SAP PRODUCT COSTING CONFIGURATION

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INTRODUCTION

A Warm Welcome Friends! You are going to love this book and we have taken great efforts to ensure that we present the configuration in a very simple yet detailed manner.

Product costing module of SAP has eased out all hassles of costing a manufactured product. Product costing module uses data for valuation from the Production planning (PP) module. The data maintained in the PP module is the Bill of Material and Routing or the Master Recipe. The product costing modules uses the various quantities of raw and packing material required from the Bill of Material. It valuates this quantity with the various prices available in the material master in accordance with the strategy specified in customizing. Similarly it accesses the various quantitative details mentioned in routing or recipe. The time required for each operation is specified in the routing or recipe. This quantity is multiplied by the activity prices maintained in the cost center accounting module.

In this e-book we are covering product cost planning, cost object controlling by period (repetitive manufacturing), cost object controlling by order, cost object controlling by sales order and configuration settings for co-product costing.

We had configured controlling area 9100, in the e-book cost center accounting. We will now do the product costing configuration in controlling area 9100.

A) Product Cost Planning

For doing the configuration we use the following path on the SAP application screen:-

SAP Menu → Tools → AcceleratedSAP → Customizing → SPRO - Edit Project → 

1. Basic Settings for Material Costing

The company A Ltd for its plant 9100 requires the followings overheads:-
1) Material overhead
2) Production overhead

It should be calculated as follows:-

On materials 5 % material overhead should be calculated and on Wages 4 % Production overhead should be calculated.

Let us go about configuring the costing sheet from steps 1.a to 1.g we will see how to create a costing sheet for the purpose of overhead calculation.

1.1 Maintain Overhead Cost Elements

IMG → Controlling → Product Cost Controlling → Product Cost Planning → Basic Settings for Material Costing → Overhead → Maintain Overhead Cost Elements

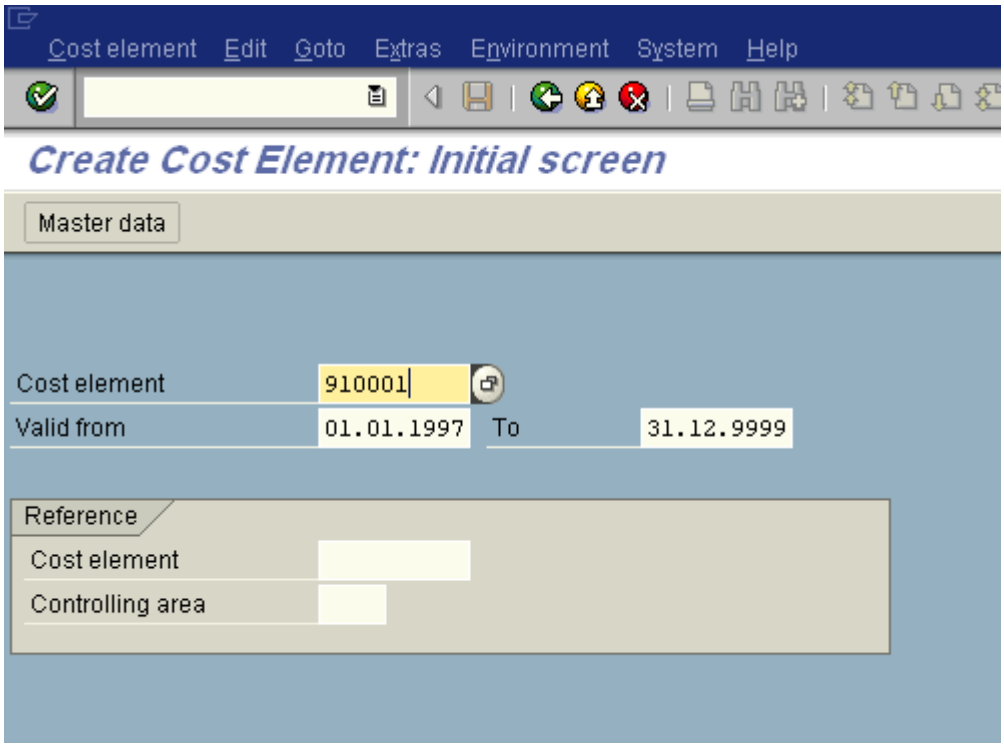
To allocate overhead to products, you need to define overhead cost elements. The SAP system then posts the overheads with these overhead cost elements.

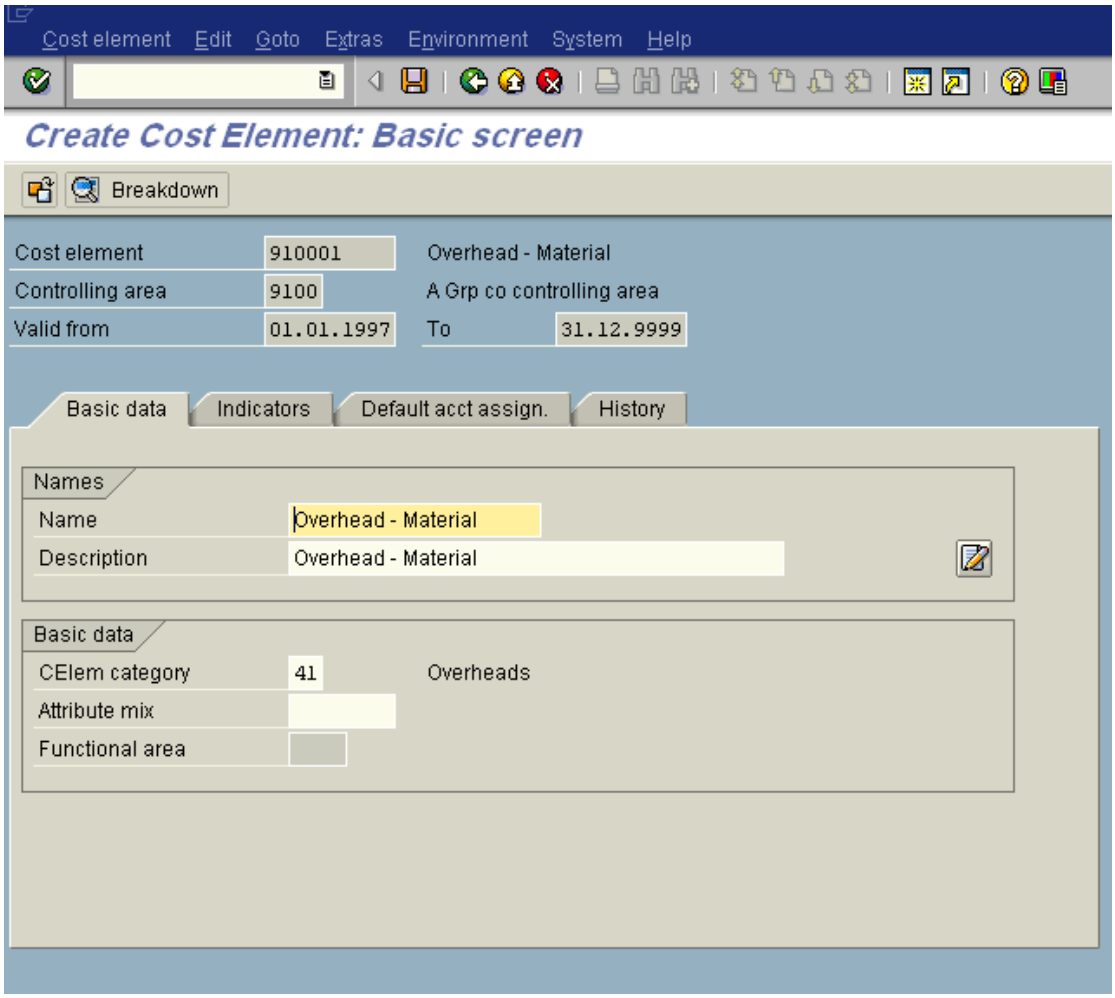
The cost center is credited with the overhead cost element and the product or the production order is debited with the overhead cost element.

Let us create secondary cost elements for overhead.

Create secondary cost elements of type 41 (overhead).

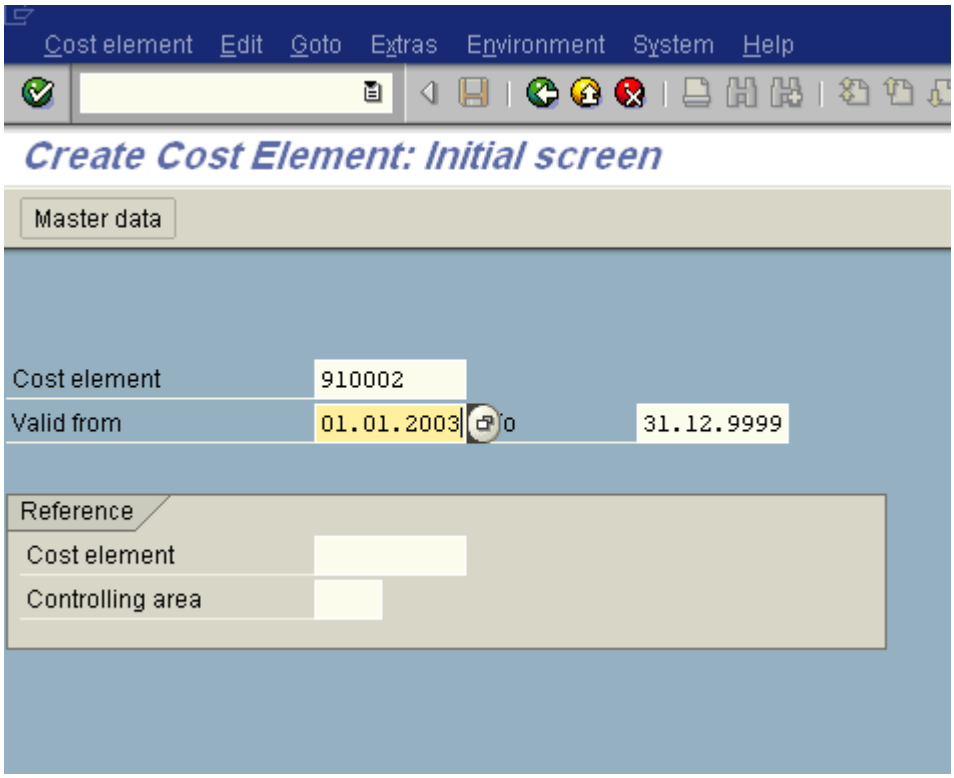
Update the following:-

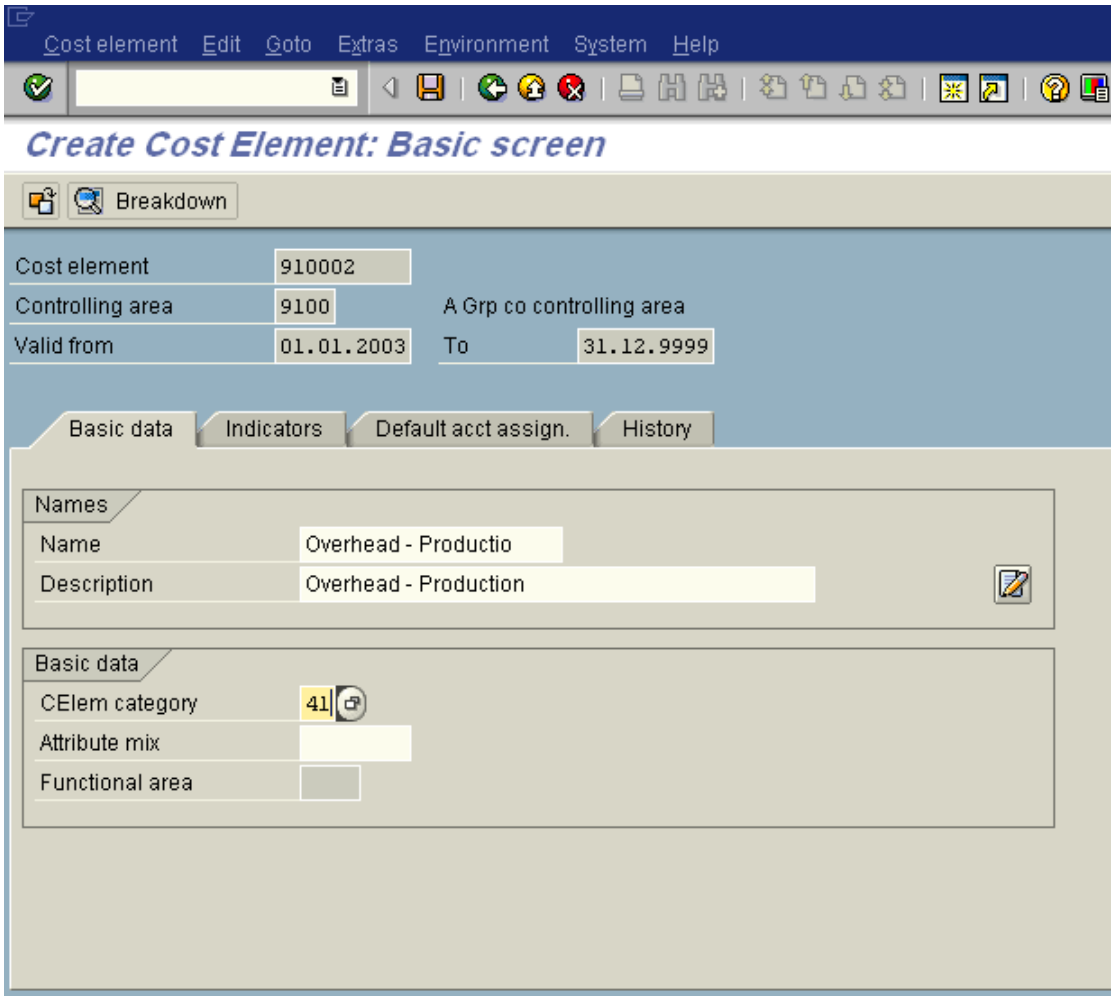

Cost element Edit Goto Extras Environment System Help
Create Cost Element: Initial screen
Master data
Cost element 910001
Valid from 01.01.1997 To 31.12.9999
Reference
Cost element
Controlling area


Cost element Edit Goto Extras Environment System Help
Create Cost Element: Basic screen
Breakdown
Cost element 910001 Overhead - Material
Controlling area 9100 A Grp co controlling area
Valid from 01.01.1997 To 31.12.9999
Basic data Indicators Default acct assign. History
Names
Name Overhead - Material
Description Overhead - Material
Basic data
CElem category 41 Overheads
Attribute mix
Functional area

Click on Save 

Create another overhead cost element for production overheads





Click on Save 

1.2 Define Calculation Bases

IMG → Controlling → Product Cost Controlling → Product Cost Planning → Basic Settings for Material Costing → Overhead → Costing Sheet: Components → Define Calculation Bases

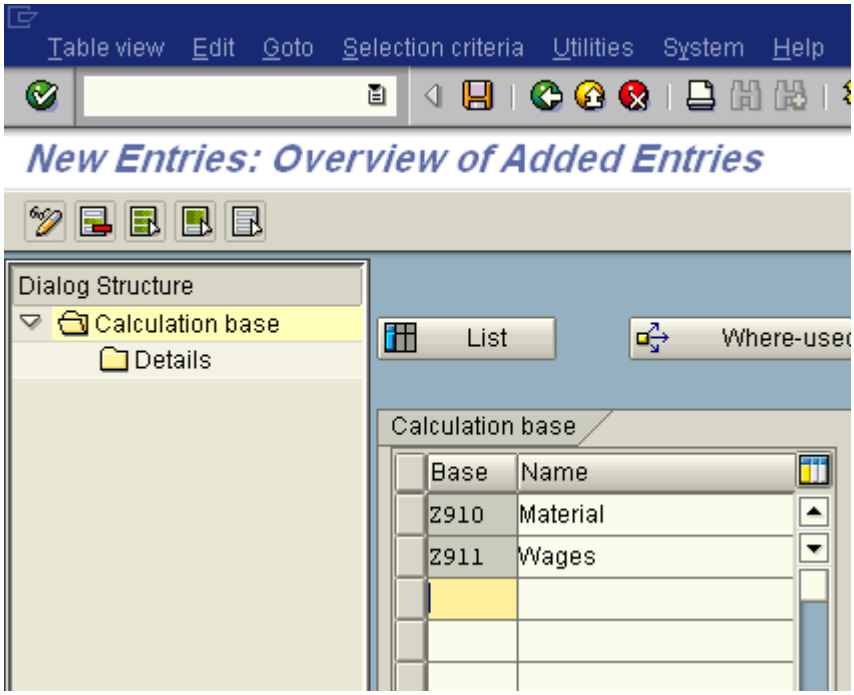
The calculation base determines to which cost elements overhead is applied together.

We will define 2 bases on which overheads will be calculated:-

1) Materials
2) Wages

Proceed as follows:-

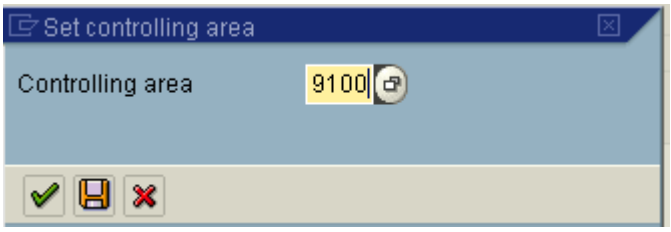
Click on New entries and **update the following:-**



Click on Save

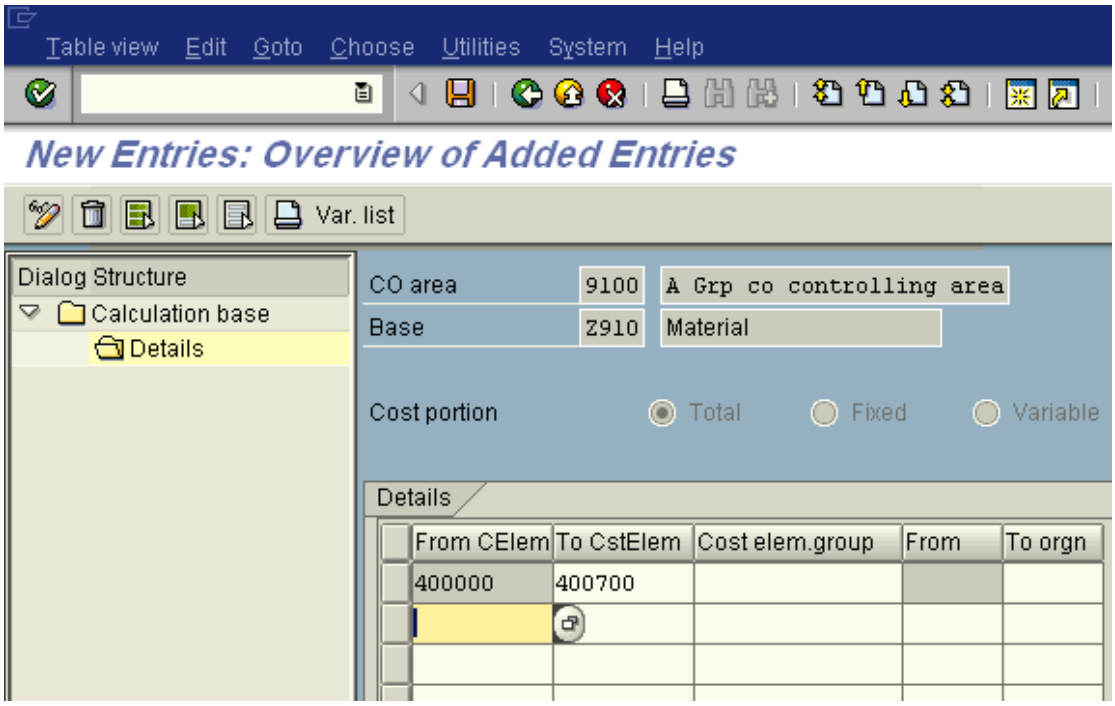
Select 

Double click Details

Update 

Click on New entries and **Update the following:-**

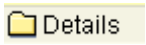
The Raw material consumption is booked to cost elements 400000 to 400700; therefore we update this as base for our calculation of overhead.



Click on Save 

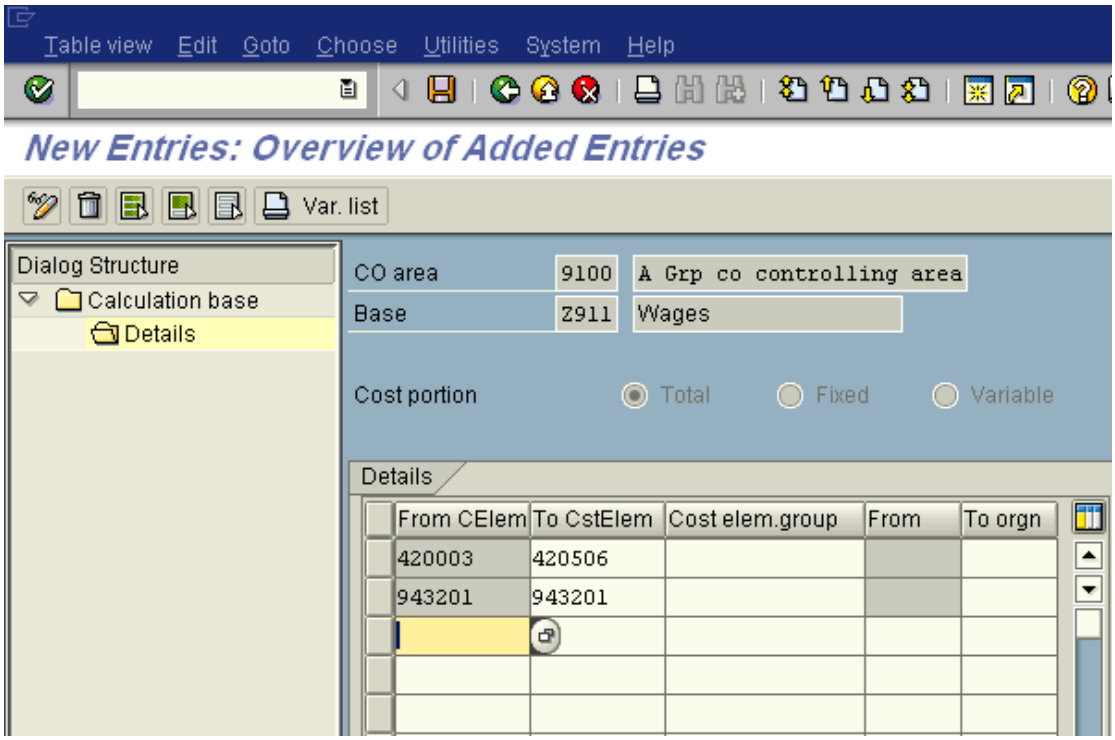
Select 

Now wages are booked under the primary cost element 420003 and 420506 and also wages allocation from other cost center is allocated using secondary cost element 943201.Therefore we specify this as base.

Double click 

and **Update the following:-**

Click on 



Click on Save 

1.3 Define Percentage Overhead

IMG → Controlling → Product Cost Controlling → Product Cost Planning → Basic Settings for Material Costing → Overhead → Costing Sheet: Components → Define Percentage Overhead

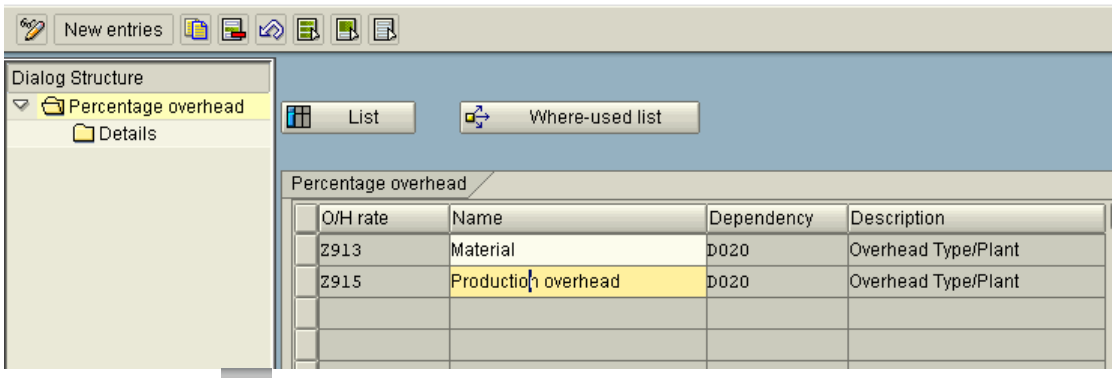
We want to calculate 5 % overhead on Material and 4% on wages. But the condition is that, it should be only calculated for plant 9100.

To fulfill the above requirement we need to select the dependency **overhead type/ plant**. Thus the system will only calculate overhead rate for plant 9100. In the Std. SAP system there are quite a number of dependencies available such as plant, order type, overhead type, overhead key, company code etc.

Here we can calculate Plan and actual overhead. Plan overhead rate is required for the purpose of planning the cost of the product (standard cost estimate). Actual overhead rate is required for the purpose of charging it to the production order.

In this step we will create the **overhead rate**, attach the dependency and define the overhead rate. Further we will also define whether it is plan or actual.

Click on New entries and **update the following:-**

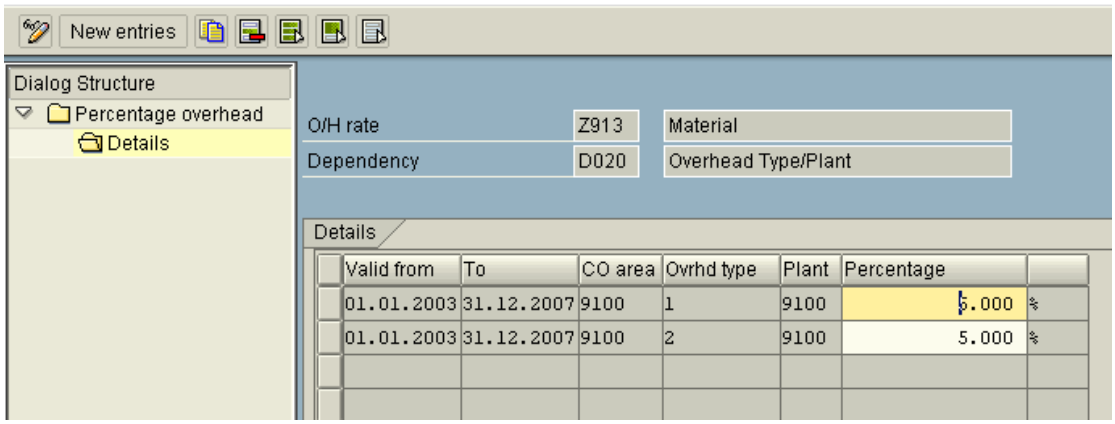


Click on Save

Select 

Double click Details

Click on New entries

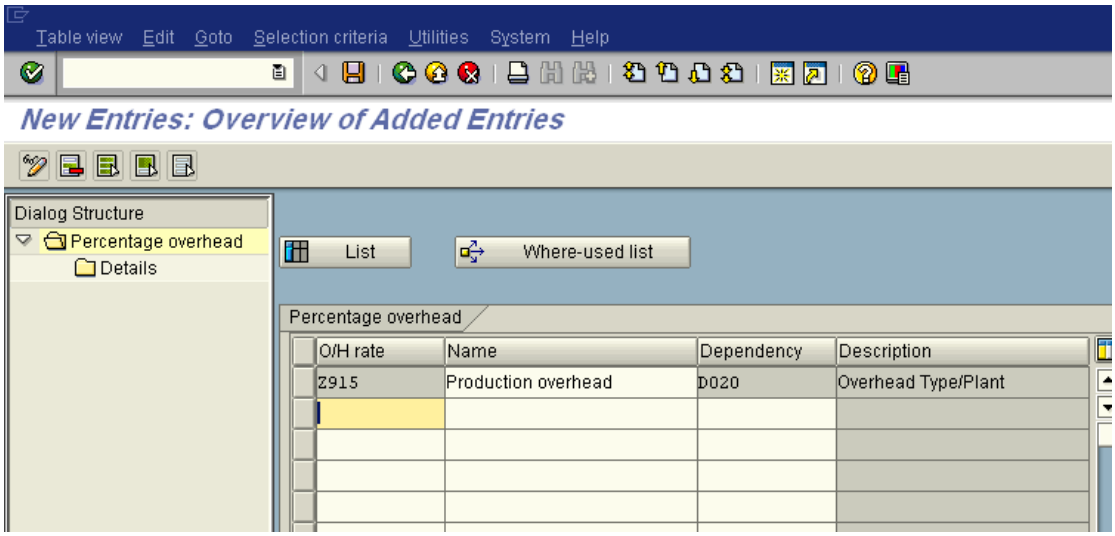


Overhead type – 1 is actual overhead rate

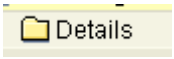
Overhead type – 2 is planned overhead rate

Click on Save

Click on New entries and **Update the following:-**



Select

Double click 

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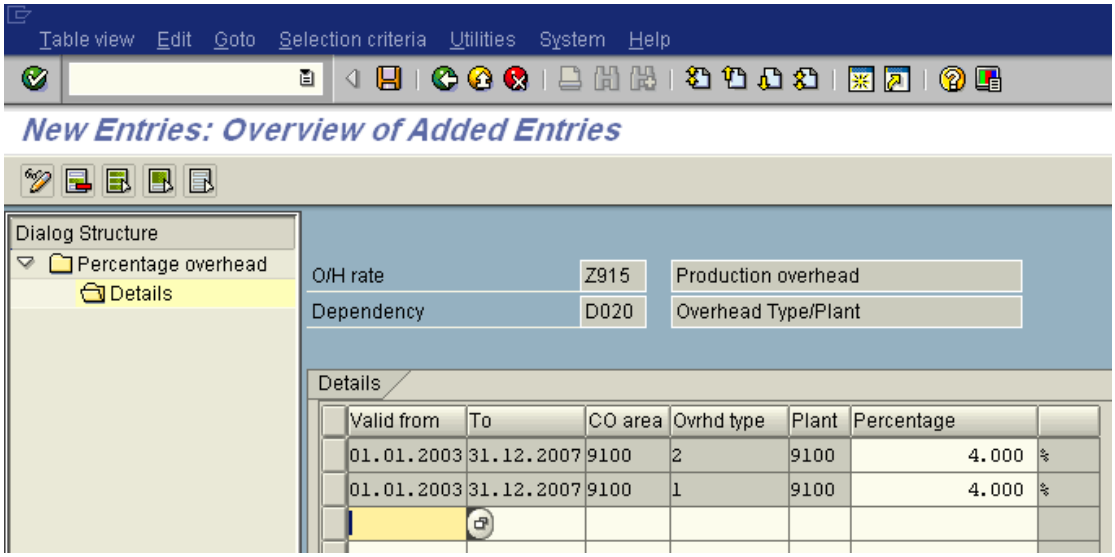
and update the following



Click on 

To maintain a new dependency the path is as follows:-

IMG → Controlling →Cost Center Accounting → Actual Postings →Period-End Closing → Overhead → Costing Sheet: Components → Extras: Dependencies / Condition Tables →Define Condition Tables/ Define Dependencies.

Create a new Condition table with table name as 999

You need to select fields Controlling area, Overhead type. Profit center and plant.

Create a new dependency.

Create a new access sequence. In this access sequence you will assign the condition table.

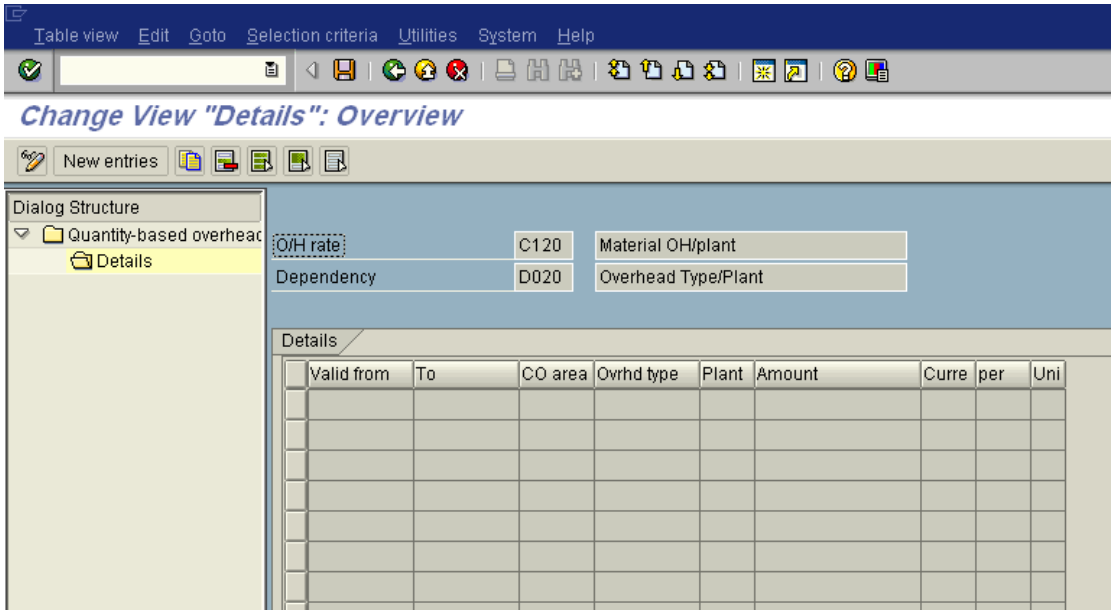
1.4 Define Quantity-Based Overhead

IMG → Controlling → Product Cost Controlling → Product Cost Planning → Basic Settings for Material Costing → Overhead → Costing Sheet: Components → Define Quantity-Based Overhead

In addition to percentage-based overhead rates, you can also define quantity-based overhead rates, for example, 100 INR per tonne).

You can determine overhead rates in the plan and actual. Here too you need to attach the dependency.

We will not configure a quantity overhead.



1.5 Define Credits

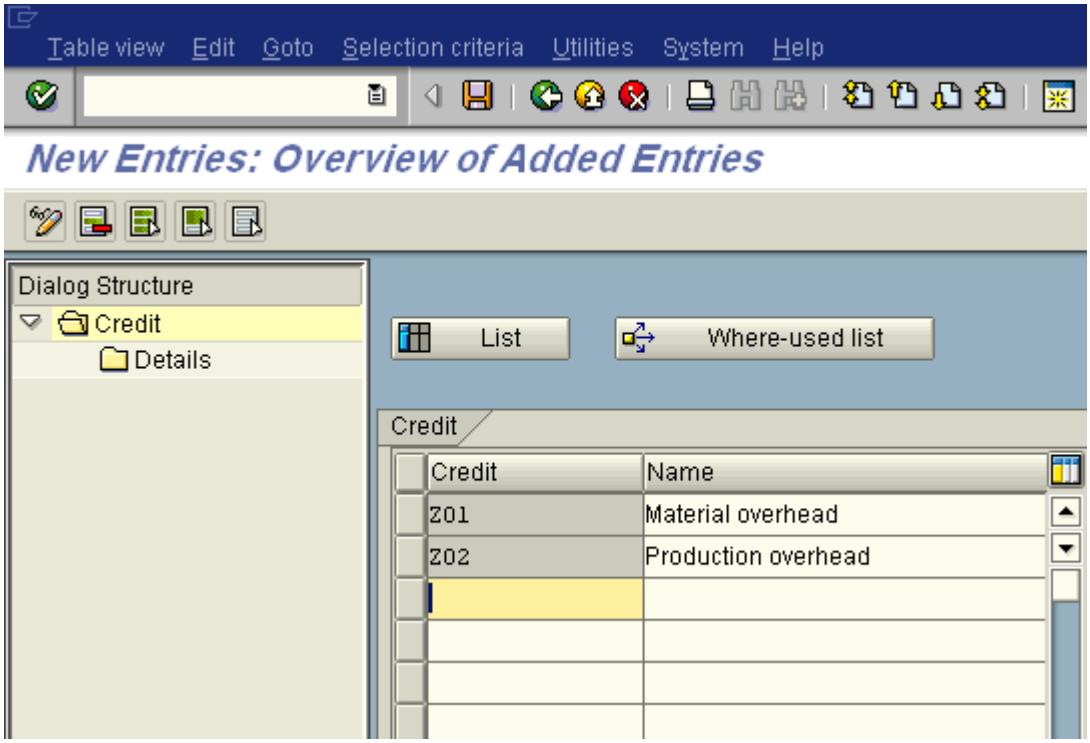
IMG → Controlling → Product Cost Controlling → Product Cost Planning → Basic Settings for Material Costing → Overhead → Costing Sheet: Components → Define Credits

By defining the credit key you are crediting the cost center and debiting the product or the production order. The credit on the cost center happens with the overhead cost element which we created earlier 910001 Material overhead and 910002 production overhead.
Here we attach the overhead cost center which is to be credited.
You can also define what percentage of the overhead is to be allocated as fixed costs.

Therefore we will create 2 credit keys one for material overhead and other for the production overhead.

Click on 

and update the following:-



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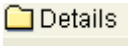
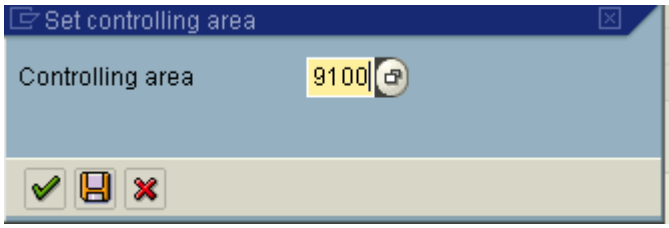
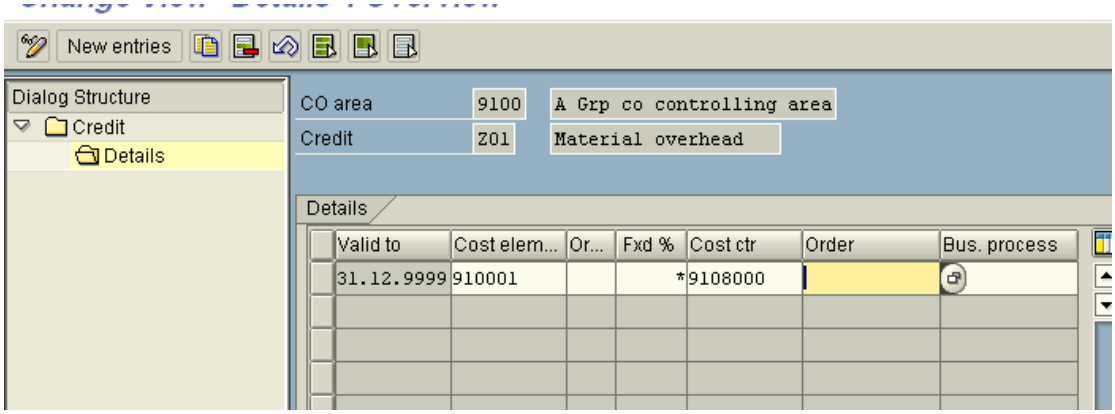
Double click 

Update the following:-



Click on 

We update the cost center which is to be credited using the overhead cost element.



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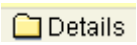
Double click 

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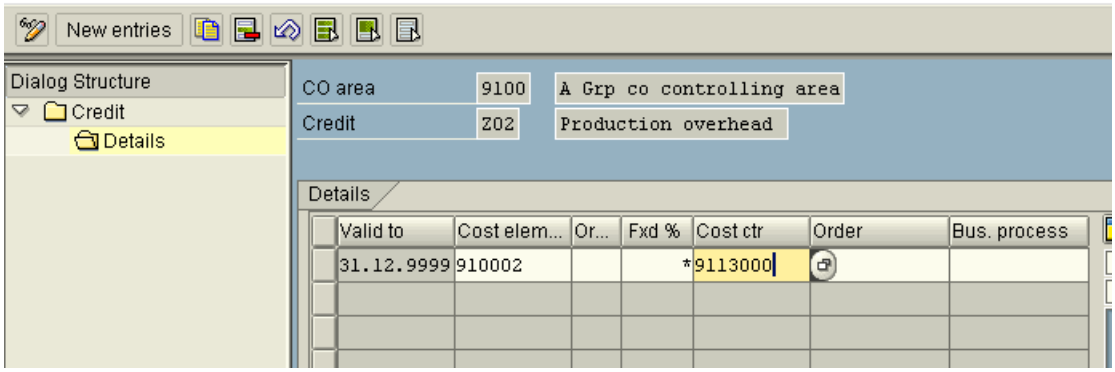


Click on 

1.6 Define Origin Groups (Optional)

IMG → Controlling → Product Cost Controlling → Product Cost Planning → Basic Settings for Material Costing → Define Origin Groups

Origin groups are created to subdivide the material costs further. Materials assigned to the same cost element by automatic account determination can be separated into origin groups.

- If an origin group is entered in the costing view of the material master record, the combination of origin group and cost element is updated in the Controlling module.

- If the *Material origin* indicator in the costing view of the material master record is specified in addition to the origin group, the costs are updated under the combination of material number and cost element in the Controlling component.

Therefore you can do the following for each cost element and origin group:

- Calculate Overhead

If you have maintained origin groups for the raw materials, you can define a calculation base in the costing sheet for each group of raw materials. This enables you to define different overhead surcharges for each group of raw materials.

- Make assignments to cost components

If you have maintained origin groups for the raw materials, you can create separate cost components for important materials or groups of materials.

We will not configure origin groups.

1.7 Define Costing Sheets

IMG → Controlling → Product Cost Controlling → Product Cost Planning → Basic Settings for Material Costing → Overhead → Define Costing Sheets

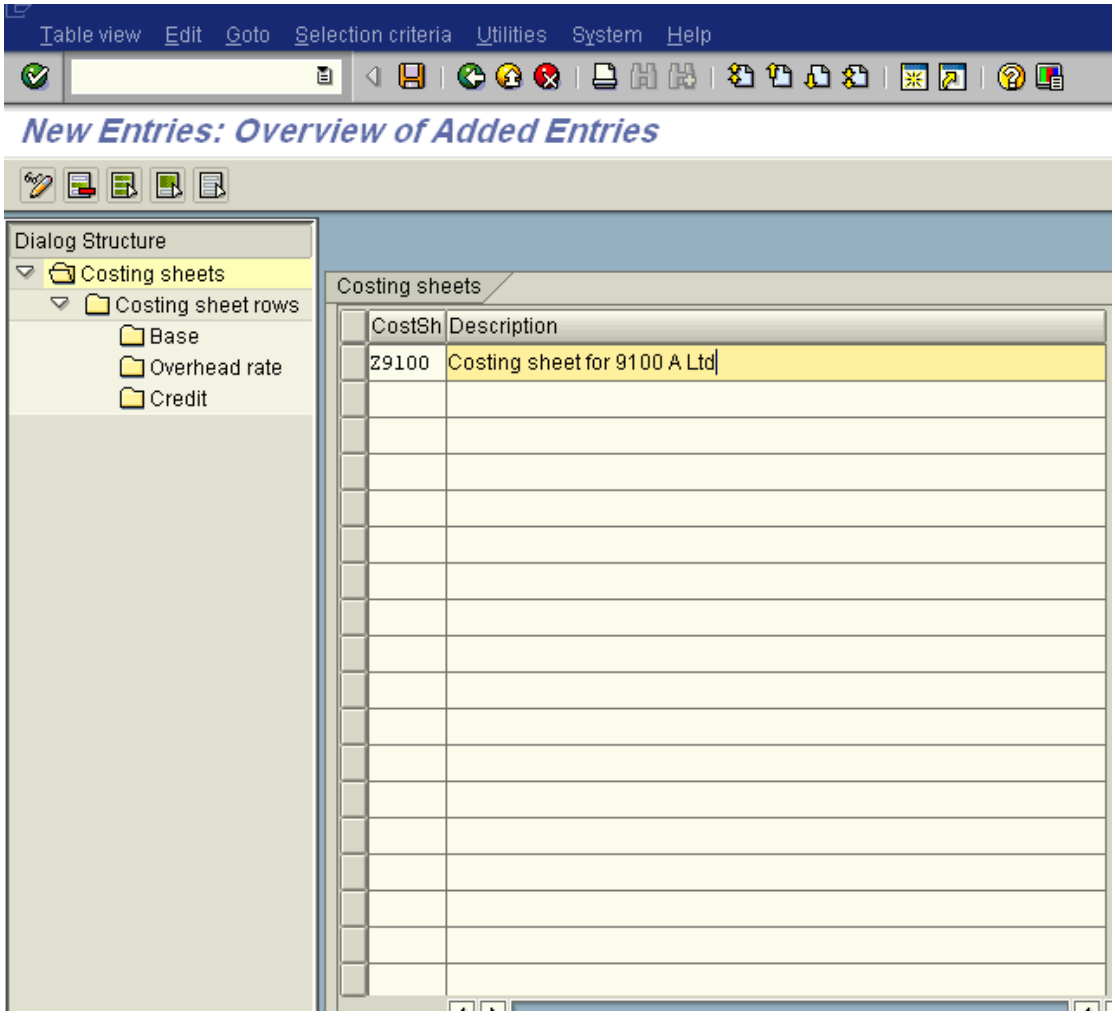
The costing sheet integrates all elements of overhead costing defined earlier such as calculation base **(Z910Material, Z911 Wages)**, overhead rates **(Z913 Material overhead, Z915 production overhead)** and the credit key **(Z01,Z02).**

Let us create a new costing sheet.

The overhead is dependent on the plant.

Material overhead @ 5% is calculated on Material costs and production overheads @ 4 % are calculated on wages.

Click on New entries and **Update the following:-**

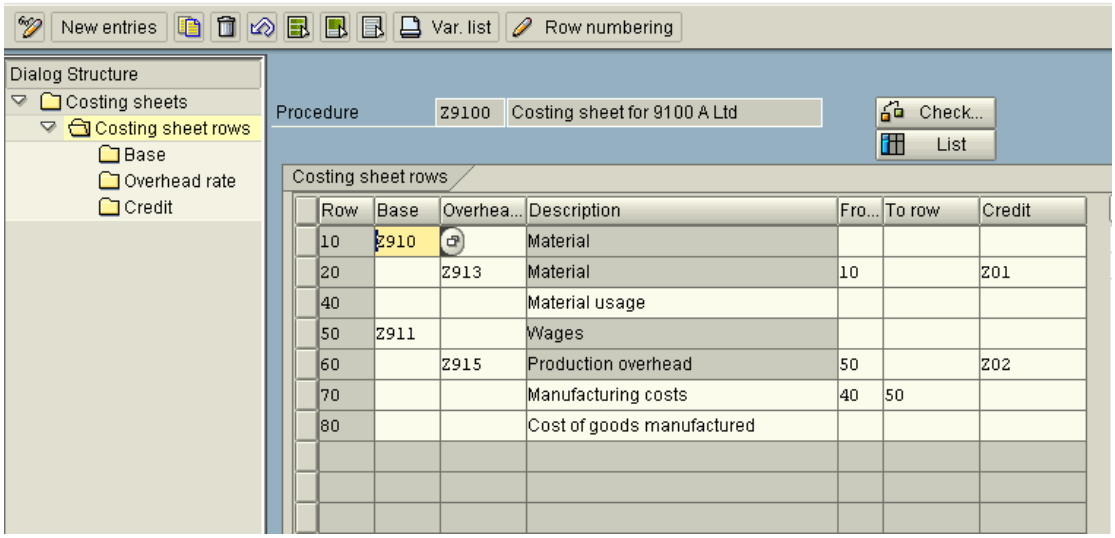


Click on Save

Select Z9100 Costing sheet for 9100 A Ltd

Double click on Costing sheet rows

Click on New entries and **update the following:-**



Click on Save 

Click 

to check the costing sheet.

1.8 Define Overhead Keys

IMG → Controlling → Product Cost Controlling → Product Cost Planning → Basic Settings for Material Costing → Overhead → Define Overhead Keys

Overhead keys need to be configured if you have defined the dependency of overhead key.

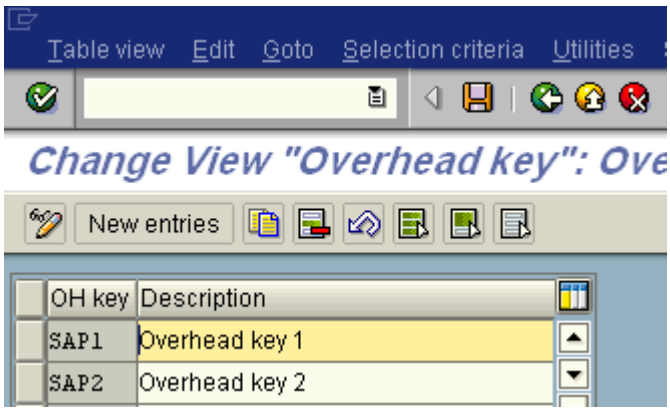
In our current scenario we are not using overhead key dependency, nevertheless we still understand it.

You can use overhead keys for individual order calculation or material-related calculation of an overhead percentage rate.

To determine an overhead percentage rate through the overhead key, you must

- assign a **costing sheet** to your production order, Enter in the assigned costing sheet, overheads that use the overhead key field.
- Assign the overhead key to an overhead group.
- Enter the overhead group in the material master record for the material to be produced.

The Std. overhead keys are as follows:-



1.9 Define Overhead Groups

IMG → Controlling → Product Cost Controlling → Product Cost Planning → Basic Settings for Material Costing → Overhead → Define Overhead Groups

Here we create overhead groups so that you can define conditions in the costing sheet for the calculation of overhead that apply only to certain finished or semi finished products.
These conditions are linked to overhead keys. The overhead key is selected through an overhead group specified in the material master record of the material to be costed.

Example

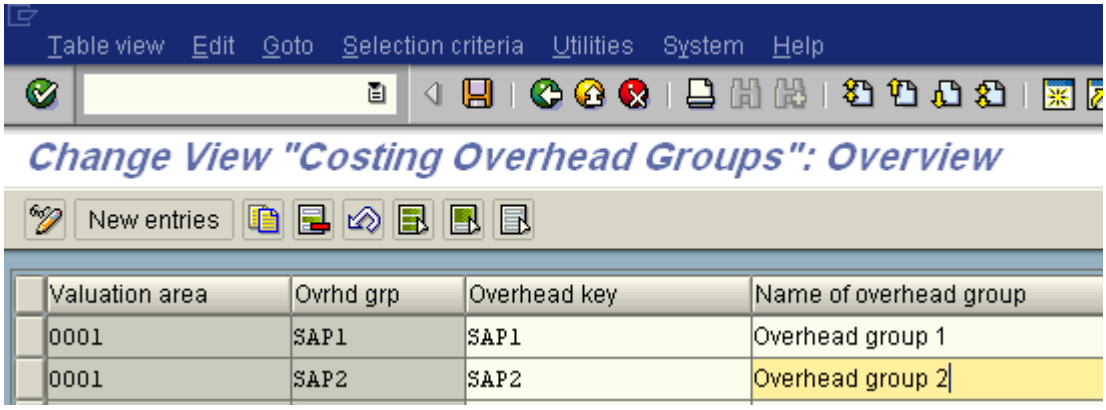
Suppose you want to apply an overhead rate of 10% to one group of materials and an overhead rate of 20% to another group of materials. To do this, you create two overhead groups and two overhead keys:

Overhead group	Overhead key	Percentage
SAP10	SAP10	10%
SAP20	SAP20	20%

You enter overhead group SAP10 in the master records of the materials in the first group, and overhead group SAP20 in the master records of all materials in the second group.

The costing sheet for overhead calculation is selected through the valuation variant. You create two lines in this costing sheet. In the first line, you link the percentage 10% to the overhead key SAP10. In the second line you link the percentage 20% to the overhead key SAP20.

In our current scenario we are not using overhead groups; we still see the standard SAP configuration.



1.10 Define Cost Component Structure

IMG → Controlling → Product Cost Controlling → Product Cost Planning → Basic Settings for Material Costing → Define Cost Component Structure

The cost components breaks down the results of the standard cost estimate into factors such as raw materials, packing material, material overhead, salaries and wages, production overheads, depreciation and other costs.

We are defining the cost component structure as a primary cost component split. As a result primary costs from cost centers are included in the cost estimate.

There are various configuration settings to be defined for the individual cost component.

We will briefly discuss each of them here:-

1) Cost share – Whether the cost component is relevant only for variable cost or Fixed and Variable costs.
2) Roll up cost component - The "Roll up" indicator determines, for example, that the costs for the usage of a raw material in a semifinished product are displayed in the cost estimates of the higher-level semifinished products and of the finished product. Always select this.
3) Filter criteria – Whether the cost component is cost of good manufactured or Sales and administration costs.
4) Inventory valuation – Whether the cost component is relevant for inventory valuation or not, or only relevant for variable costs or relevant for both fixed and variable costs.

Cost Component Views

You can display the results of the cost estimate in the following views:

- Cost of goods manufactured
- Sales and administration costs
- Inventory (commercial)

The cost component views are created using the attributes of the cost components in the cost estimate. When you create a cost estimate, you can display the costs in the cost component views defined.

Cost Component Groups

You can create cost component groups for example in order to group together all production costs or all raw material costs. These cost component groups can be evaluated in the costed multilevel BOM or in the custom-programmed reports.

For each cost component, you can assign two cost component groups.

Click on 

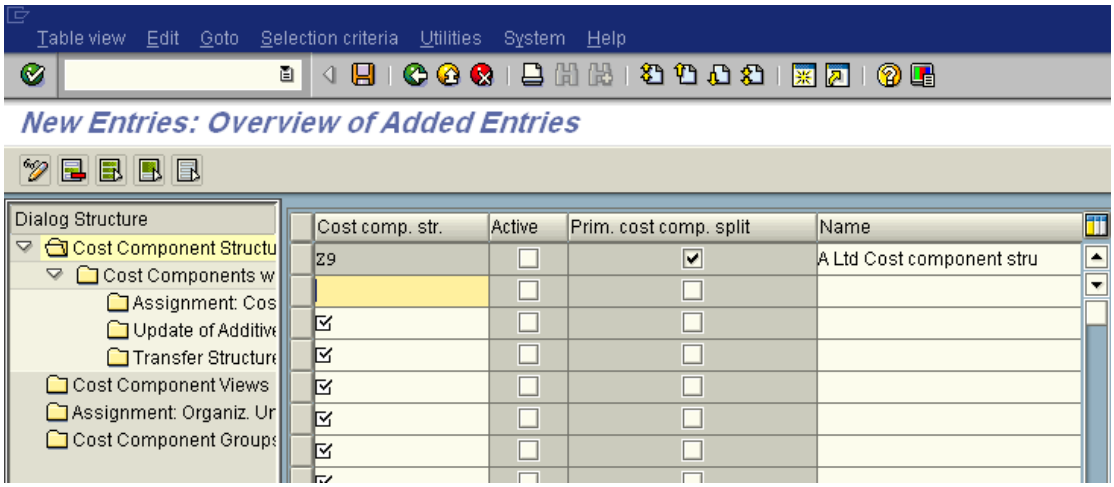
and **Update the following:-**

Let us create a cost component structure for the following:-

1) **Raw Material and SFG**
2) **Packing material**
3) **Material overheads**
4) **Salaries and wages**
5) **Production overhead**
6) **Depreciation**
7) **Other costs**

1. Create a cost component structure.

Enter an alphanumerical key and a name for the cost component structure, and specify whether the cost component structure is a primary cost component split.



Click on Save 

2. Define the cost components.

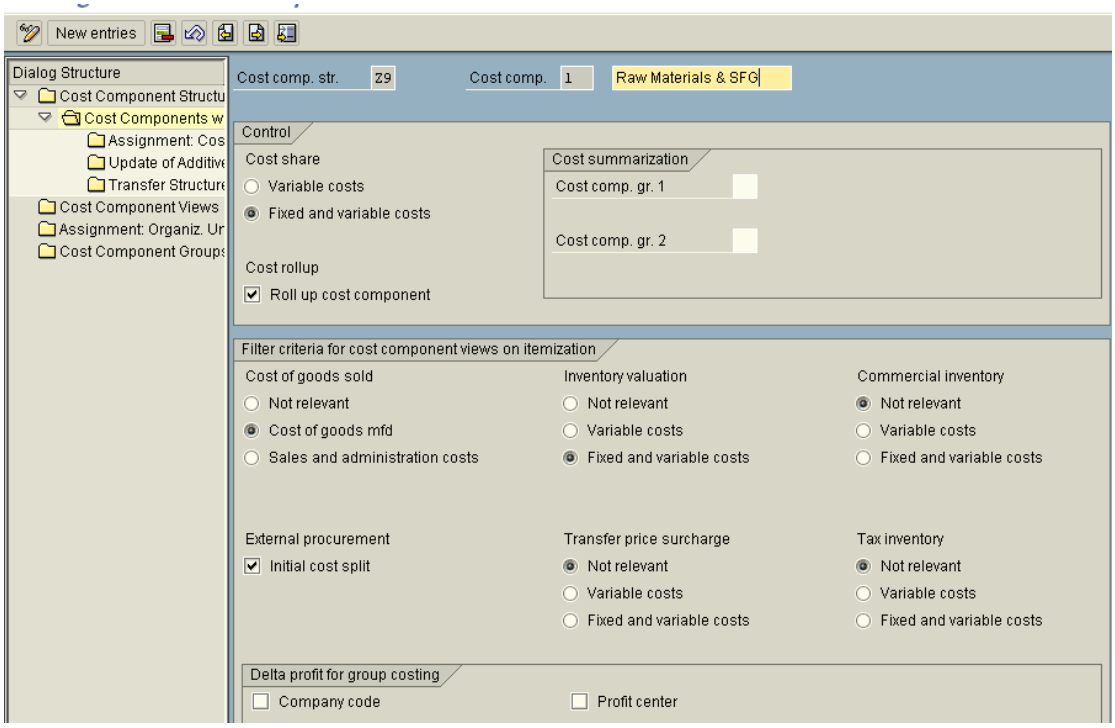
Enter the cost component structure, a key and a name for the cost component. Define the attributes of the cost component. For example, specify if the cost component contains

- variable or full costs
- production, distribution or administrative costs
- relevant for the stock evaluation

Double click 

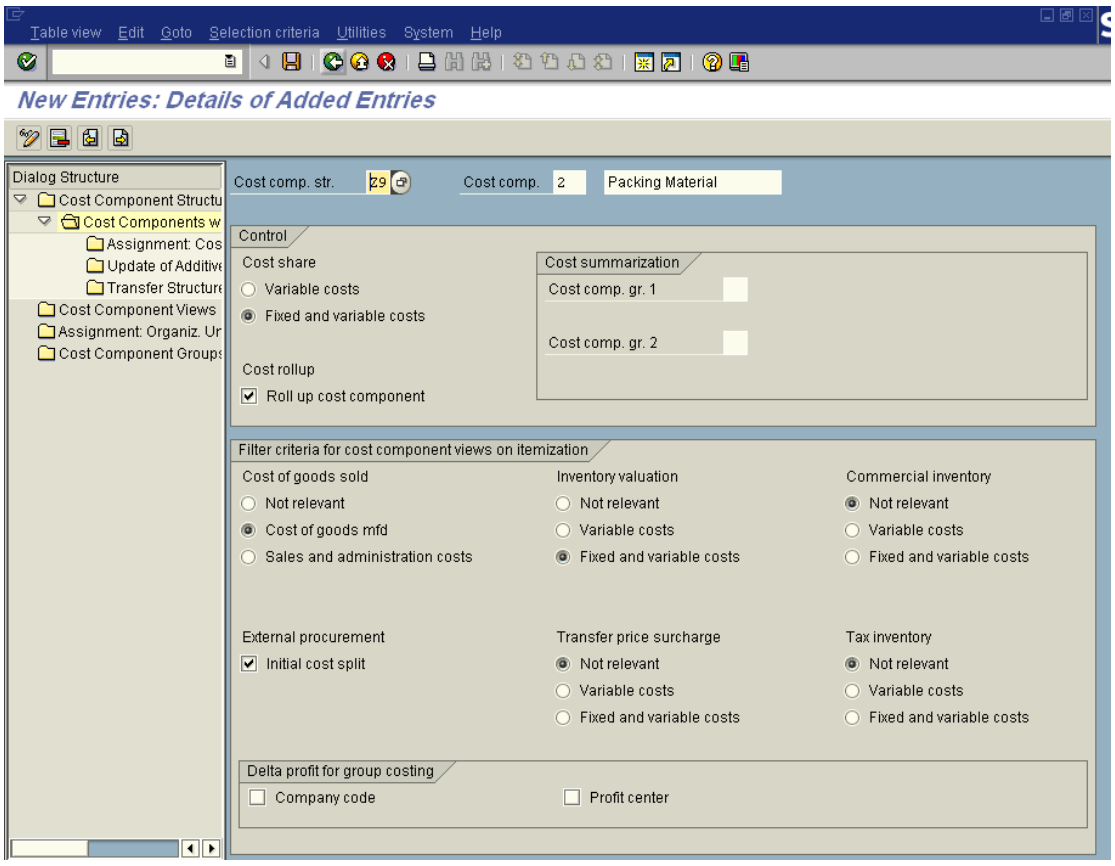
Click on 

Update the following:-



Roll up cost component – Selecting this makes the cost of Raw material to roll up to the next level of finished good.

