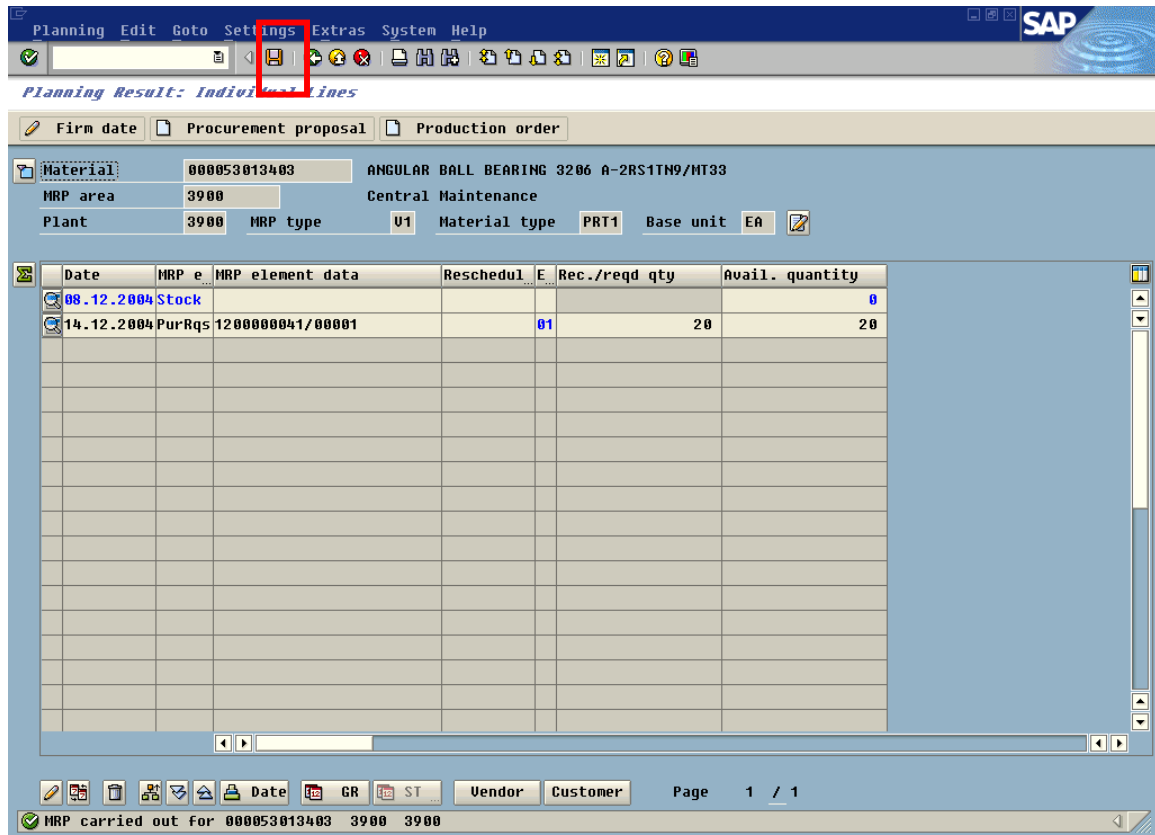
Display results before they are saved

Fig-07

Field Name	Description	R/O/C/D	User Action and Values
Material	Alphanumeric key uniquely identifying the material	R	Enter the material
MRP area	Number of the MRP area for which material requirements planning should be carried out separately	R	Enter the MRP area number
Plant	Key uniquely identifying a plant	R	Enter the plant number
			Press 'ENTER' twice to trigger MRP run

**Legend:** R = Required, O = Optional, C = Conditional, D = Display

2.3. The Purchase Requisition was generated to replenish the stock up to the maximum stock level. On “Planning Result: Individual Lines” screen, click on  icon to save this MRP run result:



Planning Edit Goto Settings **Save** Extras System Help

Planning Result: Individual Lines

Firm date Procurement proposal Production order

Material: 000053013403 ANGULAR BALL BEARING 3206 A-2RS1TN9/MT33  
 MRP area: 3900 Central Maintenance  
 Plant: 3900 MRP type: U1 Material type: PRT1 Base unit: EA

Date	MRP element	MRP element data	Rescheduled	Rec./reqd qty	Avail. quantity
08.12.2004	Stock				0
14.12.2004	PurRqs	1200000041/00001	01	20	20

MRP carried out for 000053013403 3900 3900

Fig-08