Click on  to create another cost component



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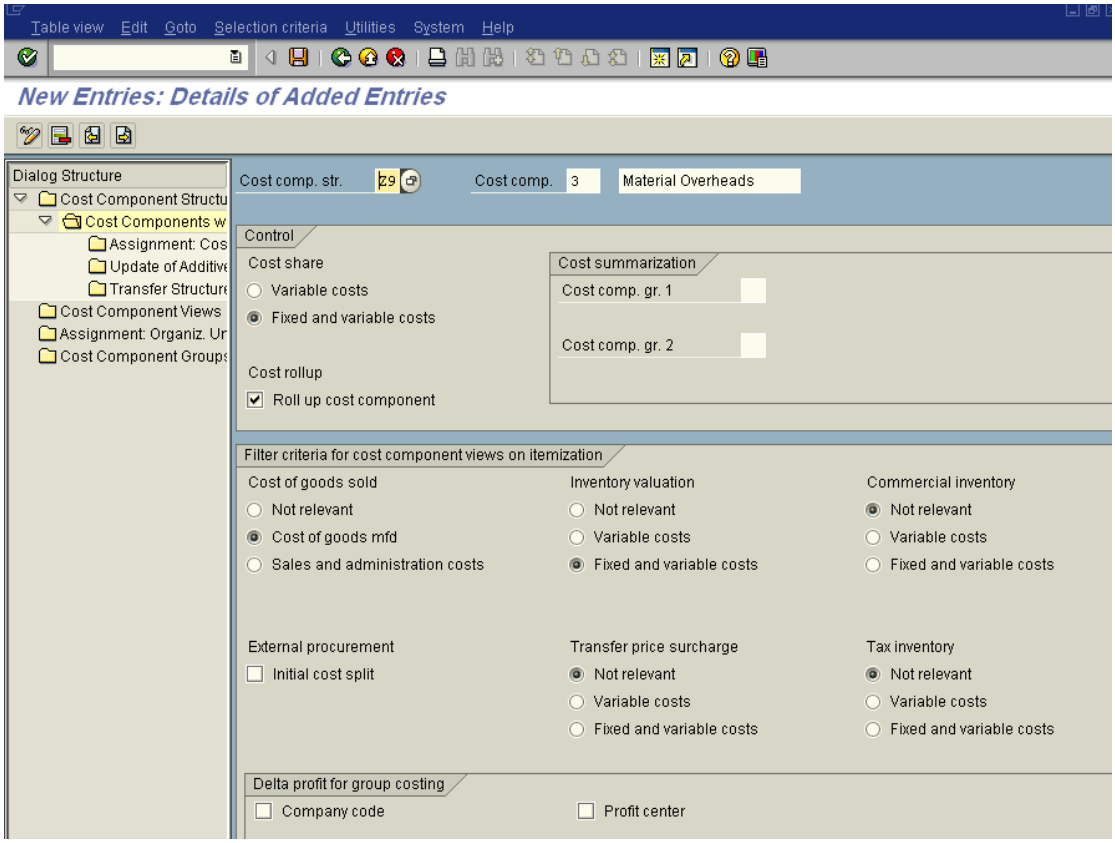
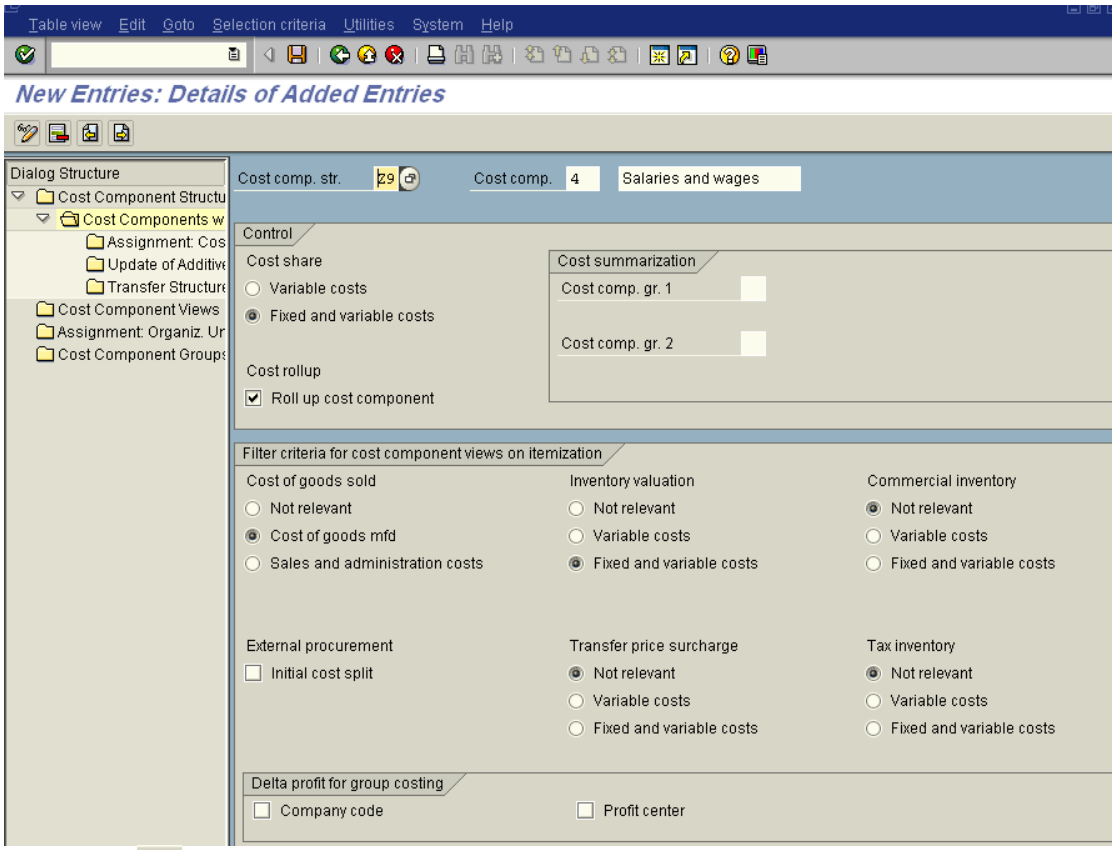
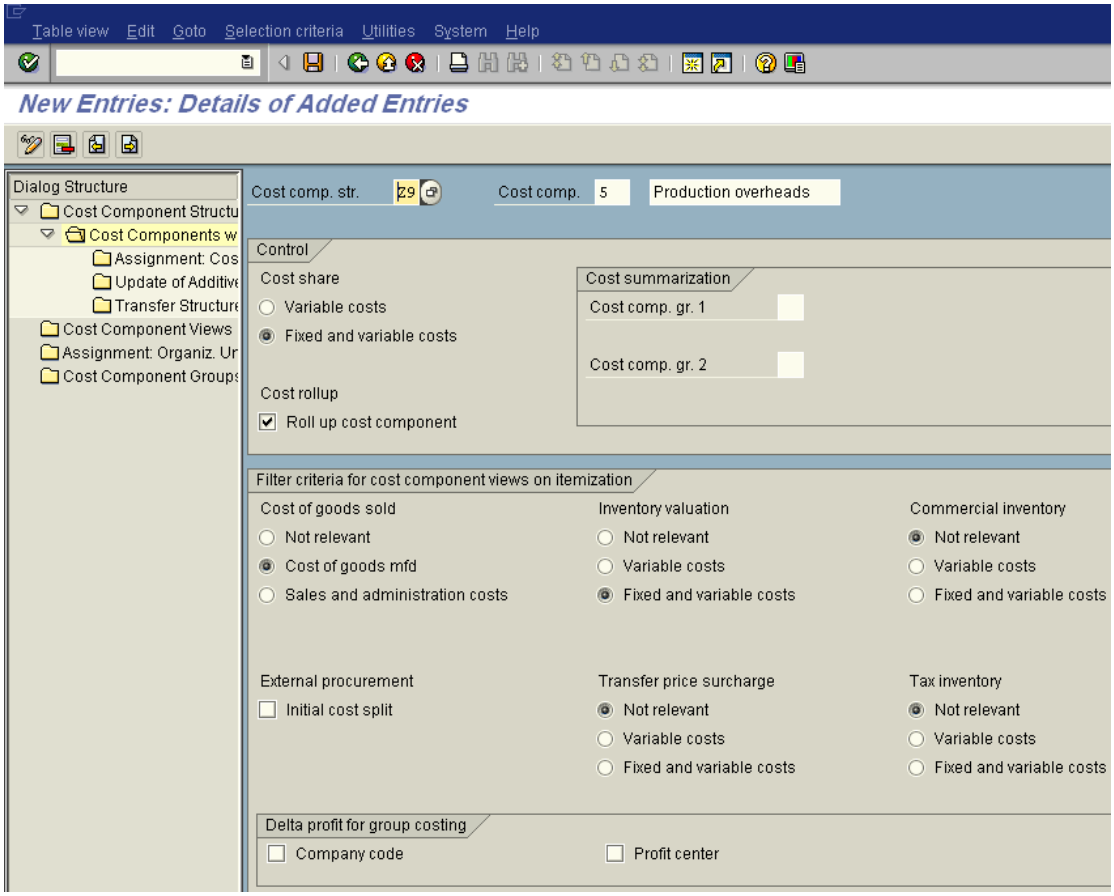


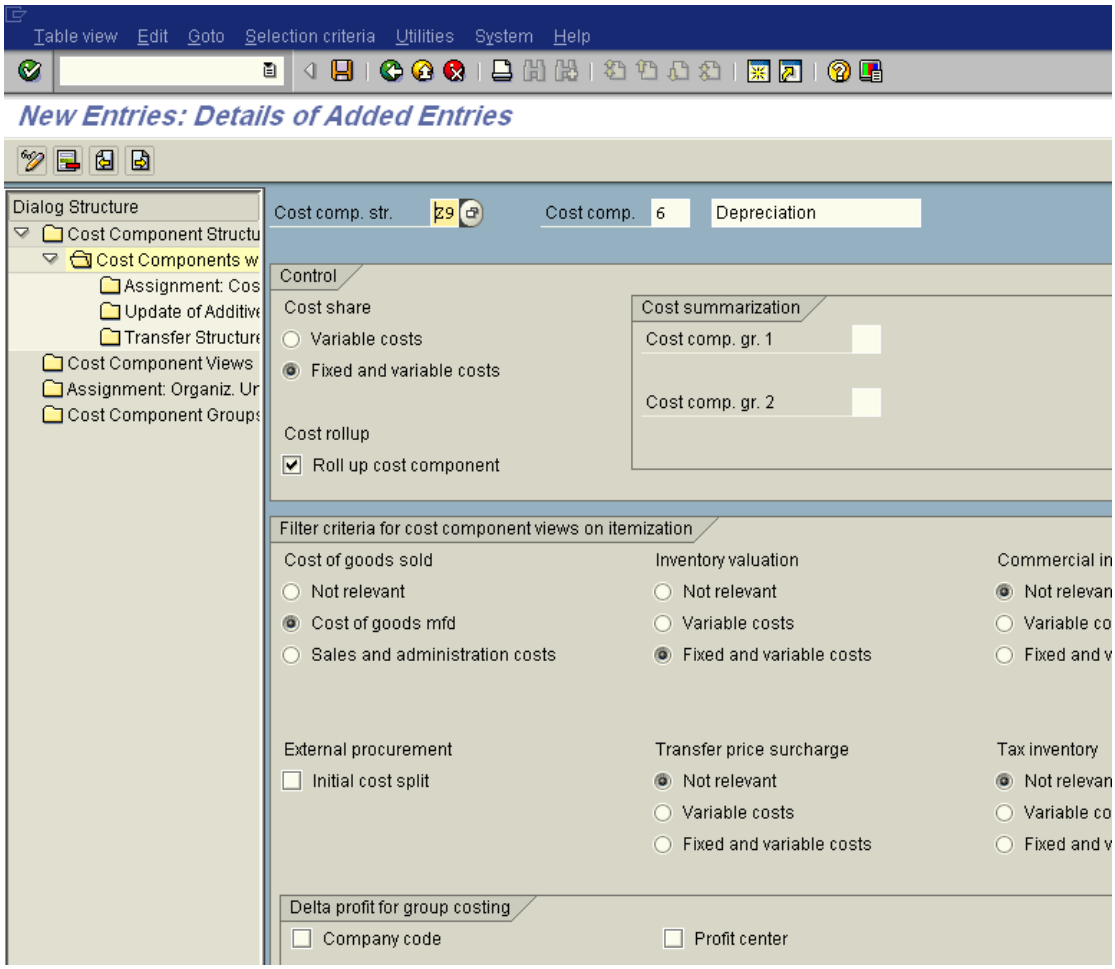
Click on  to create another cost component



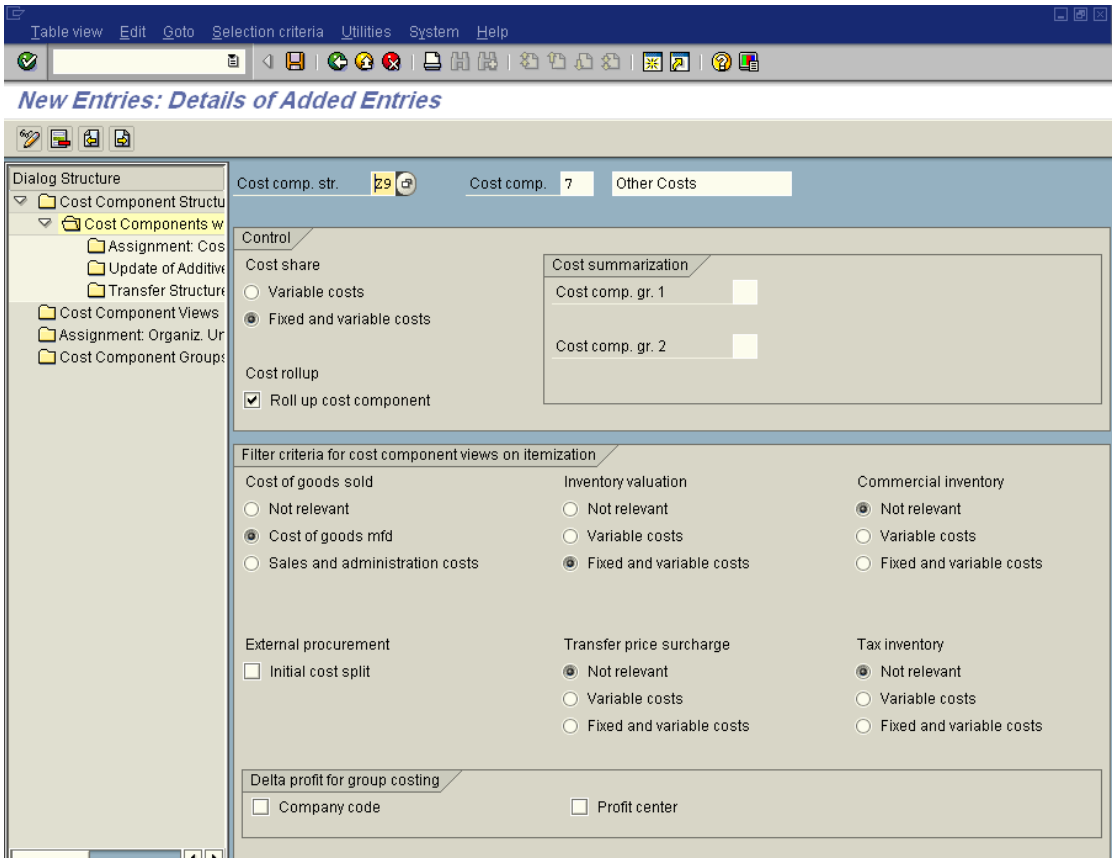
Click on  to create another cost component



Click on  to create another cost component

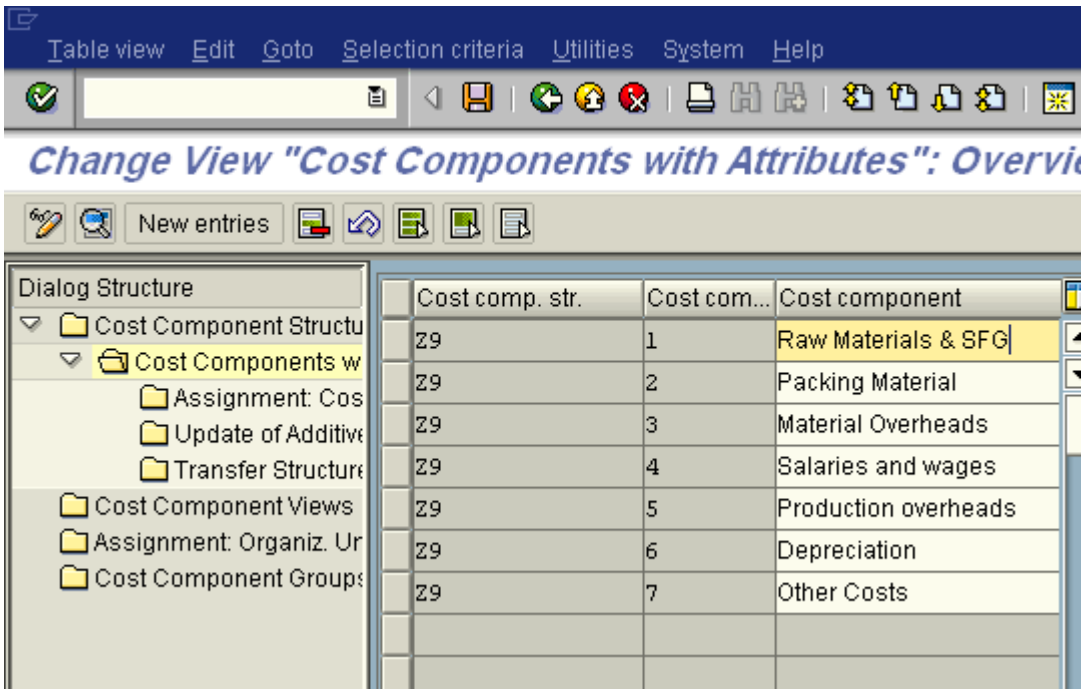


Click on  to create another cost component



Click on Save 

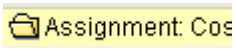
These are the cost components created.



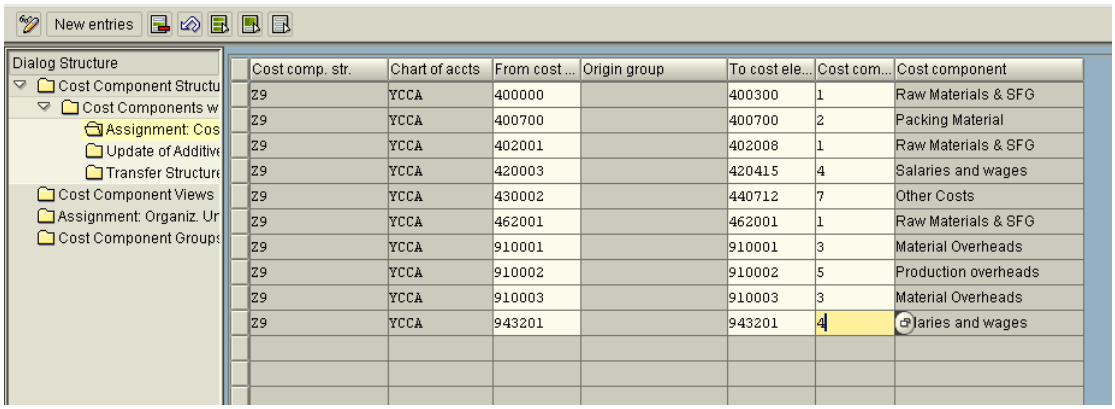
Now we need to attach the cost component structure to the cost elements

3. Assign the cost elements to these cost components.
   For each cost component, enter the cost component structure, the chart accounts, and the relevant cost element interval.

Select

Double click 

Click on 

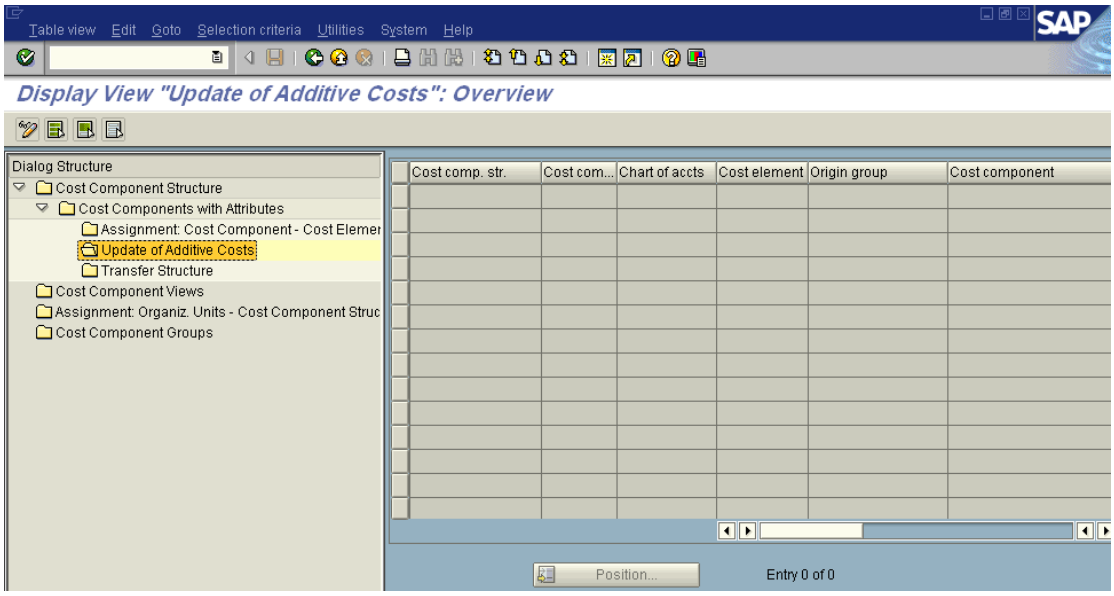


Cost comp. str.	Chart of accts	From cost ...	Origin group	To cost ele...	Cost com...	Cost component
Z9	YCCA	400000		400300	1	Raw Materials & SFG
Z9	YCCA	400700		400700	2	Packing Material
Z9	YCCA	402001		402008	1	Raw Materials & SFG
Z9	YCCA	420003		420415	4	Salaries and wages
Z9	YCCA	430002		440712	7	Other Costs
Z9	YCCA	462001		462001	1	Raw Materials & SFG
Z9	YCCA	910001		910001	3	Material Overheads
Z9	YCCA	910002		910002	5	Production overheads
Z9	YCCA	910003		910003	3	Material Overheads
Z9	YCCA	943201		943201	4	laries and wages

Click on Save 

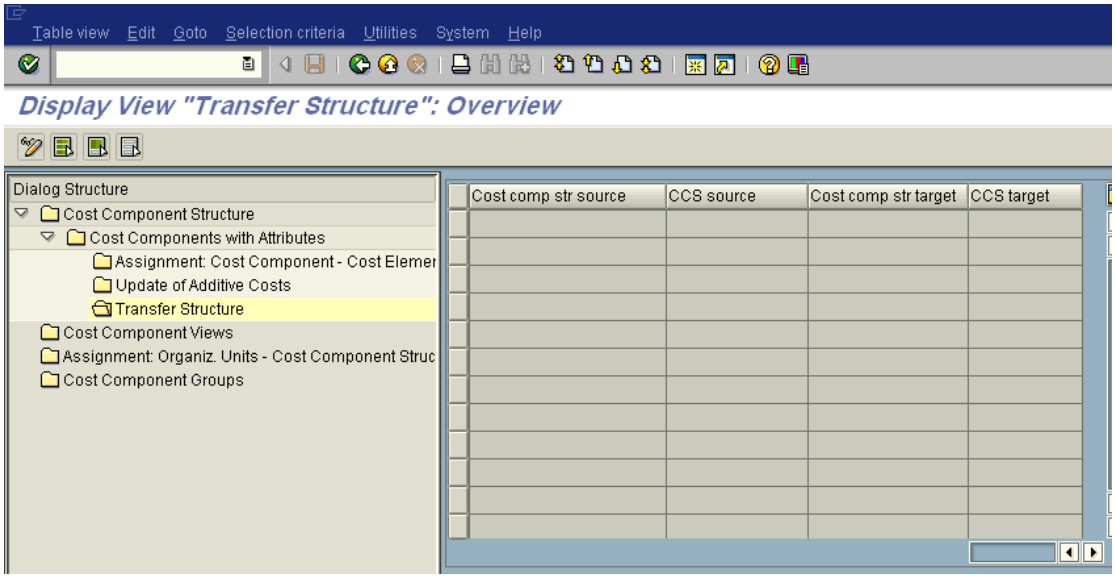
4. Here you can define which cost elements or cost elements and origin groups are proposed in cost estimates without quantity structure or when additive costs are entered when you enter a cost component.

   We are not configuring the Update of additive costs which is similar to above maintenance.



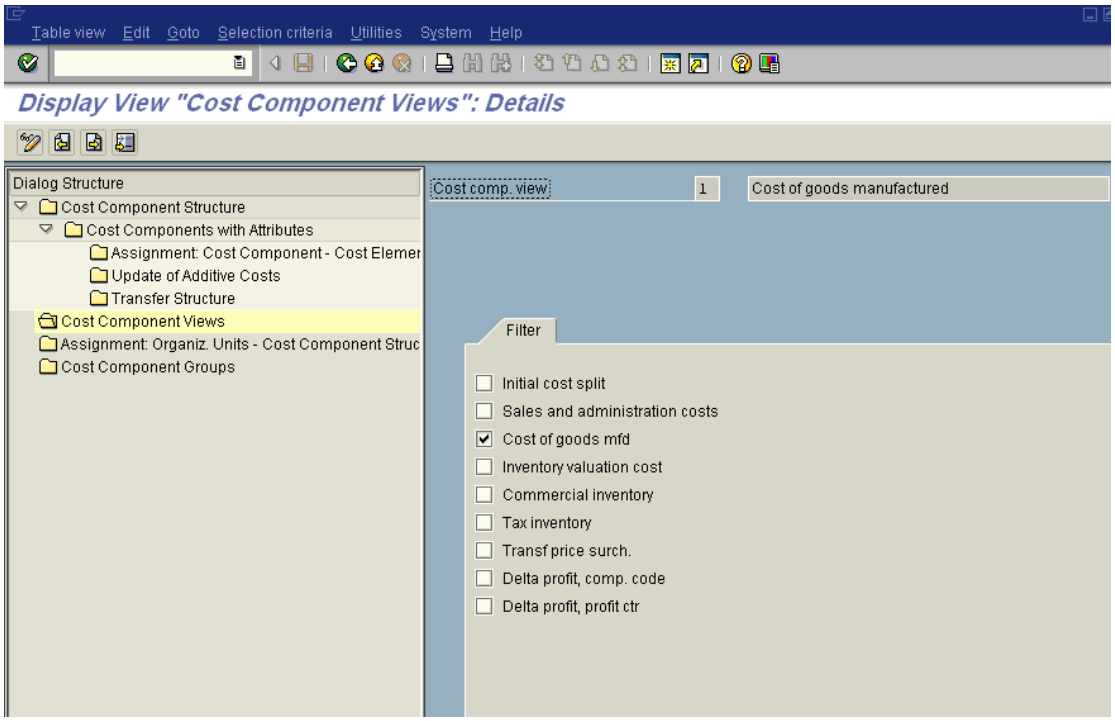
5. The transfer structure transfers the costs from one cost component structure to the cost components of another cost component structure. If you want to transfer data from a primary cost component split in Cost Center Accounting and the primary cost component split uses a different cost component structure, assign the cost components of the source cost component structure to the cost components of the target cost component structure.

We are not configuring the Transfer structure

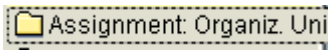


6. We want only a single cost component view i.e. Costs of goods manufactured

Double click 



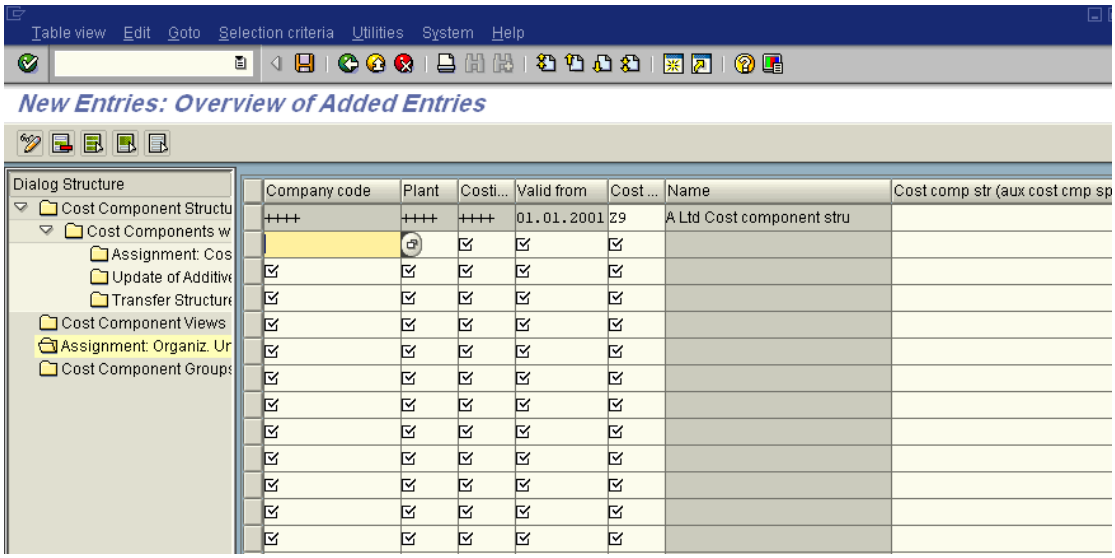
7. Assign the cost component structure to the relevant organizational units, and specify when the assignment is valid and whether you want to have an auxiliary cost component split in addition to the main cost component split.

Double click 

Click on 

We are masking the company code, plant and costing variant to the cost component structure. You can even specify actual entries instead of masking.

We can attach one more cost component split (called as the auxiliary cost component split) which is for statistical purpose. You need to first configure the auxiliary cost component split.

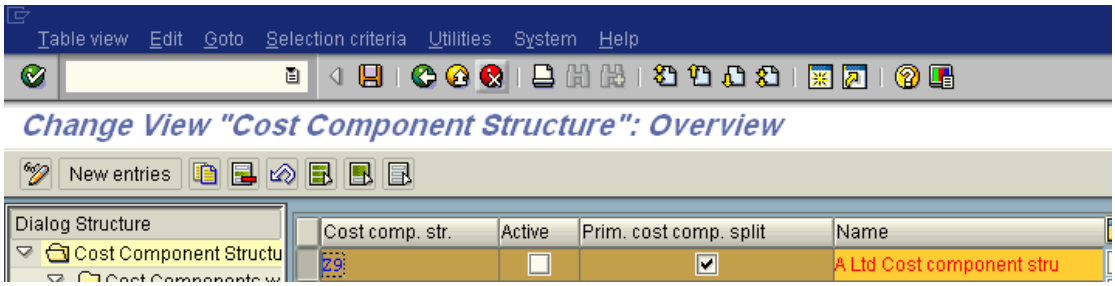


8. You can group the cost component split into Cost component groups. You create cost component groups in this step and then attach these cost component groups to the individual cost component structure. A possible cost component group could be BOM, Routing, BOM & Routings.

We are not configuring anything over here. In case you need to configure Double click Cost Component Grou and maintain the entries.

9. When the cost component structure is no longer in the creation phase, activate it.

After configuring all the above you need to activate the cost component structure. To activate click on Active



Click on Save

2. Material Cost Estimate with Quantity Structure

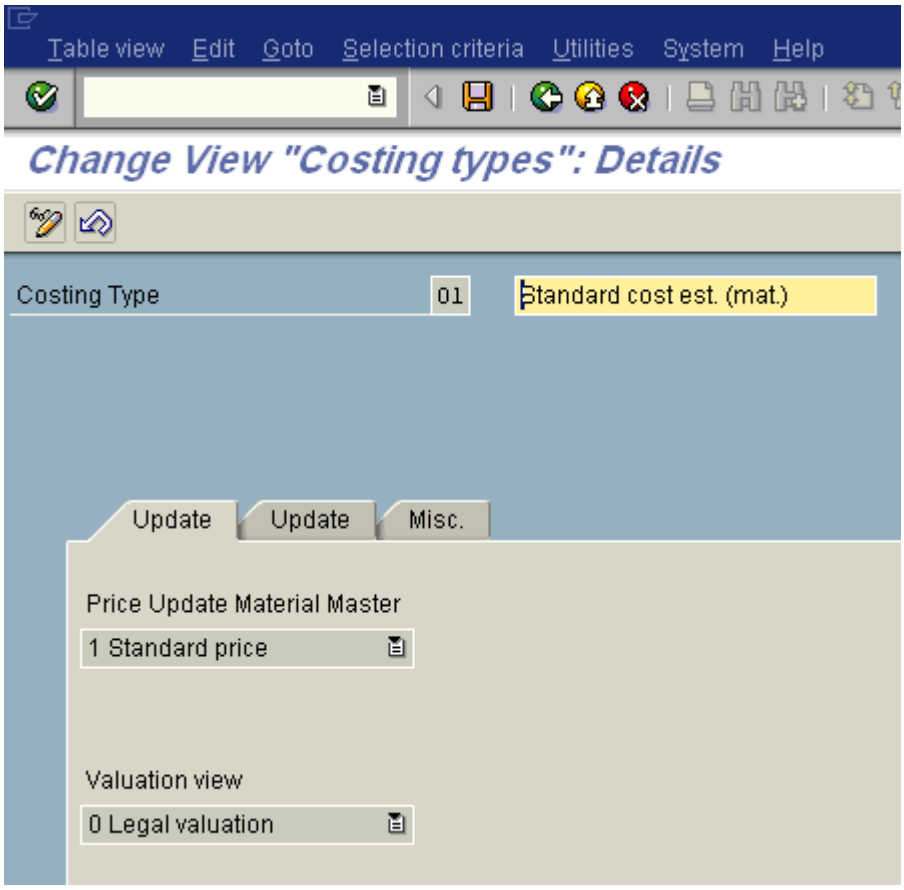
In the steps 2.a to 2.g we will configure a costing variant. A costing variant has various components within it like costing type, valuation variant, date control, quantity structure control, transfer strategy etc. We will first see the components within it and finally the costing variant. Costing variant is a link between application and customizing and enables us to cost a product (mainly Finished goods and Semi-finished goods).

2.1 Define Costing Types

IMG → Controlling → Product Cost Controlling → Product Cost Planning → Material Cost Estimate with Quantity Structure →Costing Variant: Components → Define Costing Types

In the costing type, you define which field in the material master record the costing results can be transferred to:
Standard cost estimate as the standard price or the field commercial price.
You can also specify that no update takes place in the material master.
Further you define here which valuation view is costed? Legal. Group or profit center (in case material ledger is activated)

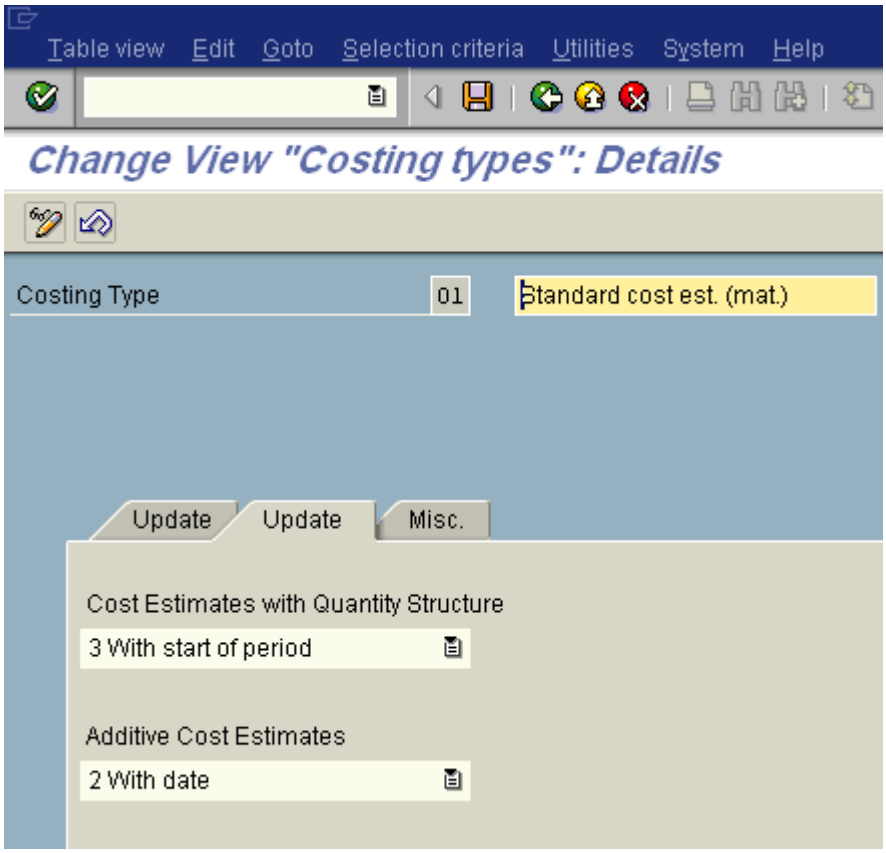
We will use the standard costing type 01 the configuration of which is as follows:-



- Whether the cost estimate should be saved with a date :

  - ✓ without date
  - ✓ With date
  - ✓ With start of period

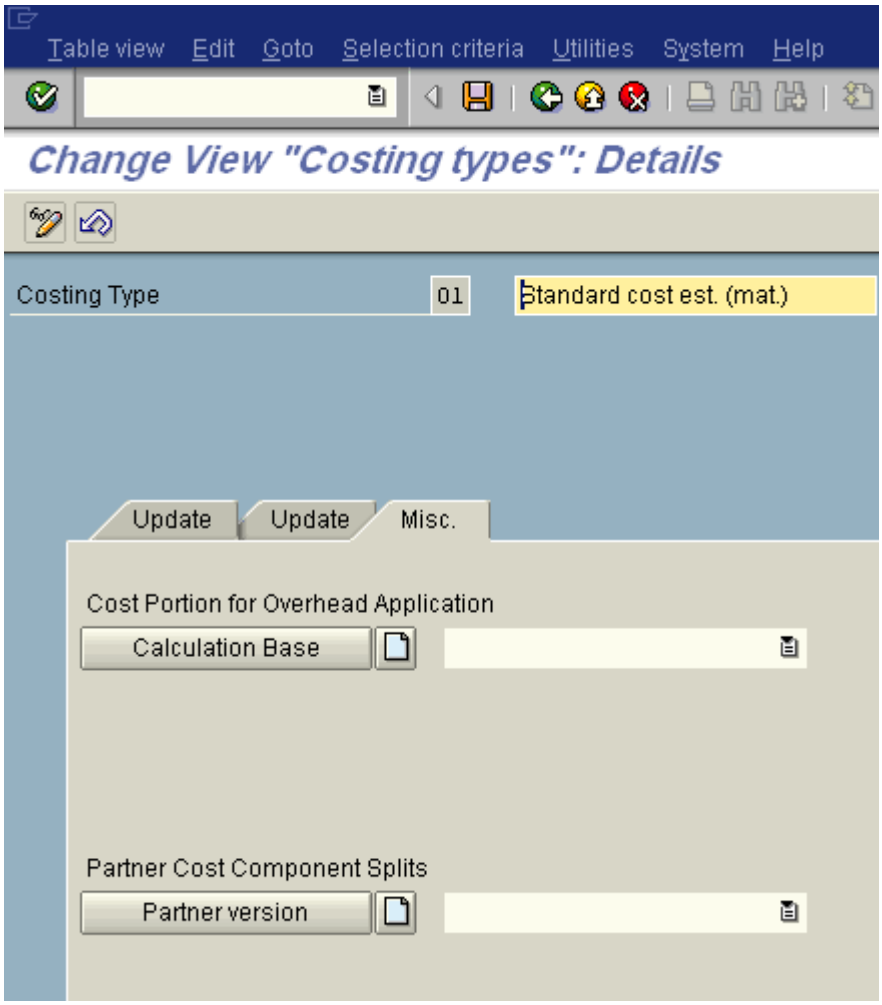
For the standard cost estimate, you must update automatic costing with the *With start of period* indicator. This ensures that the results of the standard cost estimate can be used as the standard price for that period.
For the other costing types, you can update the costing results with the *With date* indicator, for example. In this case the current date becomes part of the key.



Here you define on what basis overhead is calculated:-

You enter a cost component view. i.e. cost of goods manufactured, sales and administration costs etc.

We are calculating overheads not on the basis of cost component view but on other bases. Therefore nothing is configured here.

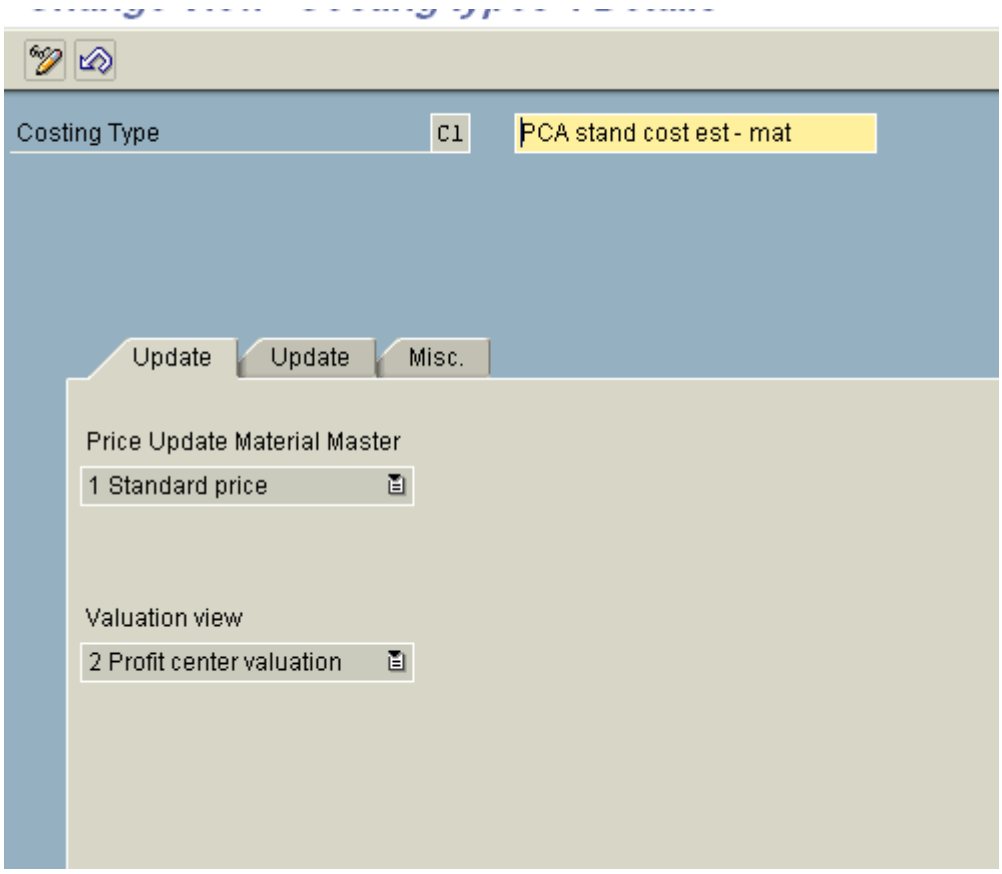


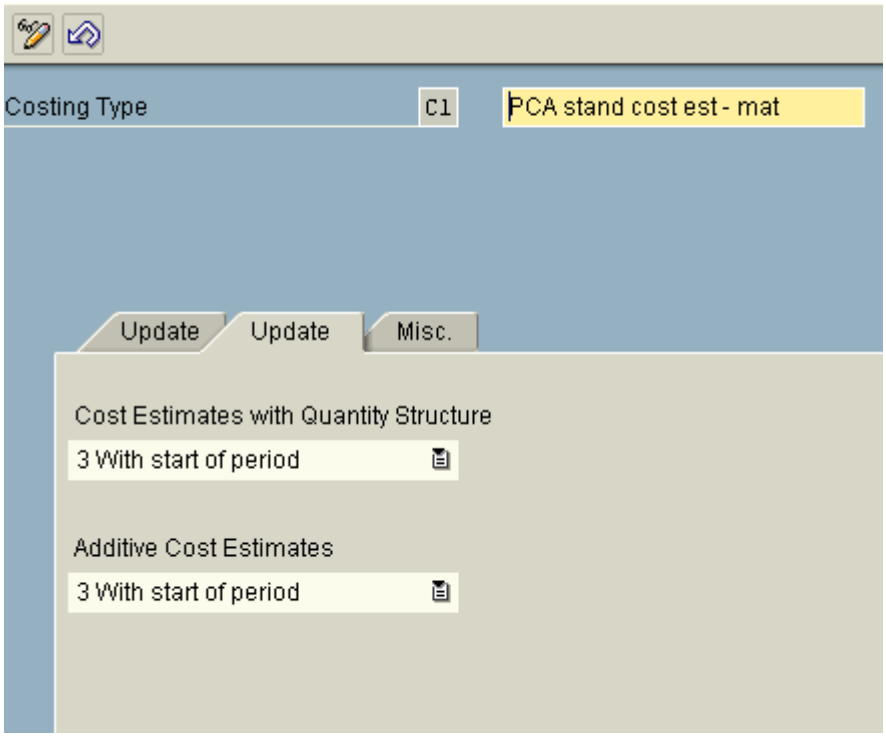
Let us create costing type for Group valuation and Profit center valuation, assuming we are using material Ledger.

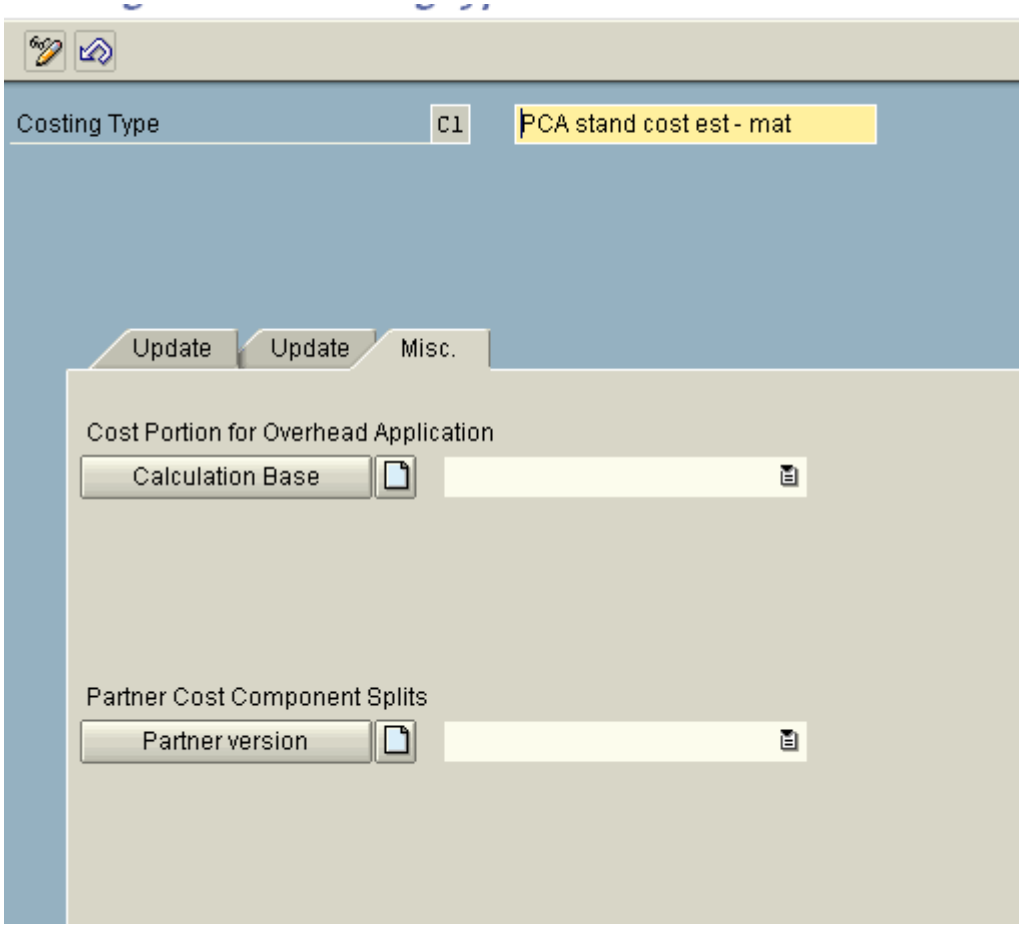
(These steps are optional, meaning it is only required if material ledger is implemented)

Click on 

Update the following:-

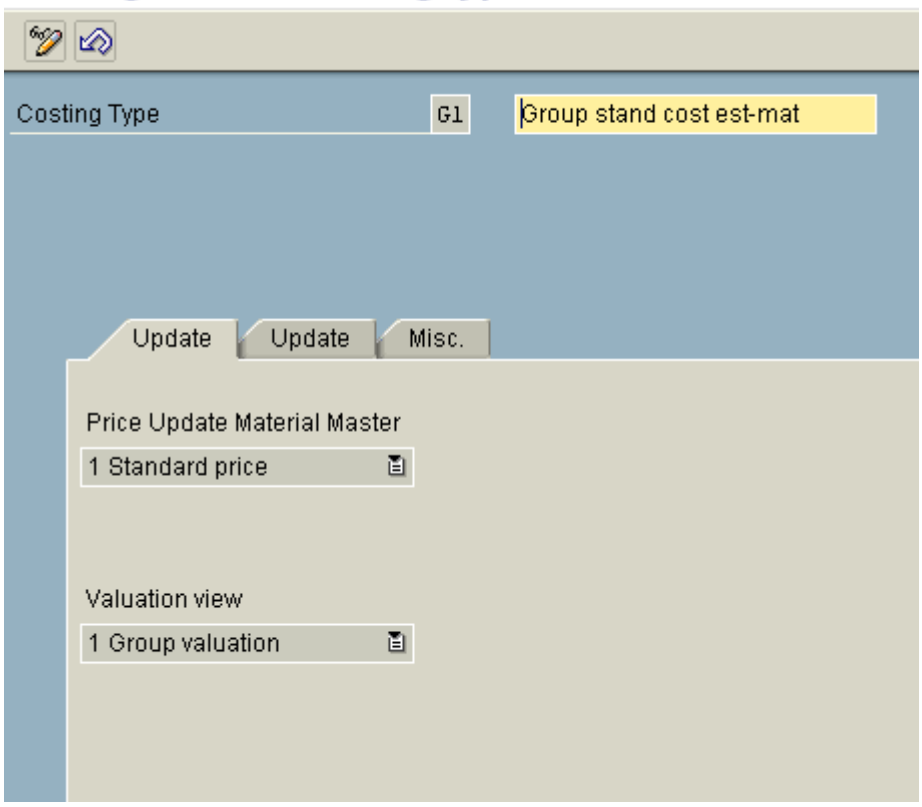

Costing Type
C1
PCA stand cost est - mat
Update
Update
Misc.
Price Update Material Master
1 Standard price
Valuation view
2 Profit center valuation

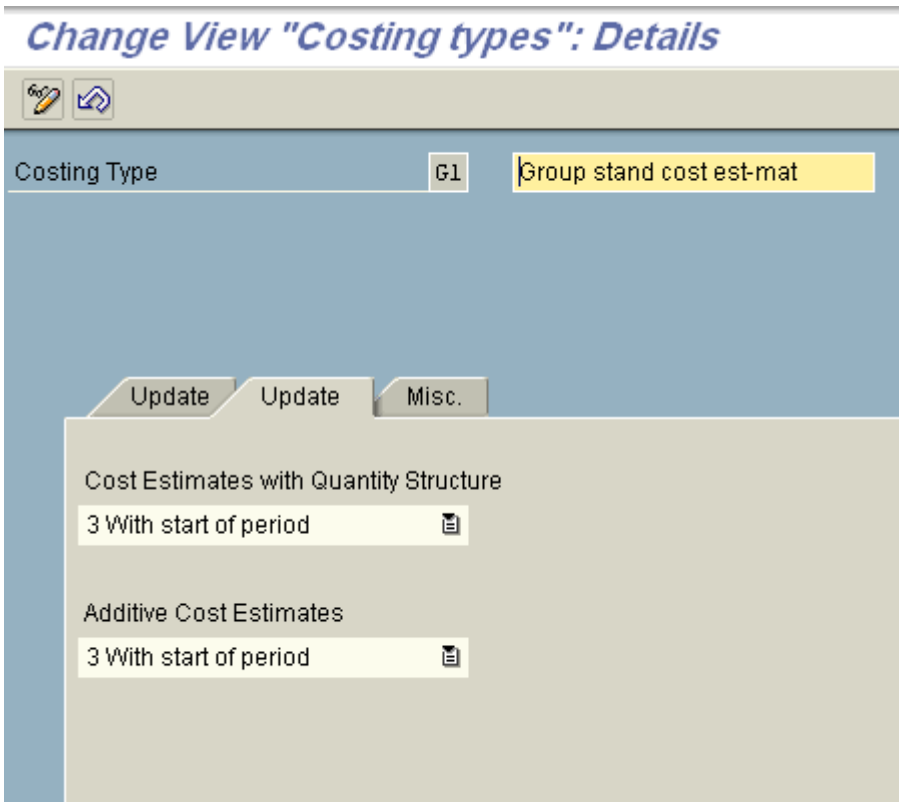

Costing Type
C1
PCA stand cost est - mat
Update
Update
Misc.
Cost Estimates with Quantity Structure
3 With start of period
Additive Cost Estimates
3 With start of period

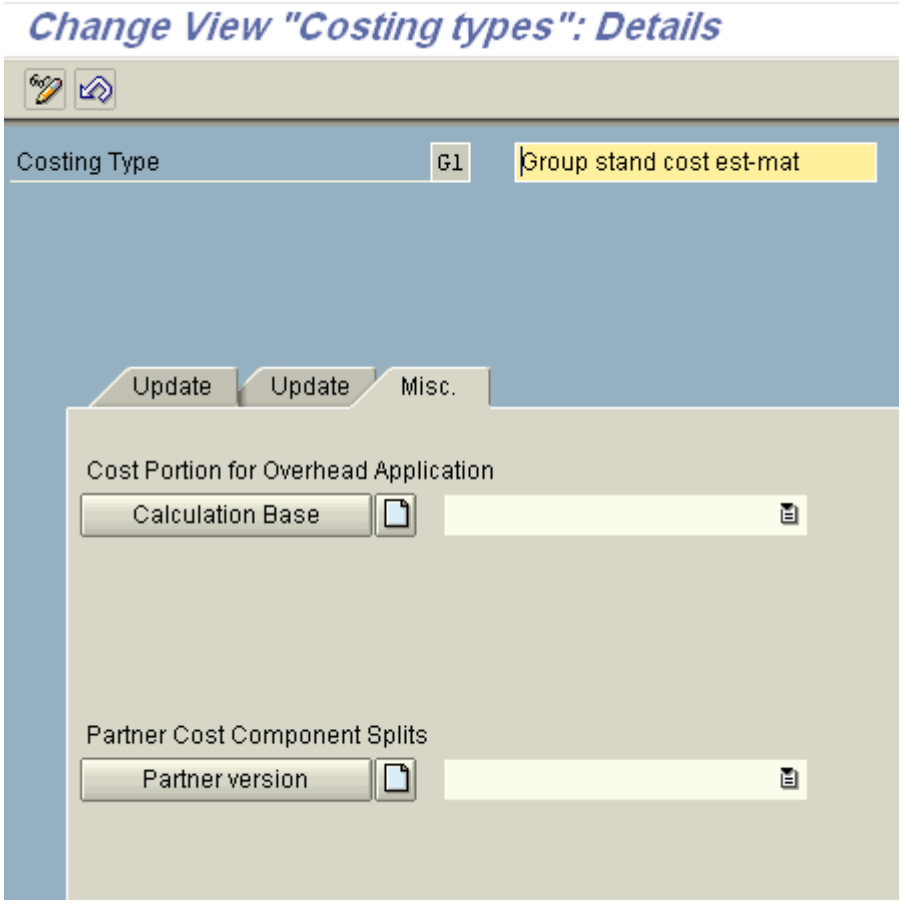


Click on Save 

Click on new entries to Create group cost est costing type


Costing Type
G1
Group stand cost est-mat
Update
Update
Misc.
Price Update Material Master
1 Standard price
Valuation view
1 Group valuation


Change View "Costing types": Details
Costing Type
G1
Group stand cost est-mat
Update
Update
Misc.
Cost Estimates with Quantity Structure
3 With start of period
Additive Cost Estimates
3 With start of period



Click on Save

2.2 Define Valuation Variants

IMG → Controlling → Product Cost Controlling → Product Cost Planning → Material Cost Estimate with Quantity Structure →Costing Variant: Components → Define Costing Variants

Valuation variant containing the parameters required for valuation of a cost estimate.

Let us create a valuation variant with key **Z91**. We will discuss the configuration required for each of the tabs.

Click on New entries **and update the following:-**

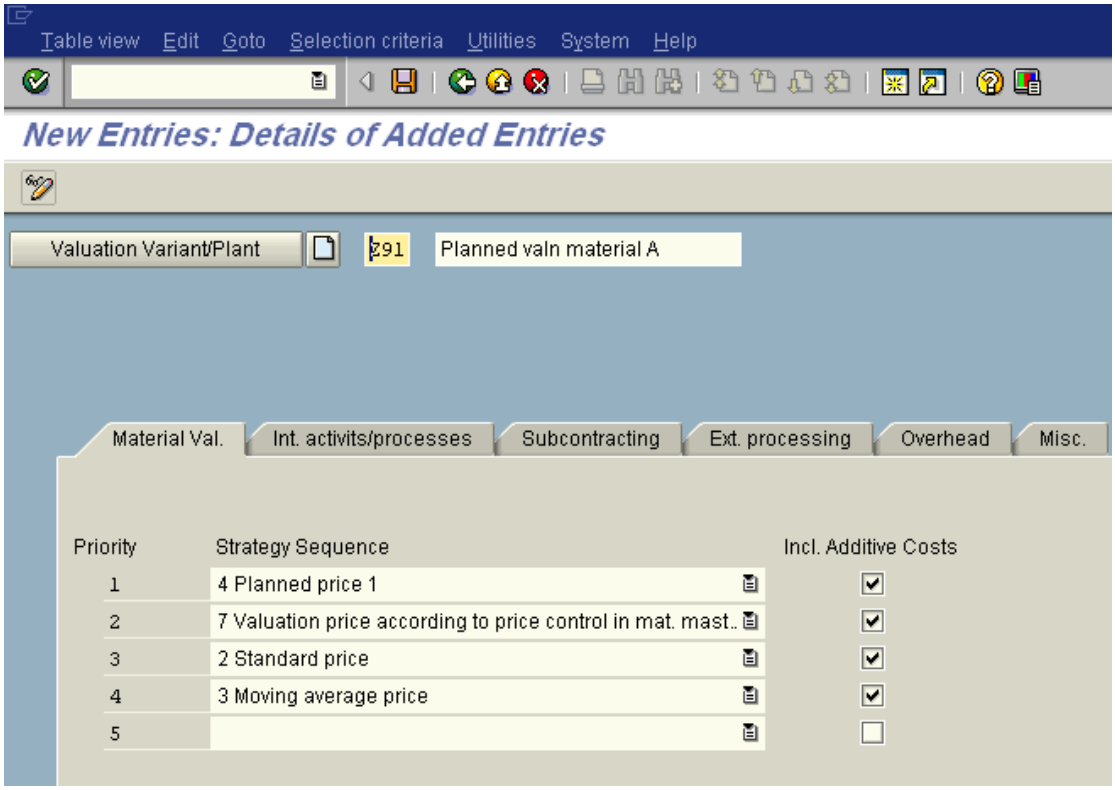
In the tab Material valuation

We define the sequence in which the system searches for prices from the accounting view or costing view of the material master record to valuate materials. You can also access prices from purchasing info records and condition types.

We have defined the following sequence:-

Planned price1 is manually maintained in the costing view of the material master. System while searching prices for raw and packing material first accesses planned price 1. In case no planned price is maintained, then system looks for the valuation price according to price control in the material master. Thus in case of raw & packing material the price control is V (moving average) it looks for a moving average price. In case no moving average price is maintained in the material master, the 3rd strategy will be used i.e. system will look for standard price in the material master. The fourth strategy is used in case a material is valuated with standard price and fails all the first 3 criteria.

The Inc. additive costs is also selected (**this selection is optional**) in case you manually want to maintain additional price for freight in another transaction called as maintain additive cost.



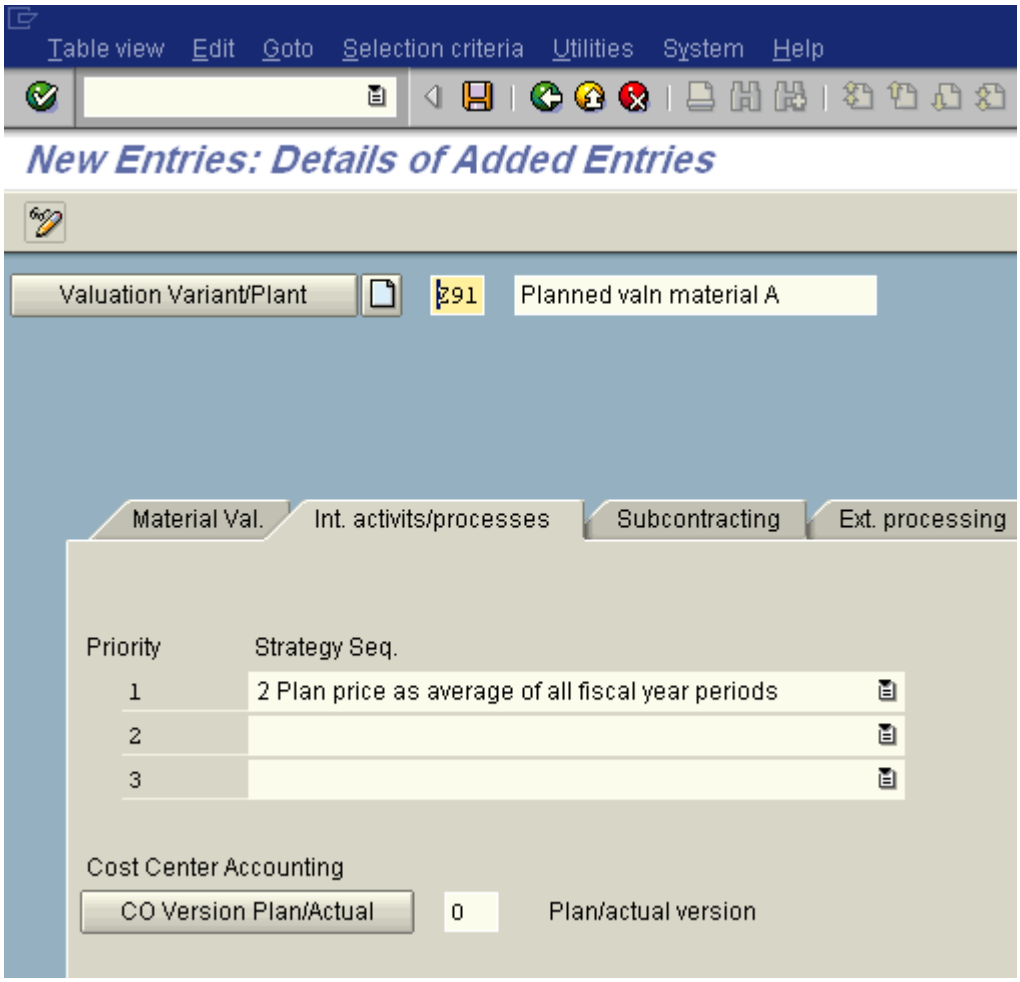
In the tab Activity Types / Processes

Here we define the sequence in which the system searches for prices in activity type planning in Cost Center Accounting Costing to valuate the utilized activity types.
You also specify which plan/actual version is used.

The plan/actual version is maintained in the controlling area, we have maintained in the controlling area 9100 in the **e-book cost center accounting. We will select the plan average price of all periods i.e January to December.**

In case you want to have different activity prices for group and profit center view. You need to create further 2 valuation variants and assign CO version D01 and D02 to the valuation variant. (Applicable only where material ledger is activated)

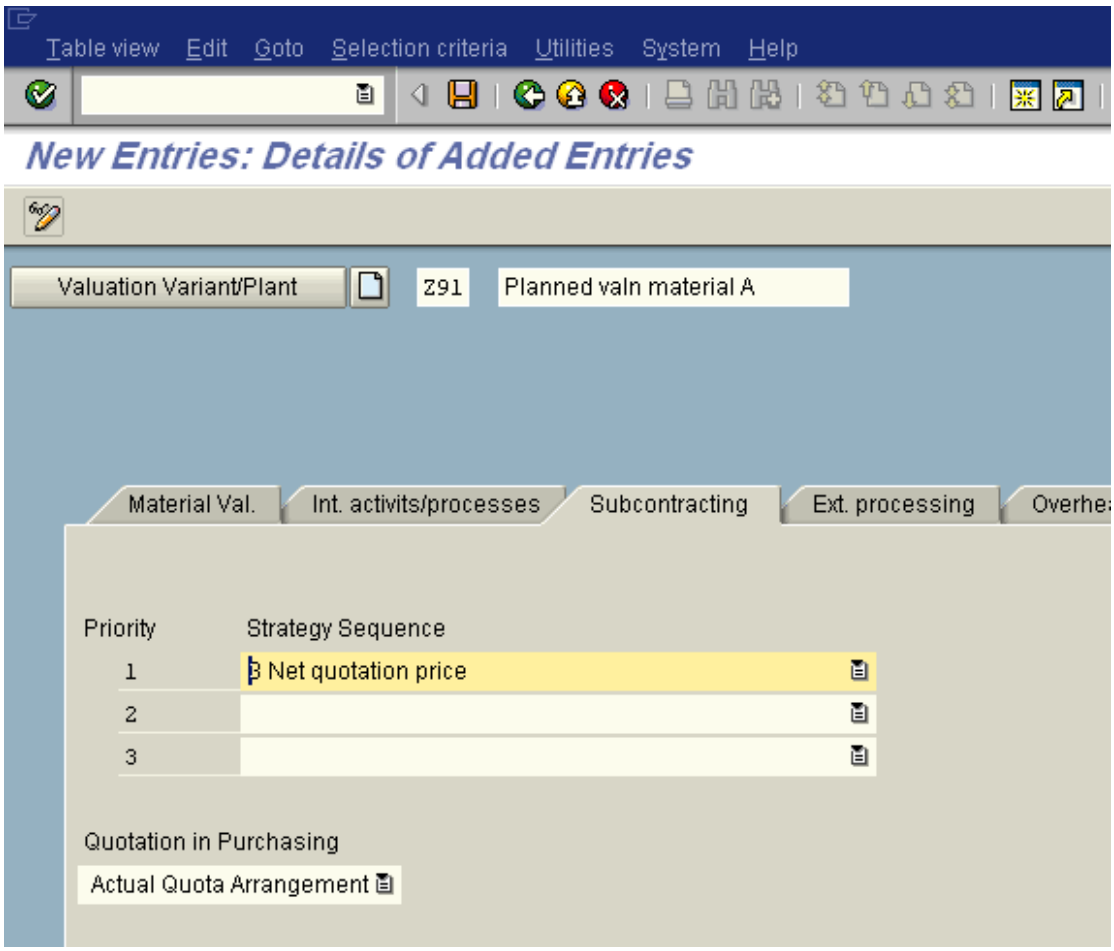
Else the same valuation variant can be assigned to the 3 costing variants(Legal, Group, Profit Center valuation)



In the tab Subcontracting

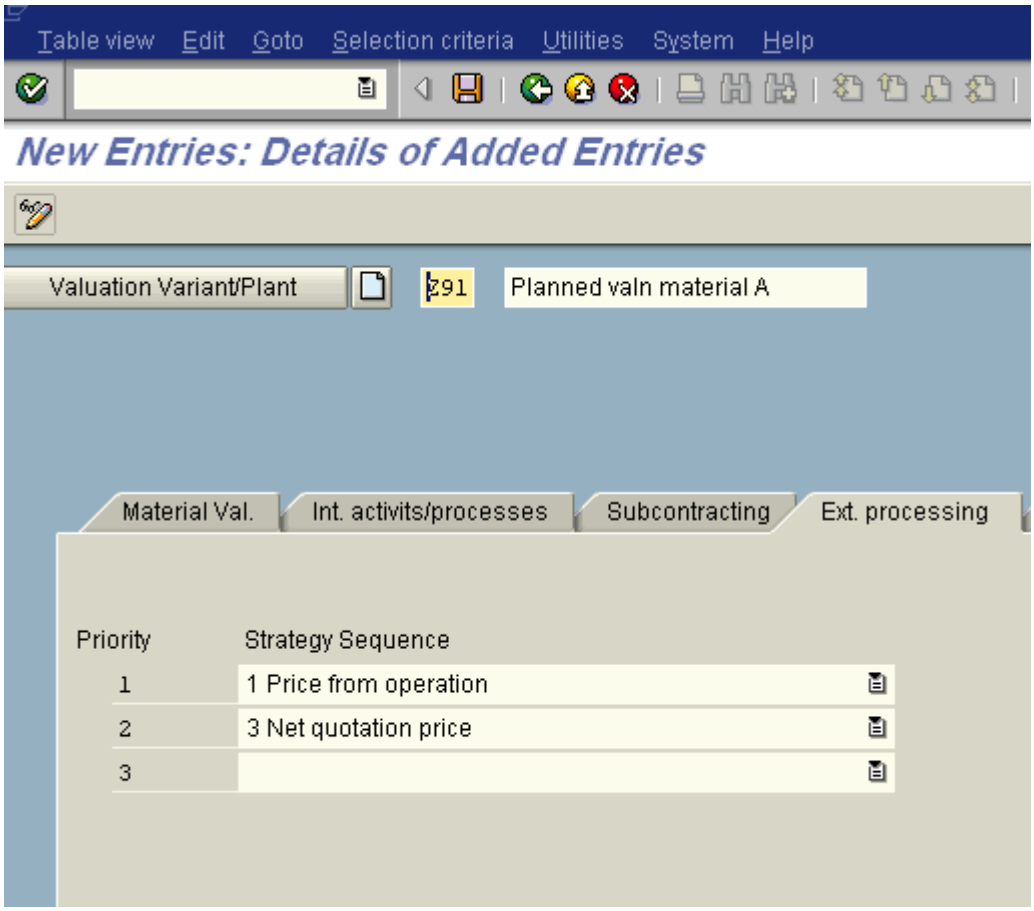
Here we define the sequence in which the system searches for prices in the purchasing info record. In purchasing, quota arrangements are used to create a mixed price for materials that are manufactured with external vendors with parts provided by the customer. You can specify whether the quota of the individual vendors that are entered in the source list for the material to be processed should be determined

through the planned quota arrangement or the actual quota arrangement.



In the tab External processing

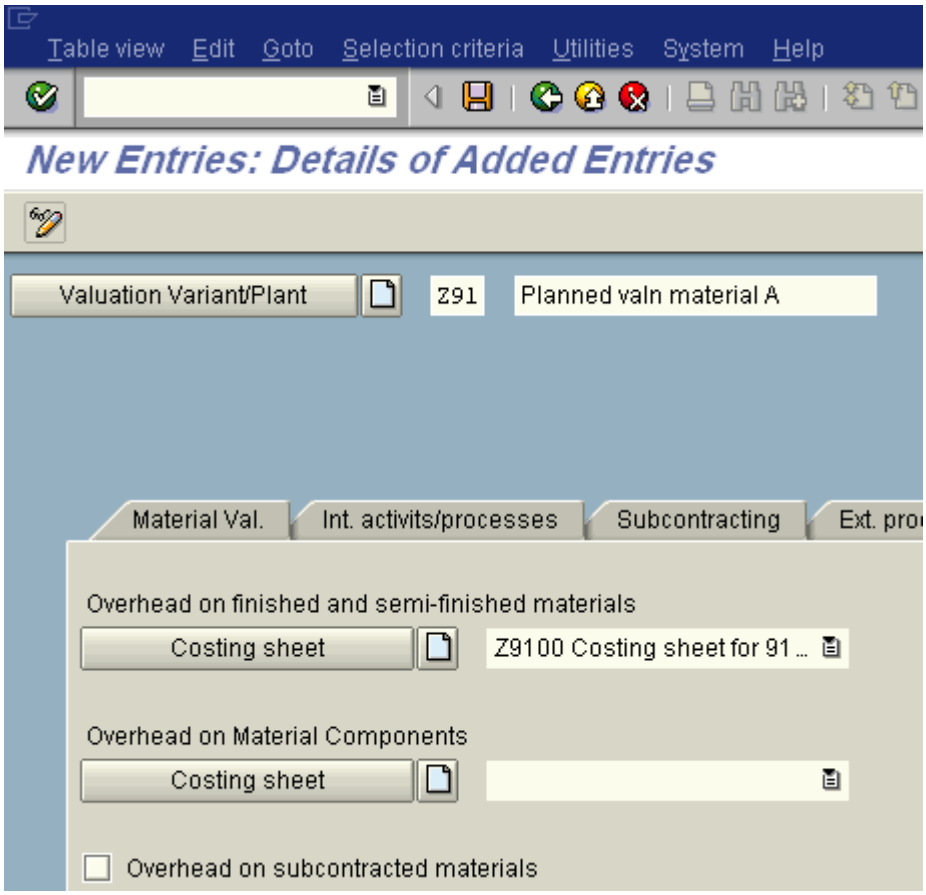
Here we define the sequence in which the system searches for prices in the purchasing info record or routing operation for valuation of the external activities.
In our configuration we have defined that the system will search for price from operation (which is manually maintained in the routing), in case no price is maintained the system will search for info records maintained in the system (net quotation price)



In the tab Overhead costs

Here we link the costing sheet Z9100 Costing sheet of A Ltd created by use earlier to the valuation variant.

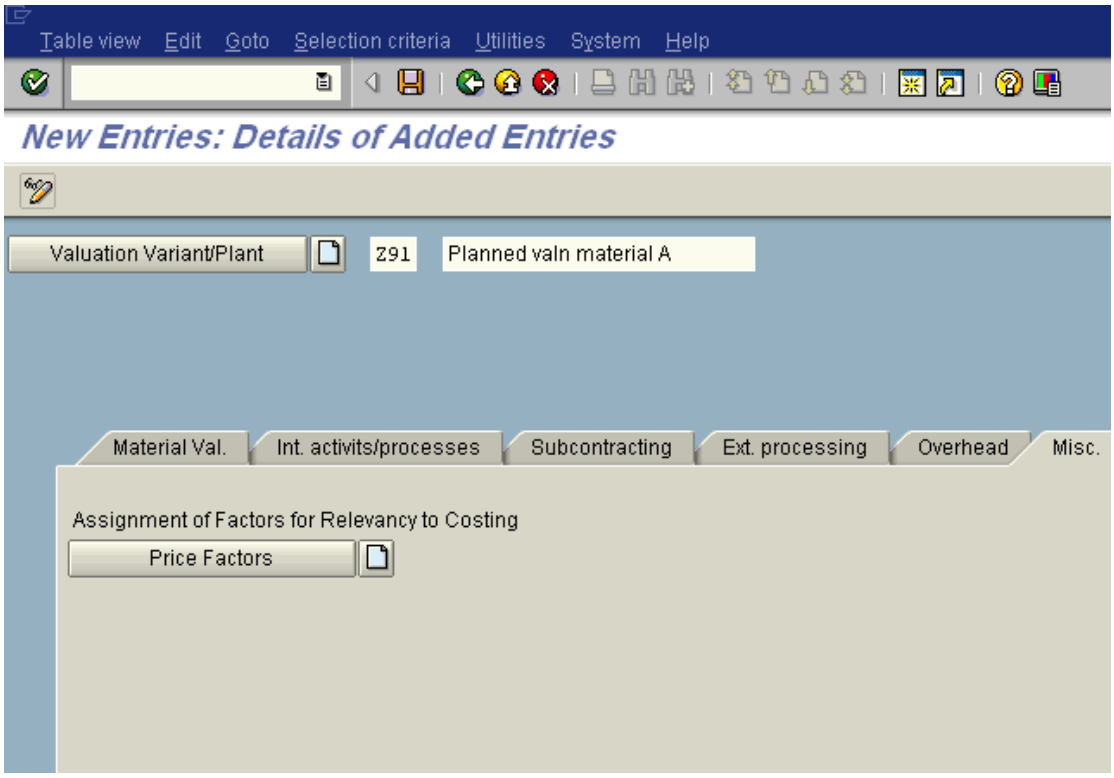
We can also specify whether overhead is calculated for subcontracted materials in material costing. We do not require this so we will not configure this.



Important note

If you want to use different valuation strategies or different overhead rates in plants that belong to the same company code, you can define plant-specific valuation variants by assigning a valuation variant to a plant. Choose the push button *Valuation variant/plant.* If you don't do this, the valuation variants apply to all your plants.

In the tab Misc.



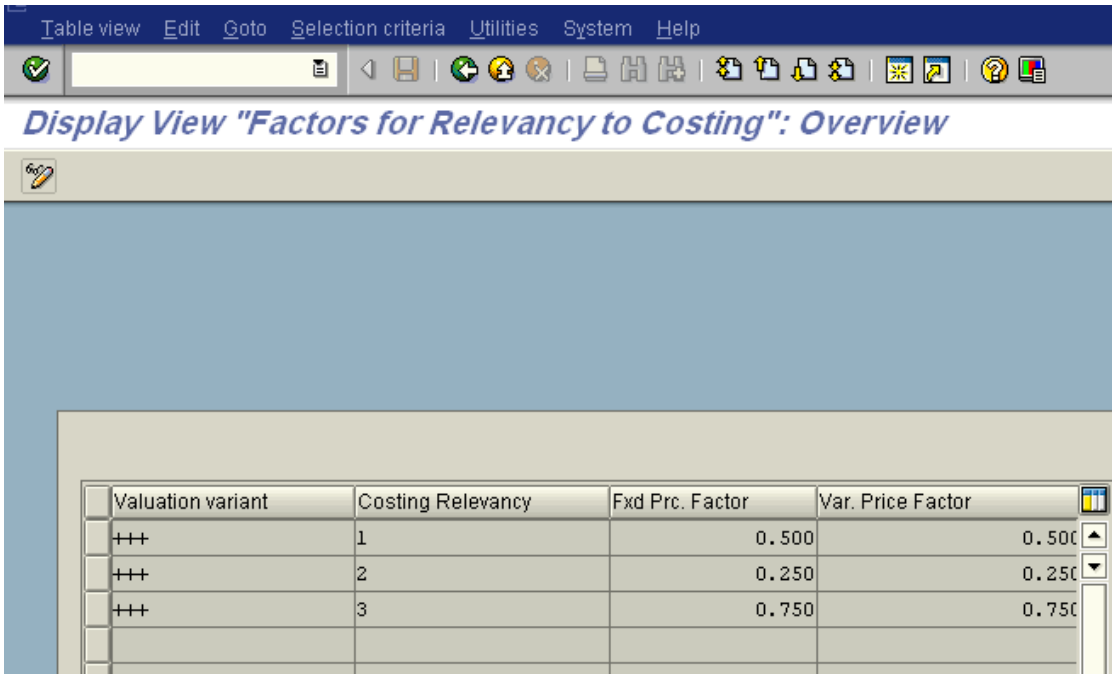
Click 

This is Indicator for relevancy to costing; it controls the extent to which a BOM item, operation, or sub operation in the routing is included in costing.
It is used for the standard cost estimate and the calculation of planned costs and actual costs for a work order, this indicator determines whether the item is included in costing.

Examples

- A BOM item or operation for which the indicator for relevancy to costing is *X* is fully relevant to costing.
- A BOM item or operation without an indicator for relevancy to costing is not relevant to costing at all.

The configuration shown below is the Std setting in SAP. The costing relevancy indicator 1, 2 and 3 indicates the relevance for costing purpose. If these indicators are selected in BOM or routing they become applicable.



Click on 

Click 

2.3 Define Date Control

IMG→ Controlling → Product Cost Controlling → Product Cost Planning → Material Cost Estimate with Quantity Structure →Costing Variant: Components → Define Date Control

Date control, controls the dates on which the quantity structure and the value structure are created. The dates determine the following parameters:

- For product costing (material cost estimate with quantity structure, sales order costing)

  The validity period of the cost estimate

  The date on which the quantity structure is determined (quantity structure date)

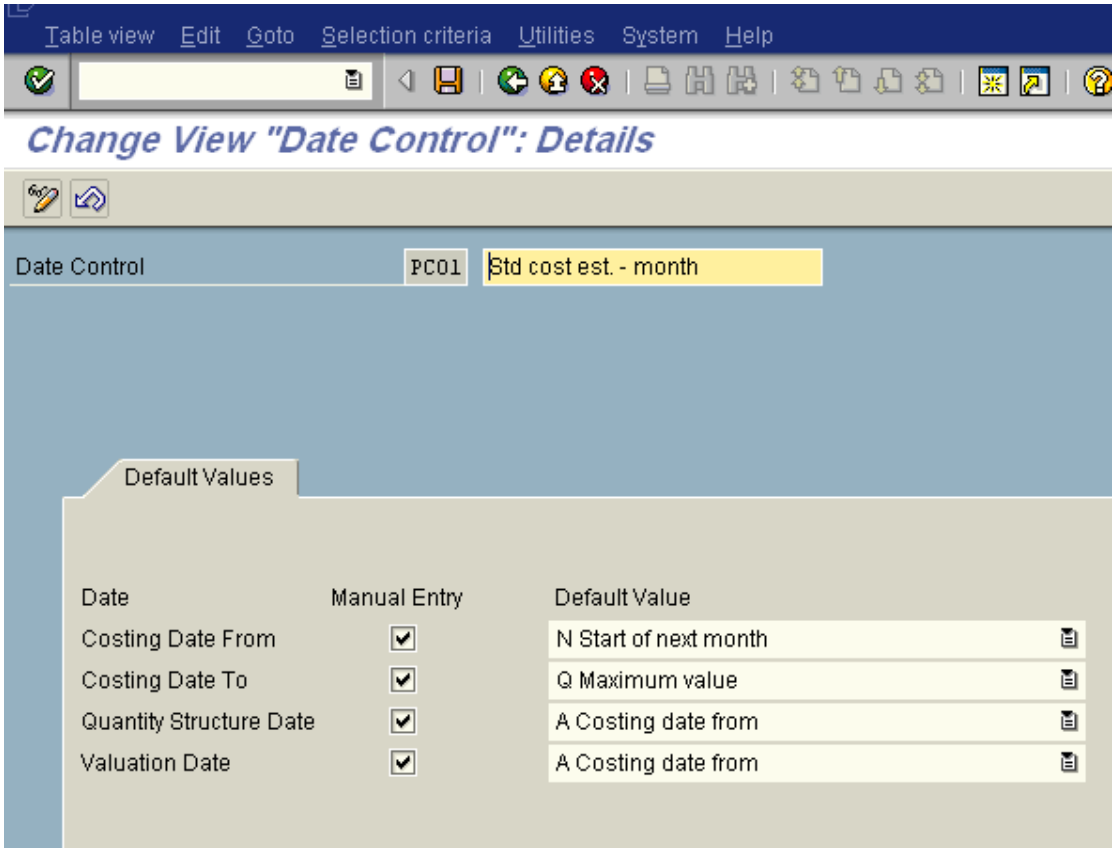
  The date on which the quantity structure is valuated (valuation date)

Date control determines which dates are proposed or displayed when a cost estimate is created, and whether these dates can be changed by the user.

The standard system contains predefined date control IDs. You can use these without making any changes.

We will use the standard SAP date control PC01.

We will see the configuration for the standard and change from **start of month** to **Start of next month**



2.4 Define Quantity Structure Control

IMG → Controlling → Product Cost Controlling → Product Cost Planning → Material Cost Estimate with Quantity Structure →Costing Variant: Components → Define Quantity Structure Control

Quantity structure control is used in cost estimates with quantity structure to specify for each plant how the system searches for valid alternative BOMs and alternative routings to create a quantity structure for multilevel BOMs. The search is carried out on the basis of two parameters:

- Application of BOMs to determine alternatives automatically

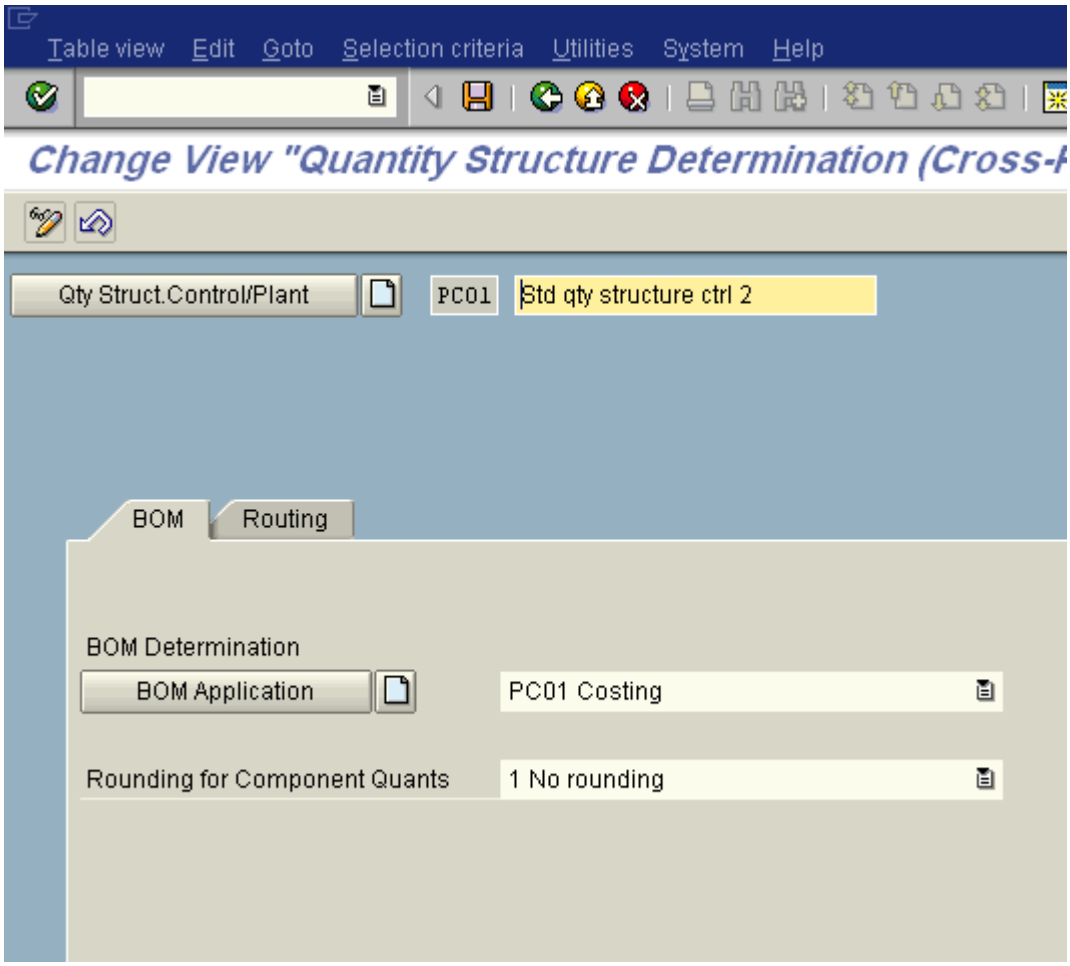
  This key determines how the system should choose the suitable alternative for the different company areas in which the BOM is used.

- Selection ID for selecting alternative routings

  This key determines the priority given to routings during routing selection.

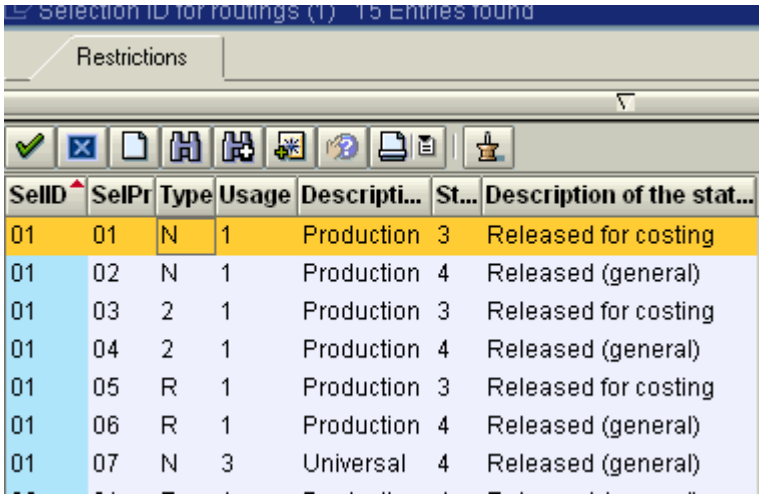
Let us use the standard setting PC01

We will display the settings of PC01

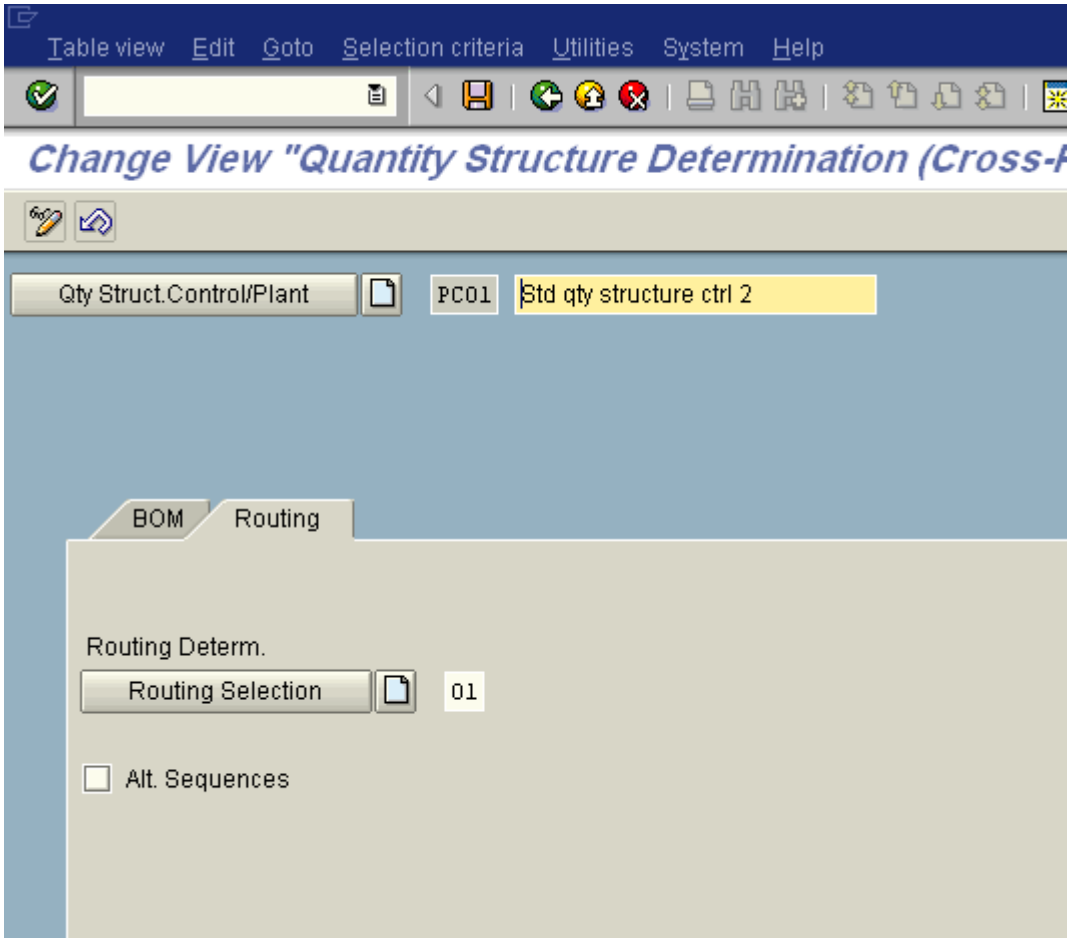


Selection ids for routing

How the routings are selected. The selection id is 01 and the selection procedure is numbered 1, 02, 03, 04, 05, 06 07. Type (the task list type the routing types for e.g. Routings, Reference operation sets, Rate routings, Reference rate routings, Standard networks, Rough cut planning profiles)



SelID	SelPr	Type	Usage	Descripti...	St...	Description of the stat...
01	01	N	1	Production	3	Released for costing
01	02	N	1	Production	4	Released (general)
01	03	2	1	Production	3	Released for costing
01	04	2	1	Production	4	Released (general)
01	05	R	1	Production	3	Released for costing
01	06	R	1	Production	4	Released (general)
01	07	N	3	Universal	4	Released (general)



2.5 Define Transfer Strategy

IMG → Controlling → Product Cost Controlling → Product Cost Planning → Material Cost Estimate with Quantity Structure →Costing Variant: Components → Define Transfer Strategy

The purpose of this setting is to prevent the system from creating a new cost estimate for a material when costing data already exists. Instead, the existing costing data is simply transferred into the new cost estimate. This improves performance.

- *Single-Plant Transfer*

  If cost estimates for certain materials already exist in the individual levels of the BOM, they are not recosted. Rather, the existing costing data is transferred into the cost estimate in accordance with the transfer control.

  If you always want to recost, choose the transfer control *No transfer*.

- *Cross-Plant Transfer*

  The following special procurement types are taken into account for transfer into material cost estimates:

  - Transfer from other plant
  - Production in other plant

  If you have entered one of these special procurement types in the costing view of the material master record, the system proceeds as follows:

  - In the plant from which the material component is withdrawn according to the special procurement type, the system looks for existing costing data and transfers that data into the cost estimate.

Strategy Sequences for Single-Plant and Cross-Plant Transfer

The strategy sequence determines the order in which the system searches for costing data. If the system cannot select a cost estimate even after reaching the end of the strategy sequence, it explodes the BOM of the material and creates a new cost estimate.

You can define up to three strategies for single-plant transfer and three strategies for cross-plant transfer.

You limit the search further by setting the following indicators:

- Within current fiscal year

  Here the costing dates must lie within the current fiscal year.

- Age (periods)

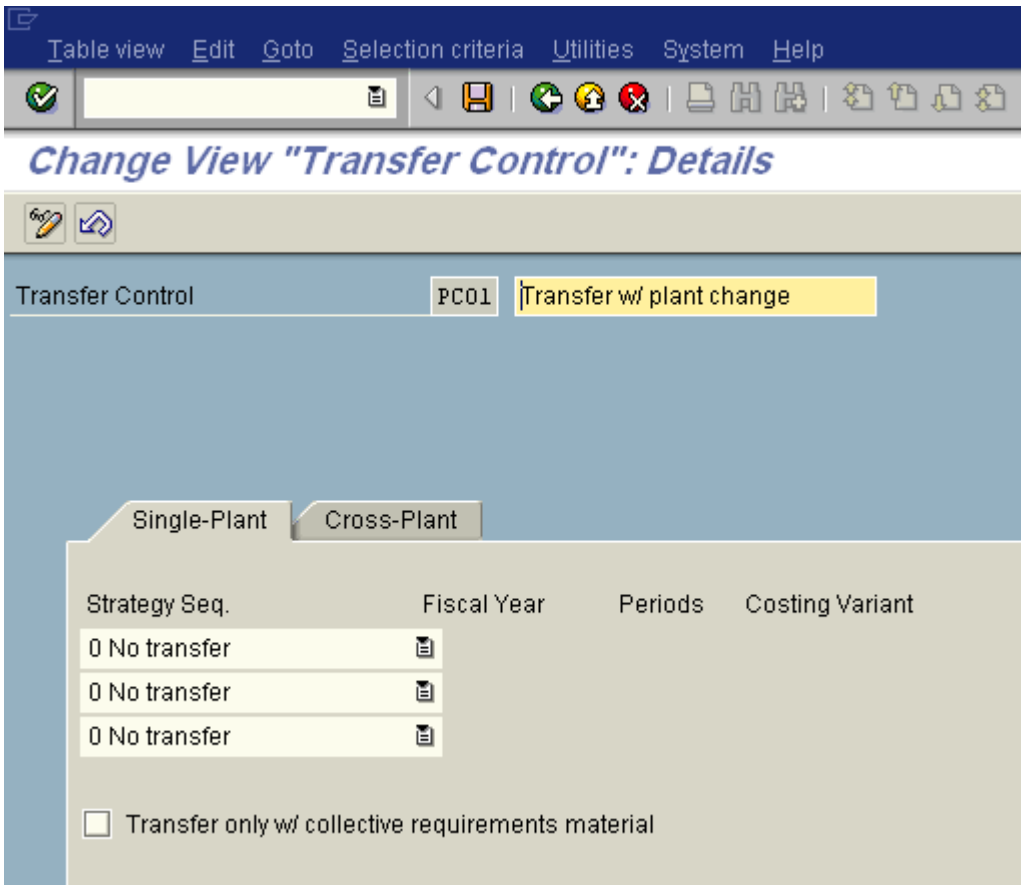
Here you can specify how many periods the system should search for costing data in. If the indicator *within current fiscal year* is set, the number of periods that you enter here is limited to the fiscal year.

If you turn on the indicator *Transfer only with collective requirements material.* the transfer depends on the requirements indicator of the material component.

- For materials in the **individual requirements** the system creates a new cost estimate even if a cost estimate for the material exists according to the strategy sequence.
- For materials in collective requirements, the existing cost estimates are transferred into the new cost estimate.

Let us use the standard PC01 – Transfer w/plant change

We will see the configuration and change it to No transfer, which means that every time a new product is costed using some existing semi-finished goods, system will explode and cost all the semi finished goods

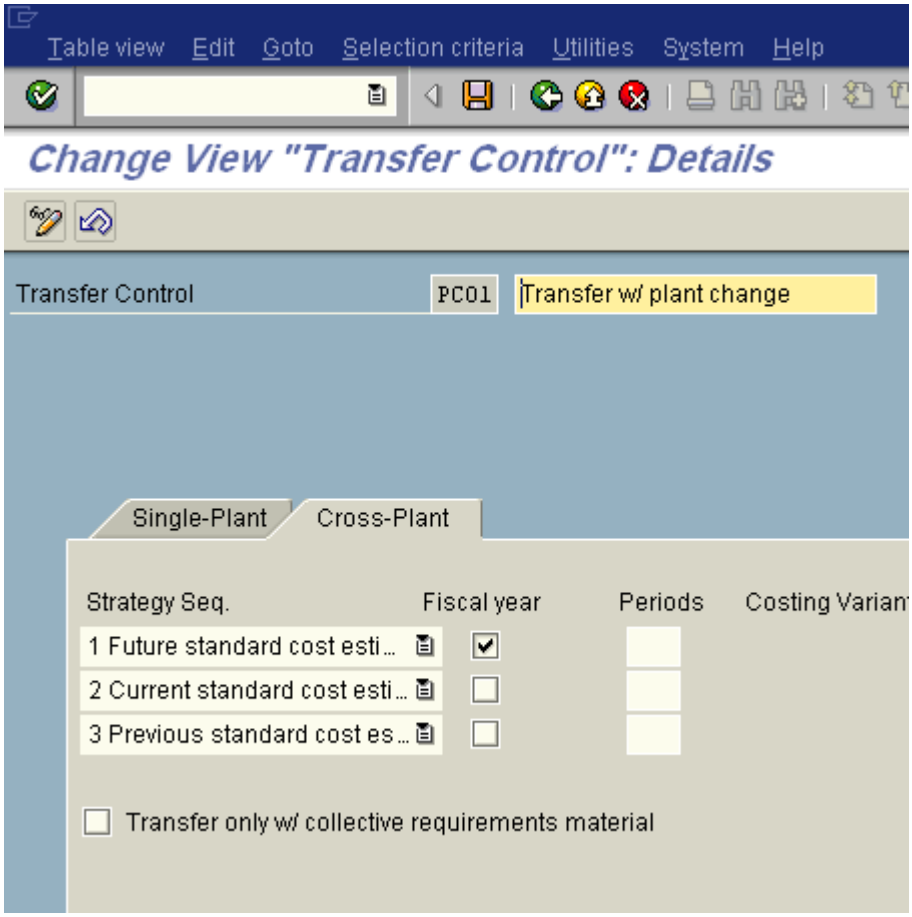


In cross plant we will keep the following strategy sequence:-

Future standard cost estimate
Current standard cost estimate

Previous standard cost estimate

Further the indicator within fiscal year is selected, so that system searches the above costs only in the current fiscal year.



2.6 Define Reference Variants (Optional)

IMG → Controlling → Product Cost Controlling → Product Cost Planning → Material Cost Estimate with Quantity Structure →Costing Variant: Components → Define Reference variants

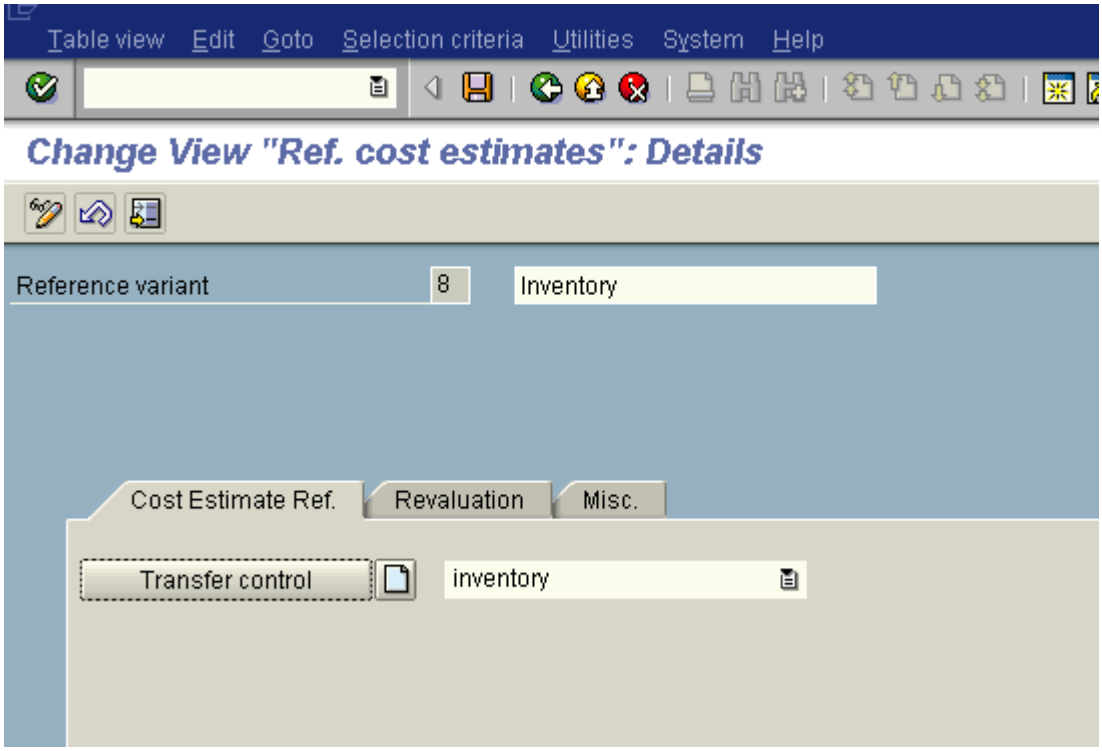
Reference variants allow you to create material cost estimates or costing runs based on the same quantity structure for the purpose of improving performance or making reliable comparisons.

The following are examples of situations where reference variants are useful:

- With a reference variant, the system can use the quantity structure of the exisiting standard cost estimate when it calculates the inventory cost estimate without having to redetermine the quantity structure. In the reference cost estimate, you specify that the overhead for the inventory cost estimate should still be calculated differently.

We are not using reference variant.

The SAP standard reference variant is shown below:-



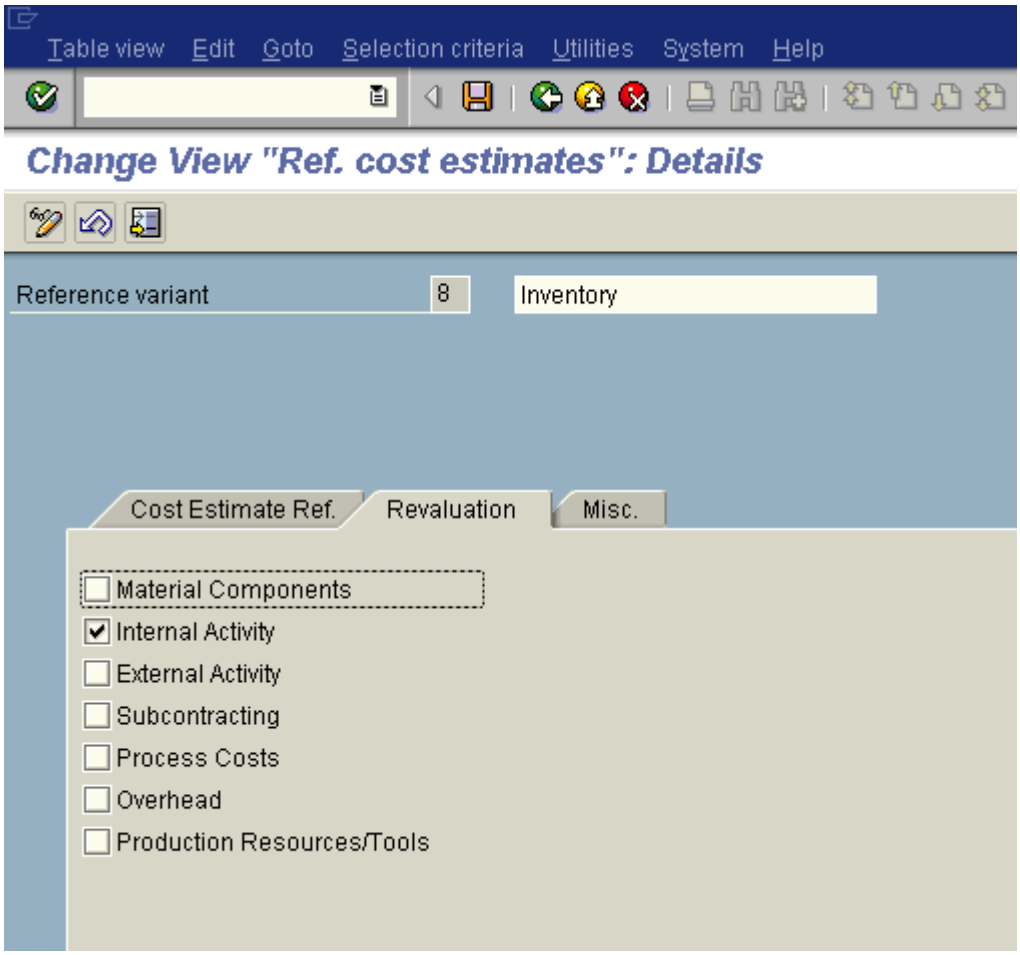


Table view Edit Goto Selection criteria Utilities System Help
Change View "Ref. cost estimates": Details
Reference variant 8 Inventory
Cost Estimate Ref. Revaluation Misc.
Material Components
Internal Activity
External Activity
Subcontracting
Process Costs
Overhead
Production Resources/Tools

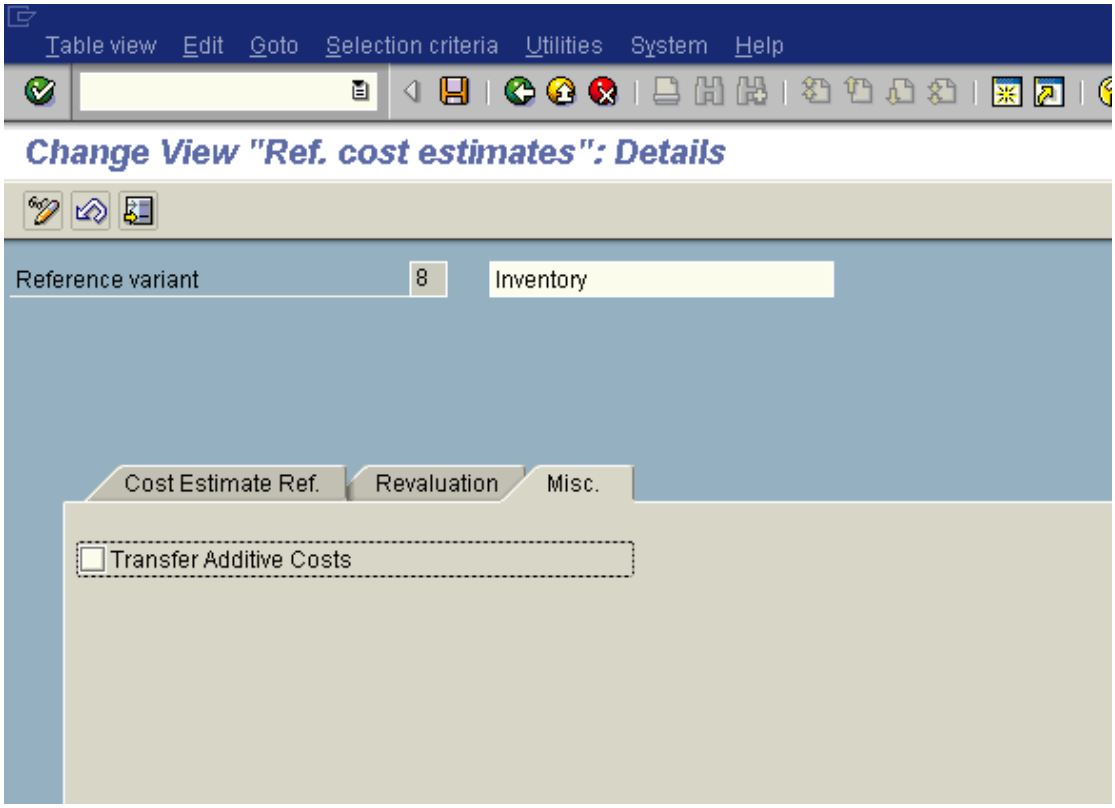


Table view Edit Goto Selection criteria Utilities System Help
Change View "Ref. cost estimates": Details
Reference variant 8 Inventory
Cost Estimate Ref. Revaluation Misc.
Transfer Additive Costs

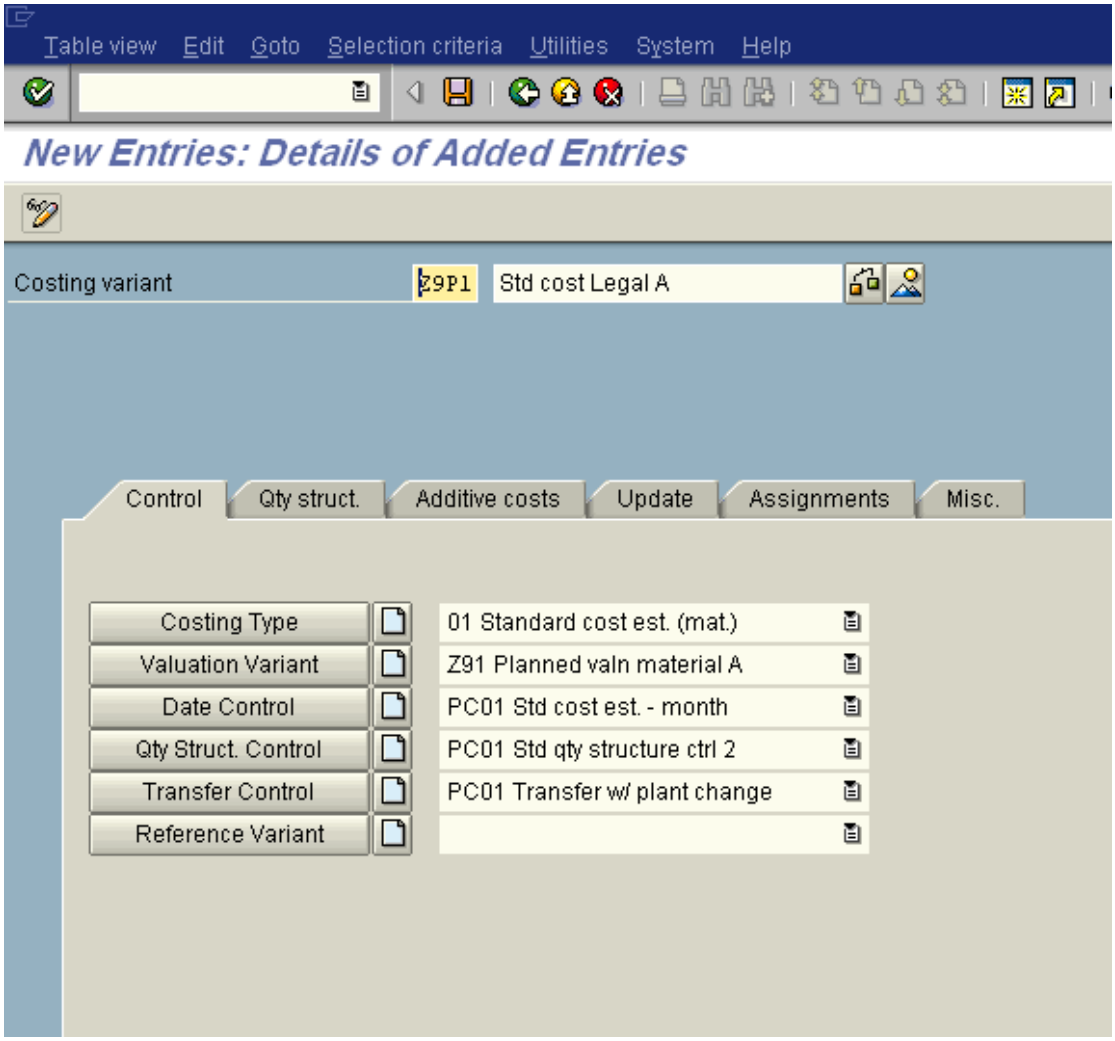
2.7 Define Costing Variants

IMG → Controlling → Product Cost Controlling → Product Cost Planning → Material Cost Estimate with Quantity Structure → Define Costing Variants

Costing variant forms the link between the application and Customizing, since all cost estimates are carried out and saved with reference to a costing variant. The costing variant contains all the control parameters for costing.

You can copy an SAP standard costing variant PPC1 to create a new costing variant.
In case you need to change valuation variant and costing type it is not possible.Therefore start from scratch to create a new costing variant

Click New entries **and update the following. Use the costing type, valuation variant configured earlier and the standard date control PC01, quantity structure control PC01, transfer control PC01**



In tab Qty. Struct

If the Pass on lot size indicator is selected, the system determines the costing lot size using the lot size of the highest material in the BOM and the input quantities of the components.

The various selections for Pass on lot size indicator are as follows:-

1) Do not pass on lot size

If this indicator is not selected, the materials further down in the structure are costed in accordance with the lot size in the costing view of the material master record. When the materials in the next-highest costing level are costed, the costing results of the semifinished materials are converted to the lot size of the finished material to calculate the material costs for the finished product.

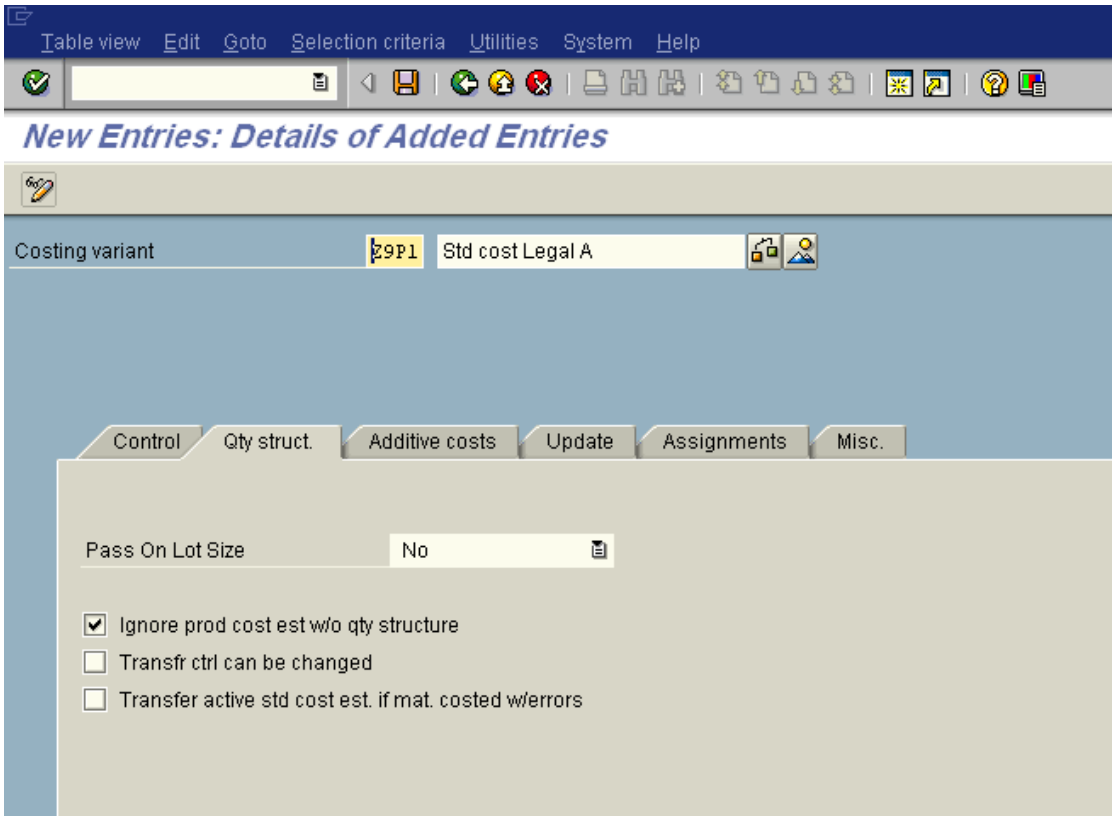
2) Pass on lot size only with individual requirement

In the MRP view of the material master record, you can specify that a material is planned as an individual requirement. If such a material is added to another material, costing uses the lot size of the highest material.

3) Always pass on lot size

Here, the costs for all the materials in a multi-level BOM are calculated using the costing lot size of the highest material. This function is used principally in sales order costing.

Here we have selected Not to pass on lot size and to ignore Prod. Cost w/o qty structure.



In tab Additive Costs

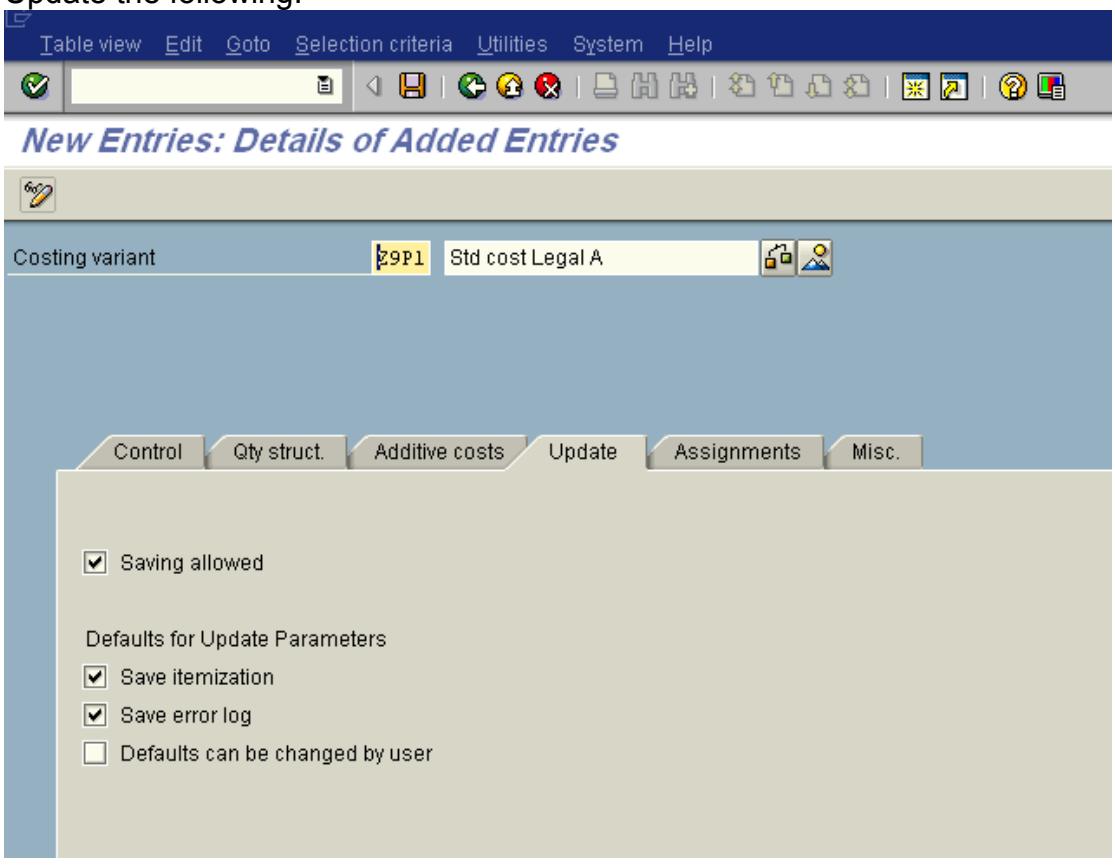
Following configuration is decided:-

- Whether we can transfer the cost components that were entered in the form of an additive cost estimate
- Whether the additive costs for materials with the special procurement types stock transfer or production are included in another plant

We want to include additive cost (costs manually created such as freight) and also to include them in stock transfers

In the tab **Update**

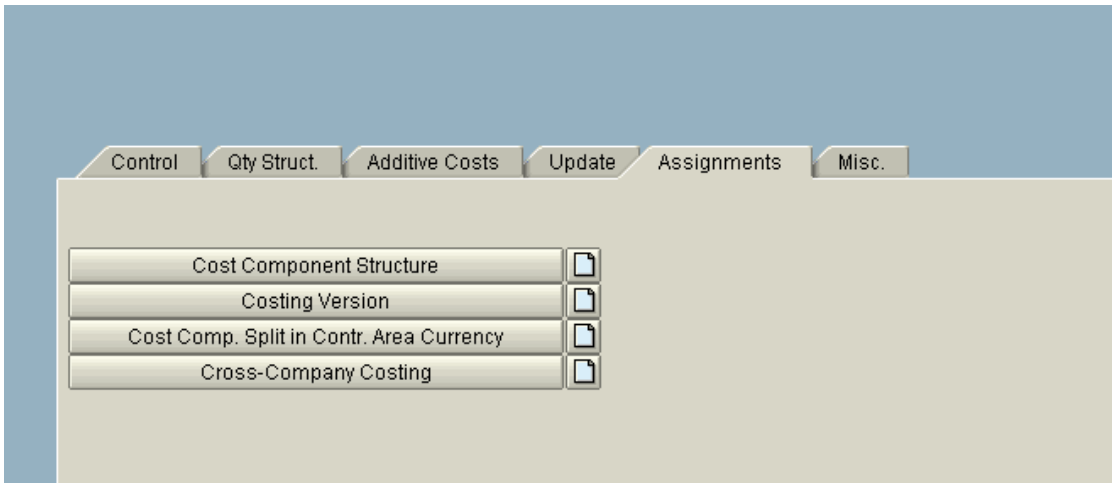
Update the following:-



In the tab **Assignments**

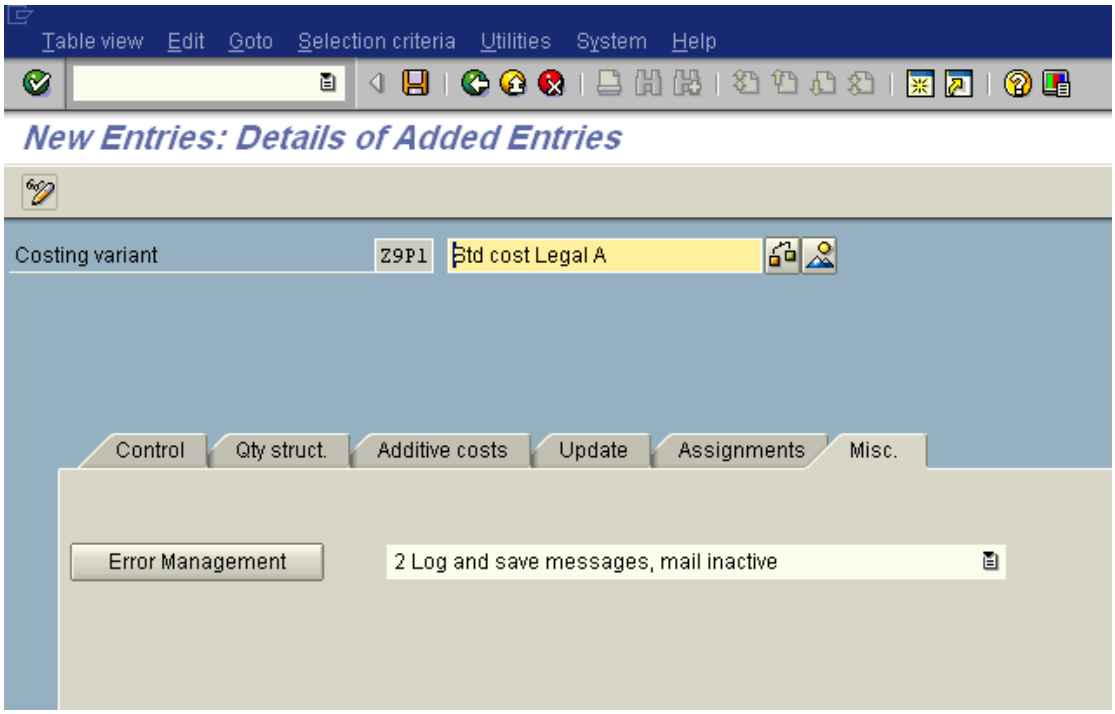
We determine the following:

- Which **cost component structure** is used for the cost estimate
- Which **costing version** is used
- Whether the cost component split can be saved in the controlling area currency in addition to the company code currency
- Whether you can cost **across company codes** with this costing variant



In the tab Misc

You update the following:-



Click on Save  **to save costing variant**

Click on  **to check the costing variant**

3. Selected Functions in Material Costing

3.1 Activate Cross-Company Costing (optional)

IMG → Controlling → Product Cost Controlling → Product Cost Planning → Selected Functions in Material Costing → Activate Cross-Company Costing

Here we specify that costing across company codes is allowed. Costing across company codes means that:

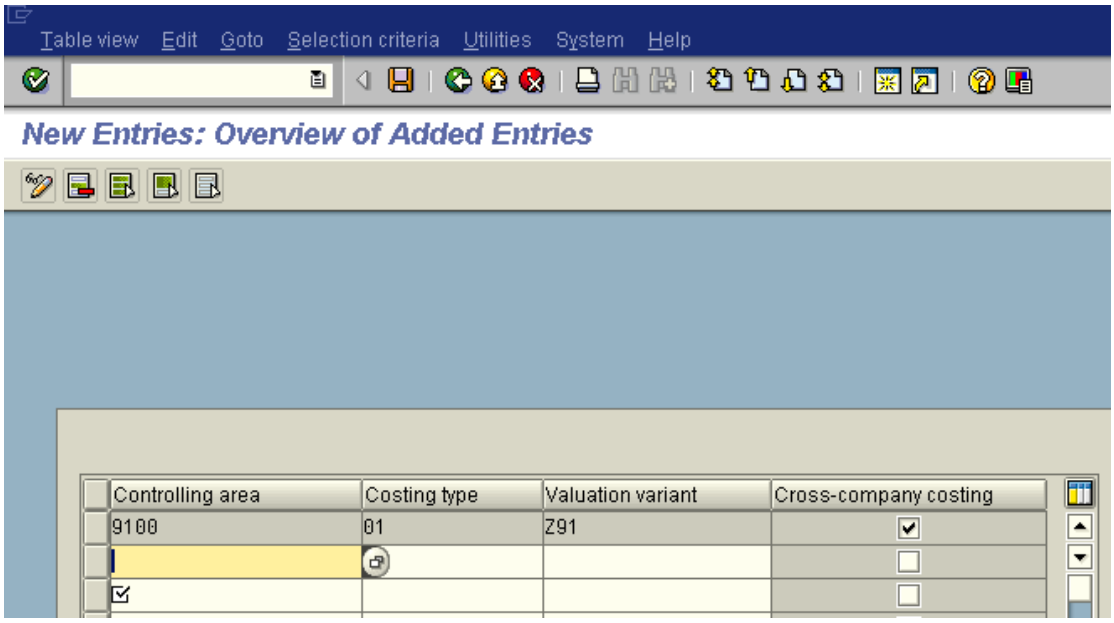
- Material costing can access information in more than one company code
- Additive costs for costs such as transportation charges can be taken into account with planned stock transfers
- The costing results can be released for all company codes in the controlling area

This step is only for costing types that are defined for the legal valuation view. The settings do not affect the group view or the profit center view.

Costing across company codes requires that the same cost component structure be used in all company codes in a given controlling area. Otherwise, the total value of the cost estimate will be used instead of the individual cost components.

Click on New entries

Update the following: -



Click on Save

3.2 Activate Cost Component Split in Controlling Area Currency (Optional)

IMG → Controlling → Product Cost Controlling → Product Cost Planning → Selected Functions in Material Costing → Activate Cost Component Split in Controlling Area Currency

Here we specify that the cost components of material cost estimate, are updated not only in the currency of the company code but also in the currency of the controlling area. **This requires that the *All currencies* indicator be set as the control indicator for the controlling area.**

If the controlling area currency is not the same as the company code currency, the following are **always** updated:

- Cost component splits in company code currency
- Itemizations in both currencies (provided that the costing variant allows itemizations to be saved)

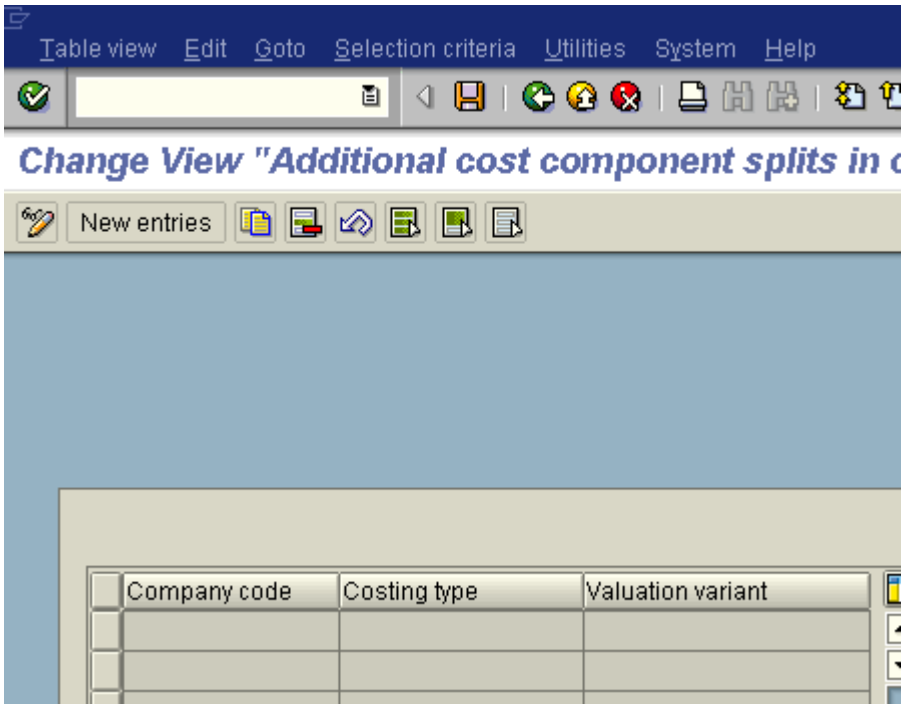
This step is only relevant if the following applies:

- The controlling area currency is not the same as the company code currency
- You want to calculate variances in period-end closing of cost object controlling
- Your system is not set up for group costing.

To activate updating the cost component split in a second currency, proceed as follows:

1. Choose *New entries*.
2. Enter a company code for which a currency has been maintained that is not the same as the controlling area currency.
3. If necessary, enter a costing type and a valuation variant.

We will not activate cost component split in controlling area currency.



3.3 Define Quantity Structure Types for Mixed Costing (optional)

IMG → Controlling → Product Cost Controlling → Product Cost Planning → Selected Functions in Material Costing → Mixed Costing → Define Quantity Structure Types

This should be configured only if you are planning to work with mixed cost estimate. A mixed cost estimate is basically used where more than one production versions are used. Mixed cost estimate is thus a weighted average of the mix of production versions.

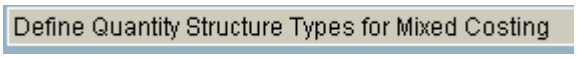
For e.g.

Cost of Finished goods as per production version 1 is 100 INR per kg
Cost of Finished goods as per production version 2 is 120 INR per kg
The production version mix will be during the year :-
production version A is 60% and production version B is 40%
Based on this mix, the mixed cost estimate is as follows:-

100 INR * 60 = 6000
120 INR * 40 = 4800
Total 10800

Mixed cost estimate = 10800/100 = 108 /kg

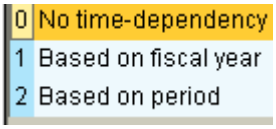
The quantity structure category controls how mixed costing is applied and how it is executed. It determines which procurement alternatives are to be costed with which mixing ratios for the materials in the cost estimate.

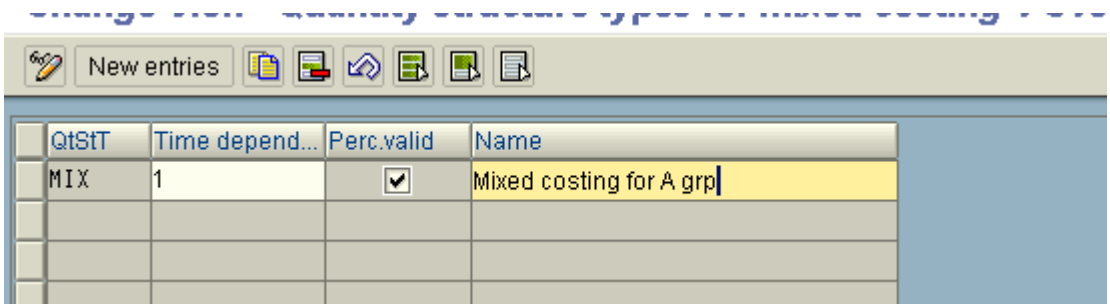
Double Click 

Click on 

Update the following: -

You can have time dependency as follows:-





Click on Save 

3.4 Define Costing Versions (optional)

IMG → Controlling → Product Cost Controlling → Product Cost Planning → Selected Functions in Material Costing → Define Costing Versions

This should be configured only if you are planning to work with mixed cost estimate.
Costing versions enable you to create multiple cost estimates for the same material and analyze the different results in the information system.

You can make the following changes:

- Exchange rate type for currency translation

  If you don't use costing versions, the exchange rate type is determined through the valuation variant specified in the costing variant.
  If you use costing versions, you can specify that a different exchange rate type should have priority.

- Quantity structure type for mixed costing

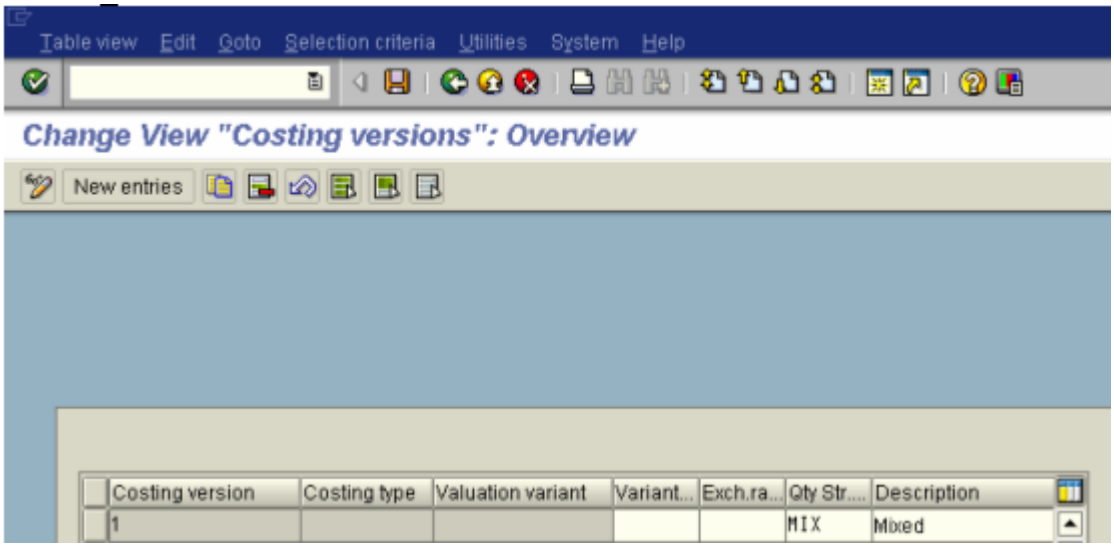
  Mixed cost estimates are created with reference to a costing version. You can create more than one mixed cost estimate for the same material; such cost estimates are differentiated by their costing versions.

  Here we attach the quantity structure mix to the costing version, since we will work with costing mixed costing

  Click on new entries 

 and update the following:-

  .



3.5 Define Source Structure in Joint Production (optional)

IMG → Controlling → Product Cost Controlling → Product Cost Planning → Selected Functions in Material Costing → Costing in Joint Production → Define Source Structure

Applicable if you have co-product. In our scenario we have a co-product therefore we configure it.

You only need a source structure for costing co-products if you want to distribute the costs to the co-products using cost elements.

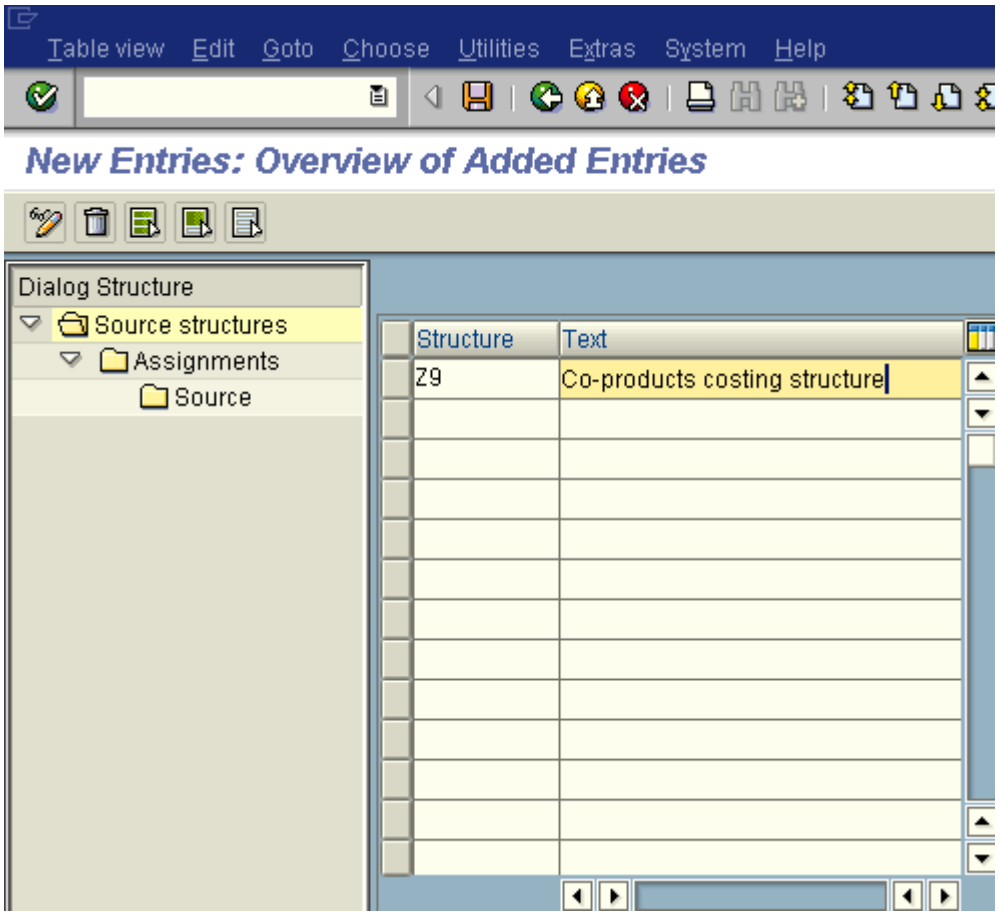
If you don't want to distribute the costs using cost elements, the costs will be distributed on the basis of the apportionment structure in the material master record. In this case you do not have to process this step.

A source structure contains several source assignments, each of which contains the individual cost elements or cost element intervals to be settled using the same distribution rules.
The quantity structure of the material is determined by means of entries in the material master record. If none of these entries exists, the quantity structure is determined by means of the quantity structure determination ID specified in the costing variant.

Here we assign cost elements to assignment structure.

Click on 

Update the following: -



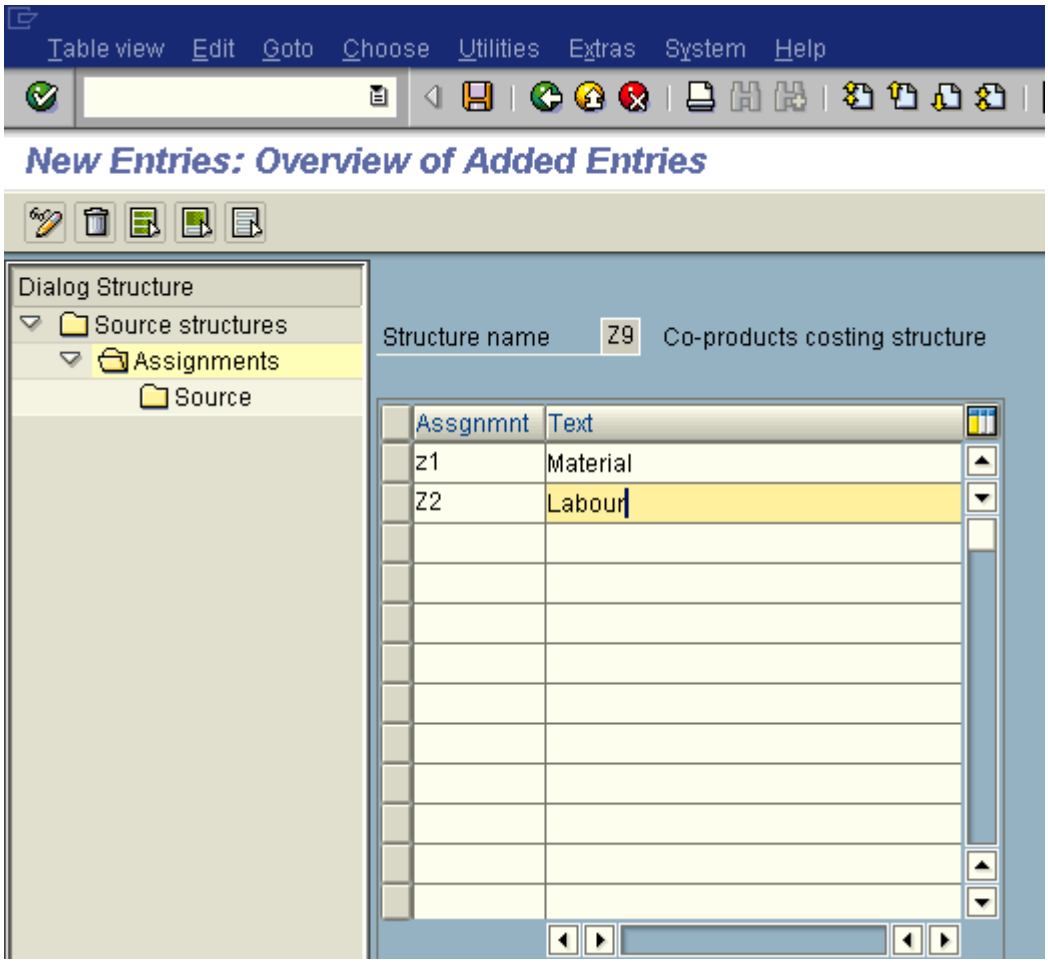
Click on Save 

Select 

Double Click 

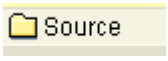
Click on 

Update the following: -



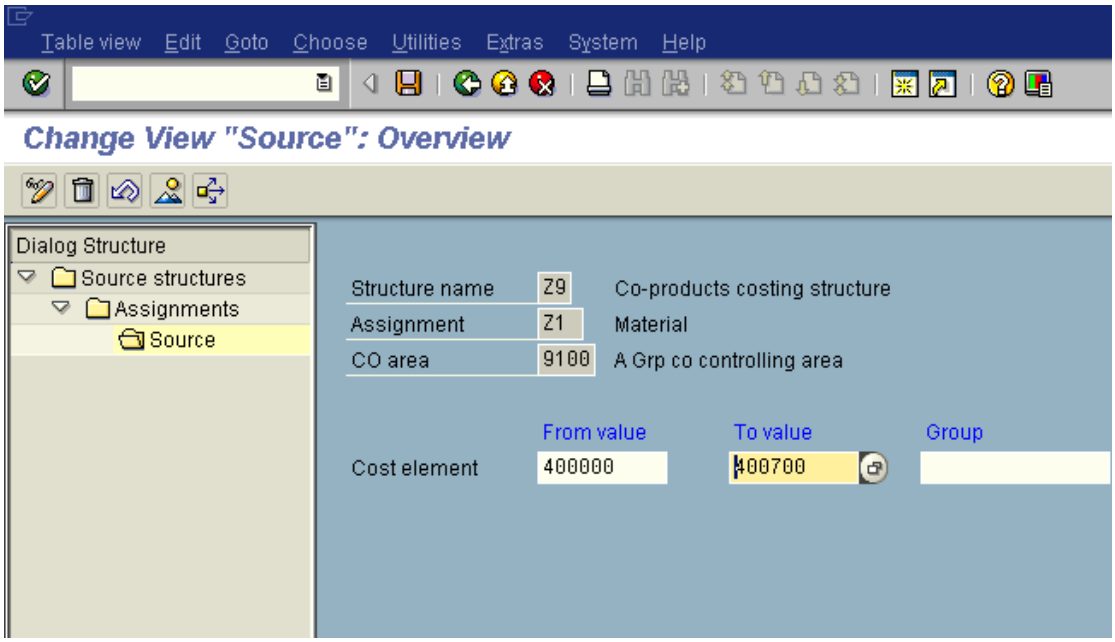
Click on Save 

Select 

Double Click 

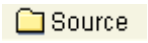
Click on 

Update the following: -

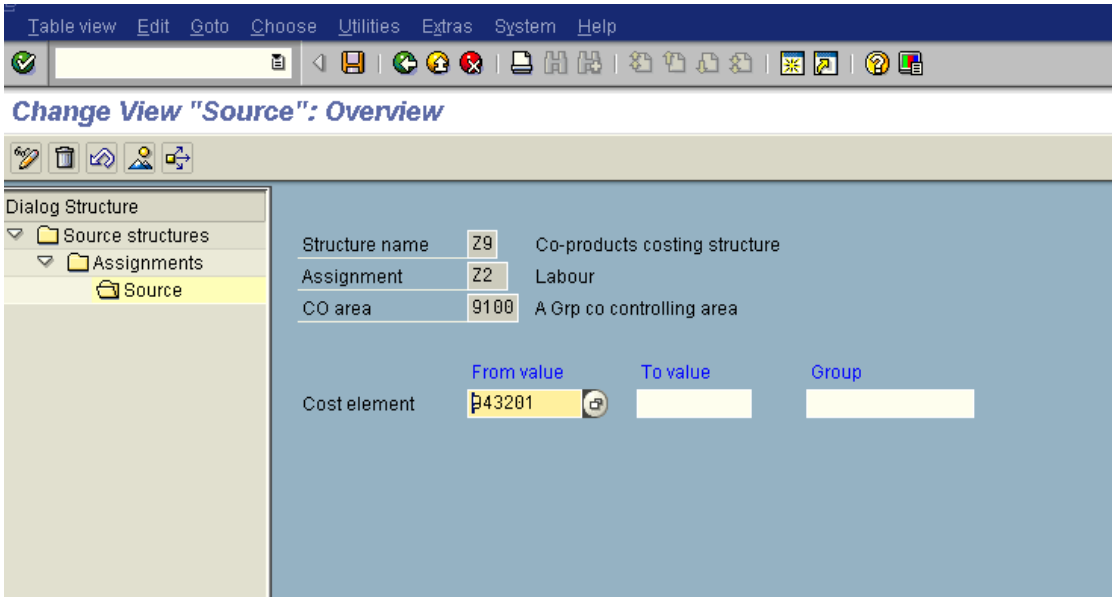


Click on Save 

Select 

Double Click 

Click on 



Click on Save 

B) Cost Object Controlling

In the section **product cost planning** we have only seen planning of the standard cost estimate to be released in the material master. In this section we will see how configuration is done for costing the products on various cost objects such as production orders, process orders, sales orders and product cost collector. Further we configure how the Work in process, variance are calculated and finally settled to the material.

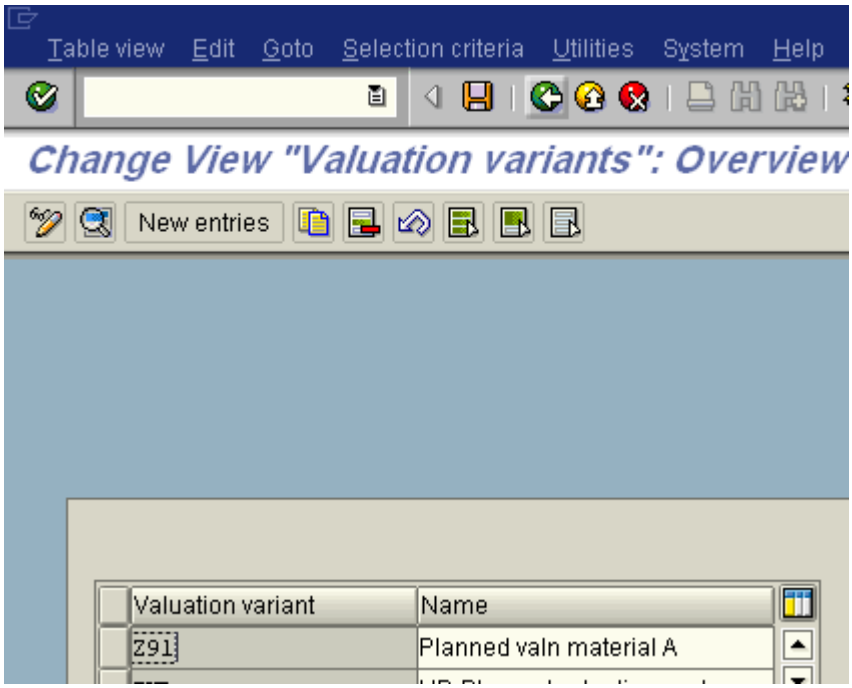
1. Product Cost by Order

1.1 Manufacturing orders

1.1.1 Check Valuation Variants for Manufacturing Orders (PP)

IMG → Controlling → Product Cost Controlling → Cost Object Controlling → Product Cost by Order → Manufacturing Orders→ Check Valuation Variants for Manufacturing Orders (PP)

In our case Z91 was earlier created in step.



1.1.2 Check Costing Variants for Manufacturing Orders (PP)

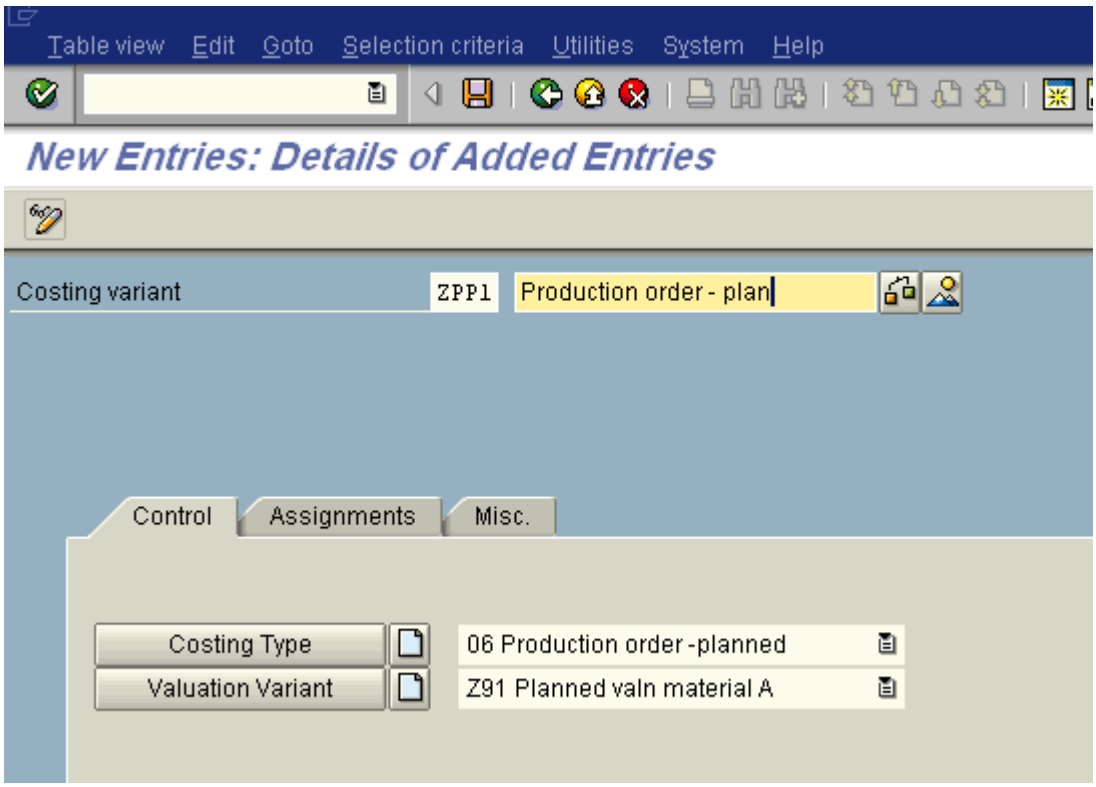
IMG → Controlling → Product Cost Controlling → Cost Object Controlling → Product Cost by Order → Manufacturing Orders→ Check Valuation Variants for Manufacturing Orders (PP)

A costing variant is required further to actually do a preliminary costing of the production order and simultaneous costing of the manufacturing order. A production order created and released need to be costed. This costing is called as preliminary costing. A costing variant is required to cost this production order. Further when actual materials and confirmation on the production order happens the production order needs to be costed. This is called simultaneous costing, which also requires a costing variant
The SAP standard system contains the following costing variants for manufacturing orders:
PPP1 Production Order - Plan
PPP2 Production Order - Actual

We will create a new costing variant since we need some changes, therefore we do not modify SAP standard and create a new costing variant called as ZPP1 for plan.

Click on 

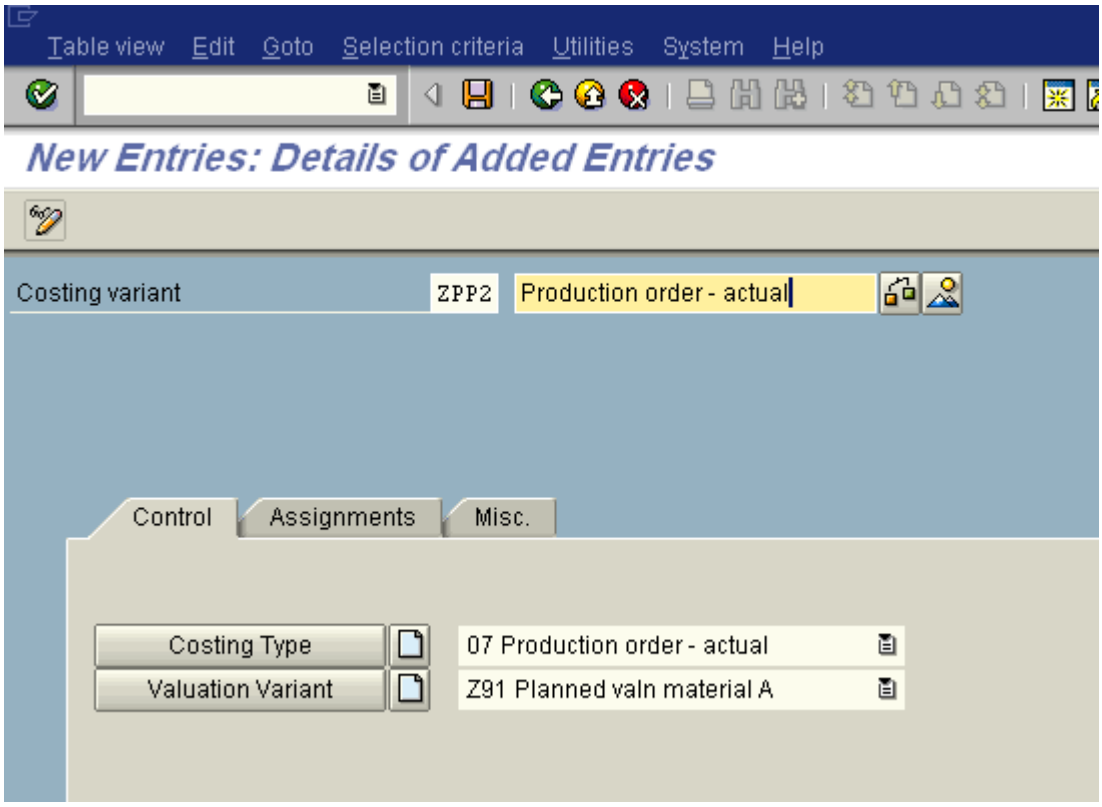
We attach the valuation variant Z91 created in product cost planning or you can create a new valuation variant similar to Z91 and attach here.



Click on 

Click 

Click on New entries and attach the standard costing type 07 and Z91 valuation variant



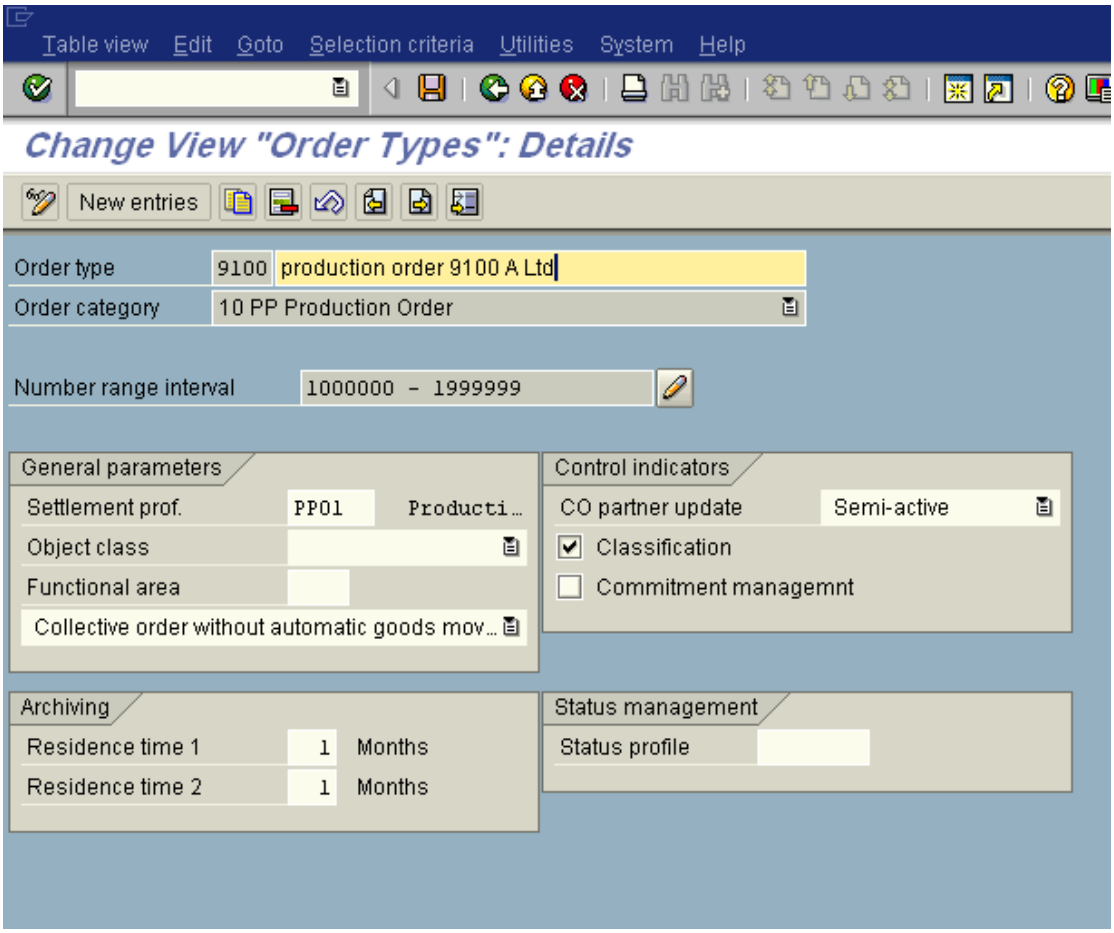
Click on

1.1.3 Check Order Types

IMG → Controlling → Product Cost Controlling → Cost Object Controlling → Product Cost by Order → Manufacturing Orders→ Check Order Types

Here an important thing we need to check is the settlement profile. Settlement profile PP01 is attached to the production order type

Order type 9100 is copied from Standard order type PP01.



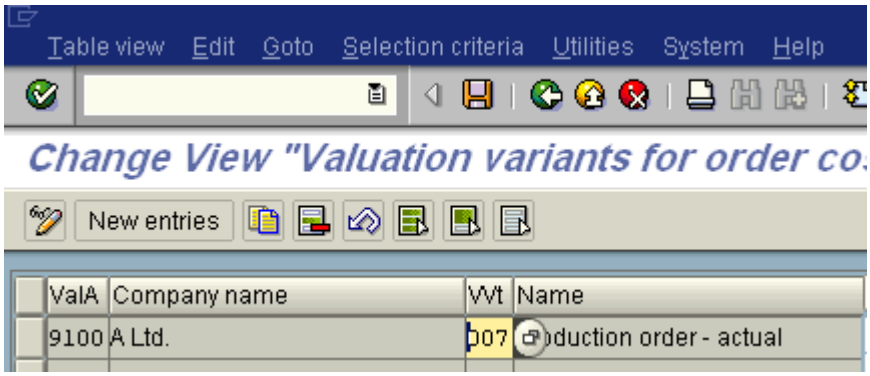
1.1.4 Define Goods Received Valuation for Order Delivery

IMG → Controlling → Product Cost Controlling → Cost Object Controlling → Product Cost by Order → Define Goods Received Valuation for Order Delivery

This step is only relevant if your have specified price control V in the material master records of semifinished products or finished products. The value for the credit is determined using a valuation variant. You must define this valuation variant separately for each valuation area. The valuation variant determines which material price is used for the credit posting.

For materials with price control **S**, on the other hand, the credit posting is always made at standard price.

This Step is not relevant for us; nevertheless we still see the configuration. The value gets automatically maintained due to plant which is copied from the standard SAP plant



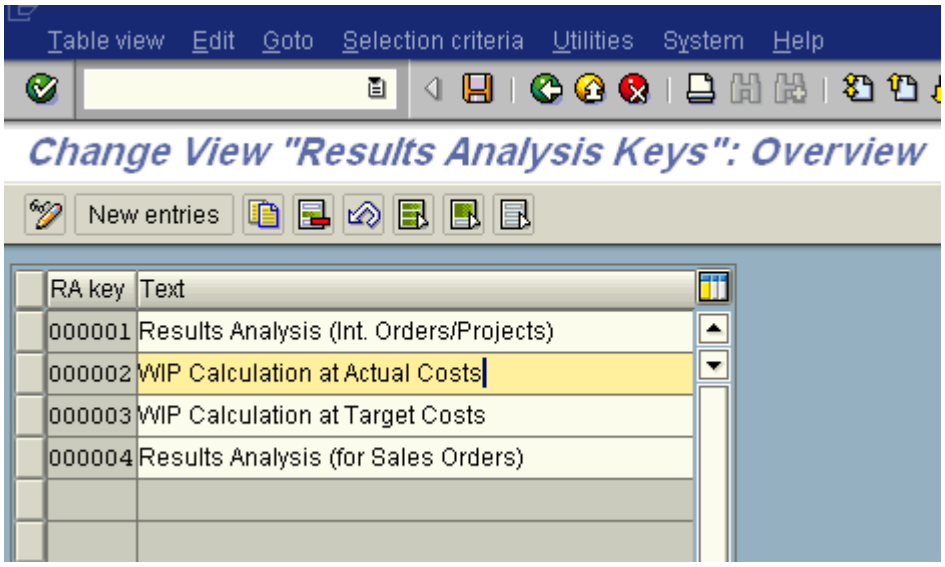
I

1.2 Work in Process

1.2.1 Define Results Analysis Keys

IMG → Controlling → Product Cost Controlling → Cost Object Controlling → Product Cost by Order → Period-End Closing→ Work in Process → Define Results Analysis Keys

Each order for which you want to create work in process (WIP) must receive a results analysis key. The presence of a results analysis key in the order means that the order is included in WIP calculation during period-end closing. Results analysis keys are already defined in the SAP standard system.
In the product cost by order component we use the RA key 000002 – WIP calculation at Actual costs



1.2.2 Define Cost Elements for WIP Calculation

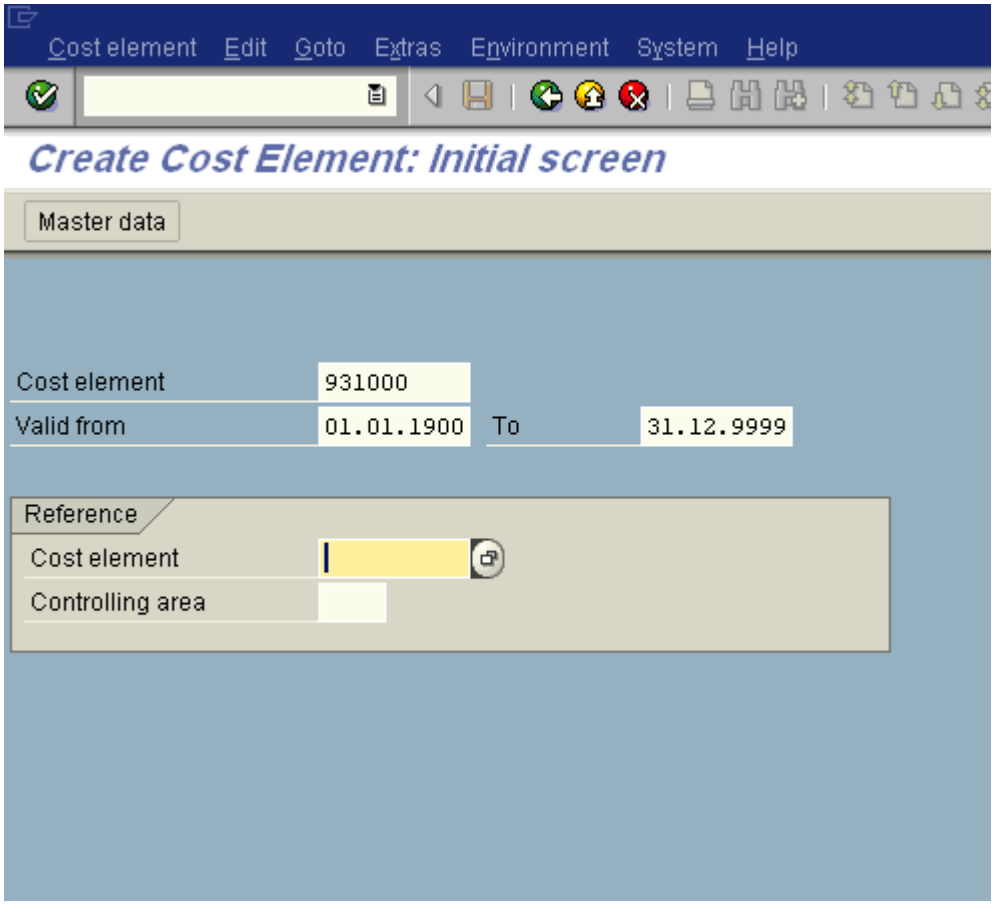
IMG → Controlling → Product Cost Controlling → Cost Object Controlling → Product Cost by Order → Period-End Closing→ Work in Process → Define Results Analysis Keys

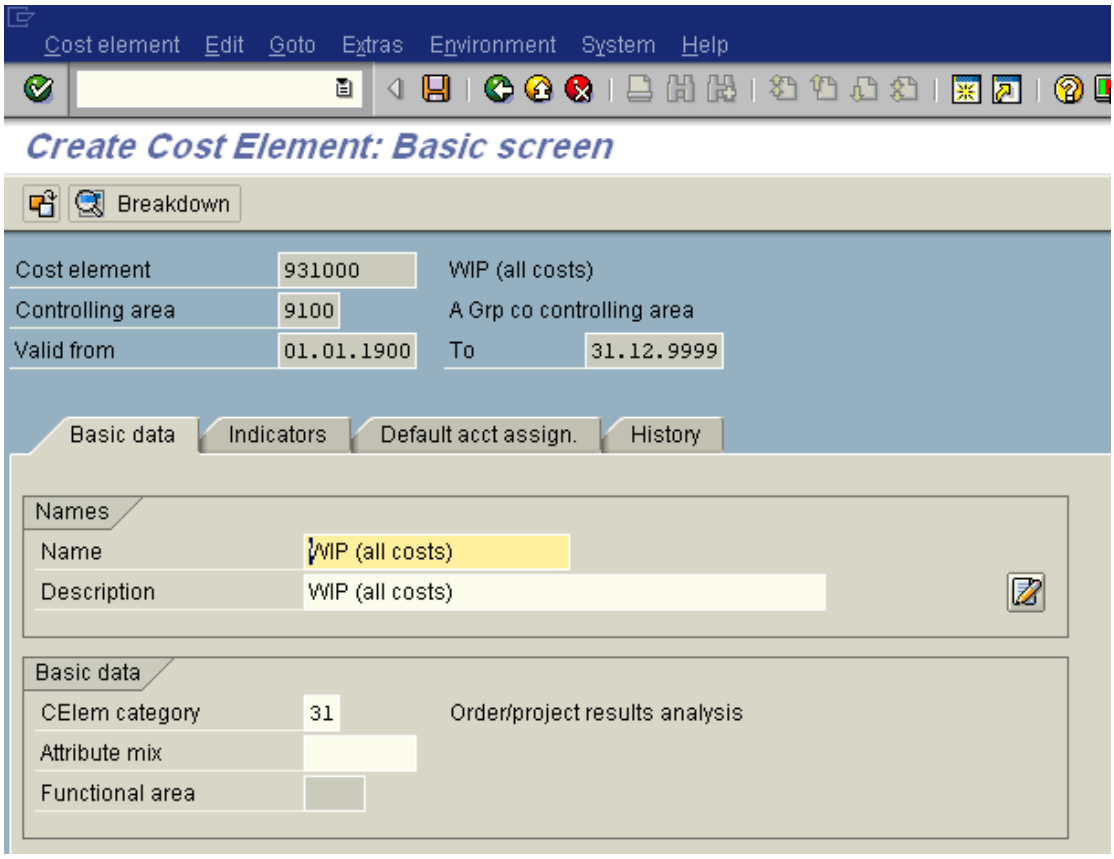
In this step we create cost elements under which the work in process and (if applicable) the reserves are updated on the order.
These secondary cost elements must have cost element type 31 (results analysis for orders/projects). Do **not** define any cost elements in the Controlling component for the G/L accounts in these posting rules, because the order is **not** credited when the work in process is settled.

We will create 3 cost elements for WIP:-

1) WIP - All costs
2) WIP - Material costs
3) WIP - Secondary costs

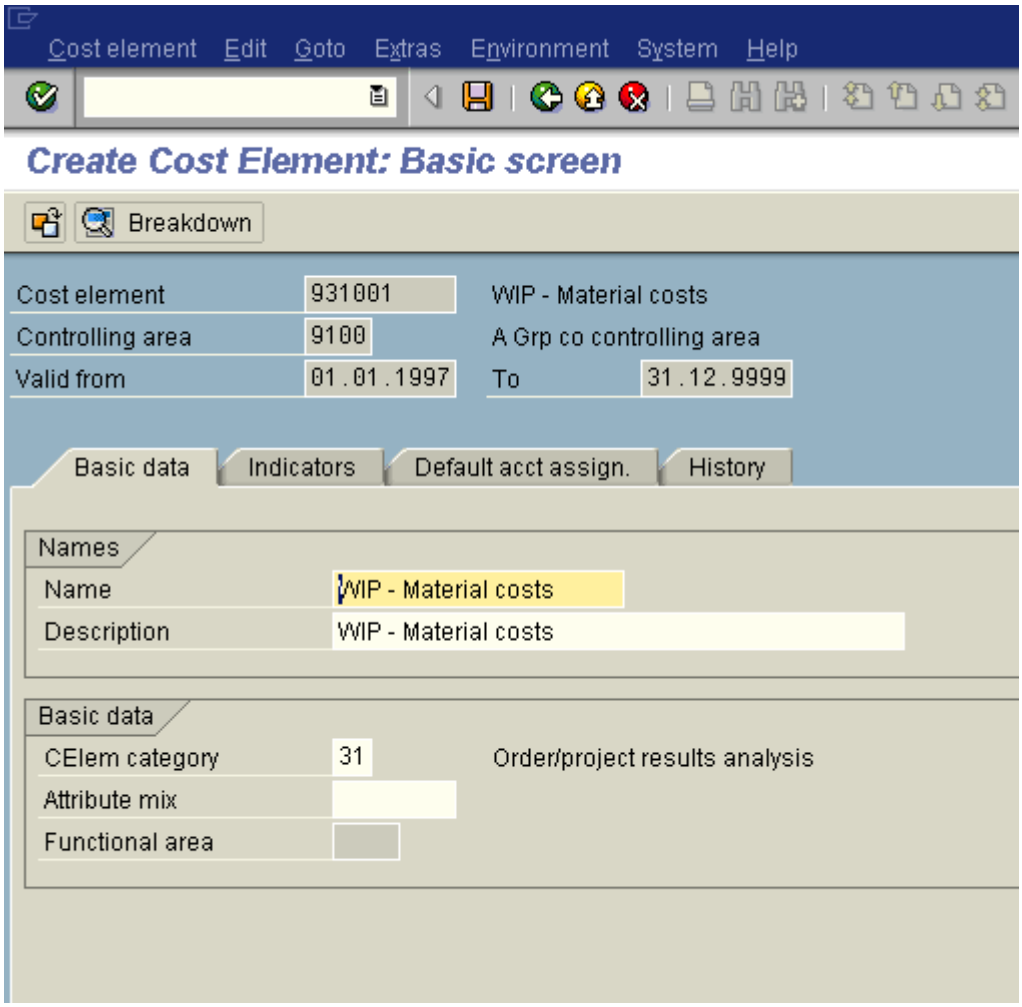
Double click Create Cost Element





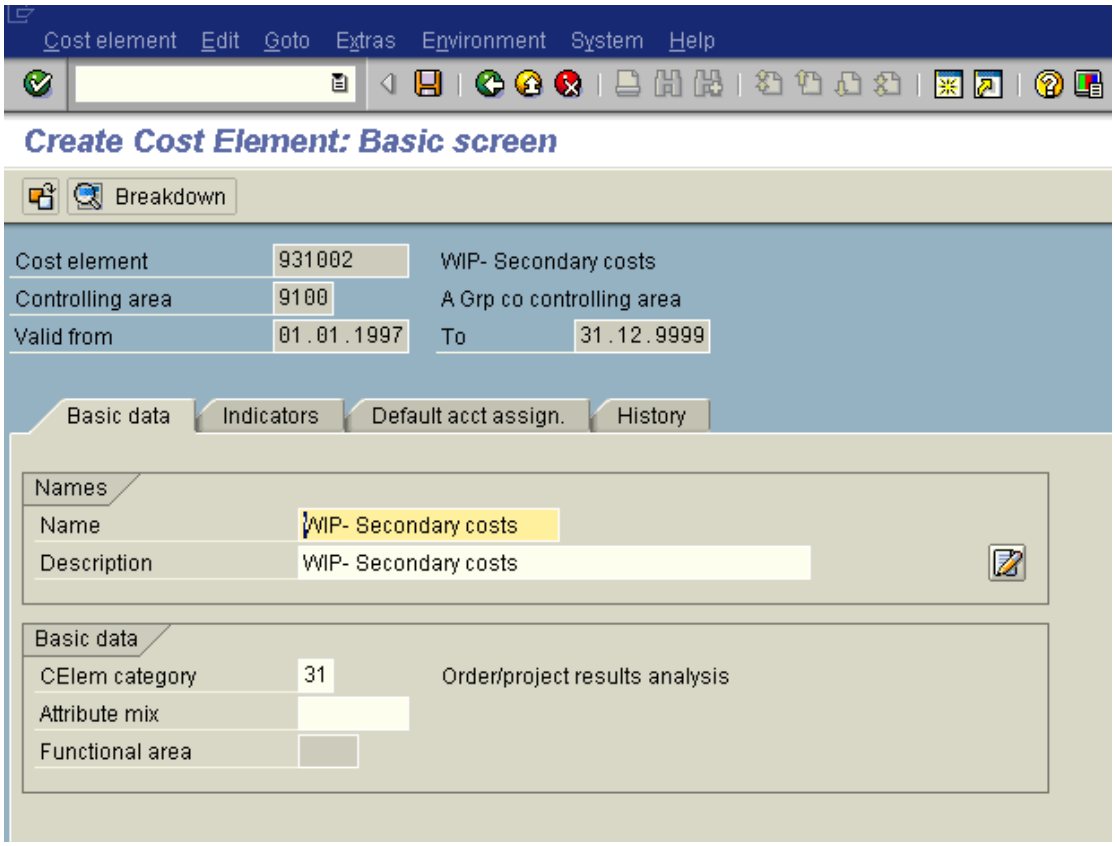
Click on 

Create another Result analysis cost element for Material costs



Click on Save 

Create another result analysis cost element for Secondary costs



Click on Save 

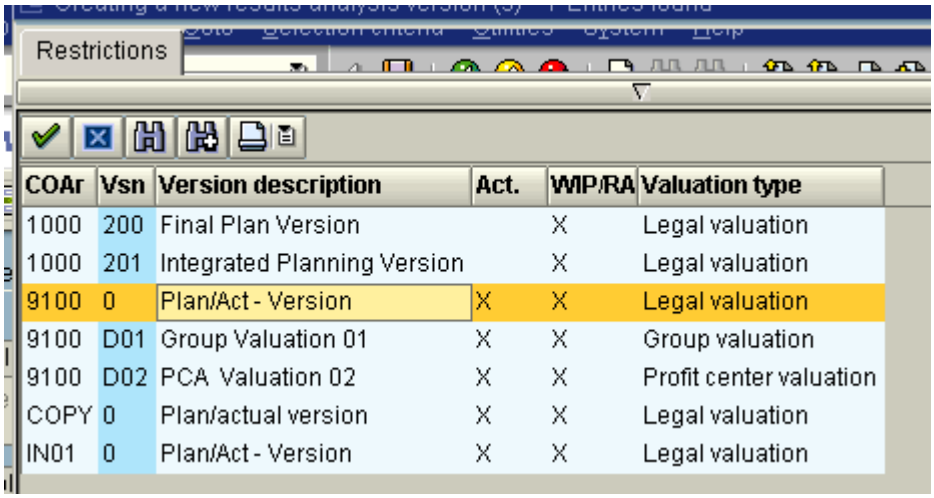
1.2.3 Define Results Analysis Versions

IMG → Controlling → Product Cost Controlling → Cost Object Controlling → Product Cost by Order → Period-End Closing→ Work in Process → Define Results Analysis Versions

Here you create result analysis version per version in controlling area. In controlling area we have 3 actual version 0, D01, D02. Since currency and valuation profile is active we have 3 versions. In case that is not active you will have only one plan/actual version 0.

Click on 

You will get a pop as follows:

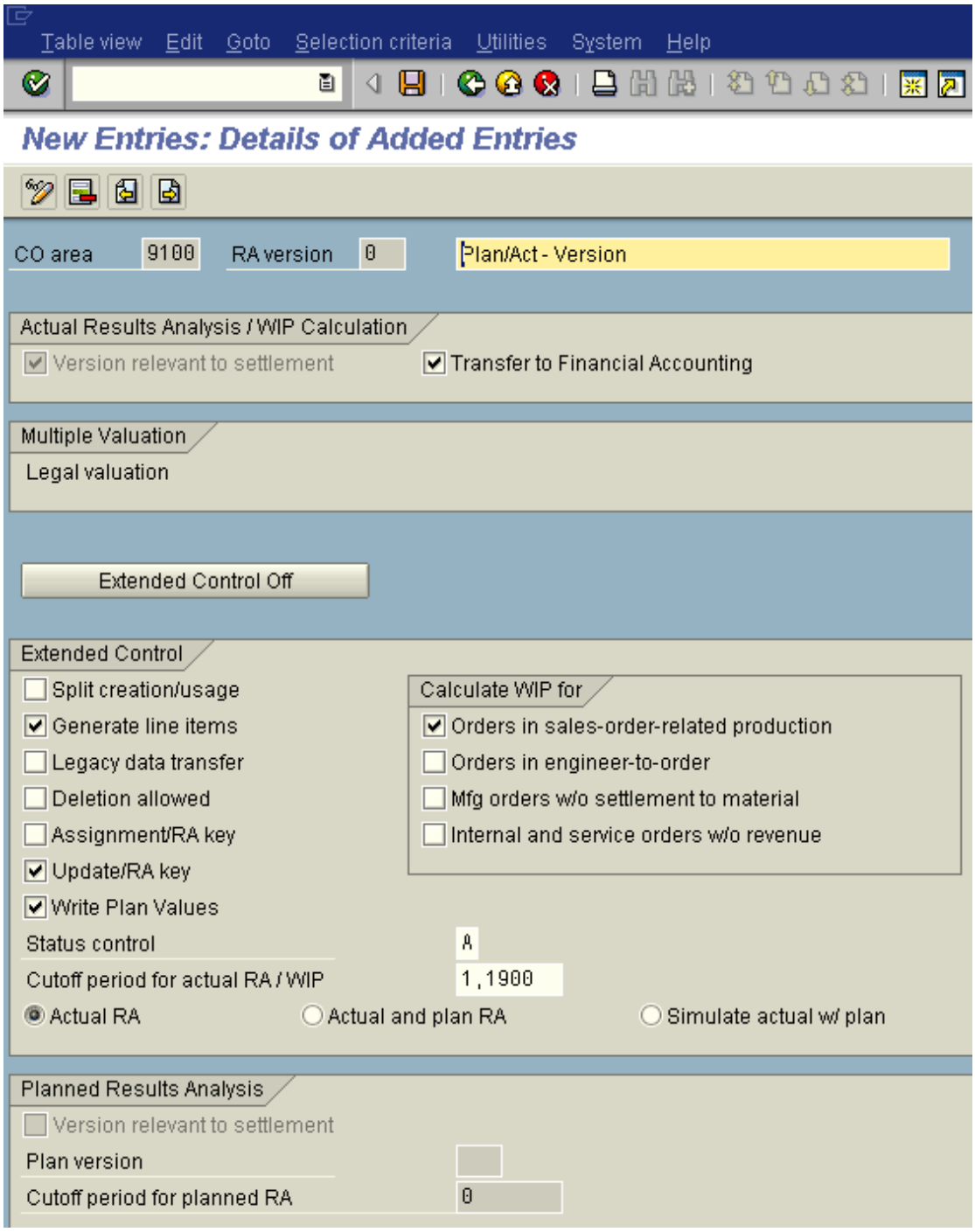


COAr	Vsn	Version description	Act.	WIP/RA	Valuation type
1000	200	Final Plan Version		X	Legal valuation
1000	201	Integrated Planning Version		X	Legal valuation
9100	0	Plan/Act - Version	X	X	Legal valuation
9100	D01	Group Valuation 01	X	X	Group valuation
9100	D02	PCA Valuation 02	X	X	Profit center valuation
COPY	0	Plan/actual version	X	X	Legal valuation
IN01	0	Plan/Act - Version	X	X	Legal valuation

Select 9100 controlling area version 0

Update the Technical RA cost element 931000

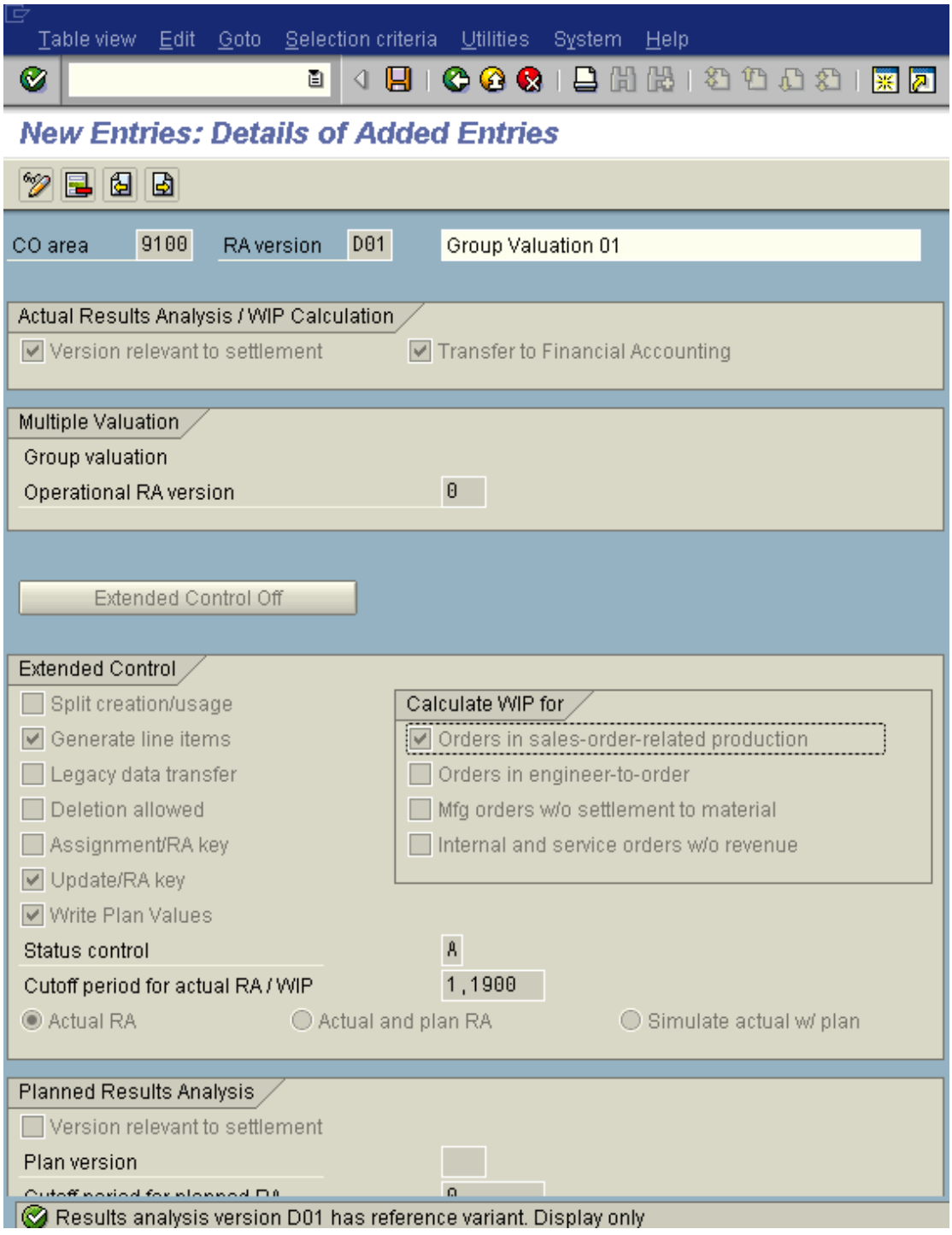
and click 



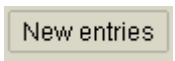
Click on Save

Click on New entries

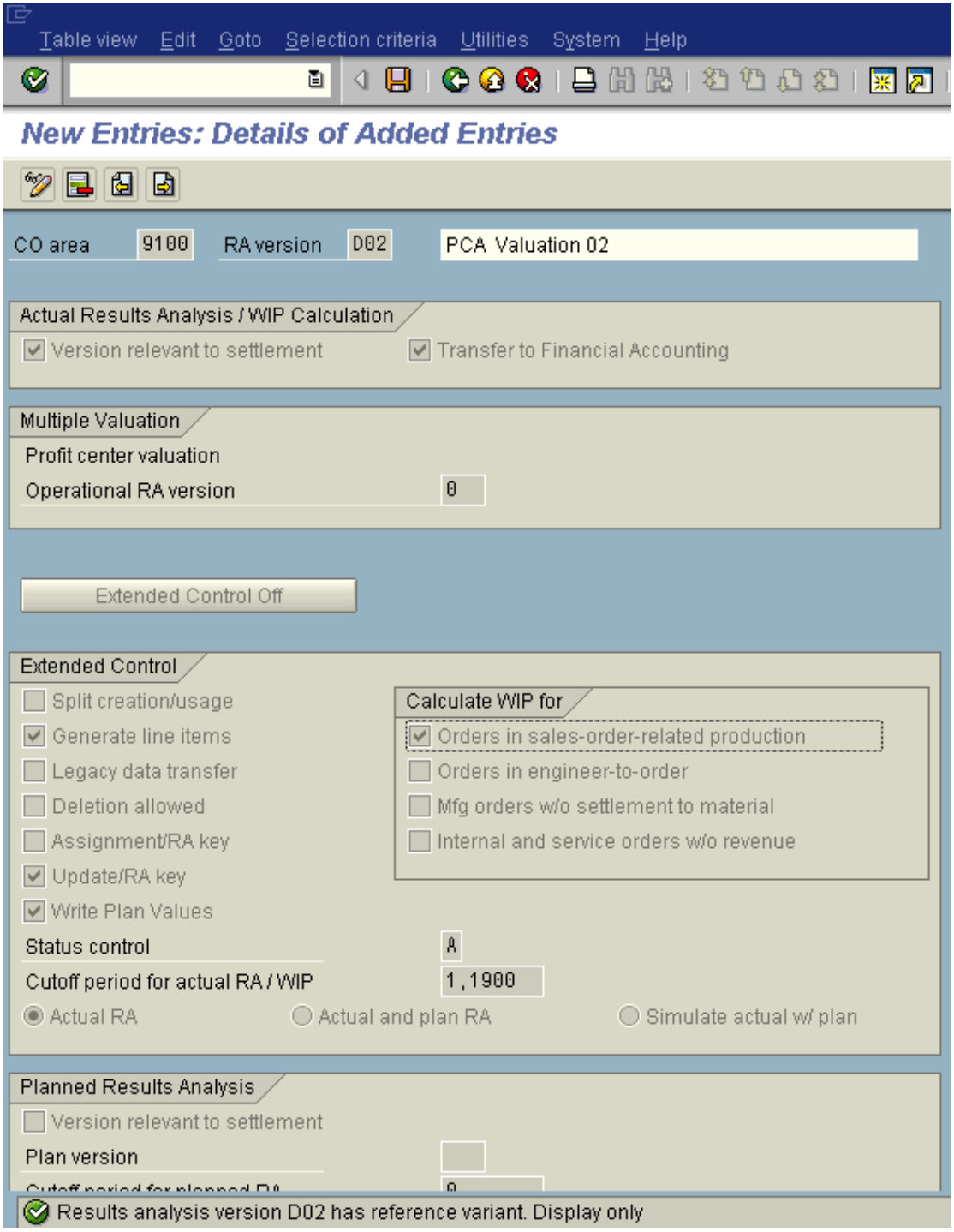
Select 9100 D01 Group Valuation 01 X X Group valuation



Click on Save 

Click on 

Select 



Click on Save 

1.2.4 Define Valuation Method (Actual Costs)

IMG → Controlling → Product Cost Controlling → Cost Object Controlling → Product Cost by Order → Period-End Closing→ Work in Process → Define Valuation Method (Actual costs)

In this step we define a valuation method for the calculation of work in process.
This creates the link between the controlling area, the results analysis key, the results analysis version, and the system status.
When you create new valuation methods, you specify whether the work in process should be valuated at **target costs** or actual costs.
In the **Product Cost by Order** component the work in process is normally valuated at actual costs. The value of the work in process is the difference between the debit and the credit of an order as long as the order has the status PREL (partially released) or REL (released).

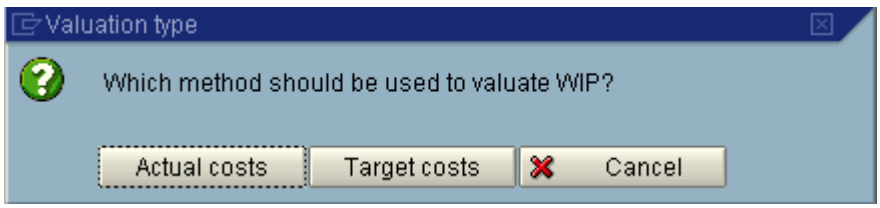
The valuation method for WIP calculation is linked to a system status.

The following status codes are relevant for WIP calculation in this component:

- PREL - The order is partially released.
- REL - The order is released.
- DLV - The order has been completely delivered.
- TECO - The order is technically completed.

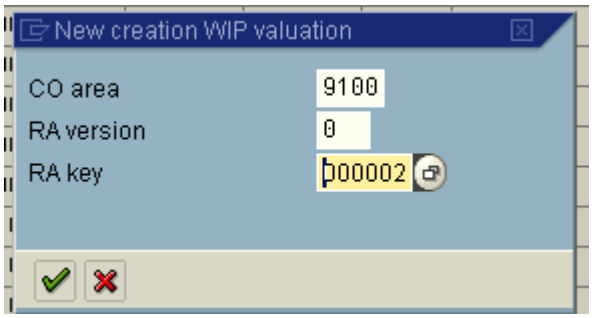
If the status is PREL or REL, the system creates work in process in the amount of the actual costs with which the order is debited.
If the status is DLV or TECO, the system cancels the work in process. The difference between the debit through actual costs postings and the **actual credit** of the order from goods receipts is interpreted as a variance with this status.

Click on 



Select Actual costs

Update the following: -



Update the following: -

CO area	RA versi...	RA key	Status	Status nu...	RA type
9100	0	000002	REL	2	WIP Calculation on Basis of Actual Costs
9100	0	000002	DLV	3	Cancel Data of WIP Calculation and Results Ana
9100	0	000002	PREL	1	WIP Calculation on Basis of Actual Costs
9100	0	000002	TECO	4	Cancel Data of WIP Calculation and Results Ana

Update the following: -

CO area	RA versi...	RA key	Status	Status nu...	RA type
9100	D01	000002	REL	2	WIP Calculation on Basis of Actual Costs
9100	D01	000002	DLV	3	Cancel Data of WIP Calculation and Results Ana
9100	D01	000002	PREL	1	WIP Calculation on Basis of Actual Costs
9100	D01	000002	TECO	4	Cancel Data of WIP Calculation and Results Ana

Update the following: -

CO area	RA versi...	RA key	Status	Status nu...	RA type
9100	D02	000002	REL	2	WIP Calculation on Basis of Actual Costs
9100	D02	000002	DLV	3	Cancel Data of WIP Calculation and Results Ana
9100	D02	000002	PREL	1	WIP Calculation on Basis of Actual Costs
9100	D02	000002	TECO	4	Cancel Data of WIP Calculation and Results Ana

1.2.5 Define Line Ids

IMG → Controlling → Product Cost Controlling → Cost Object Controlling → Product Cost by Order → Period-End Closing→ Work in Process → Define Valuation Method (Actual costs)

The line IDs serve to group the work in process and reserves for unrealized costs according to the requirements of Financial Accounting.

Reserves for unrealized cost means a production order has a partial goods receipt, but the actual issues (material and activities) to the production order is less than standard and the system expect these

issues to be made, therefore reserves for unrealized cost can be created if required for these costs which are debited short.

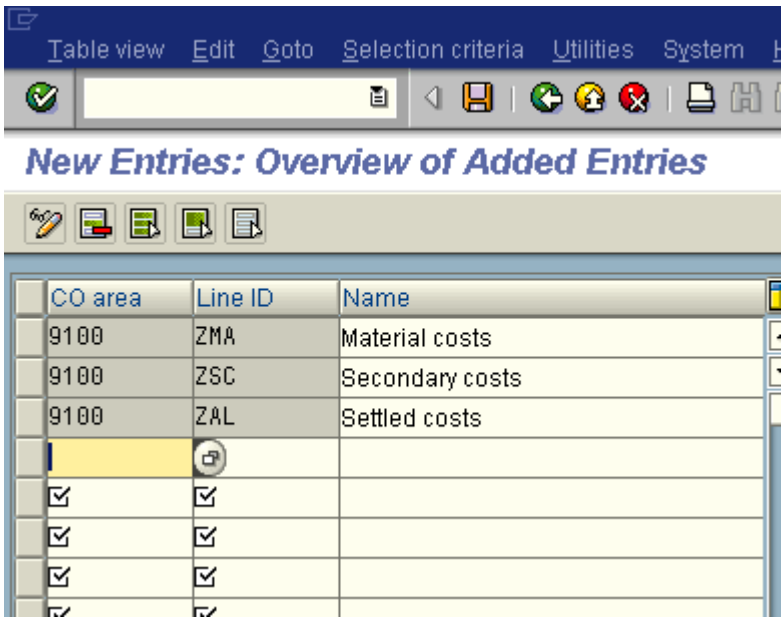
The work in process or reserves for unrealized costs are calculated as a total for each order and apportioned to the line IDs. You can define separately for each line ID whether the work in process for that line ID must be capitalized. To pass the data on to Financial Accounting, you must define posting rules that link this data to G/L accounts.

We want analysis for Material costs, Secondary costs.

We will create Line Ids for the same.

Click on New entries

Update the following: -



Click on Save

1.2.6 Define Assignment

IMG → Controlling → Product Cost Controlling →Cost Object Controlling → Product Cost by Order → Period-End Closing → Work in Process →Define Assignment

Here we assign the cost elements to line IDs under which an order is debited or credited.

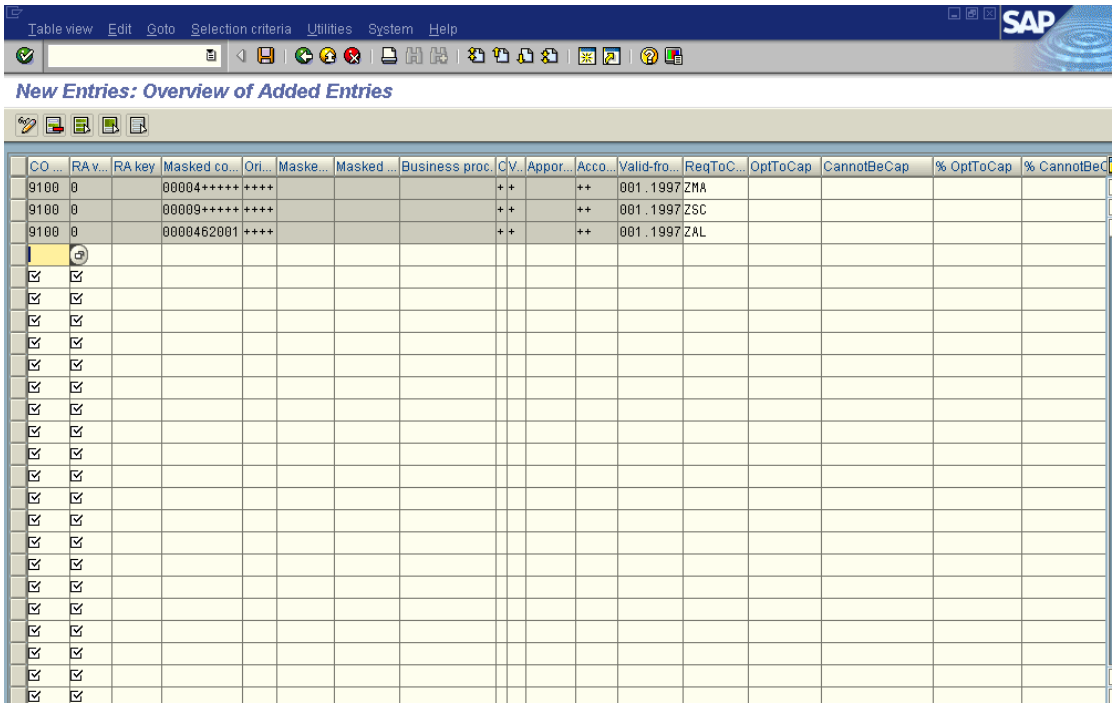
In the Assignment, we can also define the **work in process** that must be capitalized and in what amount. For example, we can specify that:
100% of the work in process calculated from the material costs can be capitalized
80% of the work in process calculated from the indirect costs can be capitalized
We assign the cost elements combined in line IDs to one of the following groups:
WIPR - Work in process with requirement to capitalize (ReqToCap)
WIPO - Work in process with option to capitalize Costs e (OptToCap)
WIPP - Work in process with prohibition to capitalize costs (CannotBeCap)

Click on 

Update the following: -

Controlling area : 9100
RA version :0
Cost elements for material start with 4 rest codes we will mask.
C (credit/debit) + All debits and credits
V (Vble/fixed ind.) + All
Accou (Accounting indicator) ++Masked(all)
ReqToCa(Requirement to capitalize) – Here we will update the Line id defined earlier.
Similarly secondary cost elements are starting with 9 so we put 9 and mask the rest of the digits so that all are considered. Further we assign line id ZSC.

Change in WIP account 462001 is assigned to ZAL.



Click on Save 

When you maintain for version 0 all the data for version D01 and D02 automatically gets copied. (If material ledger & currency and valuation profile is active)

1.2.7 Define Update

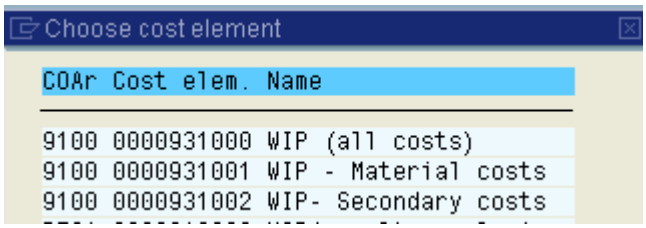
IMG → Controlling → Product Cost Controlling →Cost Object Controlling → Product Cost by Order → Period-End Closing → Work in Process →Define Update
I

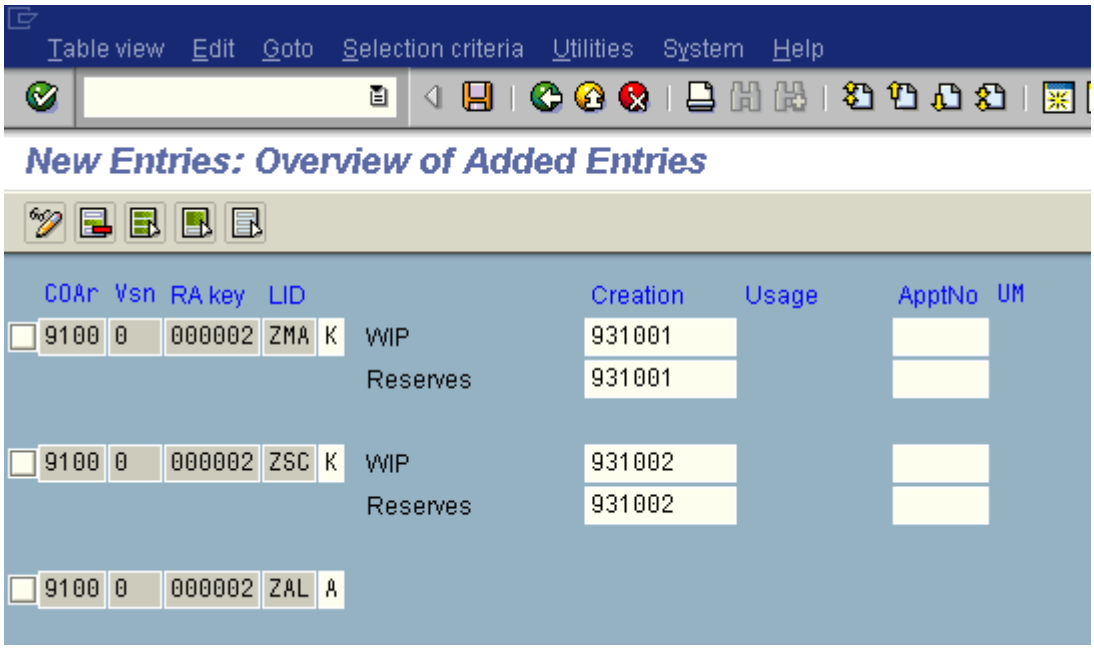
In the earlier step **define assignment** we have assigned the cost elements of material beginning with 4 to line id ZMA, internal activities beginning with 9 to the line id ZSC and GL code 462001 to ZAL.
Now here we assign for Line ID ZMA to a results analysis(ra) cost element 931001 and to a category K (costs), ZSC to a ra cost element 931002.

Thus all material withdrawals, internal activites, external activities, and overhead are assigned to line IDs of category **K** (costs).
The system creates work in process for each debit posting that is updated under one of these cost elements. These values are updated under the results analysis cost elements (cost element category 31) that you specify here.
We must assign all credits, such as for material issues and order settlement to line IDs of category **A** (settled costs). For each credit posting that is updated under one of these cost elements, the system reduces the work in process.

Click on 

Update the following:-





K – Costs
A - Settled costs

Click on Save 

Automatically the Versions for D01 and D02 get created.

1.2.8 Define Posting Rules for Settling Work in Process

IMG → Controlling → Product Cost Controlling →Cost Object Controlling → Product Cost by Order → Period-End Closing → Work in Process → Define Posting Rules for Settling Work in Process

In this step we specify the G/L accounts in Financial Accounting to which the work in process is settled. We assign a results analysis cost element or a group of results analysis cost elements to two G/L accounts.

A FI is generated on the basis of the settlement of work in process:-

Entry passed:-
WIP account **Debit (**Balance sheet)
Change in WIP **Credit** (Profit & loss account)

We can assign the results analysis data to the G/L accounts at the following levels:

- Results analysis categories

  The results analysis categories are created on the basis of the assignment of the costs to line IDs:

WIPR - Work in process with requirement to capitalize costs

WIPO - Work in process with option to capitalize costs

WIPP - Work in process with prohibition to capitalize costs

We normally define a posting rule that assigns the work in process with requirement to capitalize costs to the G/L accounts for unfinished products (balance sheet) and stock changes (P/L).

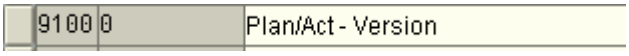
- Results analysis cost elements

  In this case you assign the individual results analysis cost elements to the G/L accounts.
  For example, the work in process for the direct material costs is updated under results analysis cost element 931001 and the work in process for the production costs under results analysis cost element 931002, you can pass this information on to different G/L accounts in Financial Accounting.

  In our scenario we do not want the results to be updated to different GL codes.

Before doing this transaction you need to first switch off the indicator:-

Use the path:-
IMG → Controlling → Product Cost Controlling → Cost Object Controlling → Product Cost by Order → Period-End Closing→ Work in Process → Define Results Analysis Versions

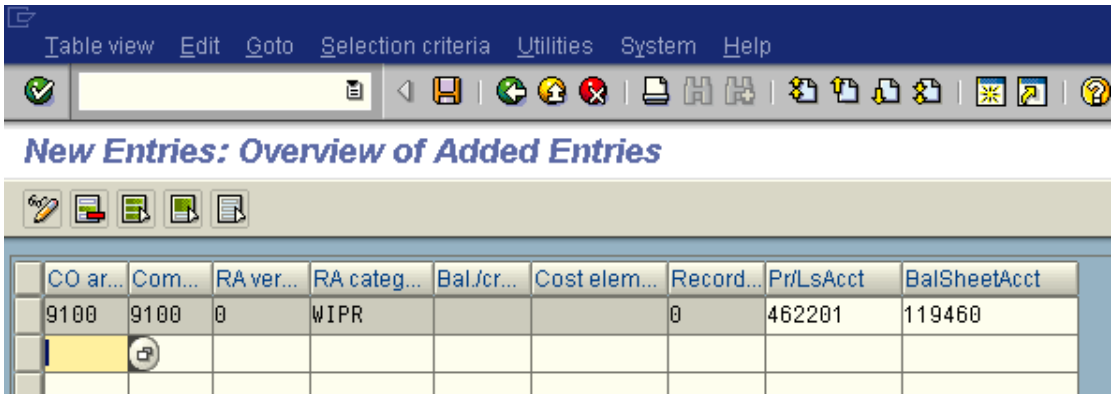
Double Click 

Uncheck 

Remove the tick

Click on 

Update the following: -



Co area (controlling area) – 9100
Com(Company code) – 9100
Ra ver (RA version) – 0
RA categ (RA category) – WIPR (Work in process with requirement to capitalize)

In case you want to calculate reserves for unrealized costs you need to select RA category RUCR (Reserves for unrealized costs). This normally happens when the goods issue to the production order based on the goods receipt is lesser than as per the standard issues.

Note: The GL code 462201 (Change in WIP) should not be created as cost element in the controlling module

119460 is a balance sheet account WIP

Click on Save 

The posting rules for version D01 and D02 are defined automatically.

Switch on the transfer to financial accounting tick now.

1.2.9 Define Number Ranges

IMG → Controlling → Product Cost Controlling →Cost Object Controlling → Product Cost by Order → Period-End Closing → Work in Process → Define Posting Rules for Settling Work in Process

When work in process is calculated, the following business transactions are carried out:
KABG Automatic results analysis
KSWP Calc. primary target costs (WIP)
KSWS Calc. secondary target costs (WIP)

CO documents are created when these transactions are carried out. The system assigns numbers to these documents.

We must maintain number ranges to restrict the areas for the numbers assigned or to categorize according to certain criteria.
The number range is already defined or copied while maintaining the controlling area.

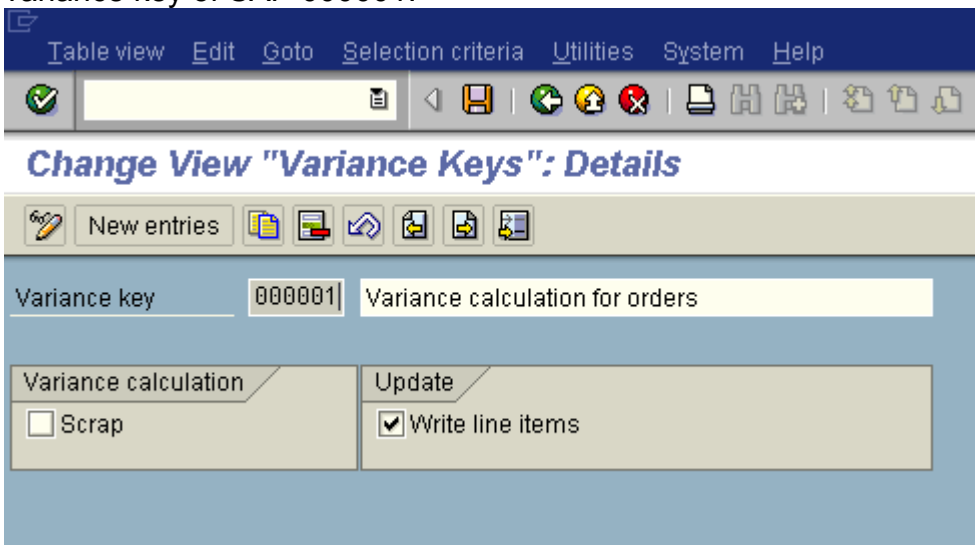
1.3 Variance Calculation

1.3.1 Define Variance Keys

IMG → Controlling → Product Cost Controlling → Cost Object Controlling → Product Cost by Order → Period-End Closing→ Variance Calculation → Define Variance Keys

We define variance keys in this step. Production orders can only be selected for variance calculation if a variance key is entered in the order. .
In cumulative variance calculation, the target costs are calculated on the basis of the quantity you have transferred to stock for the order. The actual costs are for the entire life of the order. Variance calculation requires that the order have the status DLV (delivered) or TECO (technically completed).

Normally there is no need to create a variance key; we can use the standard variance key of SAP 000001.



1.3.2 Define Default Variance Keys for Plants

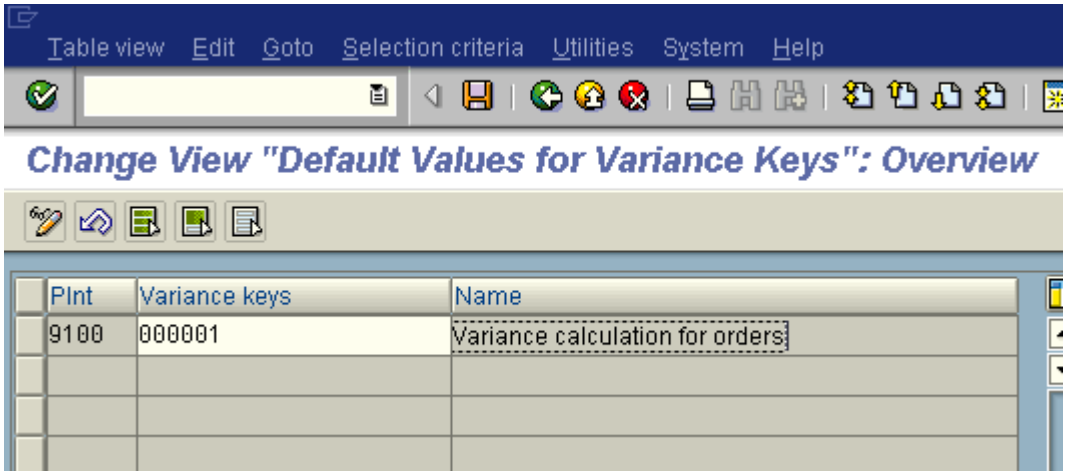
IMG → Controlling → Product Cost Controlling → Cost Object Controlling → Product Cost by Order → Period-End Closing→ Variance Calculation → Define Default Variance Keys for Plants

We assign a variance key to the plant in this step.

Variances are calculated on the basis of the variance key shown in the order master record. This entry is defaulted as follows:

- When we create a material master record, the system proposes a default variance key for that material master through the plant.
- When we create a production order, process order for this material, the system proposes a default variance key through the entry in the material master record.

This value gets copied automatically when a plant is copied. No maintenance is generally required here.



1.3.3 Check Variance Variants

IMG → Controlling → Product Cost Controlling → Cost Object Controlling → Product Cost by Order → Period-End Closing→ Variance Calculation → Check Variance Variants

Variance variants determine what variance categories are calculated.

The following variance categories can be calculated:

Variances on the input side:

- **Scrap variances**

  You specify whether scrap variances are calculated in the step **Define Variance Keys**. This enables you to control the display of scrap or the deduction of the scrap from the actual costs separately for each variance variant; you can also control this separately for each variance variant by assigning the variance variant to a target cost version.

- **Input price variances**

Input price variances are the differences between the planned prices and the actual prices of the resources used

- **Input quantity variances**

  Input quantity variances are differences between the planned and actual input quantities of the resources.

- **Resource-usage variances**

  A resource-usage variance arises when a different resource is used than was planned.

- **Remaining input variances**

  Remaining input variances are differences on the input side that cannot be assigned to any other variance category on the input side (such as overhead).

Variances on the output side:

- **Lot size variances**

  Lot size variances are differences between the planned fixed costs and the charged fixed actual costs. Lot size variances can only be calculated for target cost version 0.

- **Output price variances**

  Output price variances are differences between the target credit (at the standard price) and the actual credit (for example at the moving average price).

- **Mixed-price variances**

  If we valuate your inventories with mixed prices, mixed-price variances may result if the standard price calculated on the basis of the mixed cost estimate is not the same as the target cost of the **procurement alternative**.
  Example:
  Suppose the standard price for a material was calculated in a mixed cost estimate. The material has price control indicator **S**, which means that the goods receipts are valuated at the standard price and the order is credited accordingly. When the system calculates the total variance, it compares the control cost (in this case the actual cost) with the procurement alternative for which the order was created. If the target cost for the procurement alternative is not the same as the credits at the standard price, a mixed-price variance will result.

- **Remaining variances**

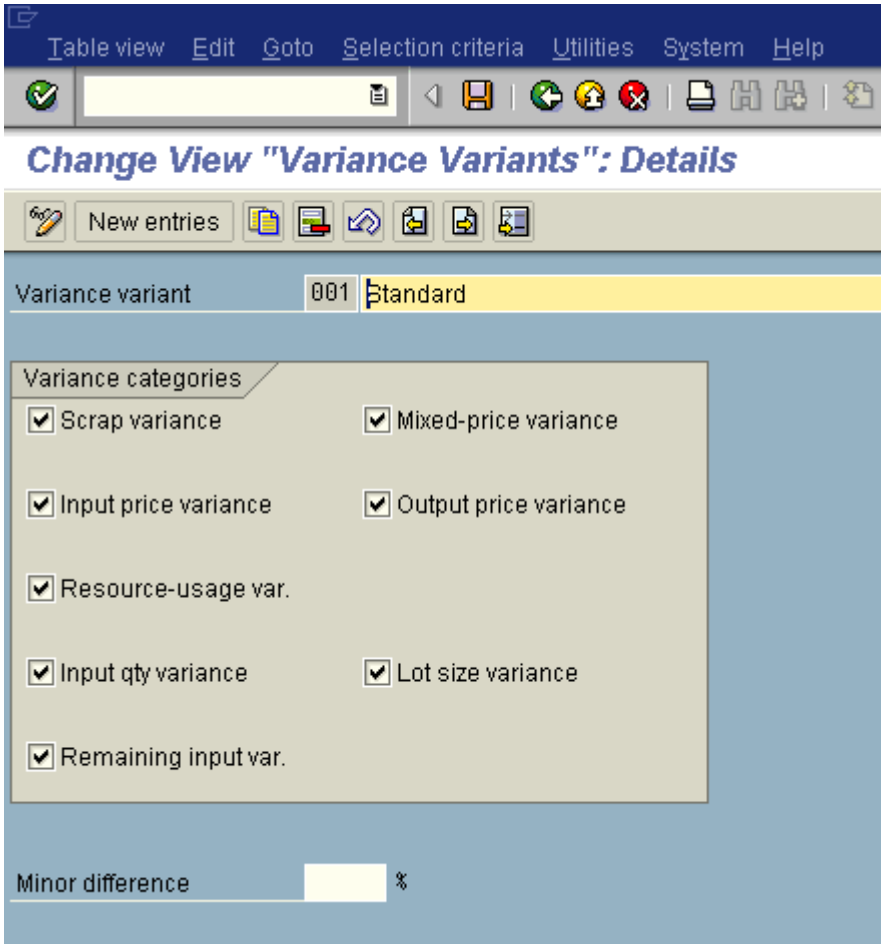
  Remaining variances are variances that cannot be assigned to any other variance category (for example, rounding differences). If the system cannot calculate any target costs, only remaining variances will be calculated.

Variances are calculated for all variance categories that are selected in this view.

- If a particular variance category is not selected, the variances of that category will be assigned to the remaining variances. Scrap variances are an exception to this: if you don't want to see scrap variances, these variances can enter all other variance categories on the input side.

- If no variance categories are selected, only remaining variances will be calculated.

The *Minor differences* field enables us to have small amounts charged and settled as remaining variances, although they are still assigned to the relevant variance category in the detail screen of variance calculation.



1.3.4 Define Valuation Variant for WIP and Scrap (Target Costs)

IMG → Controlling → Product Cost Controlling → Cost Object Controlling → Product Cost by Order → Period-End Closing→ Variance Calculation → Define Valuation Variant for WIP and Scrap (Target Costs)

We are not configuring any valuation variant, since we are valuing WIP at actual cost. This is more relevant in product cost by period.

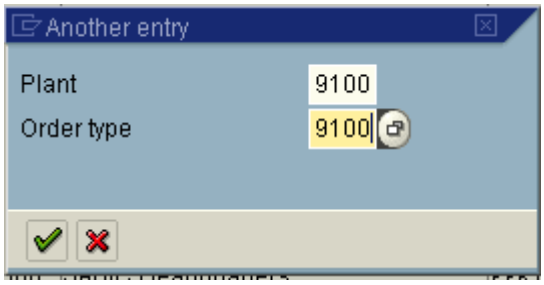
1.3.5 Define Order type dependent parameters

IMG → Production → Shop Floor Control → Master Data → Order → Define order type-dependent parameters

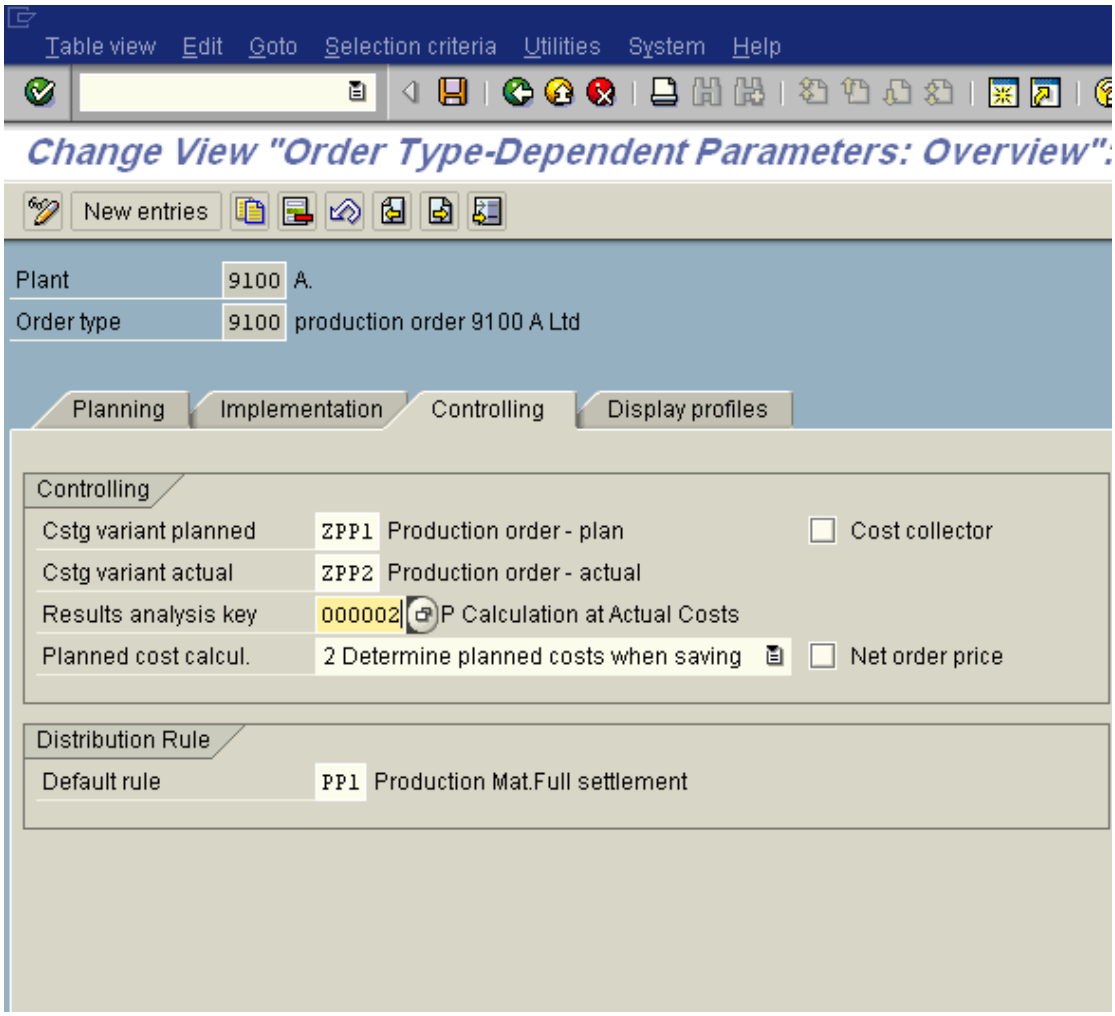
Here, you define the parameters relevant to controlling, such as, for example, costing variants for planned and actual costs and a results analysis key.

Click on 

and enter the following



Change or update the following



1.3.6 Define Target Cost Versions

IMG → Controlling → Product Cost Controlling → Cost Object Controlling → Product Cost by Order → Period-End Closing→ Variance Calculation → Define Target Cost Versions

Target cost means the costs expected to be incurred when a specific quantity is produced. In Cost Object Controlling, the target costs are calculated on the basis of the planned values of a service unit (such as the planned cost of a production order) and the control quantities (such as the yield delivered to stock).

Target costs can be used to determine variances, valuate WIP, valuate unplanned scrap

The target cost version specifies which data is to be compared. The target cost version also specifies which variance variant is used and therefore which variance categories are calculated.

Target cost version 0 is the only target cost version that is relevant to settlement. That is, only the variances calculated with target cost version 0 can be settled to Profitability Analysis.

Only in target cost version 0 can we specify a valuation variant for the valuation of scrap and work in process, rest all other target cost version are for information.

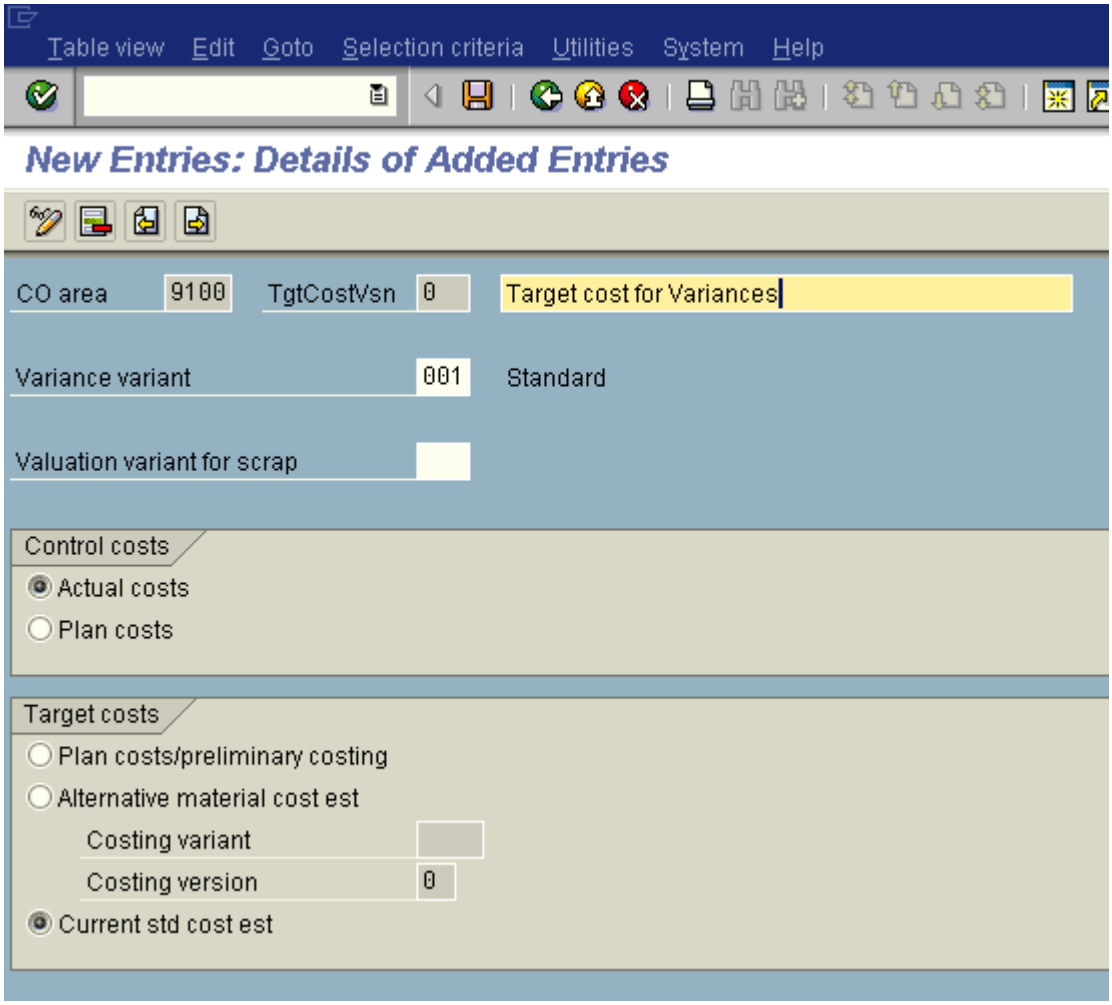
We have already maintained versions and settings in the controlling area 9100 in e-book cost center accounting, before we configure target cost version.

Click on 

Update the following: -

Take a drop down in target cost version and select

COAr	Vsn	Version description	V...	Act.	WIP/RA	Valuation type
9100	0	Plan/Act - Version	X	X	X	Legal valuation



Click on Save 

To create supplementary target cost versions you also need to update the version in the General controlling table definition in controlling area 9100

Create version 1 in controlling area version maintenance (creation is optional)

1.3.7 Define Number Ranges for Variance Documents

IMG → Controlling → Product Cost Controlling → Cost Object Controlling → Product Cost by Order → Period-End Closing→ Variance Calculation → Define Number Ranges for Variance Documents

When variances are calculated various controlling business transactions are carried out.
When these business transactions are carried out, CO documents are created containing the target costs, variances, scrap, and distributed actual costs. Numbers are assigned for these documents. We have to maintain number ranges for these transactions.
The number range is already defined when we copied number range for controlling area from SAP standard in e-book Cost center accounting.

1.4 Settlement

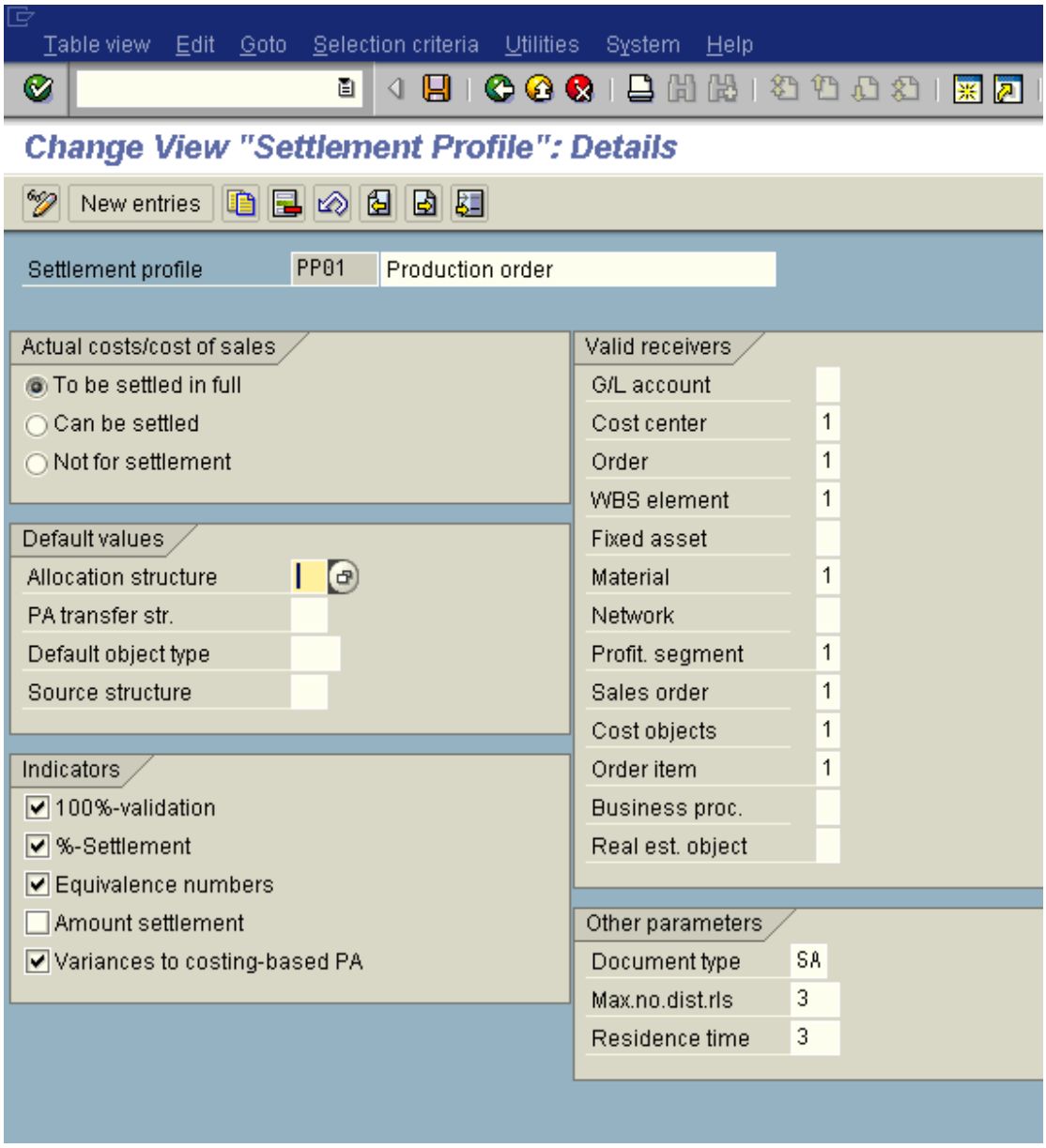
1.4.1 Create Settlement Profile

IMG → Controlling → Product Cost Controlling → Cost Object Controlling → Product Cost by Order → Period-End Closing→ Settlement → Create Settlement Profile

In the settlement profile, we define a range of control parameters for settlement. We must define the settlement profile before we can enter a settlement rule for a sender.

If we want to settle variances to Profitability Analysis, we must also set the *Variances* indicator and allow settlement to a profitability segment.

Let us create a settlement profile for the production order, after that it must be saved in the order type



We will create the PA transfer structure in the subsequent step

1.4.2 Create PA Transfer Structure

IMG → Controlling → Product Cost Controlling → Cost Object Controlling → Product Cost by Order → Period-End Closing→ Settlement → Create PA Transfer Structure

In the PA transfer structure you determine which cost element groups are assigned to which value fields in Profitability Analysis (CO-PA). You make these assignments within so-called "assignment lines".

Settlement lets us transfer production variances to costing-based Profitability Analysis. The PA transfer structure defines which quantities or values of a sender are to be transferred to which value fields in CO-PA as part of settlement.

For settlement to Profitability Analysis to proceed smoothly, the assignments you enter must be unique and complete:

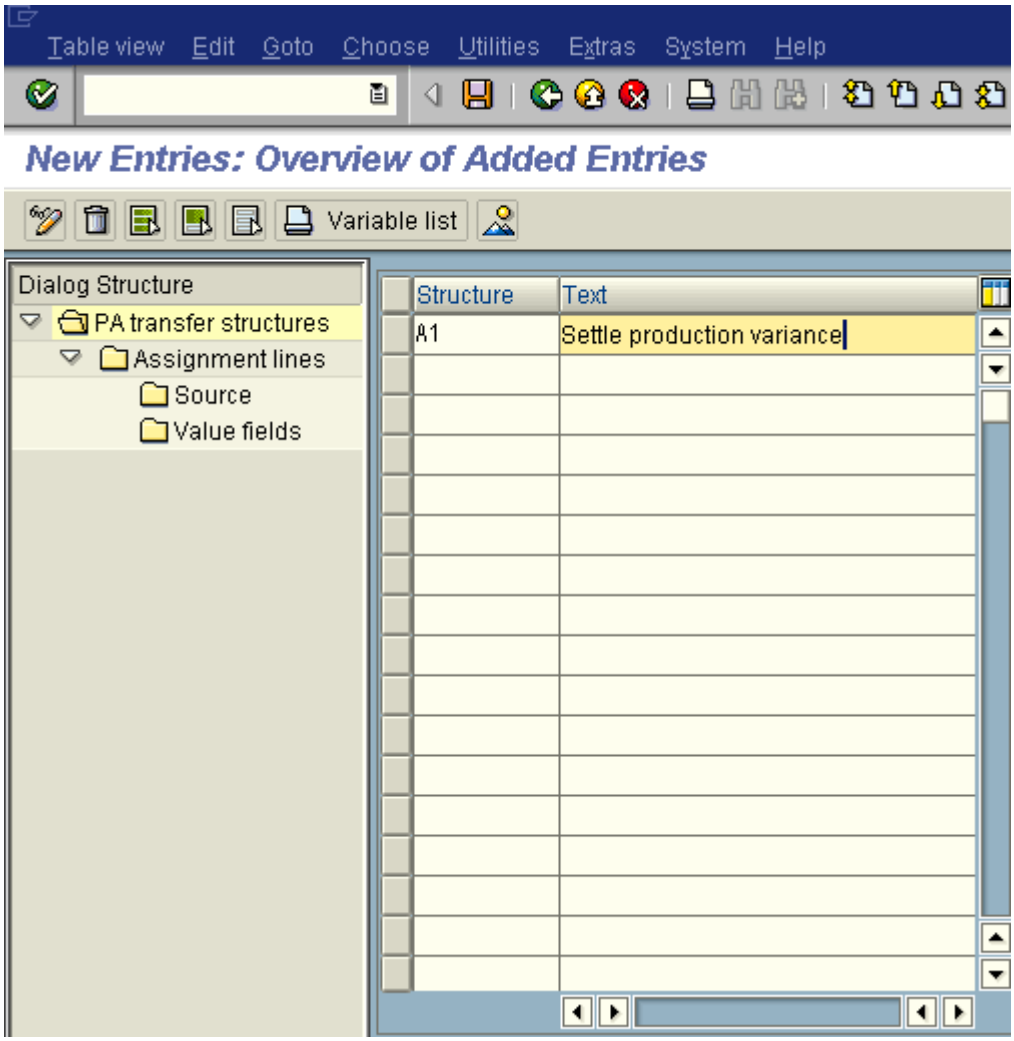
A cost element group or cost element group/variance category combination can be assigned only once to a PA transfer structure and will thus only appear once in the structure. You may not assign a cost element group or cost element group variance category to more than one field in the operating concern. However, you can assign the fixed and variable costs which have been incurred under one cost element group to different value fields.

We can settle the variances that have occurred for a cost element or cost element group (differences between planned costs and actual costs) to CO-PA separately. To do this, we need to specify a variance category for the cost element or cost element group The R/3 System distinguishes between the variance categories discussed earlier i.e. input price variance, resource usage variance, input quantity variance etc.

The settlement of Production variances provides us with useful analysis possibilities in CO-PA.

Click on 

Update the following: -



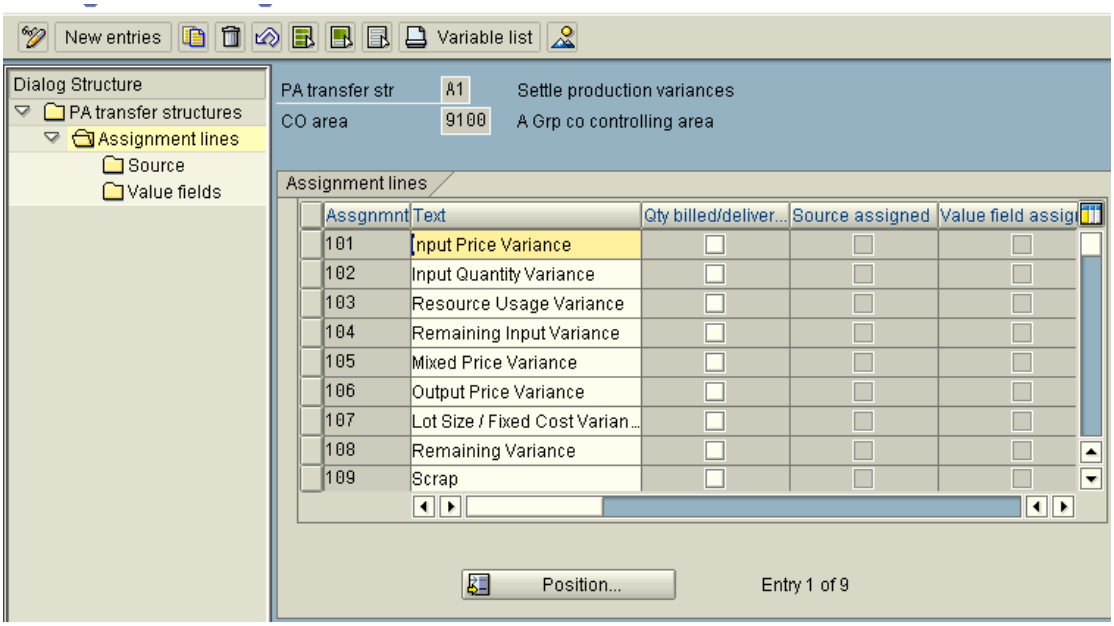
Click on Save 

Select 

Double Click 

Update the operating concern 9100 for costing-based.

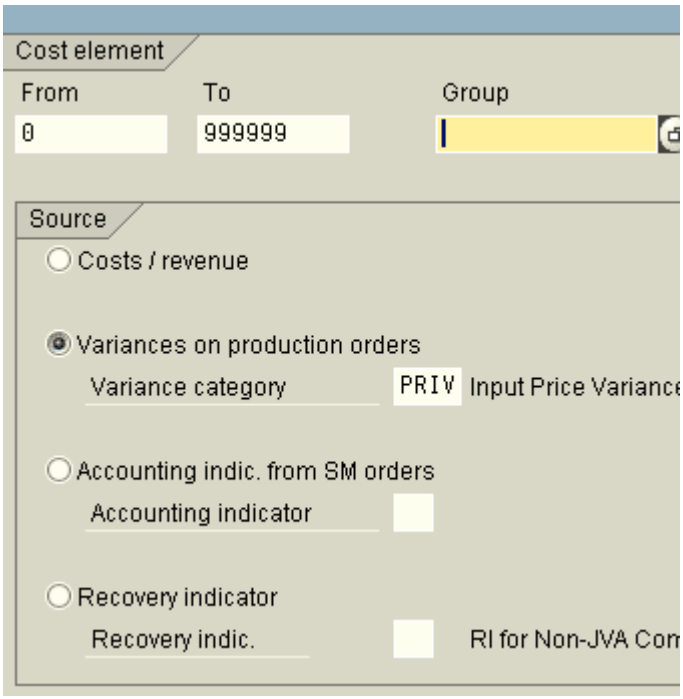
Update the following: -



Select each assignment line for e.g.

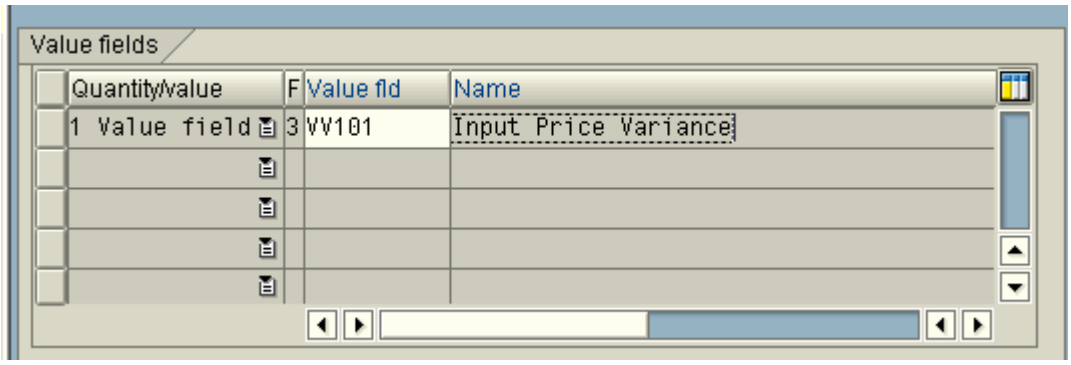
Double Click Source

Update the following: -



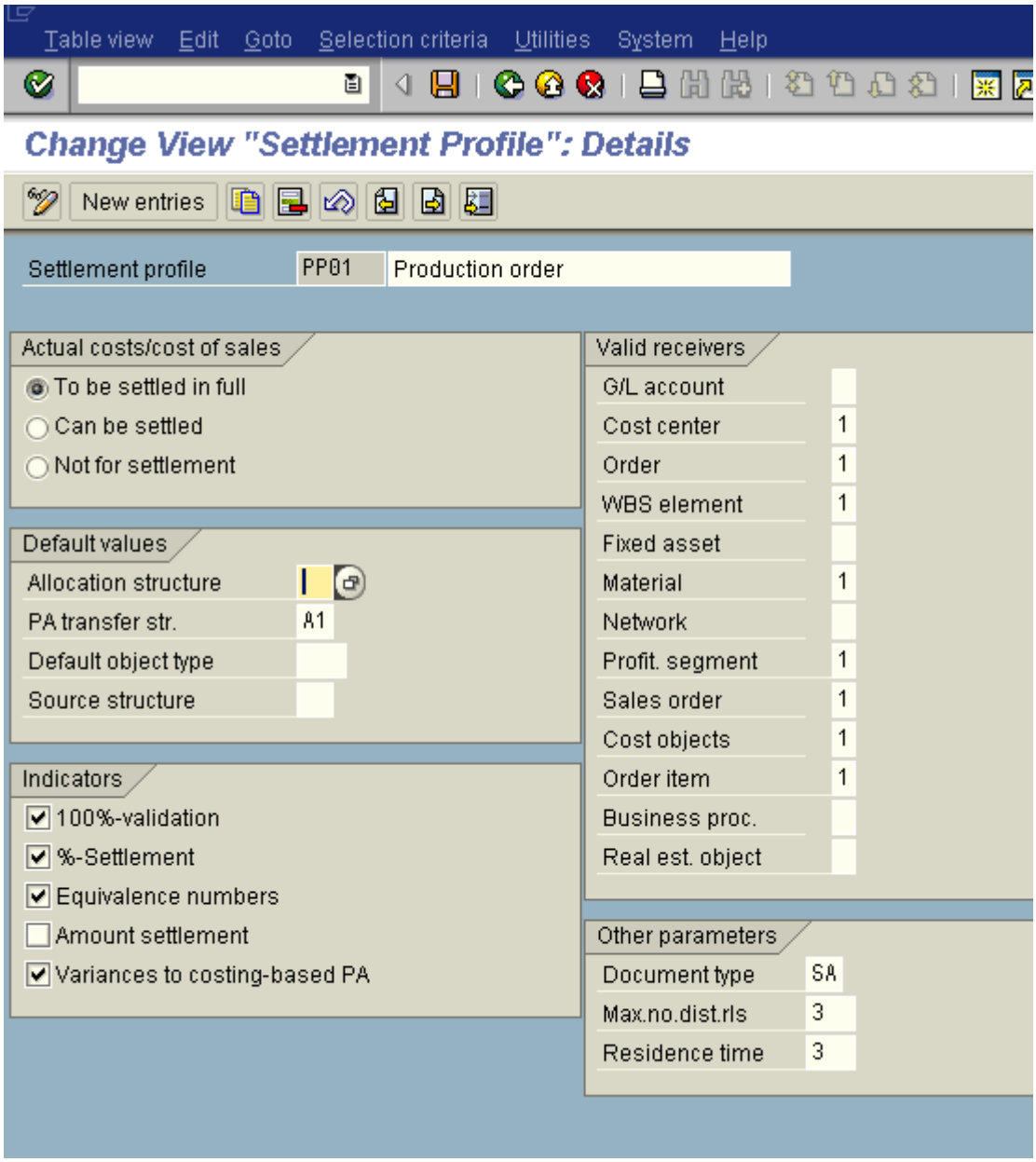
Double Click Value fields

Update the following: -



Likewise update each of the variance categories and cost element combination to the value fields in Profitability Analysis.

After creating the transfer structure A1 we will assign it to the settlement profile

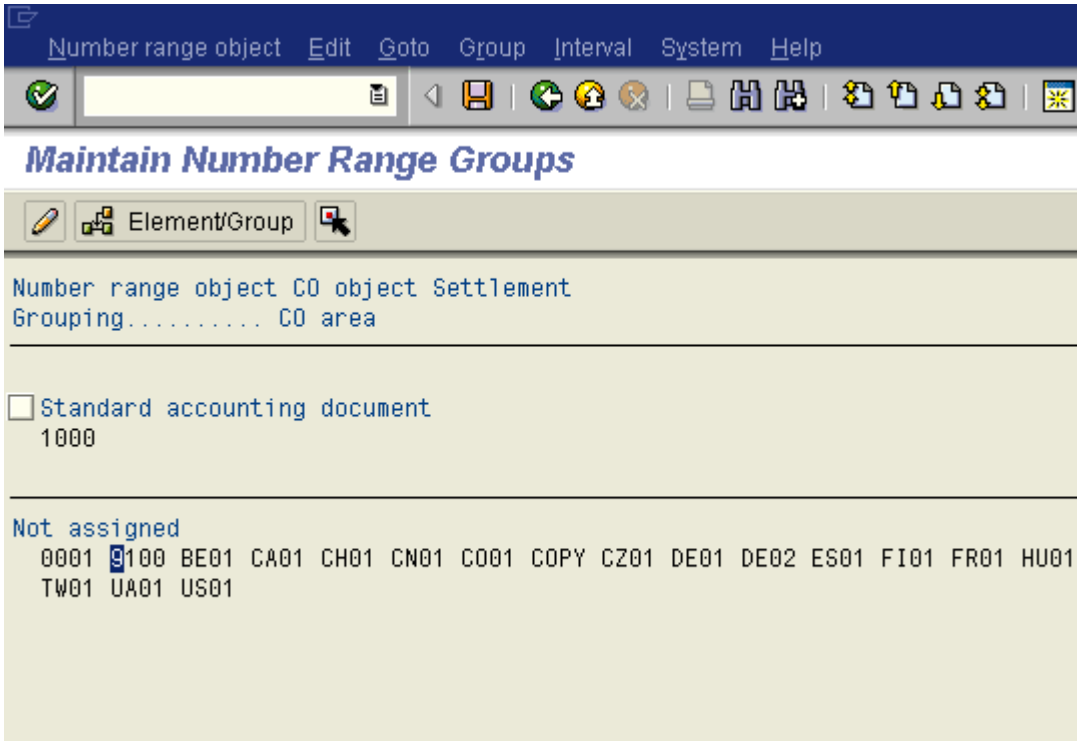


1.4.3 Maintain Number Ranges for Settlement Documents

IMG → Controlling → Product Cost Controlling → Cost Object Controlling → Product Cost by Order → Period-End Closing→ Settlement → Maintain Number Ranges for Settlement Documents

SAP System creates a settlement document each time an object is settled.
In this step we define the intervals, or number ranges, for settlement documents for our controlling area 9100.

Click on Groups

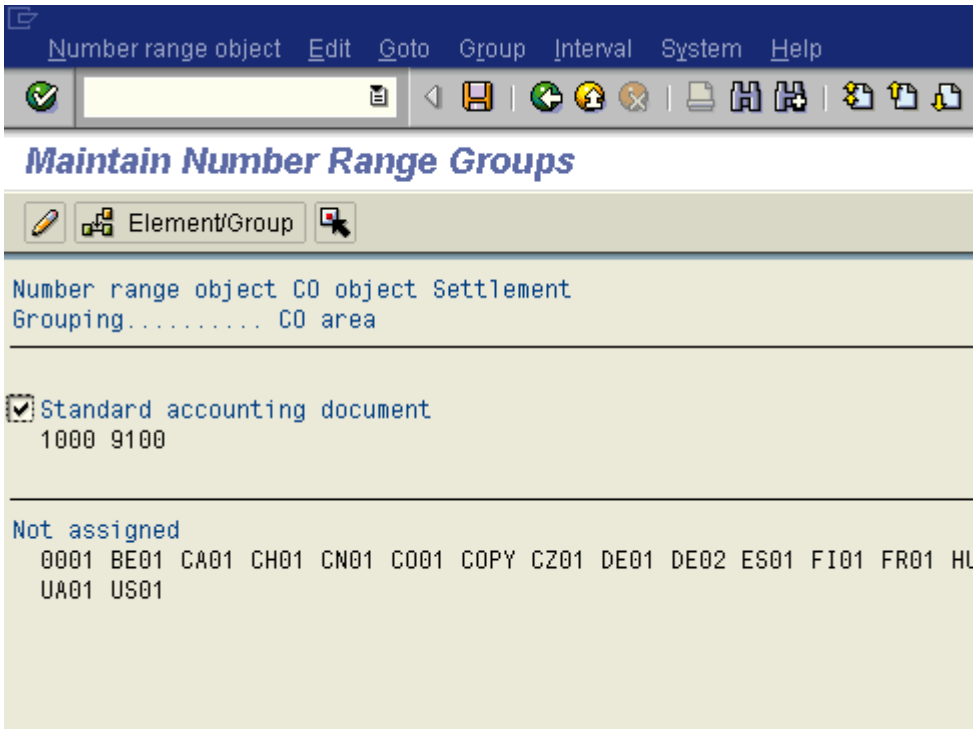


Position the cursor on 9100 which is under not assigned

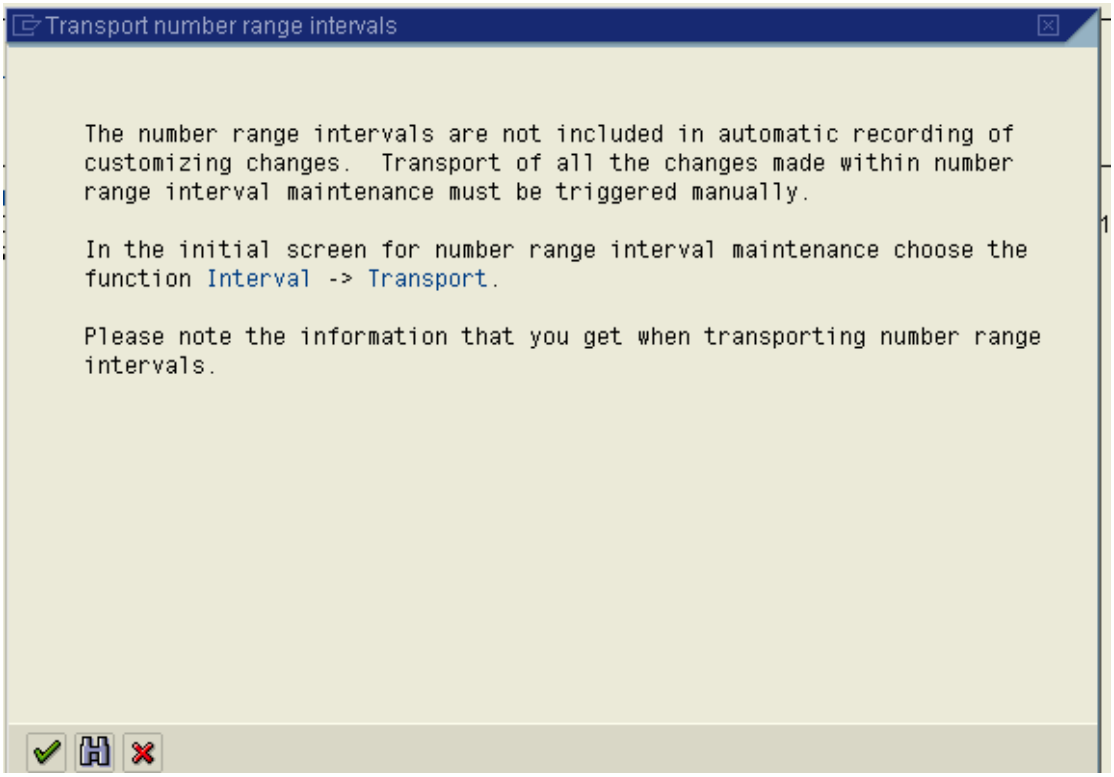
Click  then click  to select

Click 

The controlling area 9100 will be assigned to standard accounting document group as follows



Click on Save 



2. Product Cost by period

2.1 Product cost collectors

2.1.1 Check Costing Variants for Product Cost Collectors

IMG → Controlling → Product Cost Controlling → Cost Object Controlling → Product Cost Collectors→ Check Costing Variants for Product Cost Collectors

The costing variant contains the control parameters for the cost estimate.
Here you check the costing variants that are used in the Product Cost by Period component for the following purposes:

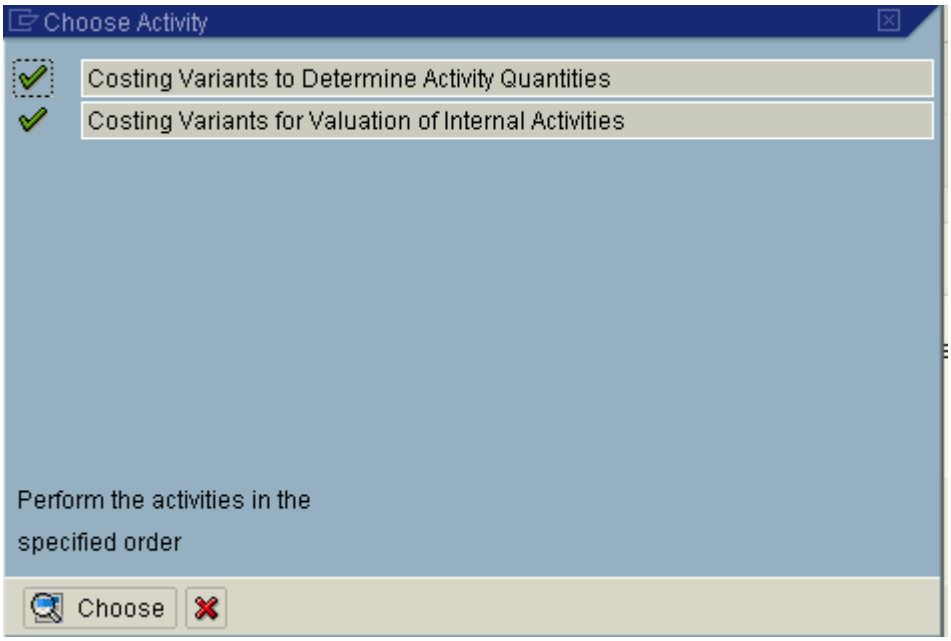
- For the preliminary cost estimate of a product cost collector
- For simultaneous costing and final costing of a product cost collector

Product cost collector is a cost object where the total costs for the manufacture of a product is collected during the period. The costing for this particular object requires a costing variant similar to the costing variant which we created for product cost planning. The costs collected on this object are settled at the month end to the material.

- Costing variants for the calculation of activity quantities

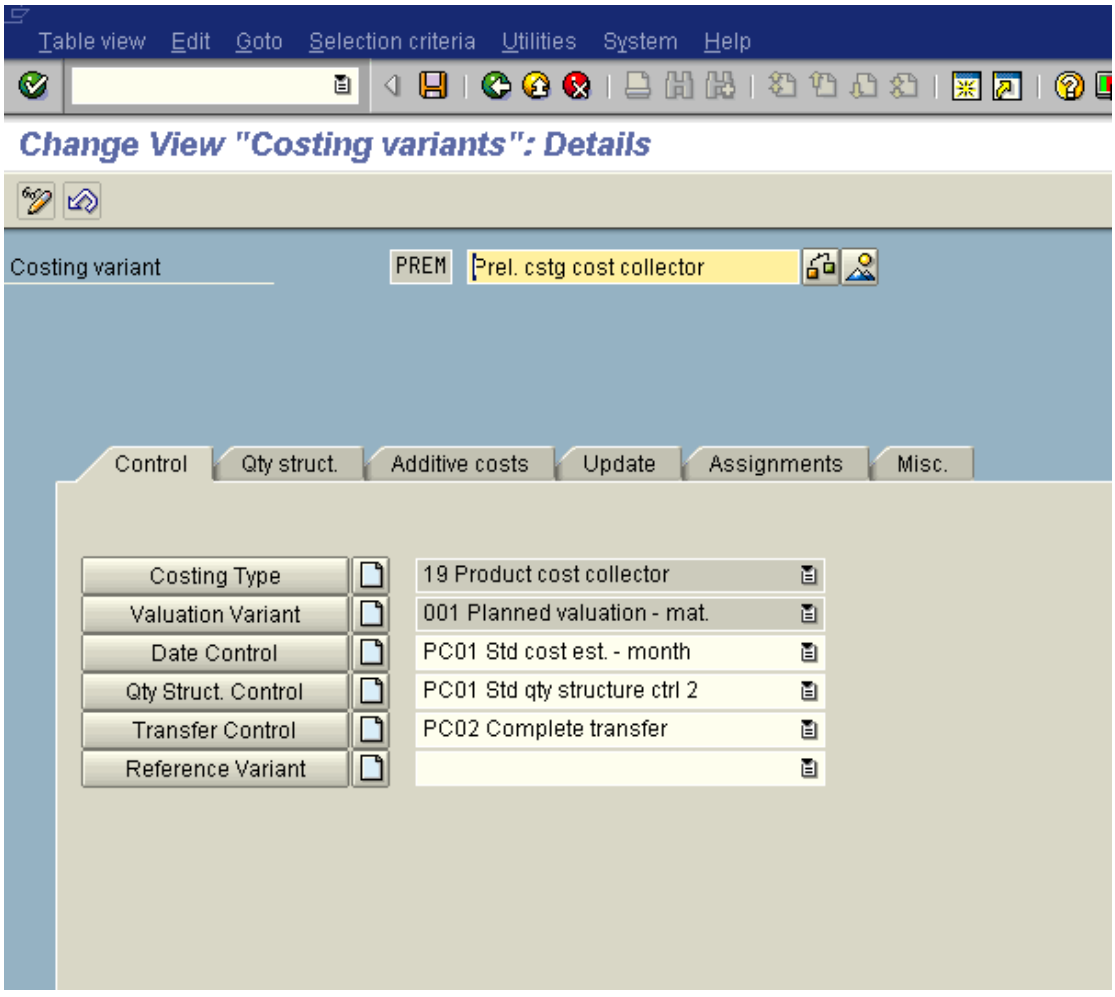
  Here you check the control parameters of the preliminary cost estimate for the product cost collector (SAP standard costing variant PREM) and the material cost estimate with quantity structure.
  If we are a repetitive manufacturer and have specified in the repetitive manufacturing profile that you want activity types allocated automatically at confirmation, make an additional entry in the repetitive manufacturing profile as to whether the activity quantities are proposed on the basis of the preliminary costing of the product cost collector or on the basis of the standard cost estimate for the material. This means that the costing variants entered here that are used for the preliminary costing of the product cost collector or for standard cost estimates can also be used for the actual costing of the default activity types

PREM is used as the costing variant planned for product cost collector



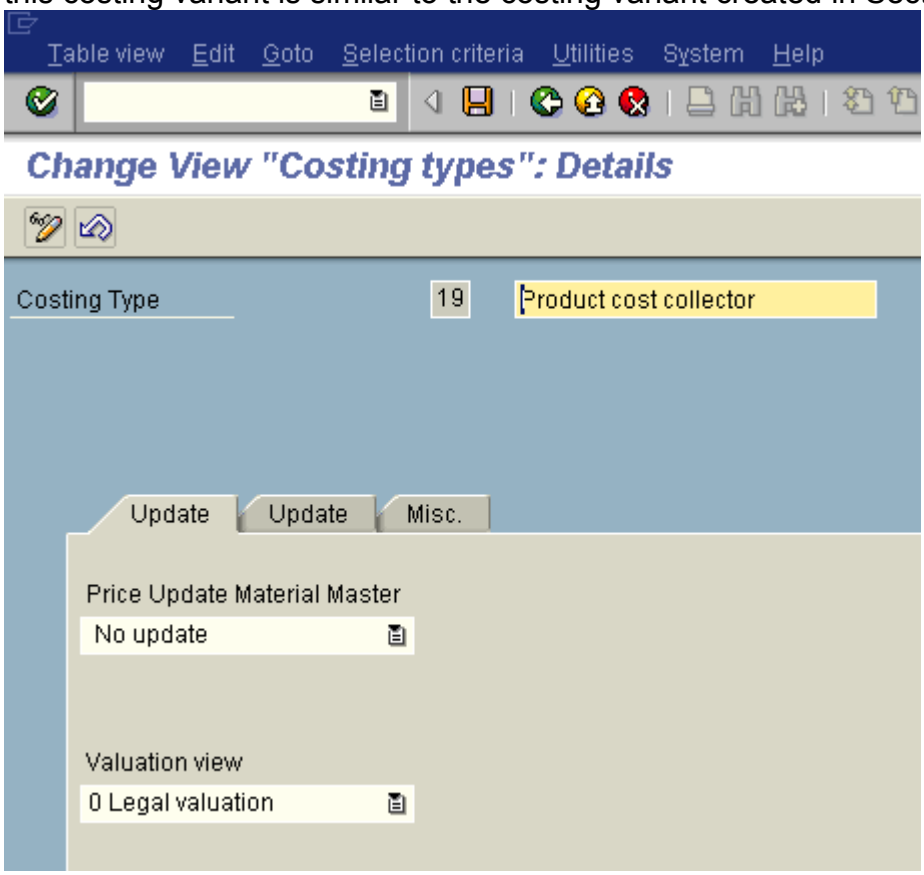
Double Click 

Double Click 



Double Click **Costing type.**

Here if you see there is **No update** for price in the material master, since the product is to be costed on the product cost collector. Rest all other settings for this costing variant is similar to the costing variant created in Section A.



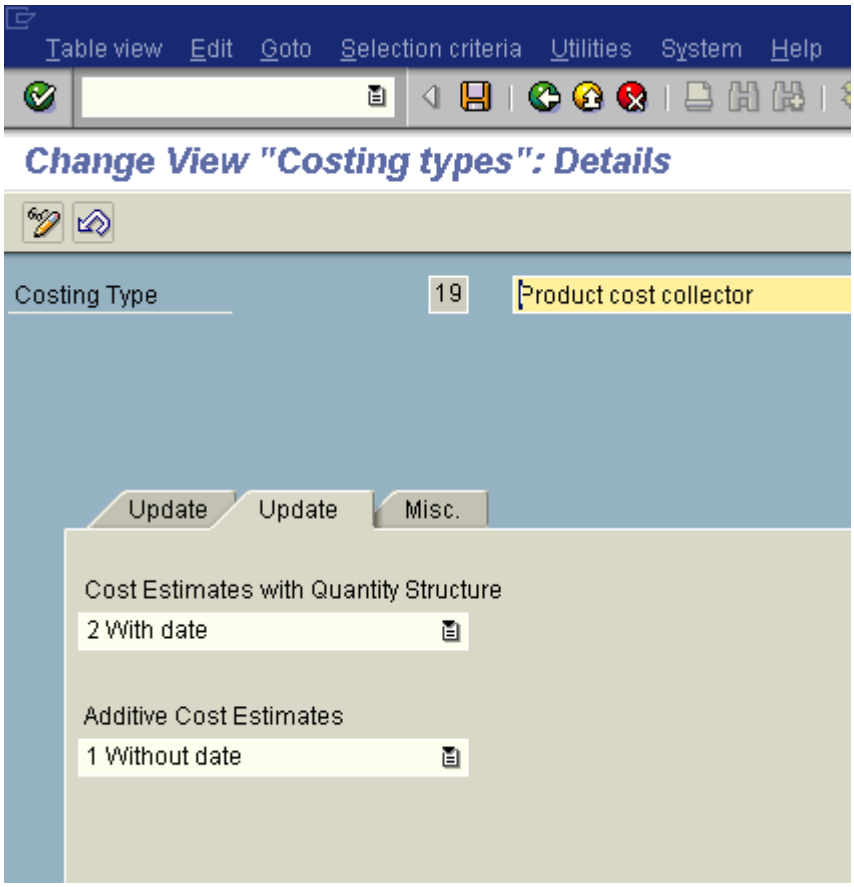
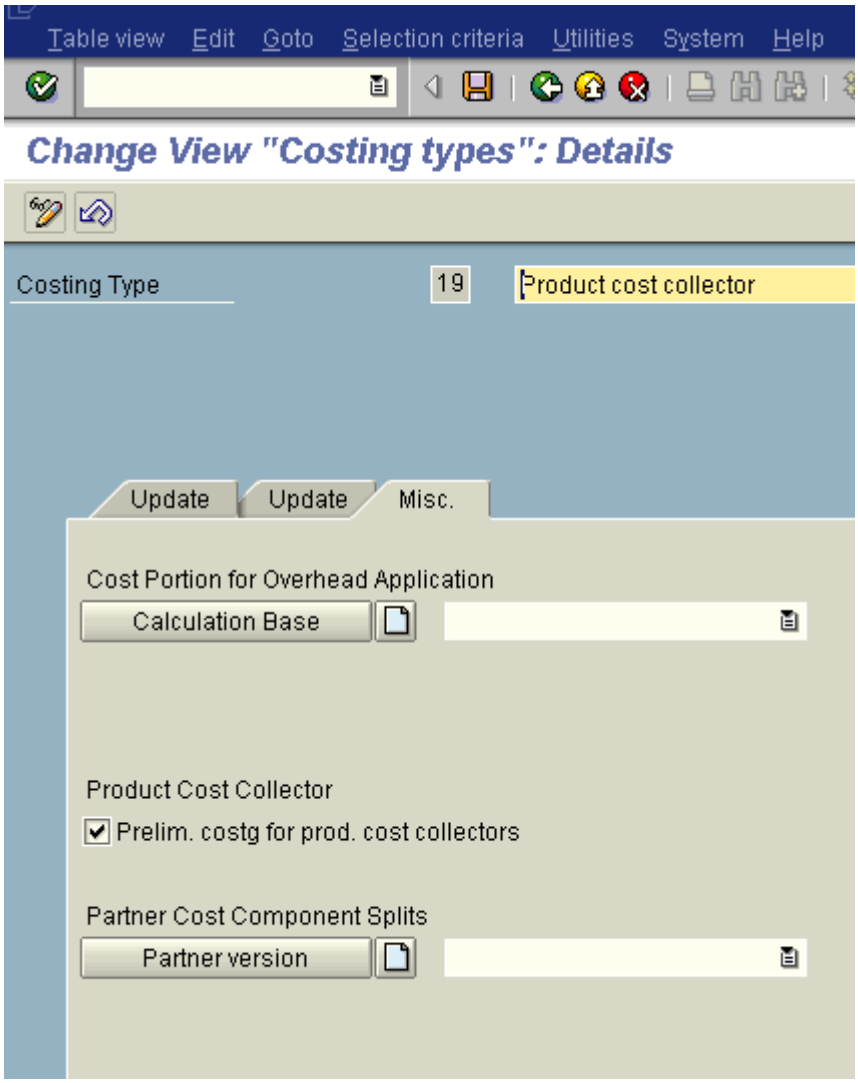


Table view Edit Goto Selection criteria Utilities System Help
Change View "Costing types": Details
Costing Type
19
Product cost collector
Update
Update
Misc.
Cost Estimates with Quantity Structure
2 With date
Additive Cost Estimates
1 Without date



Double Click 

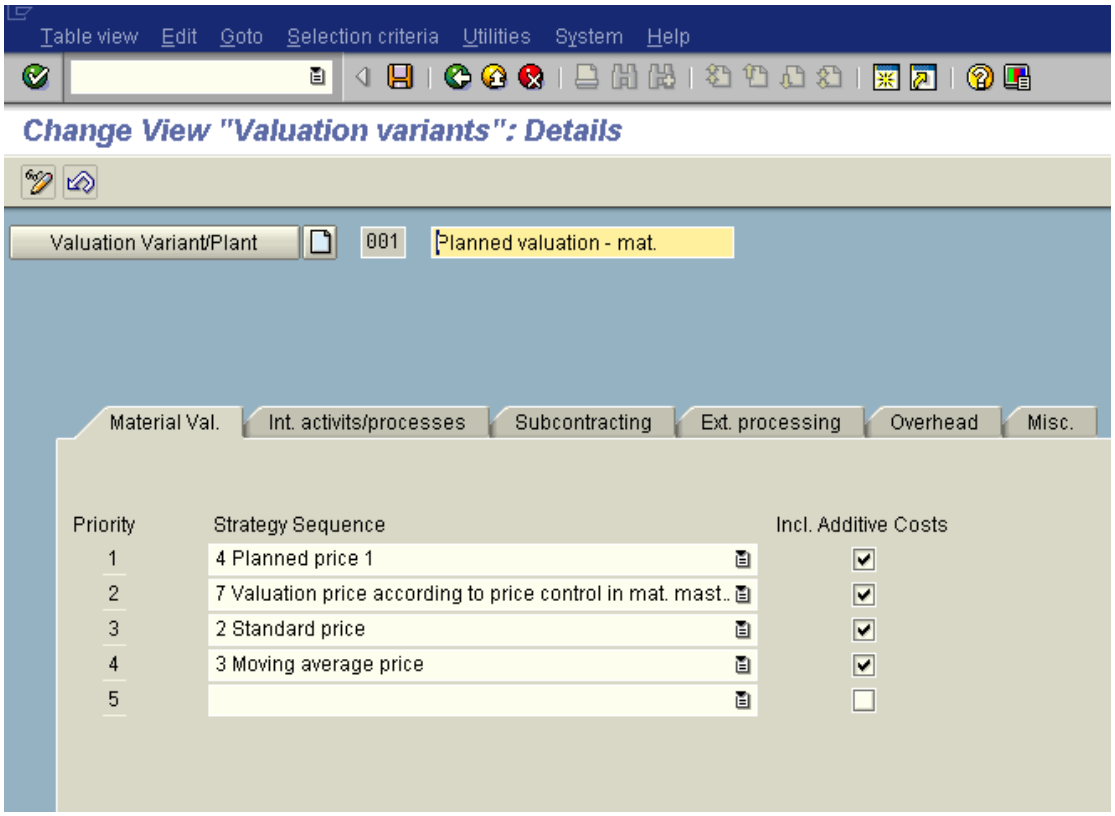


Table view Edit Goto Selection criteria Utilities System Help
Change View "Valuation variants": Details
Valuation Variant/Plant
001
Planned valuation - mat.
Material Val.
Int. activits/processes
Subcontracting
Ext. processing
Overhead
Misc.
Priority
Strategy Sequence
Incl. Additive Costs
1
4 Planned price 1
2
7 Valuation price according to price control in mat. mast..
3
2 Standard price
4
3 Moving average price
5

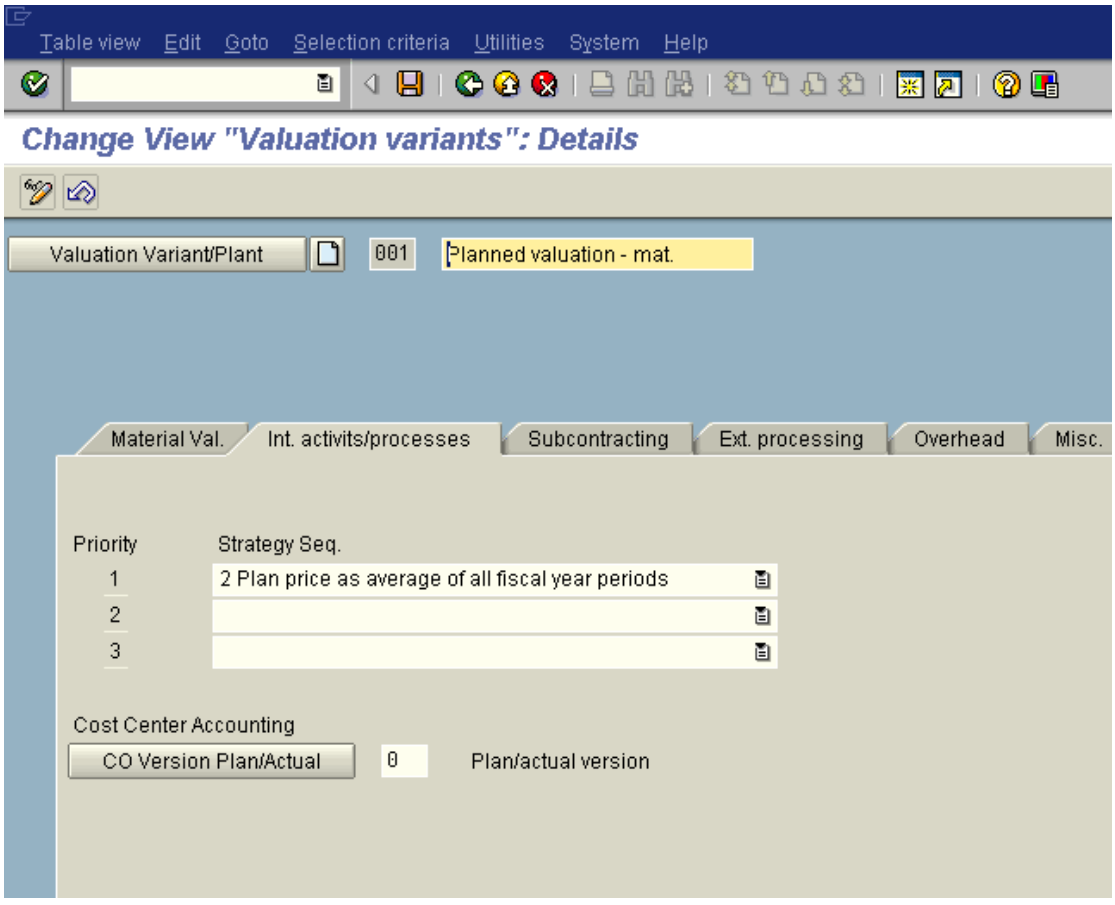


Table view Edit Goto Selection criteria Utilities System Help
Change View "Valuation variants": Details
Valuation Variant/Plant
001
Planned valuation - mat.
Material Val.
Int. activits/processes
Subcontracting
Ext. processing
Overhead
Misc.
Priority
Strategy Seq.
1
2 Plan price as average of all fiscal year periods
2
3
Cost Center Accounting
CO Version Plan/Actual
0
Plan/actual version

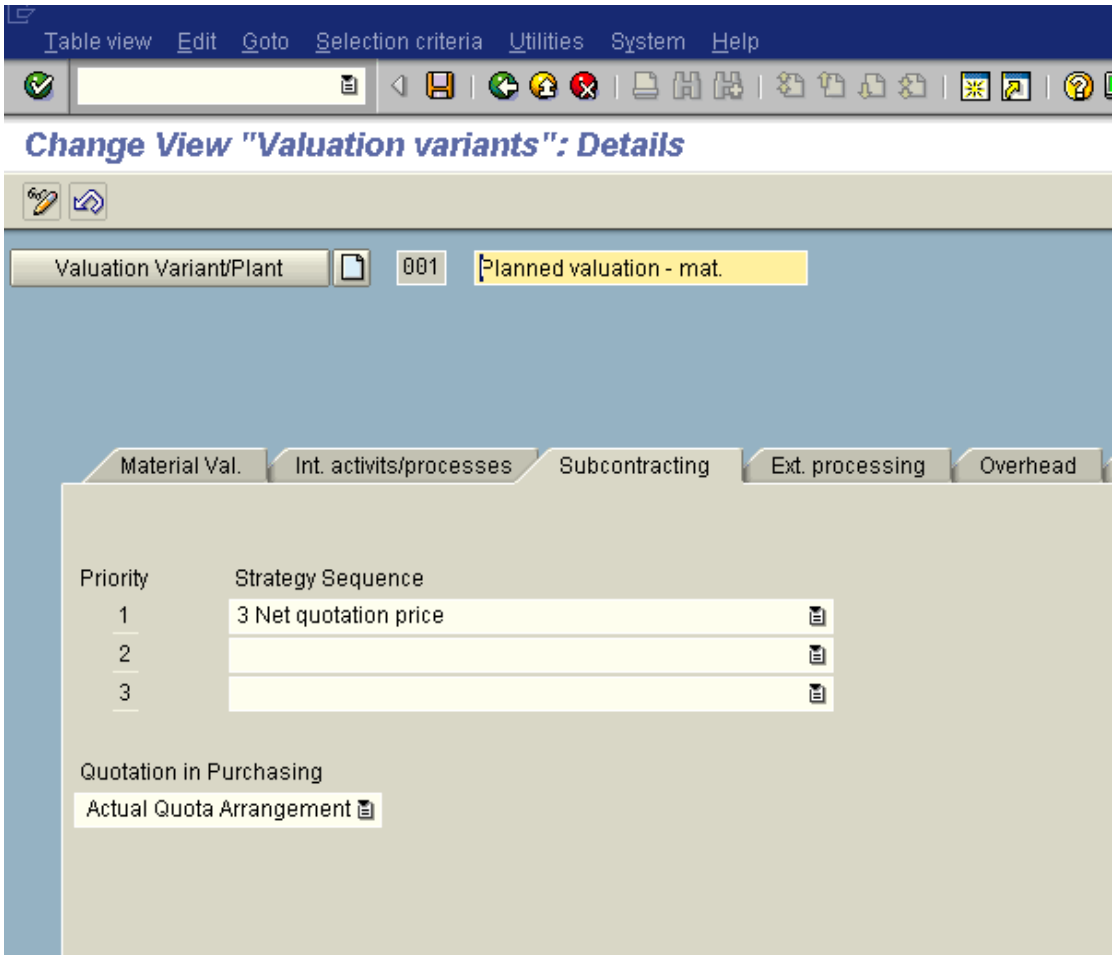


Table view Edit Goto Selection criteria Utilities System Help
Change View "Valuation variants": Details
Valuation Variant/Plant
001
Planned valuation - mat.
Material Val.
Int. activits/processes
Subcontracting
Ext. processing
Overhead
Priority
Strategy Sequence
1
3 Net quotation price
2
3
Quotation in Purchasing
Actual Quota Arrangement

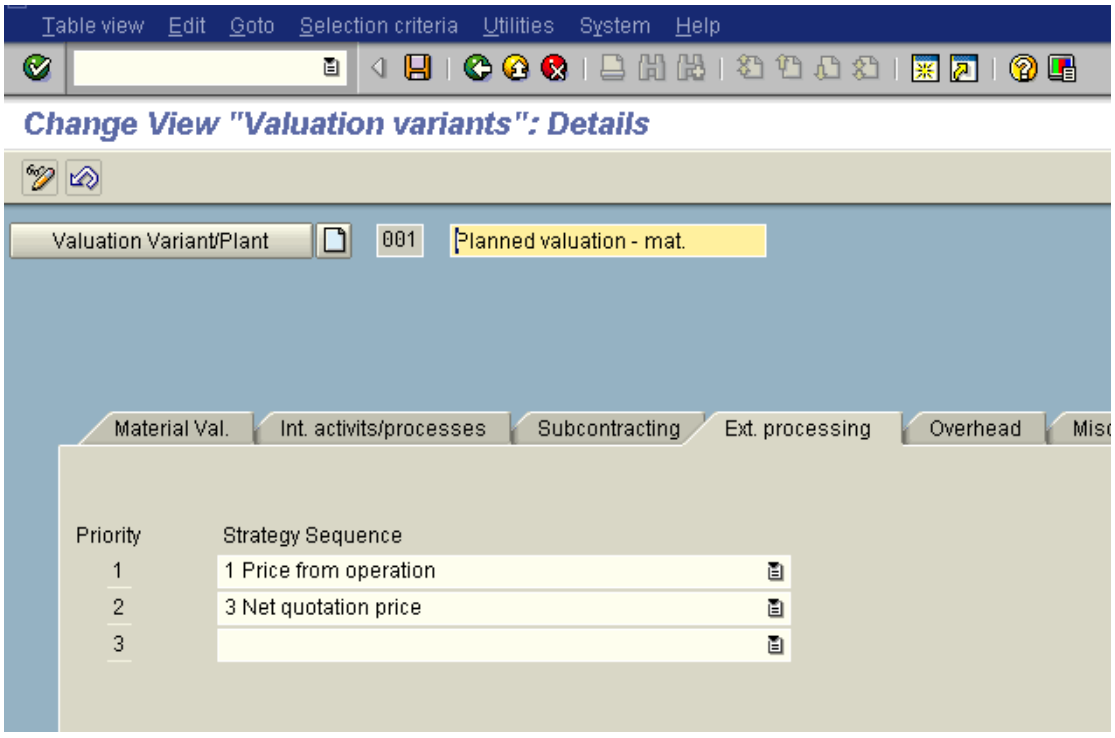
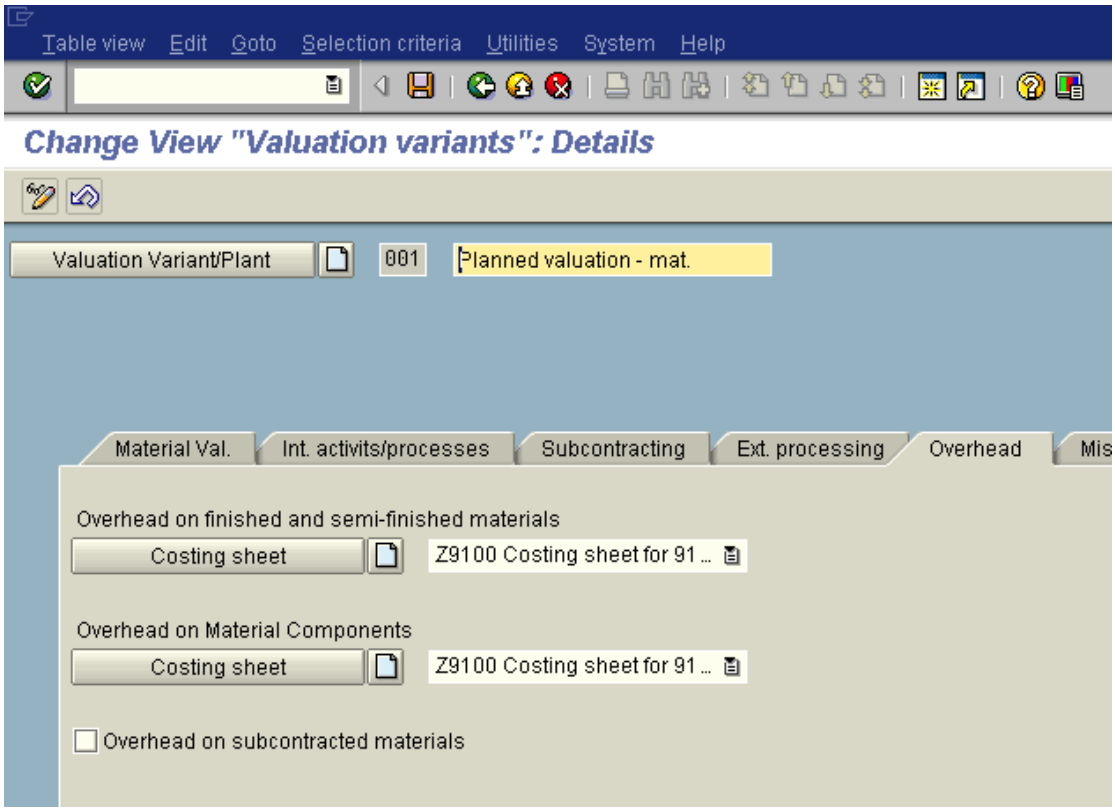
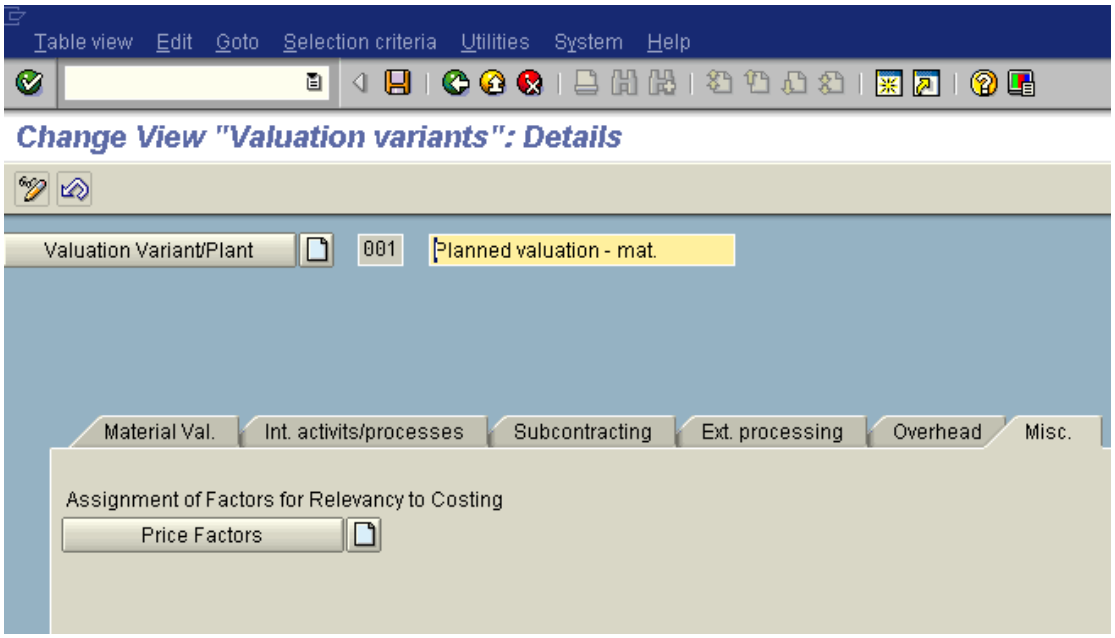


Table view Edit Goto Selection criteria Utilities System Help
Change View "Valuation variants": Details
Valuation Variant/Plant
001
Planned valuation - mat.
Material Val.
Int. activits/processes
Subcontracting
Ext. processing
Overhead
Priority
Strategy Sequence
1
1 Price from operation
2
3 Net quotation price
3





Double Click on transfer control

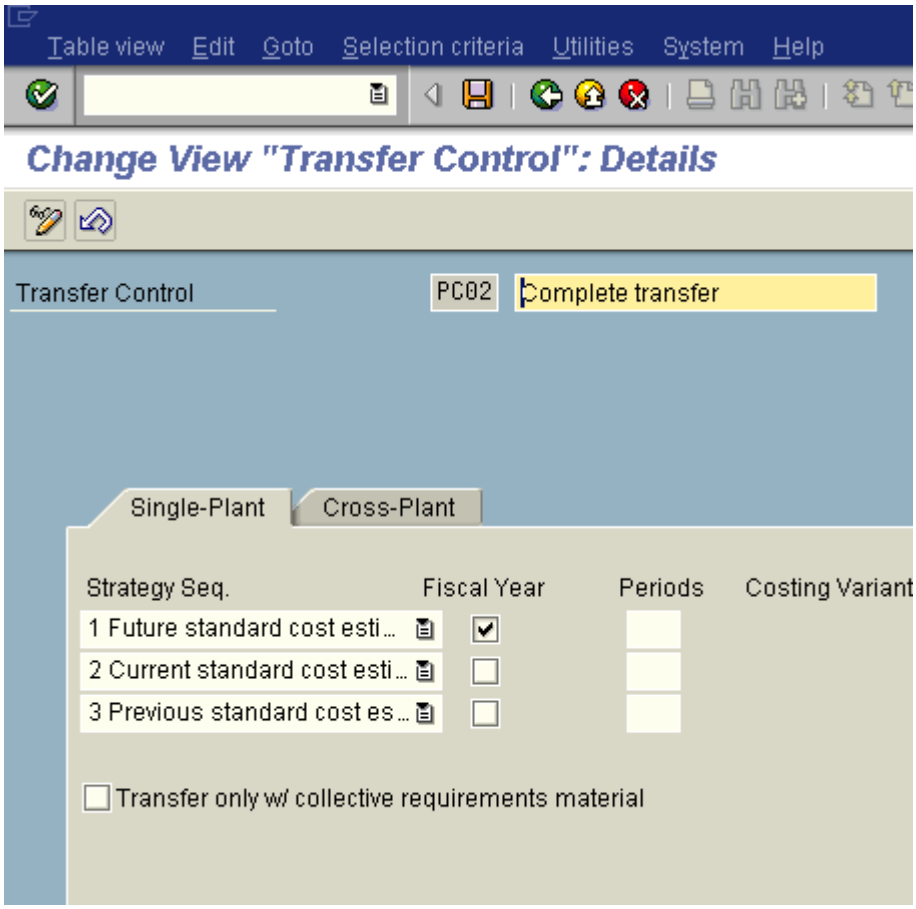


Table view Edit Goto Selection criteria Utilities System Help
Change View "Transfer Control": Details
Transfer Control
PC02
Complete transfer
Single-Plant
Cross-Plant
Strategy Seq.
Fiscal Year
Periods
Costing Variant
1 Future standard cost esti...
2 Current standard cost esti...
3 Previous standard cost es...
Transfer only w/ collective requirements material

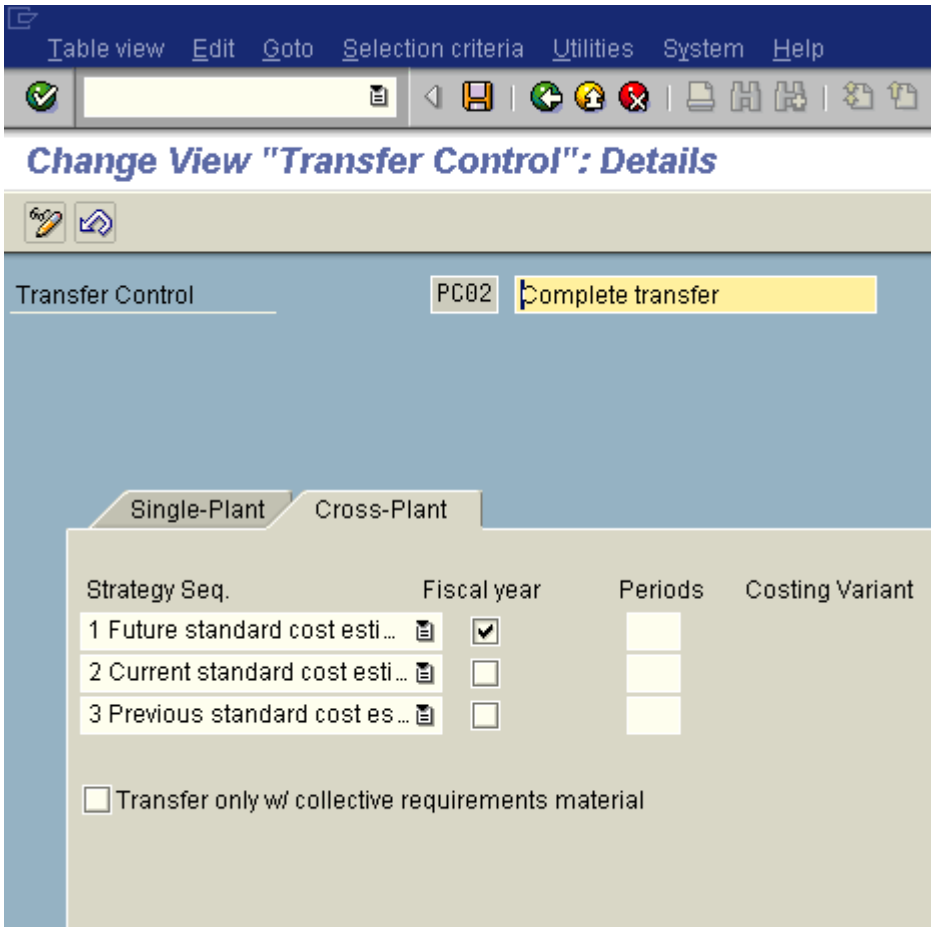


Table view Edit Goto Selection criteria Utilities System Help
Change View "Transfer Control": Details
Transfer Control
PC02
Complete transfer
Single-Plant
Cross-Plant
Strategy Seq.
Fiscal year
Periods
Costing Variant
1 Future standard cost esti...
2 Current standard cost esti...
3 Previous standard cost es...
Transfer only w/ collective requirements material

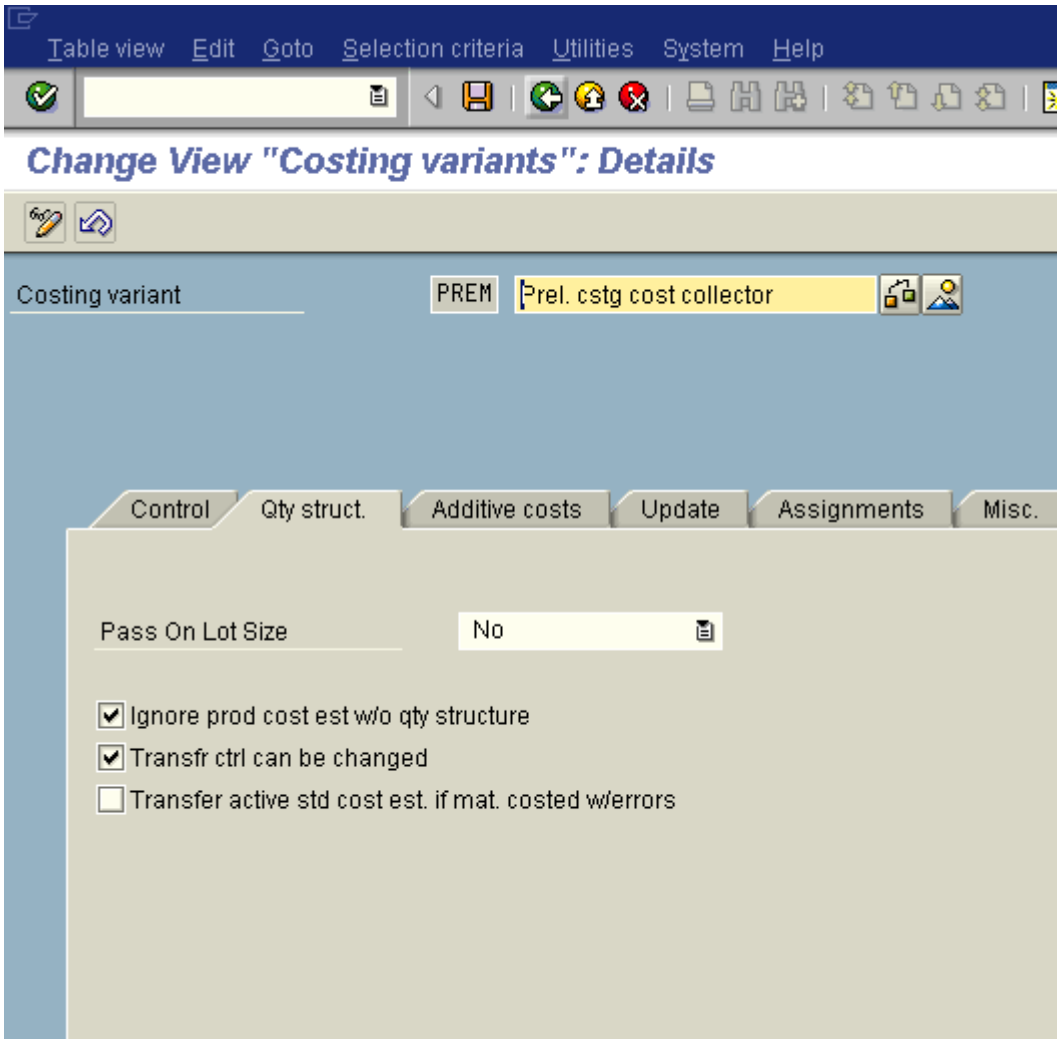


Table view Edit Goto Selection criteria Utilities System Help
Change View "Costing variants": Details
Costing variant
PREM
Prel. cstg cost collector
Control
Qty struct.
Additive costs
Update
Assignments
Misc.
Pass On Lot Size
No
Ignore prod cost est w/o qty structure
Transfr ctrl can be changed
Transfer active std cost est. if mat. costed w/errors

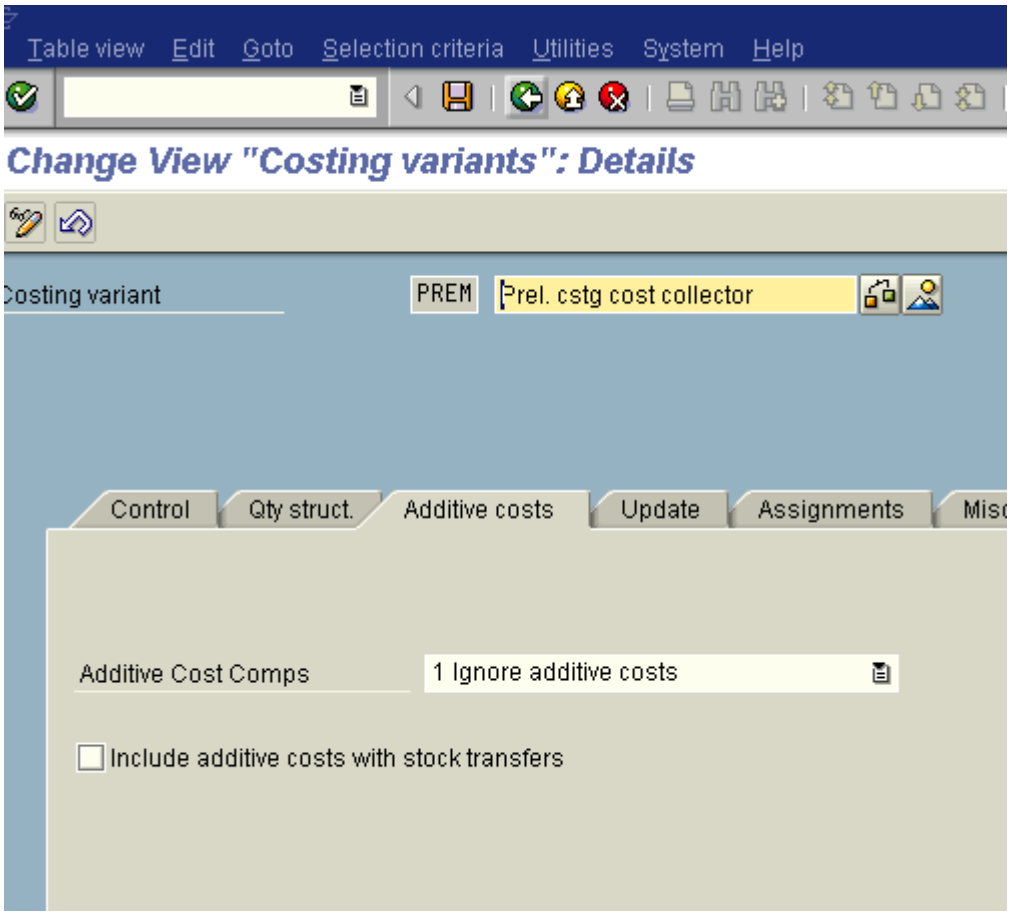


Table view Edit Goto Selection criteria Utilities System Help
Change View "Costing variants": Details
Costing variant
PREM
Prel. cstg cost collector
Control
Qty struct.
Additive costs
Update
Assignments
Additive Cost Comps
1 Ignore additive costs
Include additive costs with stock transfers

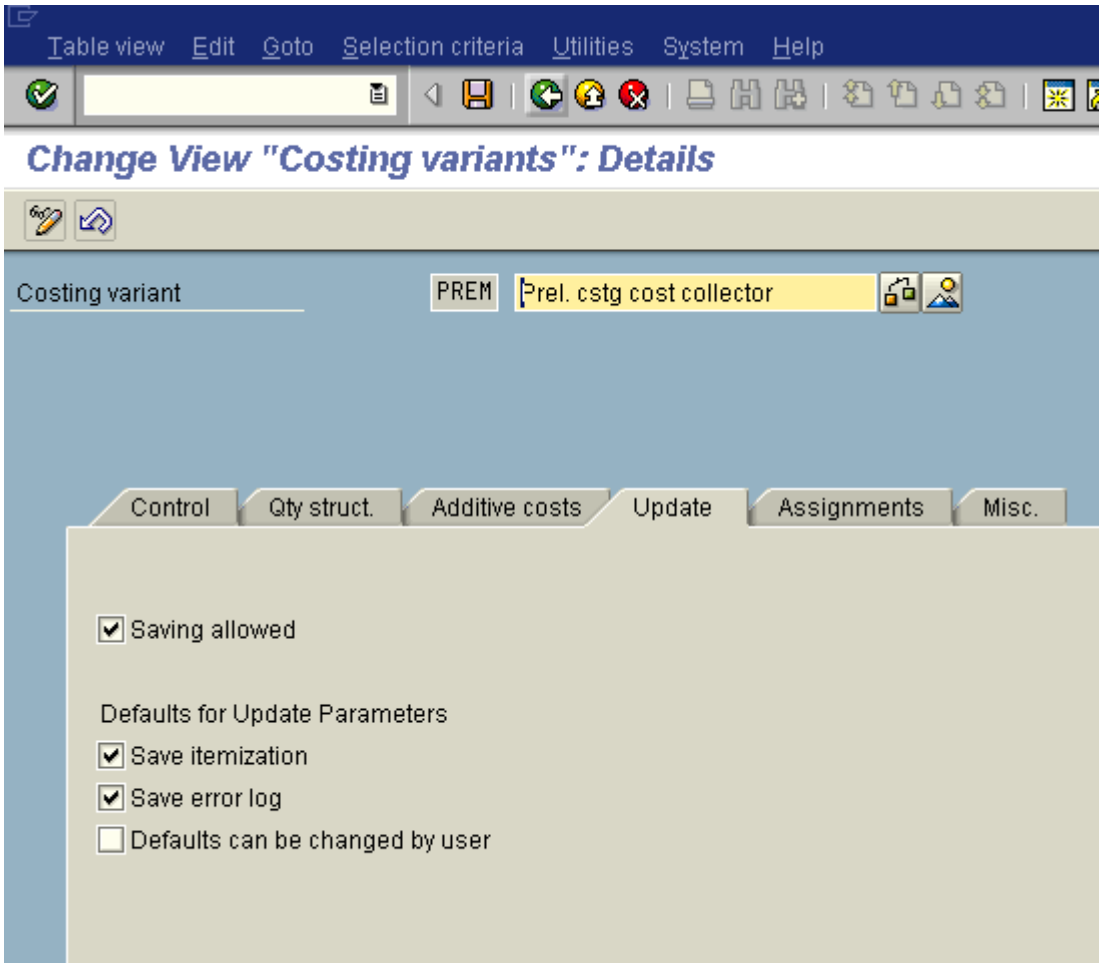
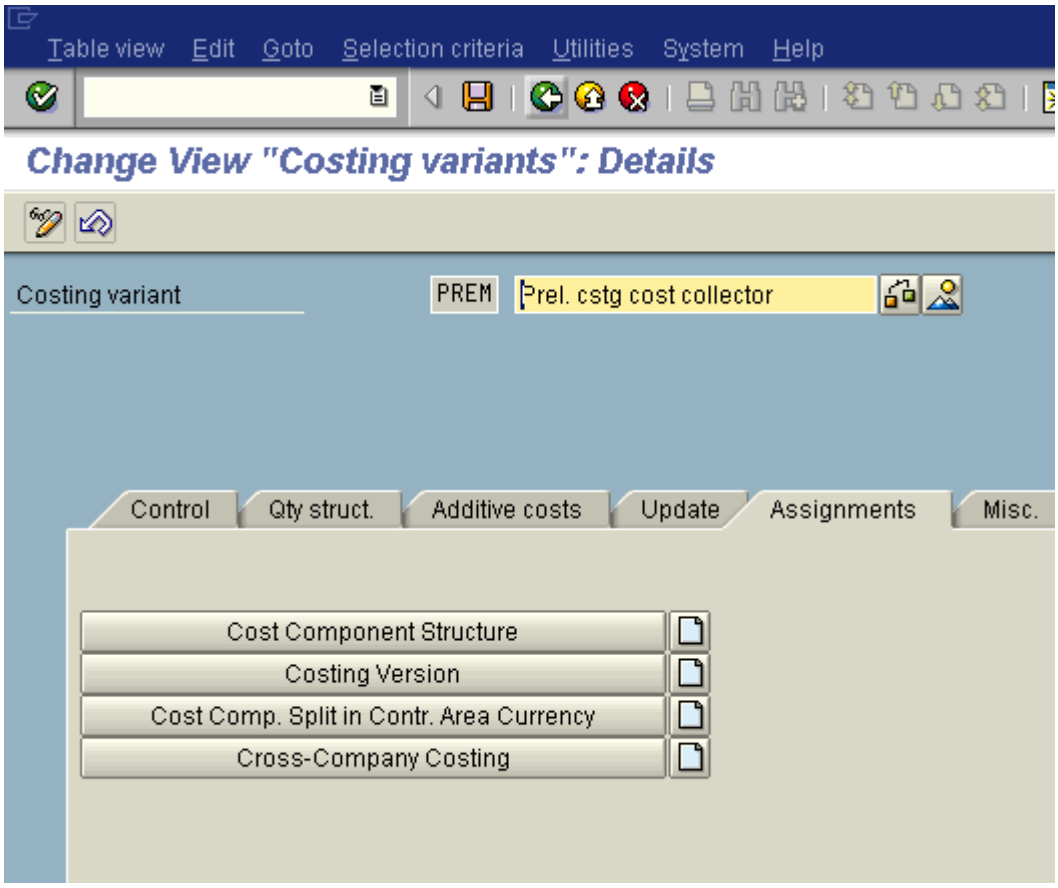
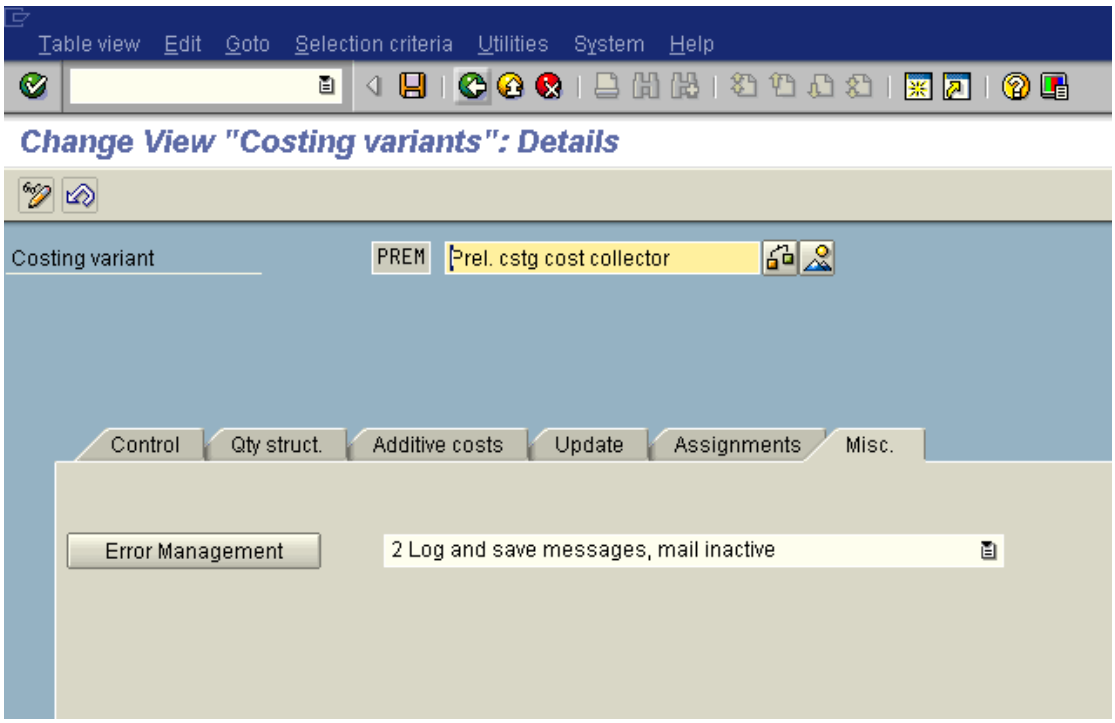


Table view Edit Goto Selection criteria Utilities System Help
Change View "Costing variants": Details
Costing variant
PREM
Prel. cstg cost collector
Control
Qty struct.
Additive costs
Update
Assignments
Misc.
Saving allowed
Defaults for Update Parameters
Save itemization
Save error log
Defaults can be changed by user

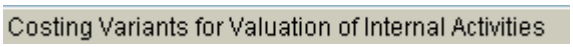


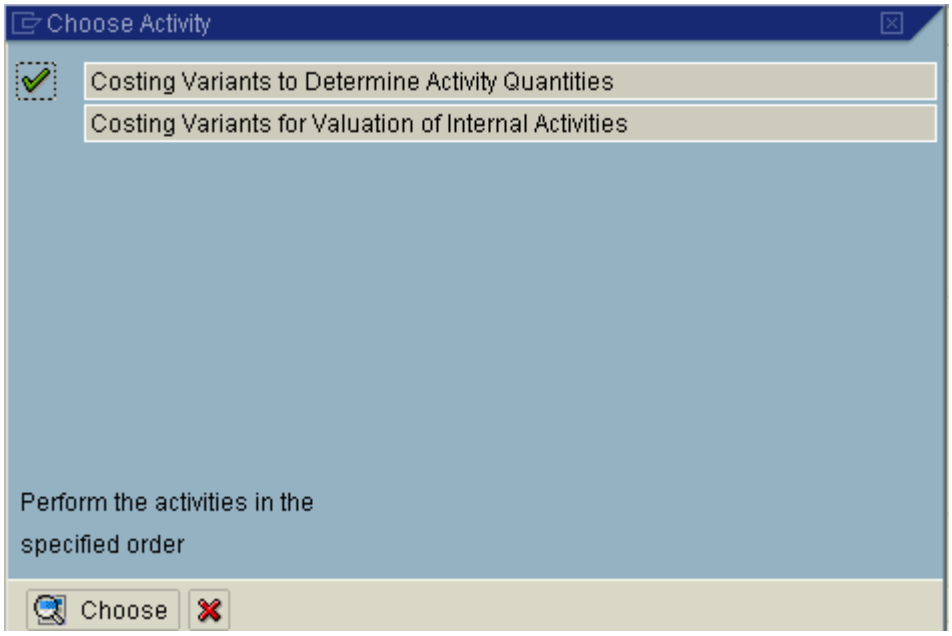


- Costing variants for valuation of internal activities

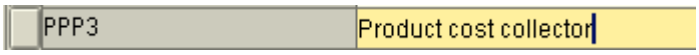
Here you check the valuation variant assigned to the costing variant. This valuation variant determines which activity prices are used for valuation of the actual activity types

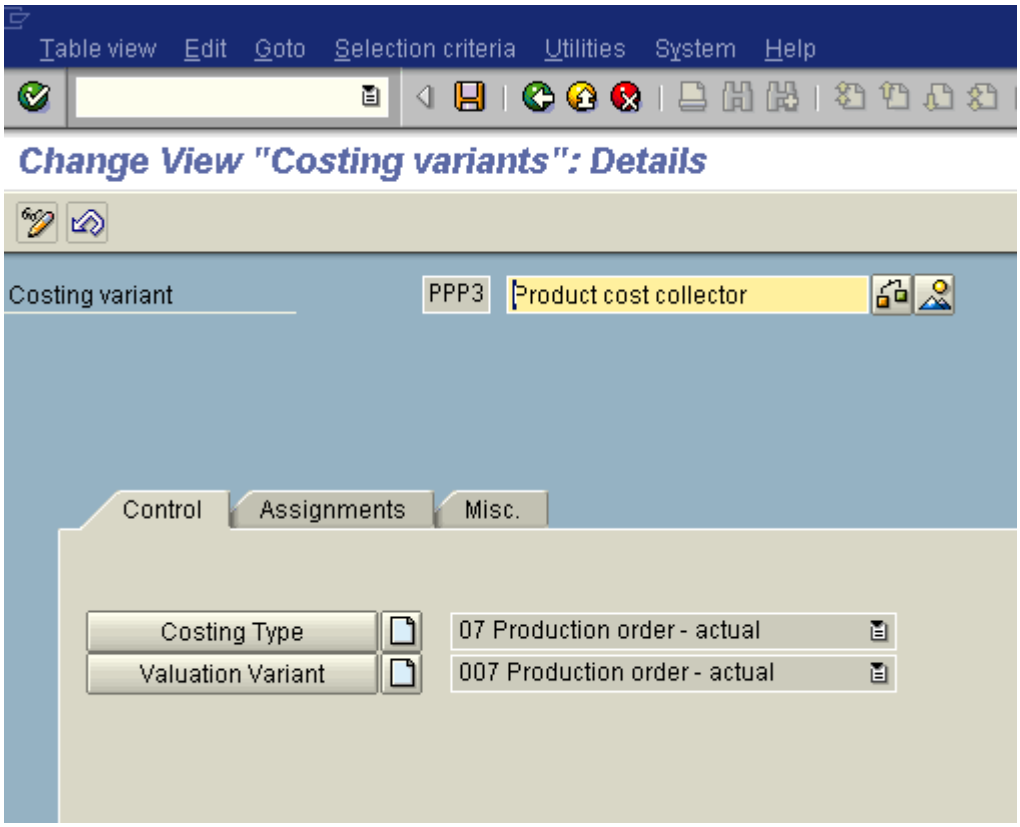
- That are allocated manually
- That are allocated automatically through a confirmation in PP

Double Click 

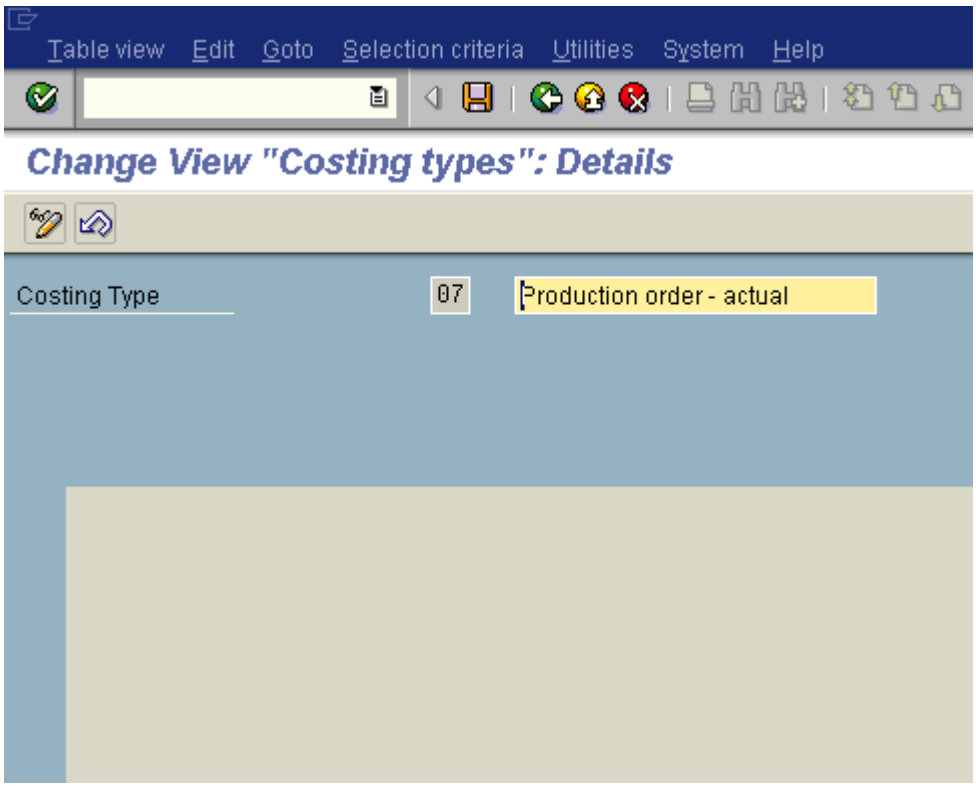


PPP3 is used as costing variant actual for product cost collector

Select 



Double Click 



Double Click 

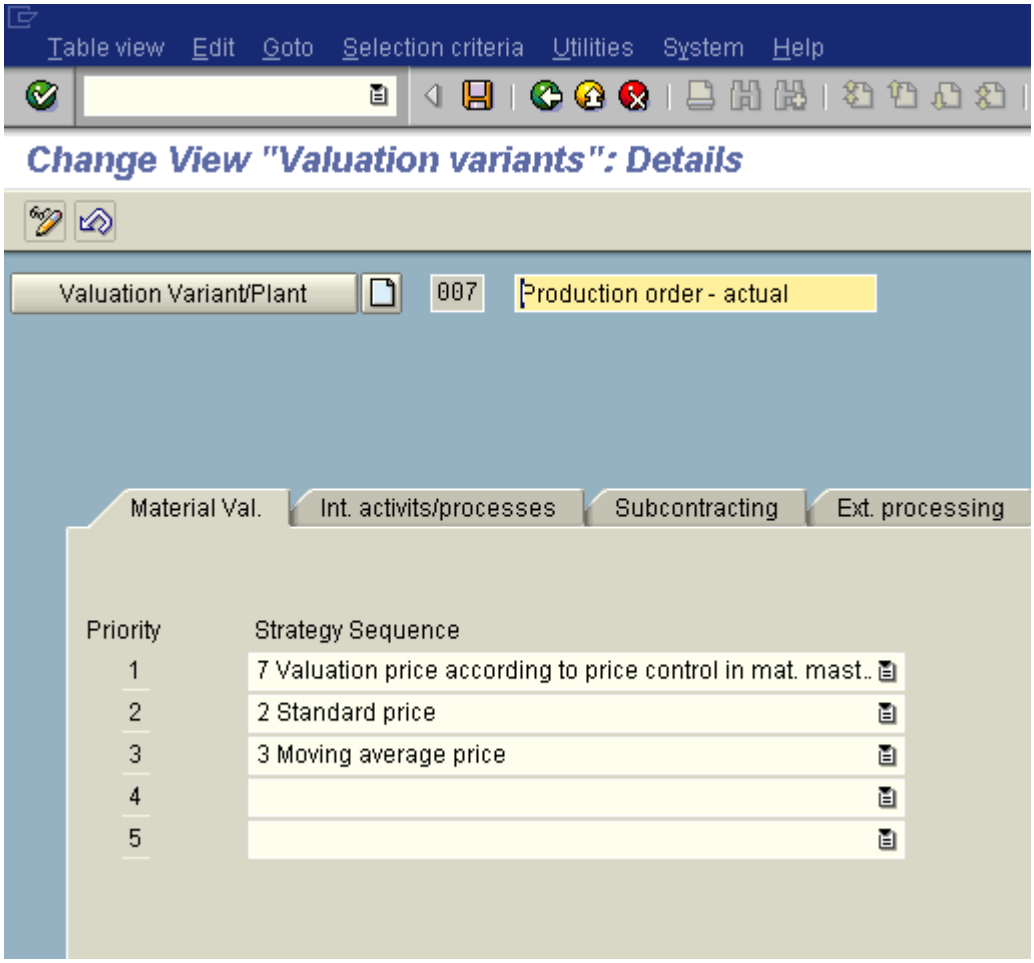


Table view Edit Goto Selection criteria Utilities System Help
Change View "Valuation variants": Details
Valuation Variant/Plant
007
Production order - actual
Material Val.
Int. activits/processes
Subcontracting
Ext. processing
Priority
Strategy Sequence
1
7 Valuation price according to price control in mat. mast..
2
2 Standard price
3
3 Moving average price
4
5

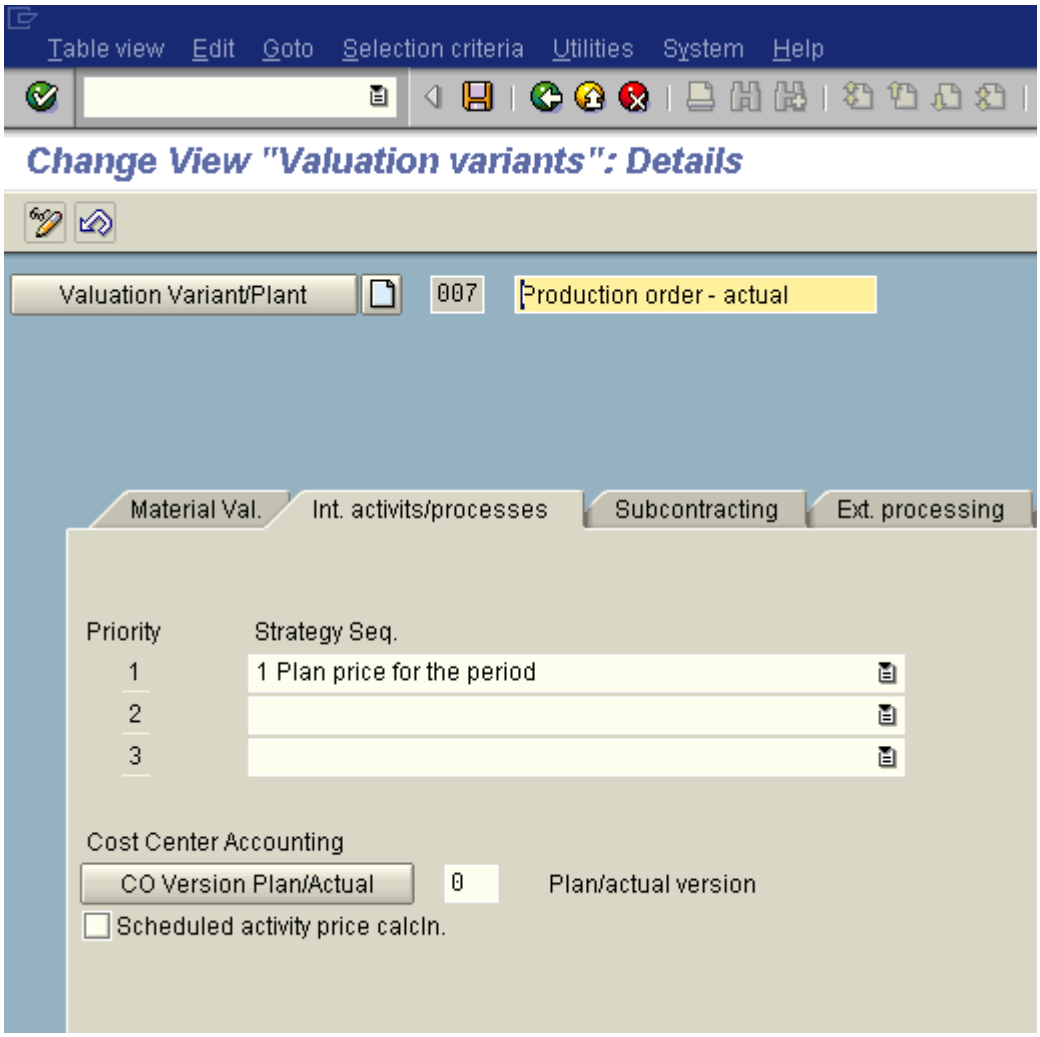


Table view Edit Goto Selection criteria Utilities System Help
Change View "Valuation variants": Details
Valuation Variant/Plant
007
Production order - actual
Material Val.
Int. activits/processes
Subcontracting
Ext. processing
Priority
Strategy Seq.
1
1 Plan price for the period
2
3
Cost Center Accounting
CO Version Plan/Actual
0
Plan/actual version
Scheduled activity price calcln.

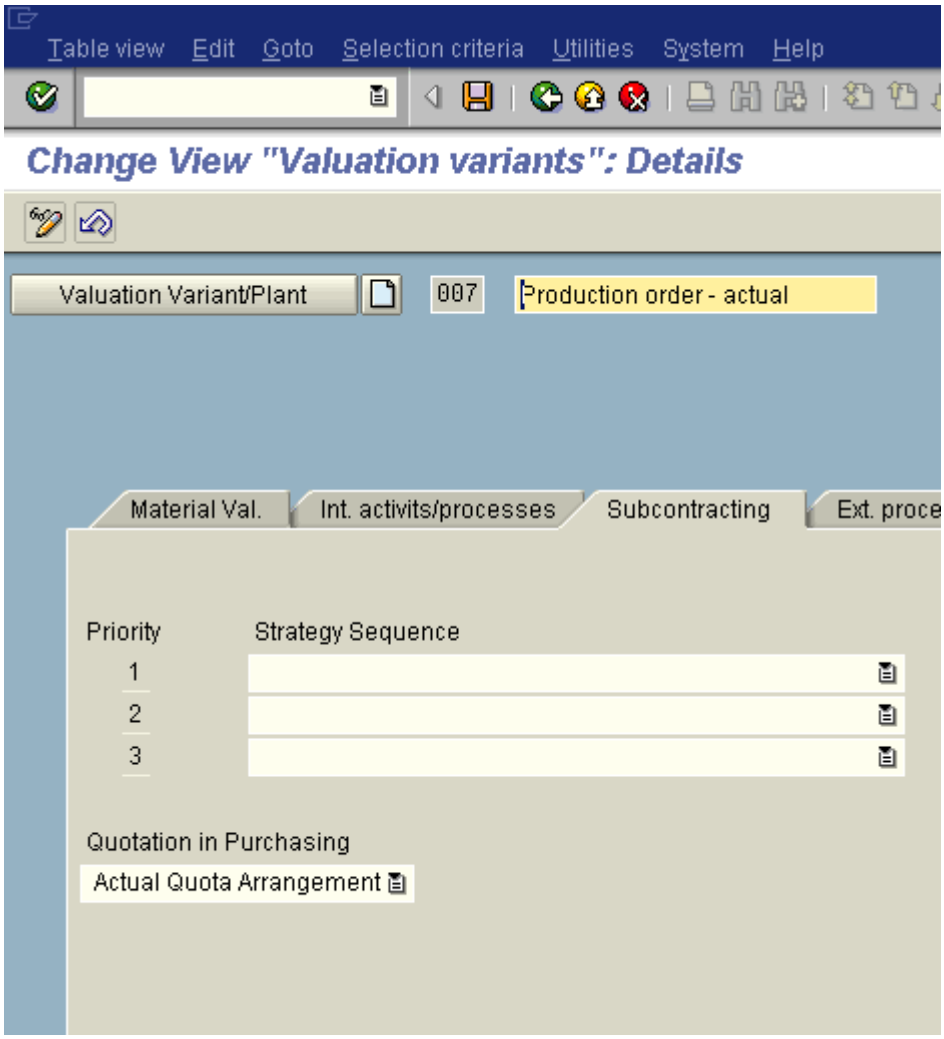


Table view Edit Goto Selection criteria Utilities System Help
Change View "Valuation variants": Details
Valuation Variant/Plant
007
Production order - actual
Material Val.
Int. activits/processes
Subcontracting
Ext. proce
Priority
Strategy Sequence
1
2
3
Quotation in Purchasing
Actual Quota Arrangement

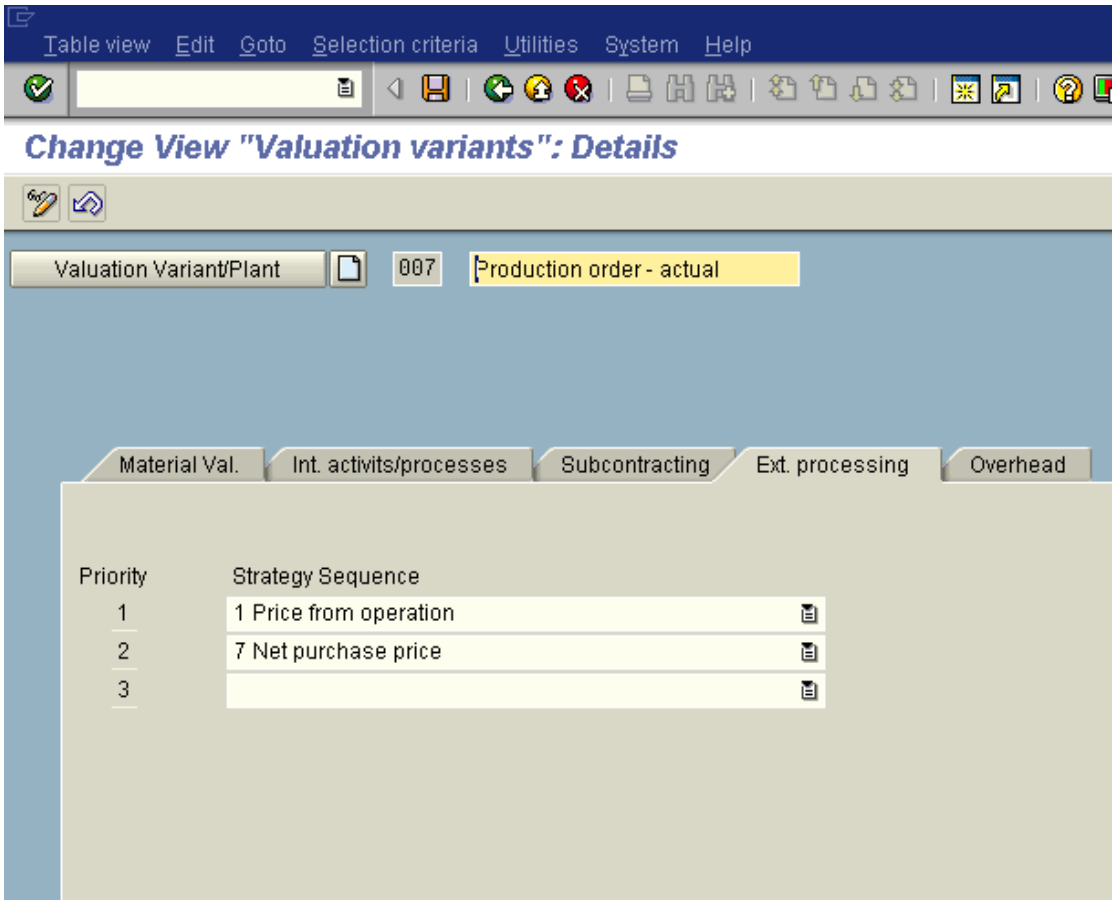


Table view
Edit
Goto
Selection criteria
Utilities
System
Help
Change View "Valuation variants": Details
Valuation Variant/Plant
007
Production order - actual
Material Val.
Int. activits/processes
Subcontracting
Ext. processing
Overhead
Priority
Strategy Sequence
1
1 Price from operation
2
7 Net purchase price
3

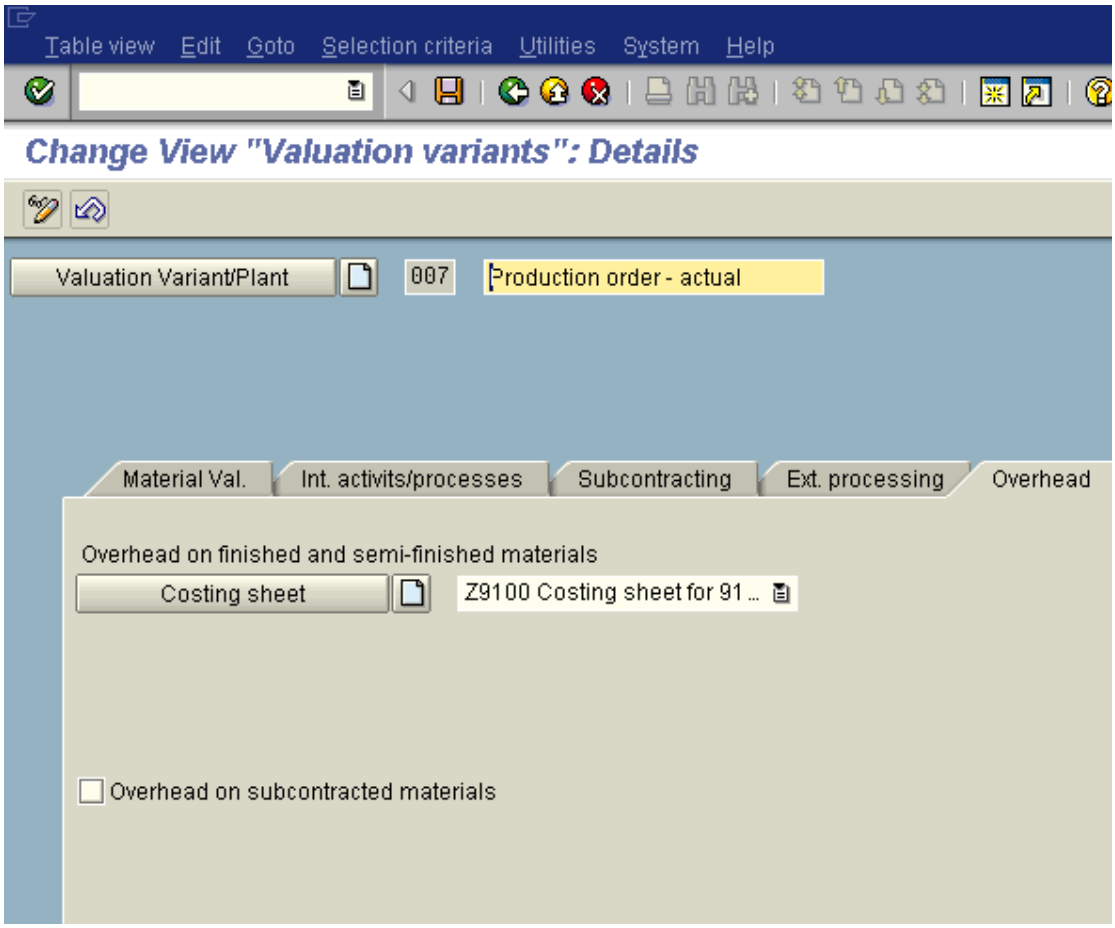


Table view Edit Goto Selection criteria Utilities System Help
Change View "Valuation variants": Details
Valuation Variant/Plant
007
Production order - actual
Material Val.
Int. activits/processes
Subcontracting
Ext. processing
Overhead
Overhead on finished and semi-finished materials
Costing sheet
Z9100 Costing sheet for 91 ...
Overhead on subcontracted materials

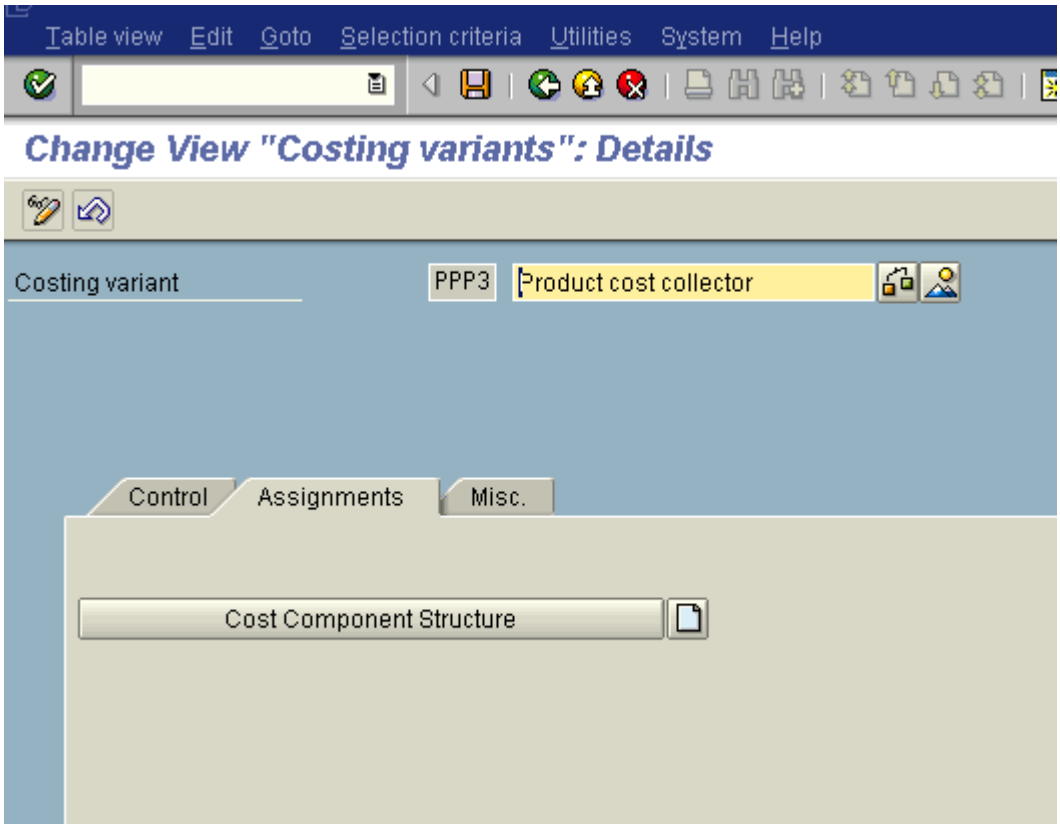
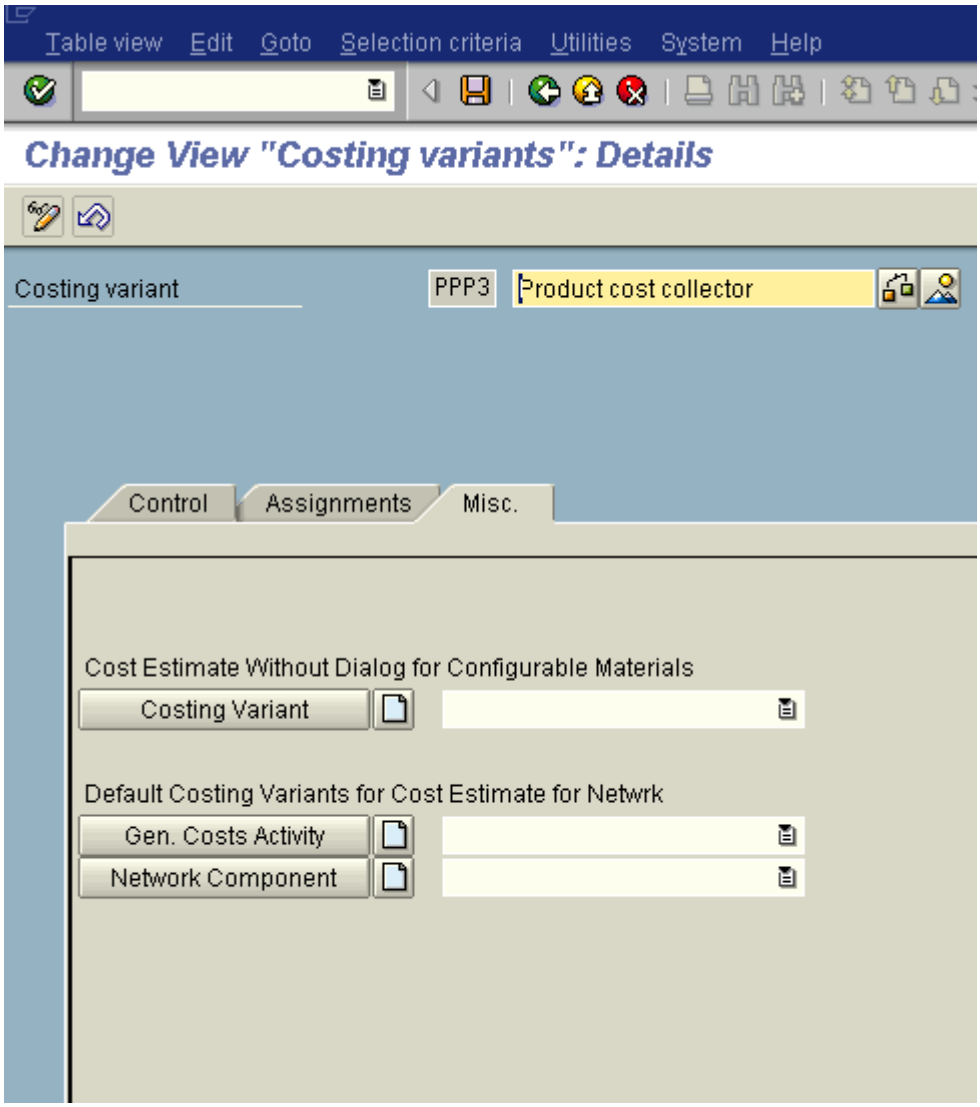


Table view Edit Goto Selection criteria Utilities System Help
Change View "Costing variants": Details
Costing variant
PPP3
Product cost collector
Control
Assignments
Misc.
Cost Component Structure



2.1.2 Check Order Types

IMG → Controlling → Product Cost Controlling → Cost Object Controlling → Product Cost Collectors→ Check Order Types

In this step you check the control parameters for the order types. The following important parameters to be checked in the product cost collector:

- Settlement profile

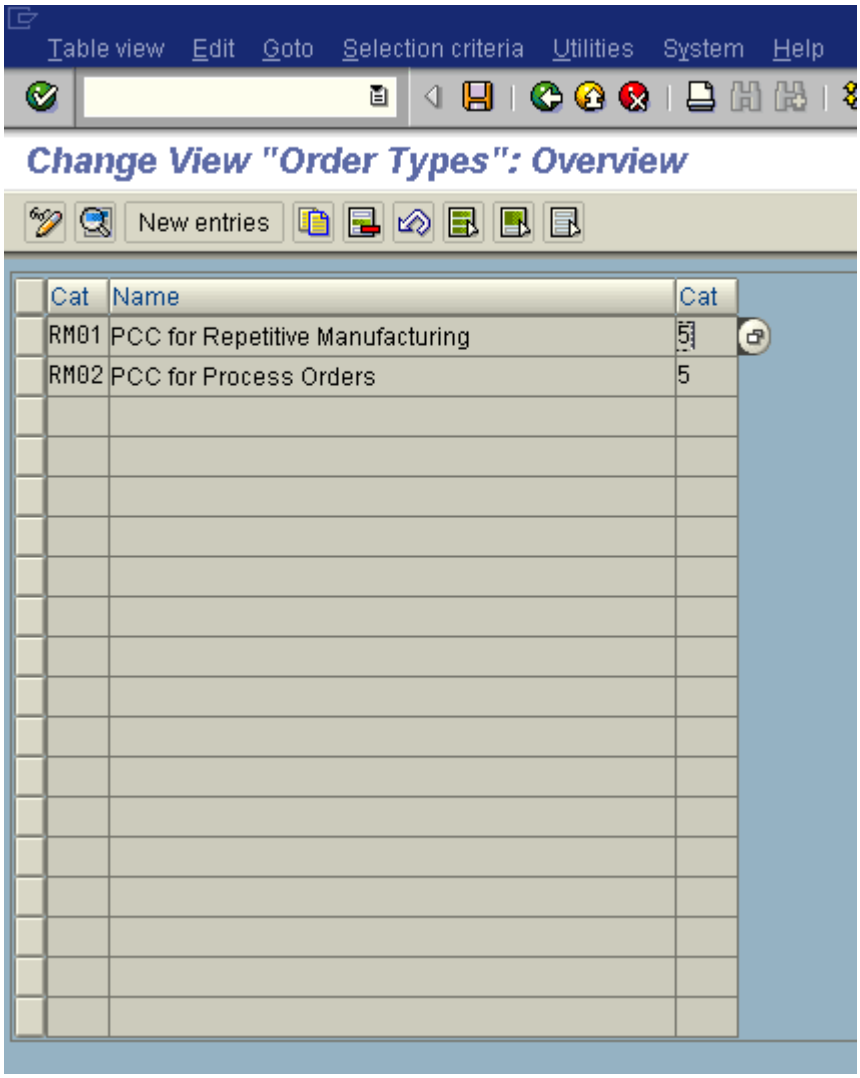
  In the settlement profile, you specify the objects on which orders of this category may be settled. You can also assign a settlement profile to an order type at a later time.

- Residence time of orders in the system

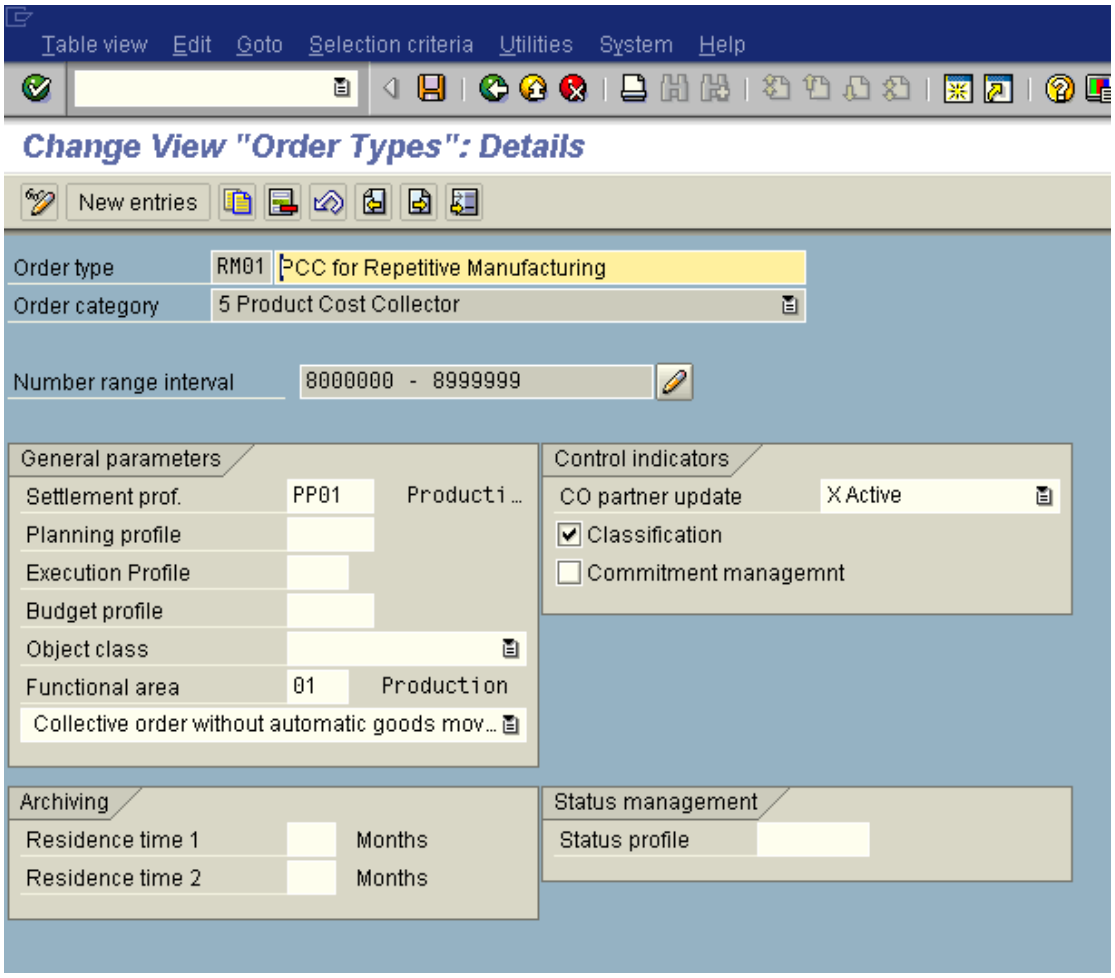
  Here you can define the length of time that finished orders will remain in the system before they are archived.

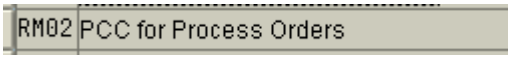
- The Functional area

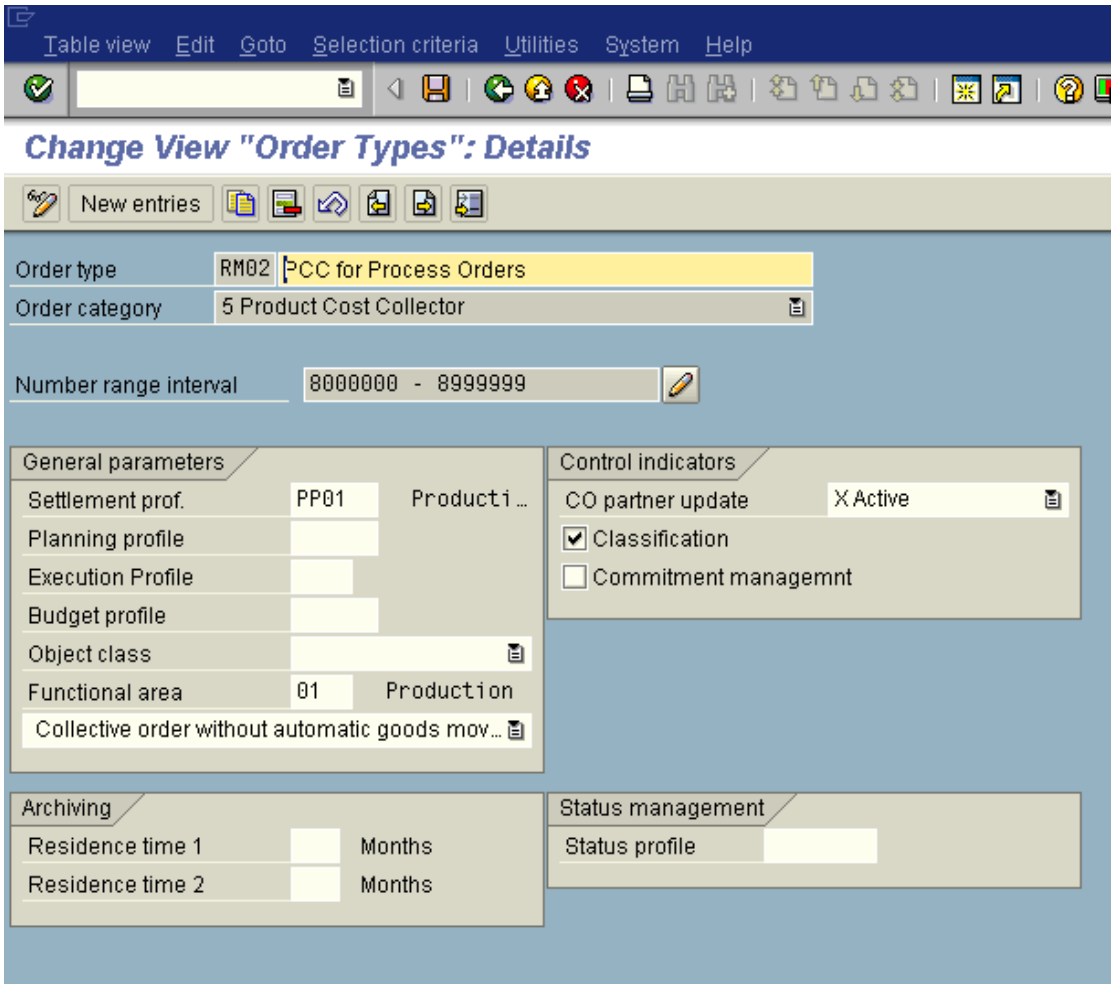
  When a product cost collector is created, the default value for the functional are is transferred into the master data of the product cost collector. This default value corresponds to the value of the function area that was specified in the order type of the product cost collector. The functional area in the master data of the product cost collector can no longer be changed.



Double Click 



Double Click 



2.1.3 Define Cost-Accounting-Relevant Default Values for Order Types and Plants

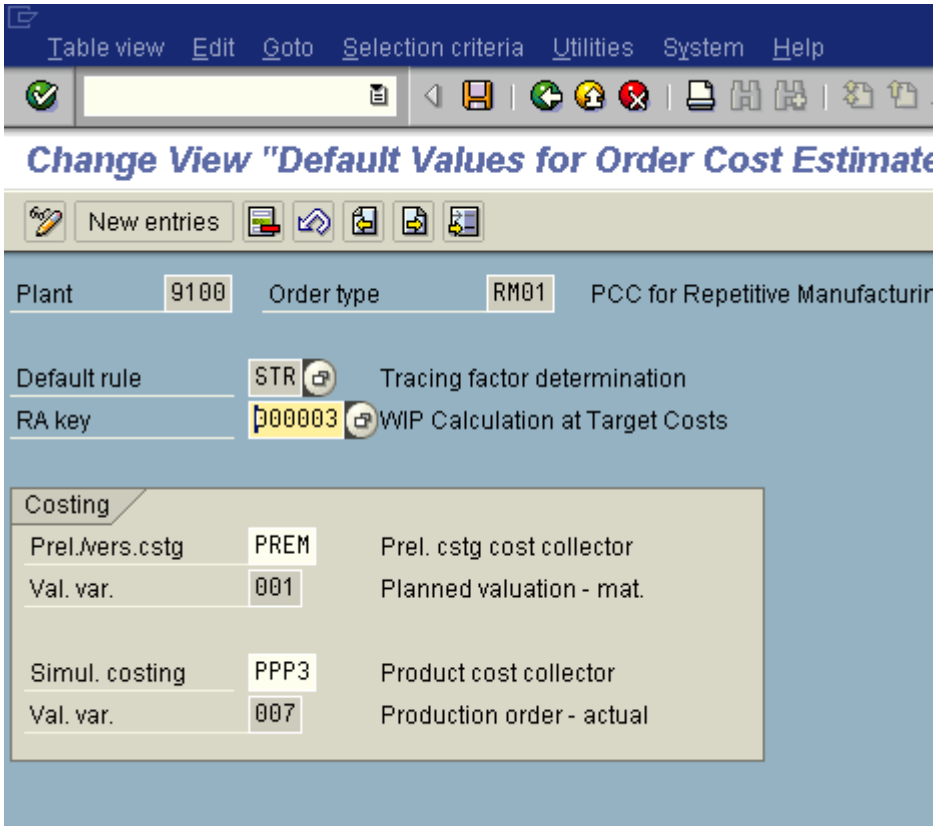
IMG → Controlling → Product Cost Controlling → Cost Object Controlling → Product Cost Collectors→ Define Cost-Accounting-Relevant Default Values for Order Types and Plants

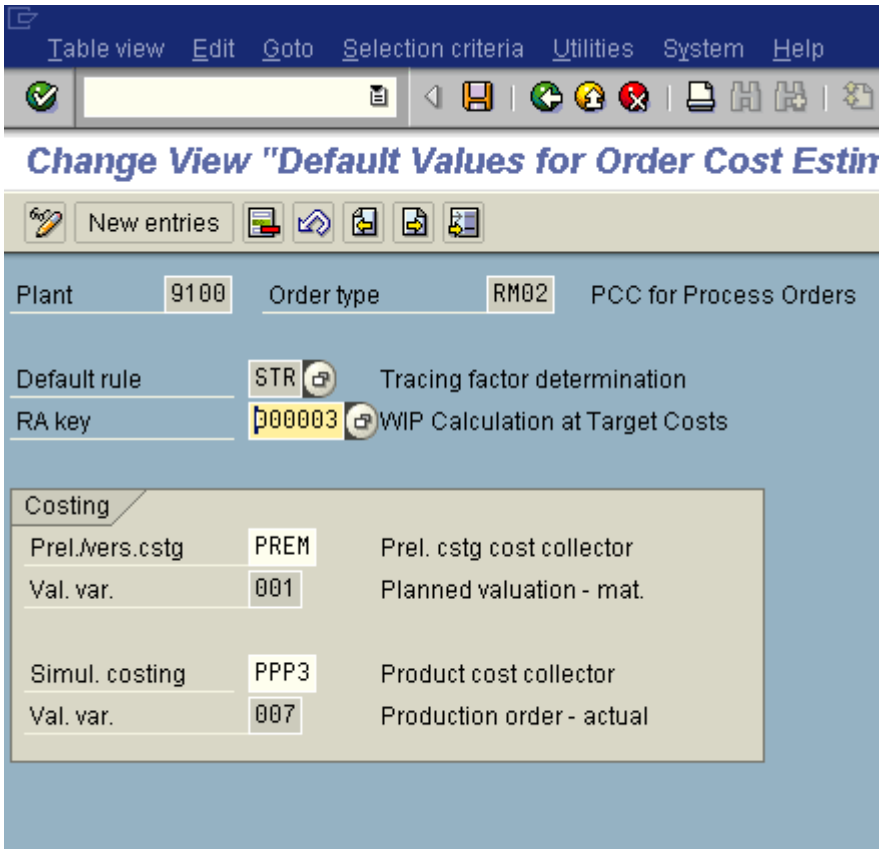
Here you define default values for production orders without quantity structure (CO production orders), and for product cost collectors for each plant and order type.
You specify your choice here in the default rule. The default rule determines whether settlement is made cumulatively after the last delivery, or in each period.

For orders whose costs are settled to stock, settlement can take place either at the end of the period (settlement by period) or after final delivery (full settlement).
Periodic settlement is used with period-based Cost Object Controlling. Here the work in process and variances are reported on the basis of the quantities

confirmed and delivered in the period. The default rule for manufacturing orders that are settled by period is "PP2 / Production Order (Periodic Settlement)".
You can use the product cost collector as a cost object when analyzing costs with order-related production or process manufacturing, as product cost collectors always use periodic settlement. The default rule for product cost collectors is STR (With Strategy for Tracing Factor Determination). For all manufacturing orders assigned to a product cost collector, you must specify the default rule PP2 (Periodic Settlement) in the order type. Use the default rule STR (With Strategy for Tracing Factor Determination) for the product cost collector itself. The settlement type PER (periodic) is specified in the settlement rule for all product cost collectors.

The default rules are maintained for a plant and order type combination.

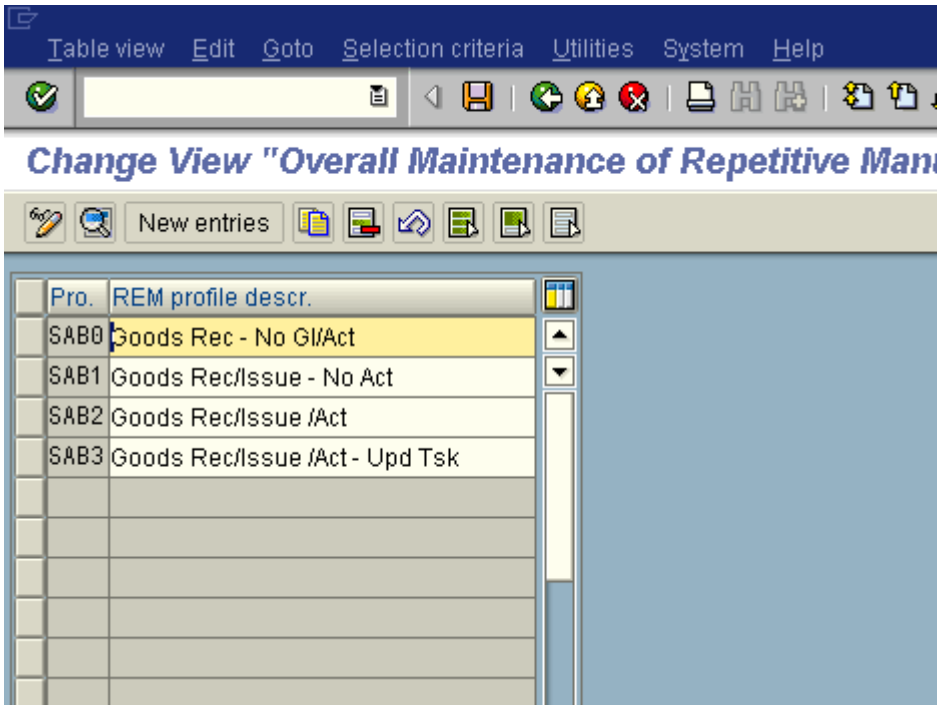


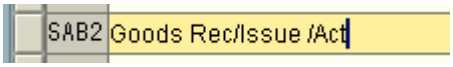


2.1.4 Check Control Data for Repetitive Manufacturing Profiles

IMG → Controlling → Product Cost Controlling → Cost Object Controlling → Product Cost by Period → Simultaneous Costing→ Check Control Data for Repetitive Manufacturing Profiles

This step is only relevant in repetitive manufacturing environments. In this step, we make the relevant settings for Cost Object Controlling in the *Control Data 1* tab. These profiles are attached in the MRP view of the material master.



Double Click 

Here we select that activities to be posted to the product cost collector shall use preliminary cost estimate.

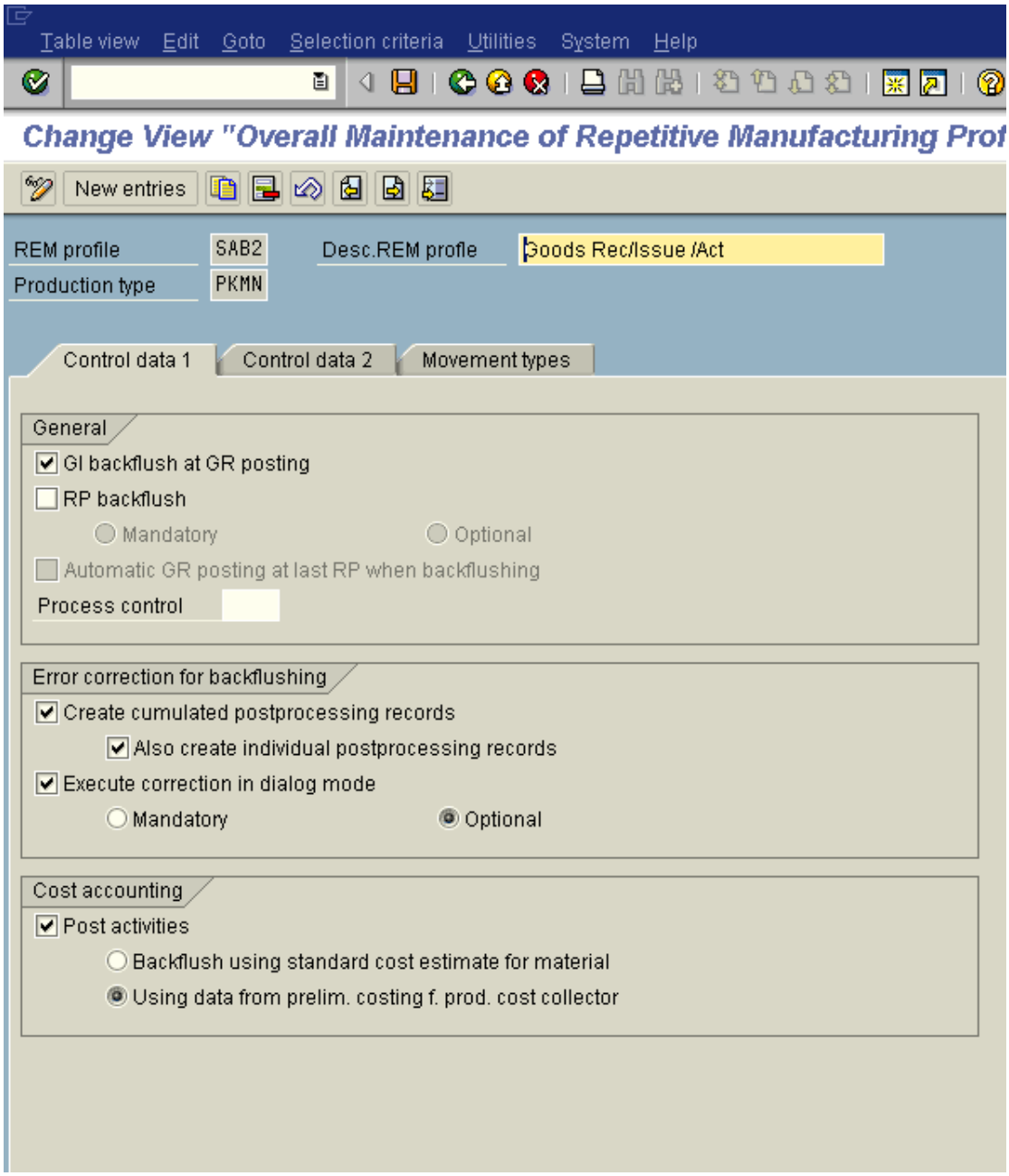
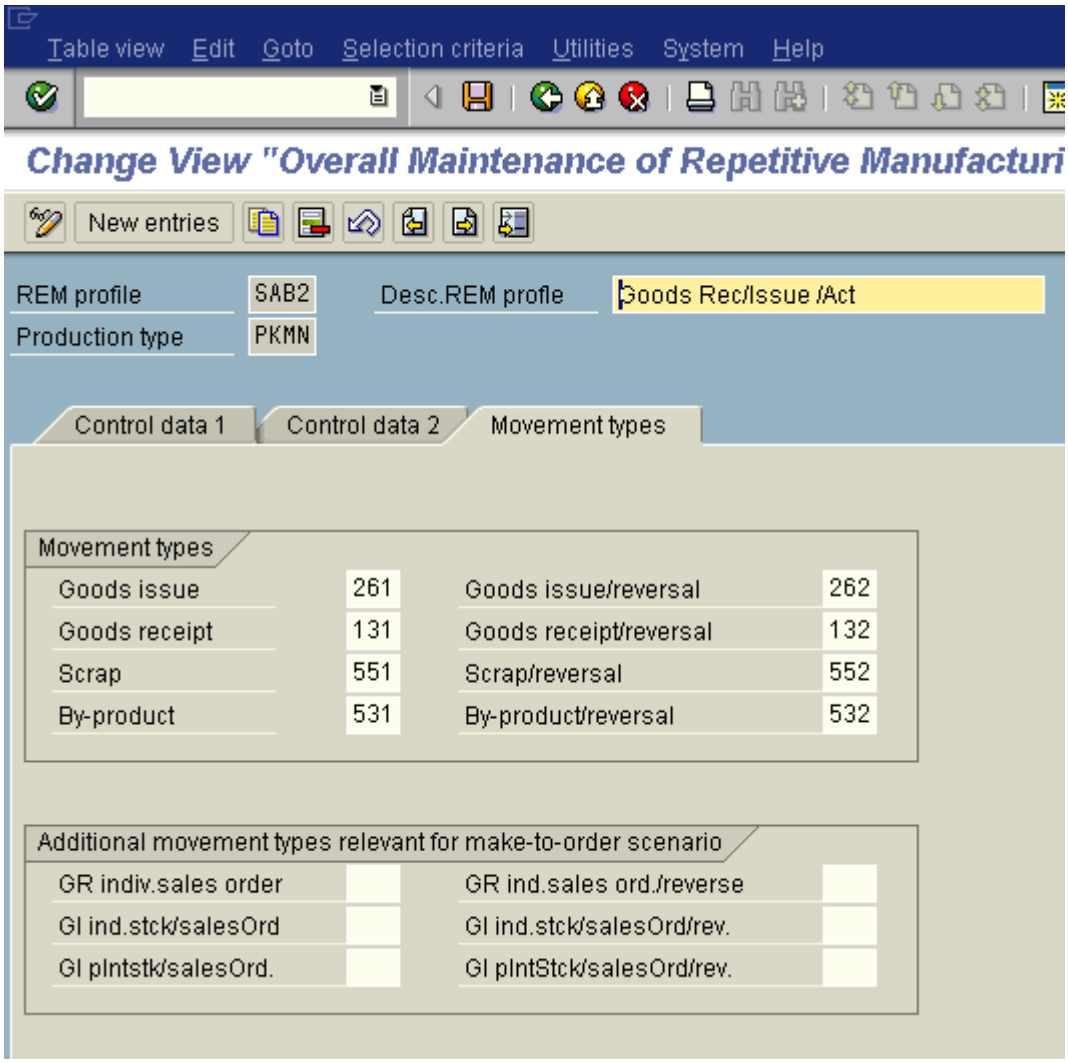


Table view Edit Goto Selection criteria Utilities System Help
Change View "Overall Maintenance of Repetitive Manufacturing Prof
New entries
REM profile SAB2
Desc.REM profile Goods Rec/Issue /Act
Production type PKMN
Control data 1
Control data 2
Movement types
General
GI backflush at GR posting
RP backflush
Mandatory
Optional
Automatic GR posting at last RP when backflushing
Process control
Error correction for backflushing
Create cumulated postprocessing records
Also create individual postprocessing records
Execute correction in dialog mode
Mandatory
Optional
Cost accounting
Post activities
Backflush using standard cost estimate for material
Using data from prelim. costing f. prod. cost collector

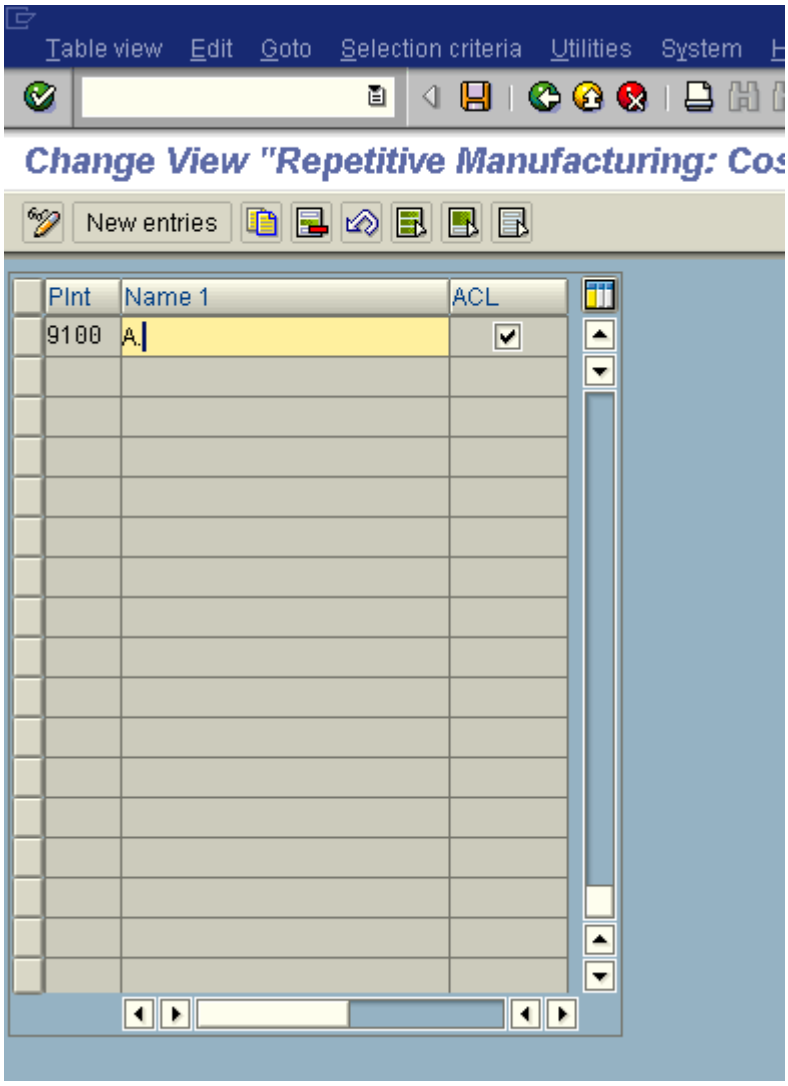


2.1.5 Activate Generation of Cost Log in Repetitive Manufacturing

IMG → Controlling → Product Cost Controlling → Cost Object Controlling → Product Cost by Period → Simultaneous Costing→ Check Control Data for Repetitive Manufacturing Profiles

This step is only relevant in repetitive manufacturing environments.It has no direct influence on Cost Object Controlling. It only serves to aid recognition of errors in activity allocation. In this step, we control whether a costs log is created in repetitive manufacturing when backflushing activities.

A costs log is only created if an error occurs during activity allocation.



2.1.6 Define Goods Received Valuation for Order Delivery

Similar to step in product cost by order

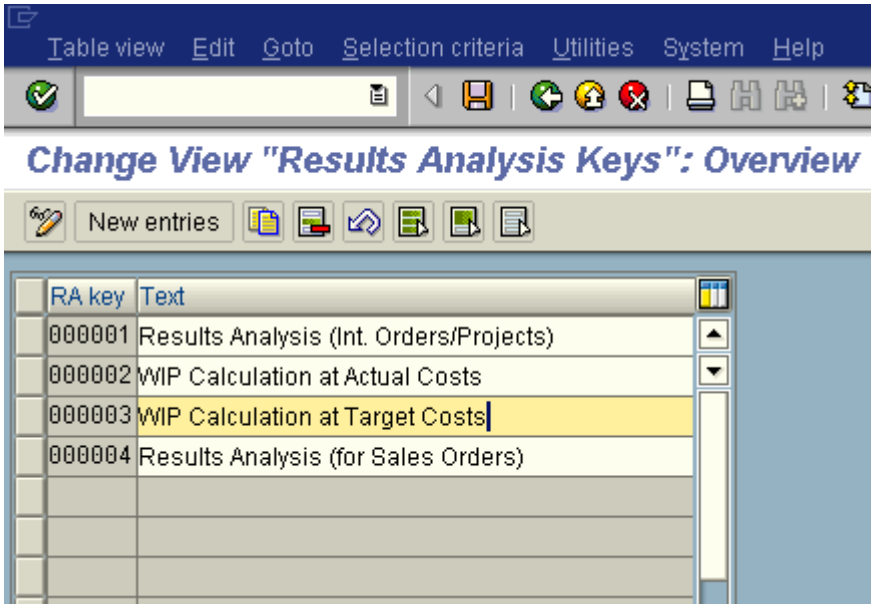
2.2 Work in Process

2.2.1 Define Results Analysis Keys

IMG → Controlling → Product Cost Controlling → Cost Object Controlling → Product Cost by Period → Period-End Closing→ Work in Process → Define Results Analysis Keys

Each order for which we want to create work in process (WIP) must receive a results analysis key. The presence of a results analysis key in the order means that the order is included in WIP calculation during period-end closing.

The results analysis key can be specified as a default value for each order type and plant. It is then added to the order master record when an order of a particular order type is created. Relevant result analysis key is 000003 – WIP Calculation at Target costs



2.2.2 Define Cost Elements for WIP Calculation

Same as step in product cost by order

2.2.3 Define Results Analysis Versions

Same as step in product cost by order

2.2.4 Define Valuation Method (Target Costs)

IMG → Controlling → Product Cost Controlling → Cost Object Controlling → Product Cost by Period → Period-End Closing→ Work in Process → Define Valuation Method (Target Costs)

In this step we define a valuation method for the calculation of work in process.

This creates the link between the controlling area, the results analysis key, the results analysis version, and the system status.
When you create new valuation methods, you specify whether the work in process should be valuated at target costs or actual costs.

In the Product Cost by Period component the work in process is valuated at target costs. The valuation is made on the basis of the quantities confirmed at the opertions or reporting points.
The system determines the following in each period:

- Which materials were delivered to stock
- Which materials were confirmed at the operations
- Which materials and activities are not included in **WIP calculation** due to scrap confirmations at subsequent operations

In the period-end closing activities in the Product Cost by Period component, the relevant quantities (**WIP quantities**) are valuated according to the *valuation variant for work in process and scrap (target costs)* and reported as work in process.

In the Product Cost by Period component, the following statuses are relevant in WIP calculation:

- PREL

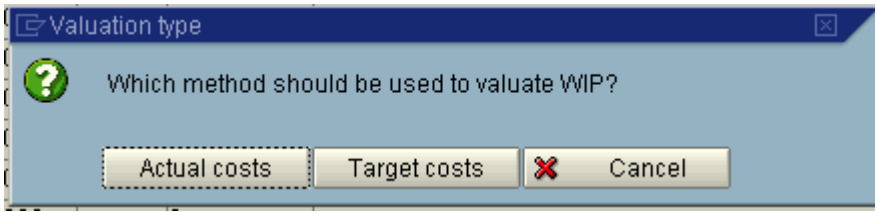
  The order is partially released. An order is partially released for which the individual operations are released.

- REL

  The order is released. When an order has the status PREL and REL, in the Product Cost by Period component the system creates work in process by multiplying the WIP quantity by the target costs in accordance with the *valuation variant for work in process and scrap (target costs)*.

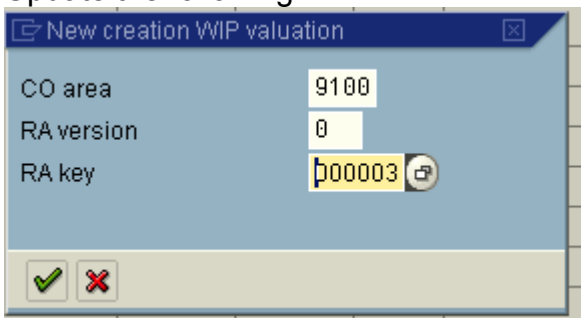
If you want to calculate work in process at target costs, then for each combination of **controlling area**, results analysis version, and results analysis key, you must specify a valuation method for the statuses relevant to WIP calculation.

Click on 



Click 

Update the following: -



The entries for the various statuses get created automatically

9100	0	000003	REL	2	WIP Calculation on Basis of Target Costs
9100	0	000003	DLV	3	Cancel Data of WIP Calculation and Results Ana
9100	0	000003	PREL	1	WIP Calculation on Basis of Target Costs
9100	0	000003	TECO	4	Cancel Data of WIP Calculation and Results Ana

Click on Save 

Once you save the entries for version D01 and D02 get created automatically (in case you have activated valuation and currency profile)

9100	D01	000002	TECO	4	Cancel Data of WIP Calculation and Results Ana
9100	D01	000003	REL	2	WIP Calculation on Basis of Target Costs
9100	D01	000003	DLV	3	Cancel Data of WIP Calculation and Results Ana
9100	1	000003	PREL	1	WIP Calculation on Basis of Target Costs
9100	D01	000003	TECO	4	Cancel Data of WIP Calculation and Results Ana
9100	D02	000002	REL	2	WIP Calculation on Basis of Actual Costs
9100	D02	000002	DLV	3	Cancel Data of WIP Calculation and Results Ana
9100	D02	000002	PREL	1	WIP Calculation on Basis of Actual Costs
9100	D02	000002	TECO	4	Cancel Data of WIP Calculation and Results Ana
9100	D02	000003	REL	2	WIP Calculation on Basis of Target Costs
9100	D02	000003	DLV	3	Cancel Data of WIP Calculation and Results Ana
9100	D02	000003	PREL	1	WIP Calculation on Basis of Target Costs
9100	D02	000003	TECO	4	Cancel Data of WIP Calculation and Results Ana
BE01	0	000002	REL	2	WIP Calculation on Basis of Actual Costs

2.2.5 Define Valuation Variant for WIP and Scrap (Target Costs) (Optional)

IMG → Controlling → Product Cost Controlling → Cost Object Controlling → Product Cost by Period → Period-End Closing→ Work in Process → Define Valuation Method (Target Costs)

In this section we can create a valuation variant for the valuation of work in process and unplanned scrap (scrap variances) at target costs. We define how the system calculates the **target costs** for the valuation of work in process and how it calculates the target costs for the valuation of scrap.

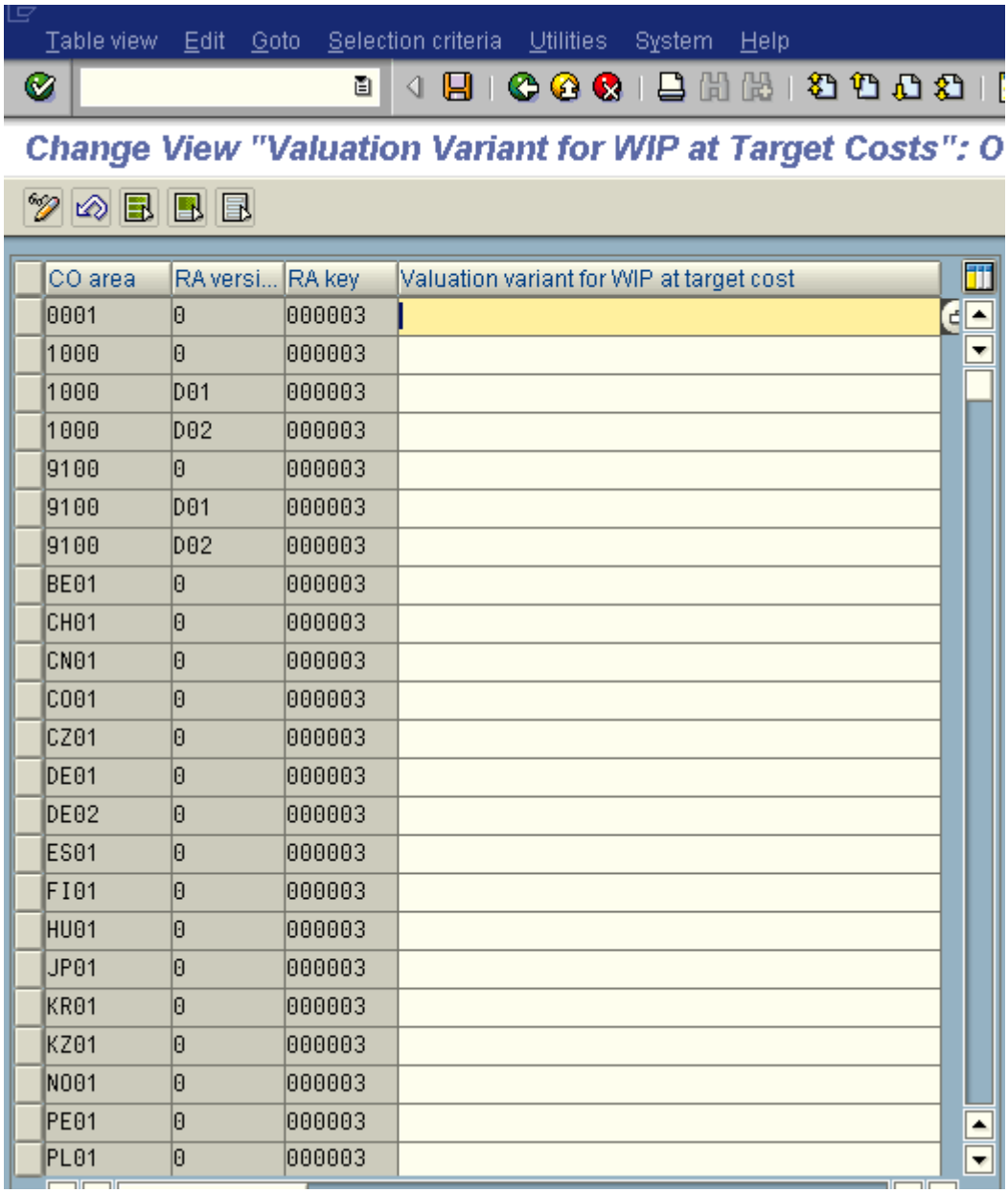
The target costs can be calculated as follows:
On the basis of a **preliminary cost estimate** for the produ**ct cost collector**
On alternative **material cost estimate**
You also specify the **costing variant** and the **costing version**.
On the basis of the standard price calculated in a current **standard cost estimate**
If you always want to valuate the work in process and scrap at the target costs calculated on the basis of a standard cost estimate, do not create a valuation variant for work in process and scrap.

We will not configure valuation variant for scrap

2.2.6 Assignment of Valuation Variant for WIP (Optional)

IMG → Controlling → Product Cost Controlling → Cost Object Controlling → Product Cost by Period → Period-End Closing→ Work in Process → Define Valuation Method (Target Costs)

Here we assign a valuation variant for work in process and scrap (target costs) to a combination of controlling area, results analysis version, and results analysis key. The only results analysis keys that are relevant here are those used to calculate work in process at target costs.
The unfinished products are valuated using the valuation variant for **work in process** (WIP) and **scrap** specified for each controlling area and results analysis key.



CO area	RA versi...	RA key	Valuation variant for WIP at target cost
0001	0	000003	
1000	0	000003	
1000	D01	000003	
1000	D02	000003	
9100	0	000003	
9100	D01	000003	
9100	D02	000003	
BE01	0	000003	
CH01	0	000003	
CN01	0	000003	
CO01	0	000003	
CZ01	0	000003	
DE01	0	000003	
DE02	0	000003	
ES01	0	000003	
FI01	0	000003	
HU01	0	000003	
JP01	0	000003	
KR01	0	000003	
KZ01	0	000003	
NO01	0	000003	
PE01	0	000003	
PL01	0	000003	

2.2.7 Define Line Ids

Same configuration as done in product cost by order

2.2.8 Define Assignment

Same configuration as done in product cost by order

2.2.9 Define Update

Same configuration as done in product cost by order

2.2.10 Define Posting Rules for Settling Work in Process

Same configuration as done in product cost by order

2.2.11 Define Number ranges

Same configuration as done in product cost by order

2.3 Variance Calculation

2.3.1 Define Variance Keys

Same configuration as done in product cost by order

2.3.2 Define Default Variance Keys for Plants

Same configuration as done in product cost by order

2.3.3 Define Variance Variants

Same configuration as done in product cost by order

2.3.4 Define Target Cost Versions

Same configuration as done in product cost by order

2.3.5 Define Number Ranges for Variance Documents

Same configuration as done in product cost by order

2.4 Settlement

2.4.1 Create Settlement Profile

Same configuration as done in product cost by order

2.4.2 Create PA Transfer Structure

Same configuration as done in product cost by order

2.4.3 Maintain Number Ranges for Settlement Documents

Same configuration as done in product cost by order

3. Product Cost by Sales Order

3.1 Control of Sales-Order-Related Production/ Product Cost by Sales Order

3.1.1 Check Account Assignment Categories

IMG → Controlling → Product Cost Controlling → Cost Object Controlling → Product Cost by Sales Order → Control of Sales-Order-Related Production/ Product Cost by Sales Order → Check Account Assignment Categories

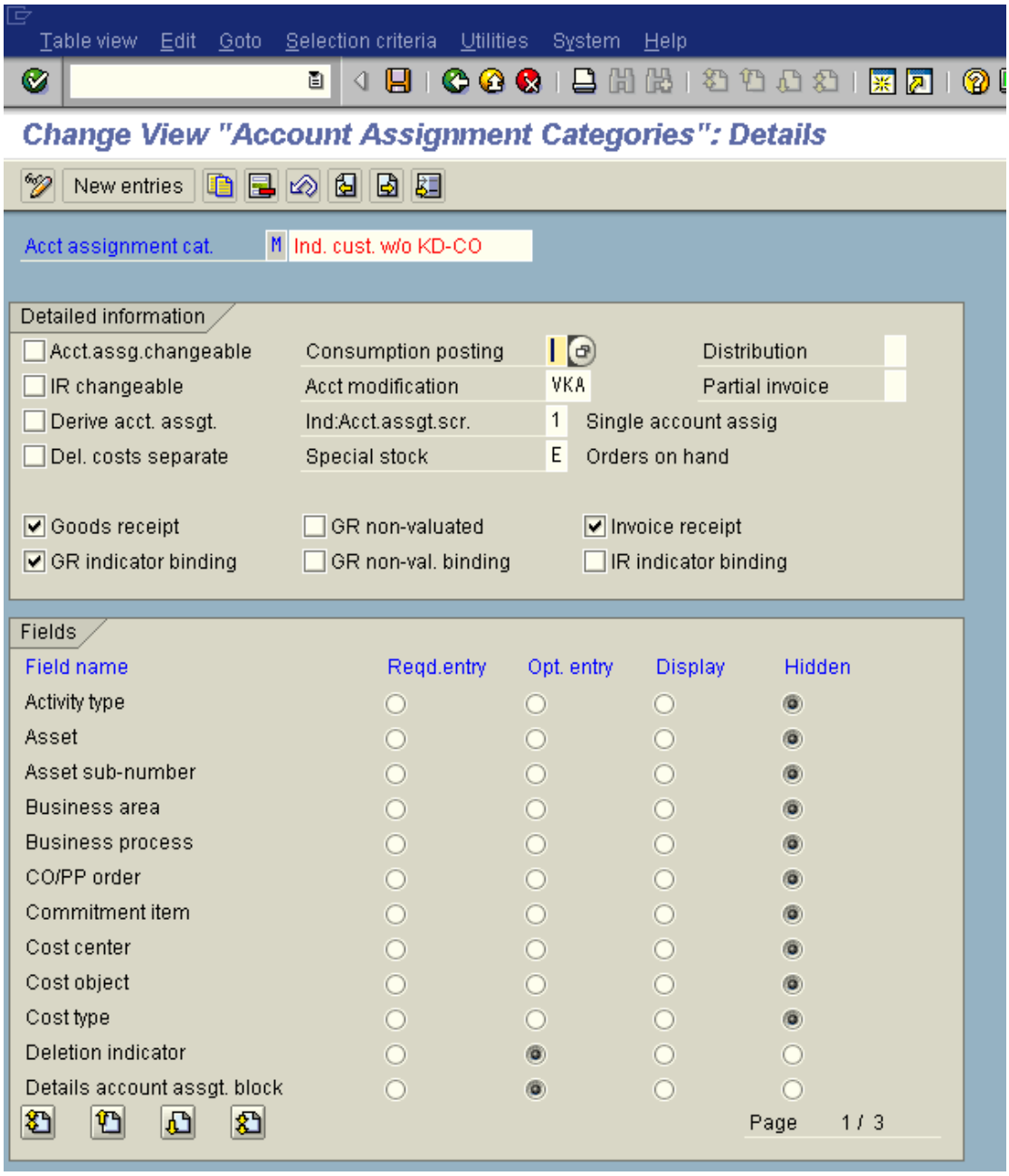
To enable goods movements to take place through the sales order stock, you must select a requirements class that specifies an account assignment category that specifies that goods movements take place through the sales order stock (*Special stock* field).

Collecting costs and revenues on the sales order (recommended in complex make-to-order production item is allowed when the entry in the **Consumption posting** field is E (settlement through sales order).

You make no entry in the **Consumption posting** field if you are using a valuated sales order stock and don't want to flag the sales order item (item in an inquiry, quotation, or sales order) as carrying costs and revenues. This is especially recommended in mass production on the basis of sales orders.

You specify whether the sales order inventory is valuated or non valuated in the requirements class with the *Valuation* indicator.
If you use a non valuated sales order stock, you always flag the sales document item as carrying costs and revenues because otherwise it is not possible to valuate your inventories.

We do not want to carry cost on the sales order, therefore in account assignment category M we keep the Consumption posting field blank.



3.1.2 Check Requirements Classes

IMG → Controlling → Product Cost Controlling → Cost Object Controlling → Product Cost by Sales Order → Control of Sales-Order-Related Production/ Product Cost by Sales Order → Check Requirements Classes

In this step you view or change the parameters in the requirements class that are relevant to cost accounting. You create the requirements class in Customizing for Sales and Distribution.

The **Costing** indicator in the requirements class controls for a sales order item whether:
Costing is required x

Costing is simulated A
Costing is allowed (Blank)
Costing is not allowed B

We have selected X – Costing is required

The Costing ID indicator controls whether a sales order cost estimate is automatically costed (A), or automatically costed and marked (B)

We have selected B – Automatic Costing and marking.

The costing method determines whether the sales order cost estimate is created using the functions of product costing (1) or unit costing (2). If you don't enter a costing method in the requirements class, then you specify the costing method while doing transaction.

We have selected 1 – Product Costing

The *Copy costing sheet* indicator controls whether the costing sheet in the sales order item is transferred to all assigned production orders. **We have not selected this.**

The field *CndTypLineItems* (condition type for transferring costs from line items) allows you to control which condition type the results of a sales order item are written under. This condition type is valid for all sales document items of this requirements class. Entering condition types in the requirements class allows you to use different condition types for different sales document items in the same sales document.

We have entered the condition type EK02. The sales order cost estimate will be updated to this condition type.

The indicator Valuation controls:-
Whether the sales order stock is valuated (entry: M and A)
Whether the sales order stock is nonvaluated (no entry)

We have assigned the account assignment category M to the requirement class.

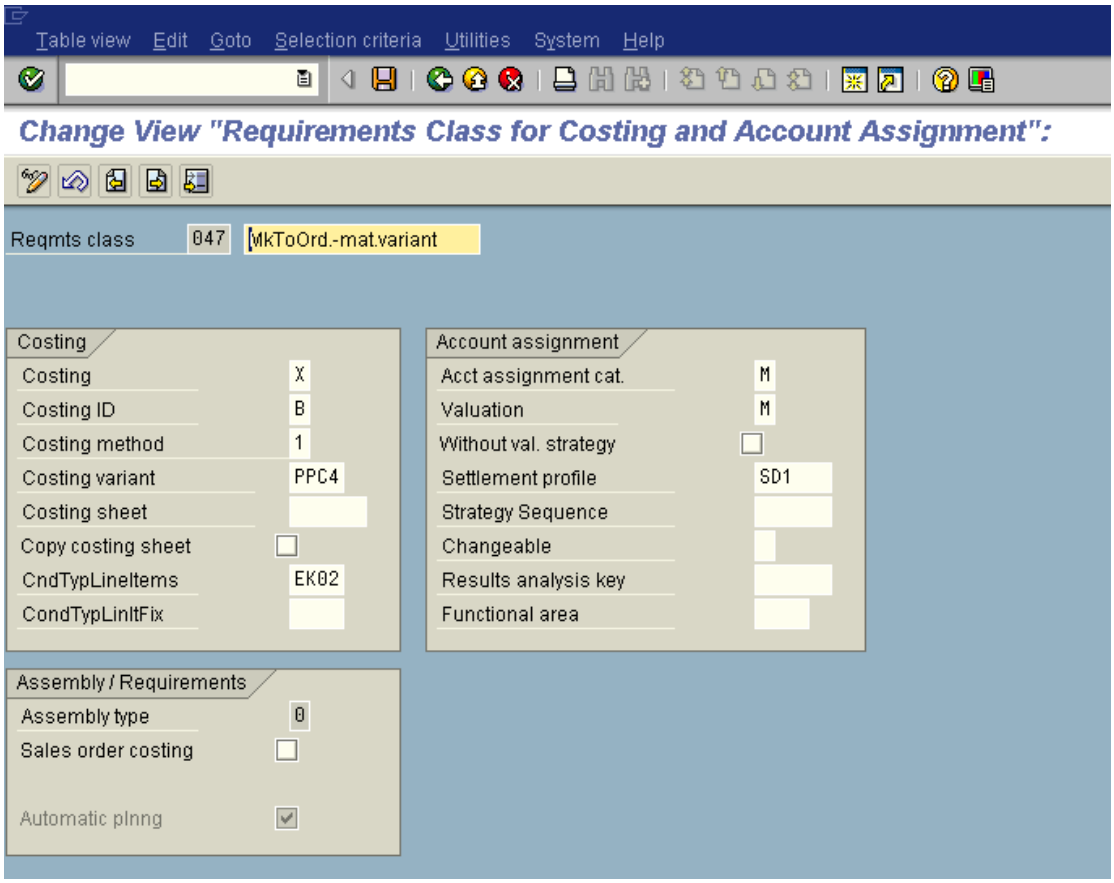
We want the sales order stock to be valuated so we enter M in Valuation.

Thus in our scenario the sales order stock is valuated and the sales order will not carry cost.

We attach the standard costing variant PPC4 to the requirement class. Thus the material will be costed using this costing variant.

The requirements class is determined through the requirements type. You can choose the requirements type as follows:
Through the item category group in the Sales view of the material master record the order type of the SD document (inquiry, quotation, sales order)
Through the MRP group or the strategy group in the MRP view of the material master record
In the subsequent steps we will see how the requirement class is attached to the requirement type, the requirement type to MRP type and strategy groups.

This will determine the selection of the costing variant for costing a product on the sales order.

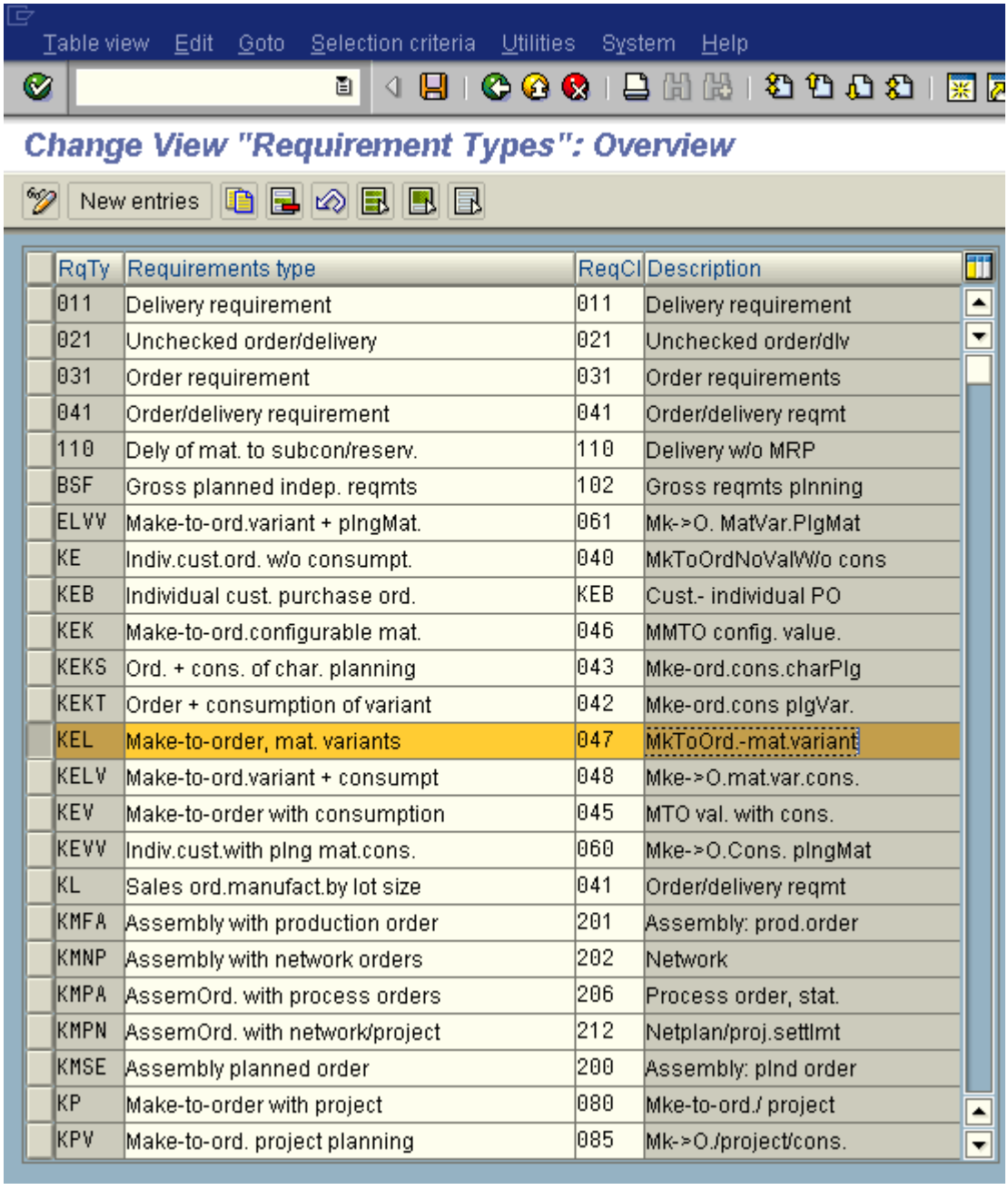


3.1.3 Check Requirements Types

IMG → Controlling → Product Cost Controlling → Cost Object Controlling → Product Cost by Sales Order → Control of Sales-Order-Related Production/ Product Cost by Sales Order → Check Requirements Types

A requirement class is attached to the requirement type. **In our case the requirement class 047 is attached to the requirement type KEL.**

Here we change or define requirements types which identify the different requirements, such as sales order requirements, delivery requirements or individual customer requirements.
Together with the item category and the MRP type of the material, an allocation to the individual transactions in sales and distribution is carried out by means of the requirements type. . Every requirements type is allocated to a requirements class with its corresponding control features.



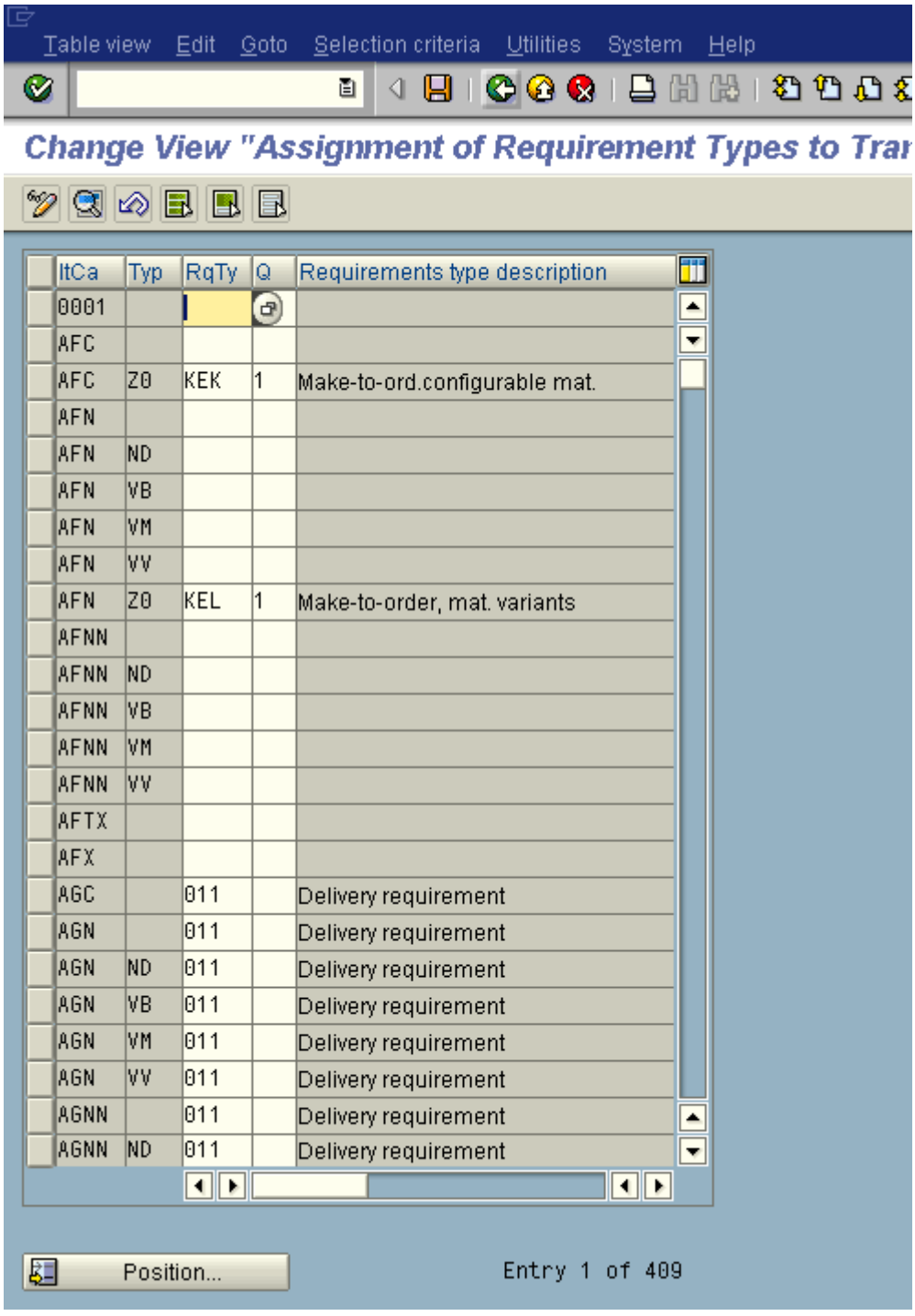
RqTy	Requirements type	ReqCl	Description
011	Delivery requirement	011	Delivery requirement
021	Unchecked order/delivery	021	Unchecked order/dlv
031	Order requirement	031	Order requirements
041	Order/delivery requirement	041	Order/delivery reqmt
110	Dely of mat. to subcon/reserv.	110	Delivery w/o MRP
BSF	Gross planned indep. reqmts	102	Gross reqmts plnning
ELVV	Make-to-ord.variant + plngMat.	061	Mk->O. MatVar.PlgMat
KE	Indiv.cust.ord. w/o consumpt.	040	MkToOrdNoValW/o cons
KEB	Individual cust. purchase ord.	KEB	Cust.- individual PO
KEK	Make-to-ord.configurable mat.	046	MMTO config. value.
KEKS	Ord. + cons. of char. planning	043	Mke-ord.cons.charPlg
KEKT	Order + consumption of variant	042	Mke-ord.cons plgVar.
KEL	Make-to-order, mat. variants	047	MkToOrd.-mat.variant
KELV	Make-to-ord.variant + consumpt	048	Mke->O.mat.var.cons.
KEV	Make-to-order with consumption	045	MTO val. with cons.
KEVV	Indiv.cust.with plng mat.cons.	060	Mke->O.Cons. plngMat
KL	Sales ord.manufact.by lot size	041	Order/delivery reqmt
KMFA	Assembly with production order	201	Assembly: prod.order
KMNP	Assembly with network orders	202	Network
KMPA	AssemOrd. with process orders	206	Process order, stat.
KMPN	AssemOrd. with network/project	212	Netplan/proj.settlmt
KMSE	Assembly planned order	200	Assembly: plnd order
KP	Make-to-order with project	080	Mke-to-ord./ project
KPV	Make-to-ord. project planning	085	Mk->O./project/cons.

3.1.4 Check Control of Requirements Type Determination

IMG → Controlling → Product Cost Controlling → Cost Object Controlling → Product Cost by Sales Order → Control of Sales-Order-Related Production/ Product Cost by Sales Order → Check Control of Requirements Type Determination

This configuration is relevant in the PP module. But nevertheless we should know it as to how system picks up the costing variant

The requirement type (RqTy) is assigned to the MRP type (Typ).
In our scenario the requirement type KEL is assigned to the MRP type Z0. The MRP type is assigned to MRP1 view in the material master.



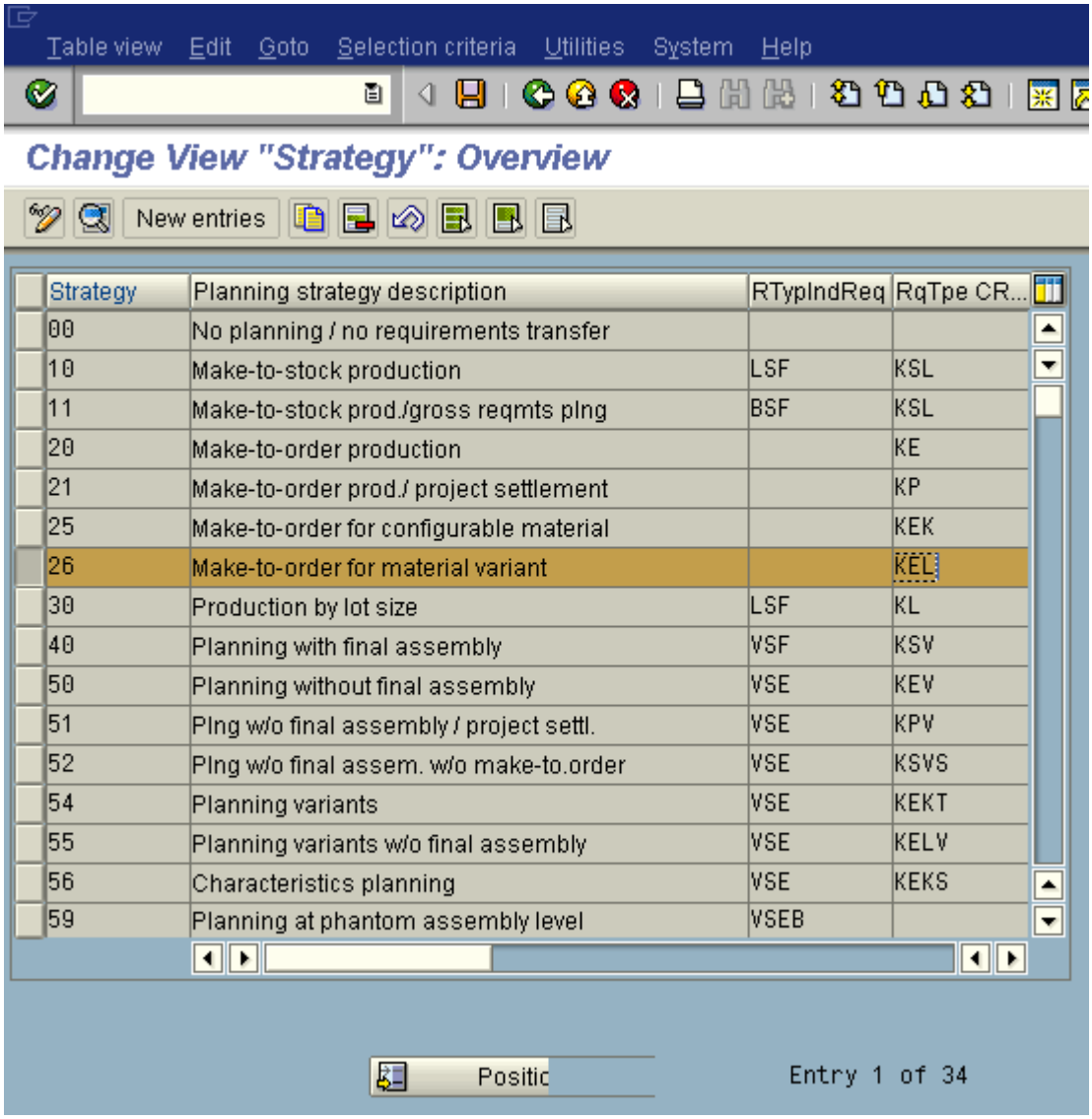
3.1.5 Check Planning Strategies (selection of reqt. type through MRP group)

IMG → Controlling → Product Cost Controlling → Cost Object Controlling → Product Cost by Sales Order → Control of Sales-Order-Related Production/ Product Cost by Sales Order → Selection of Requirements Type Through MRP Group → Check Planning Strategies

This configuration is relevant in the PP module. But nevertheless we should know it as to how system picks up the costing variant.

The planning strategy represents a procedure to be used for planning a material.
It is defined by;
a requirements type from **demand management**, or
a **requirements type** from sales order maintenance, or

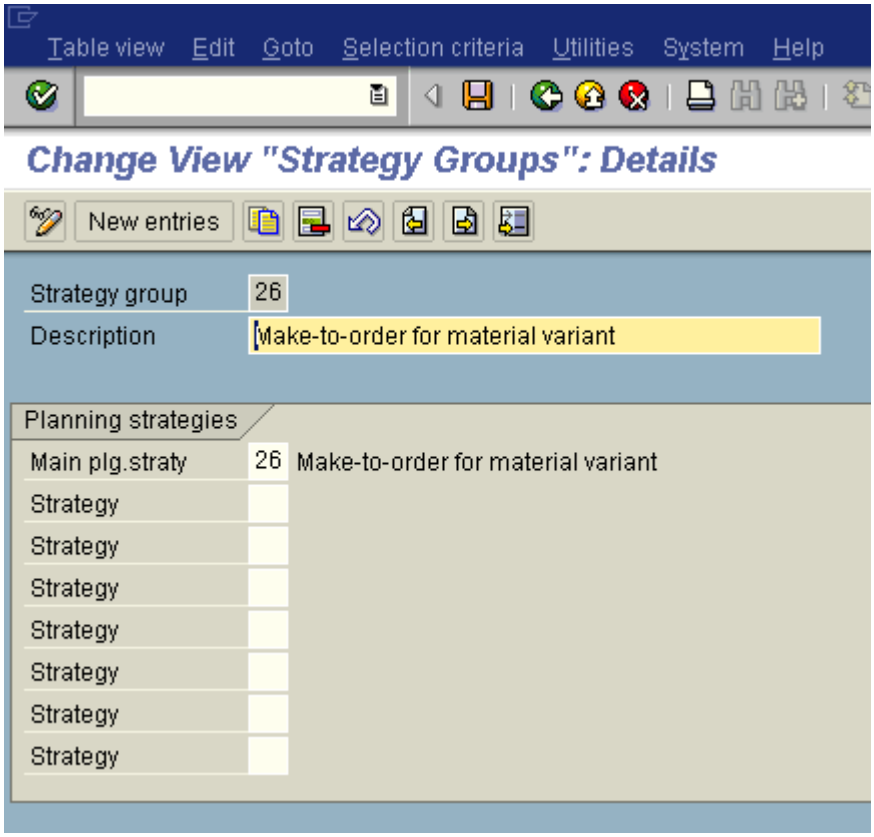
In our scenario the requirement type KEL is assigned to the strategy 26. The planning strategy is assigned in the MRP view of the material master. All this settings are done so that the system picks up the costing variant from the configuration settings done in the other modules



Strategy	Planning strategy description	RTypIndReq	RqTpe CR...
00	No planning / no requirements transfer		
10	Make-to-stock production	LSF	KSL
11	Make-to-stock prod./gross reqmts plng	BSF	KSL
20	Make-to-order production		KE
21	Make-to-order prod./ project settlement		KP
25	Make-to-order for configurable material		KEK
26	Make-to-order for material variant		KEL
30	Production by lot size	LSF	KL
40	Planning with final assembly	VSF	KSV
50	Planning without final assembly	VSE	KEV
51	Plng w/o final assembly / project settl.	VSE	KPV
52	Plng w/o final assem. w/o make-to.order	VSE	KSVS
54	Planning variants	VSE	KEKT
55	Planning variants w/o final assembly	VSE	KELV
56	Characteristics planning	VSE	KEKS
59	Planning at phantom assembly level	VSEB	

3.1.6 Check Strategy Groups (selection of reqt. type through MRP group) (optional)

IMG → Controlling → Product Cost Controlling → Cost Object Controlling → Product Cost by Sales Order → Control of Sales-Order-Related Production/ Product Cost by Sales Order → Selection of Requirements Type Through MRP Group → Check Strategy Groups



3.2 Preliminary Costing and Order BOM Costing

3.2.1 Check Costing Type

IMG → Controlling → Product Cost Controlling → Cost Object Controlling → Product Cost by Sales Order → Preliminary Costing and Order BOM Costing → Product Costing for Sales Order Items / Order BOMs → Costing Variants for Product Costing → Check Costing Types

We will use the standard costing type applicable for sales order costing

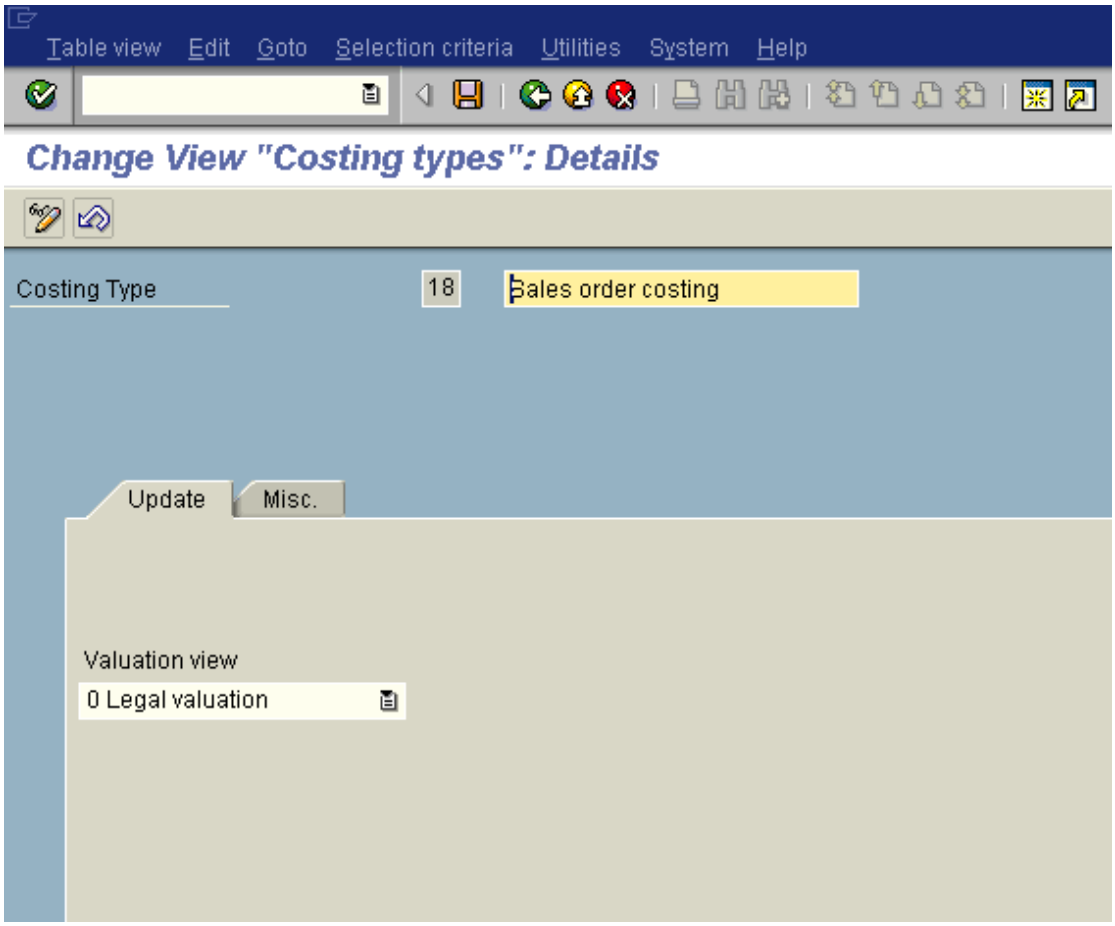
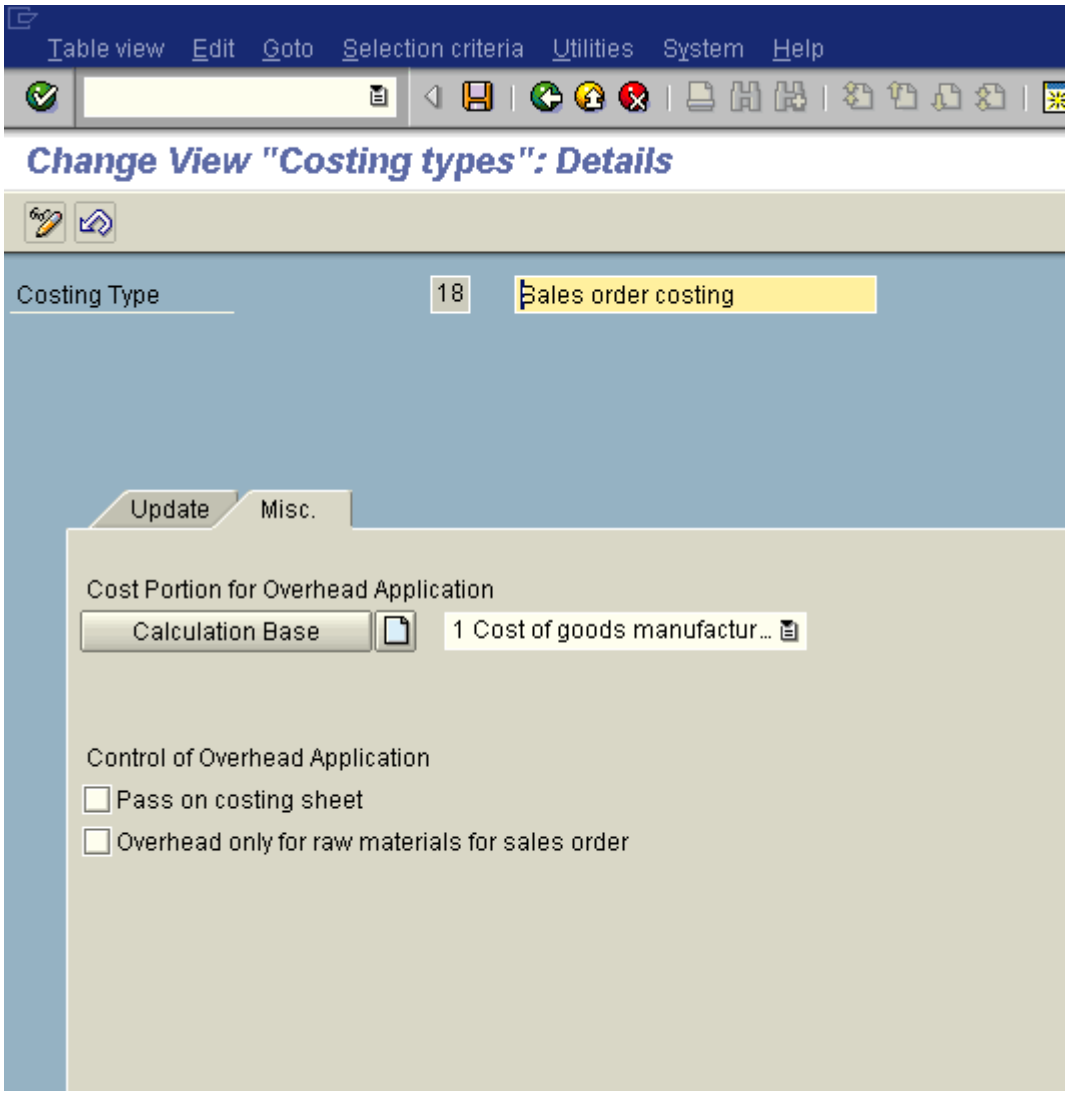


Table view
Edit
Goto
Selection criteria
Utilities
System
Help
Change View "Costing types": Details
Costing Type
18
Sales order costing
Update
Misc.
Valuation view
0 Legal valuation



3.2.2 Check Costing Variants for Product Costing

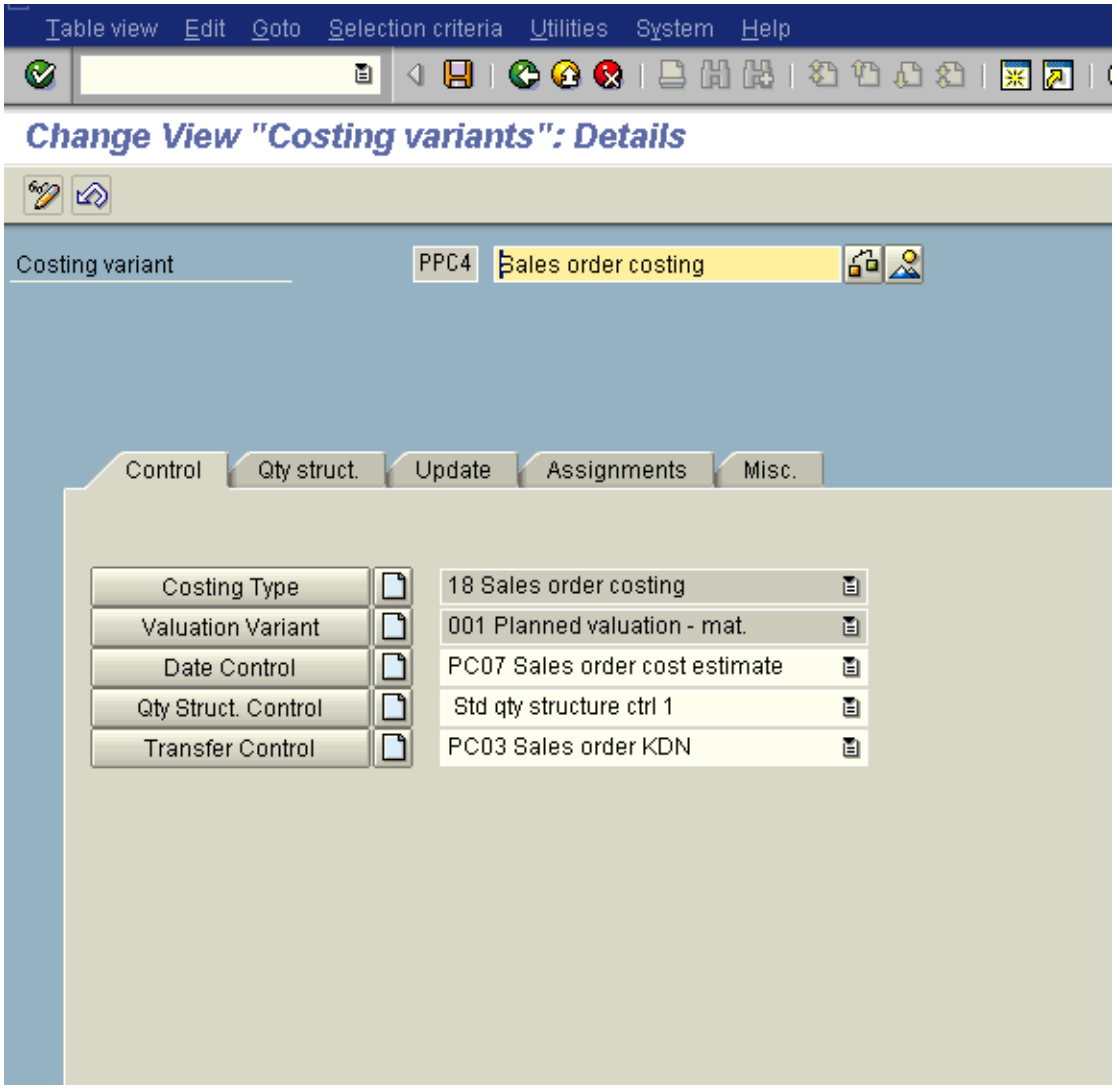
IMG → Controlling → Product Cost Controlling → Cost Object Controlling → Product Cost by Sales Order → Preliminary Costing and Order BOM Costing → Product Costing for Sales Order Items / Order BOMs → Costing Variants for Product Costing → Check Costing Variants for Product Costing

A **costing variant** contains the necessary control parameters for calculating the **planned costs** for a sales document item. With **product costing** you can calculate the planned costs for the following sales documents:

- **Customer inquiry**
- Customer quotation
- **Sales order**

Product costing is performed using the following information in the sales document:
Material-The material can be a stock able material or a configurable material.
Order quantity
The costing data is transferred into the sales document as a condition value and can be used for pricing in SD. Which condition type the costing data is transferred into is controlled in the requirements class.

We will use the standard costing variant PPC4. Costing variant "PPC4 / Sales Order costing" specifies that the system should use the lot size of the order when costing materials from individual requirements.



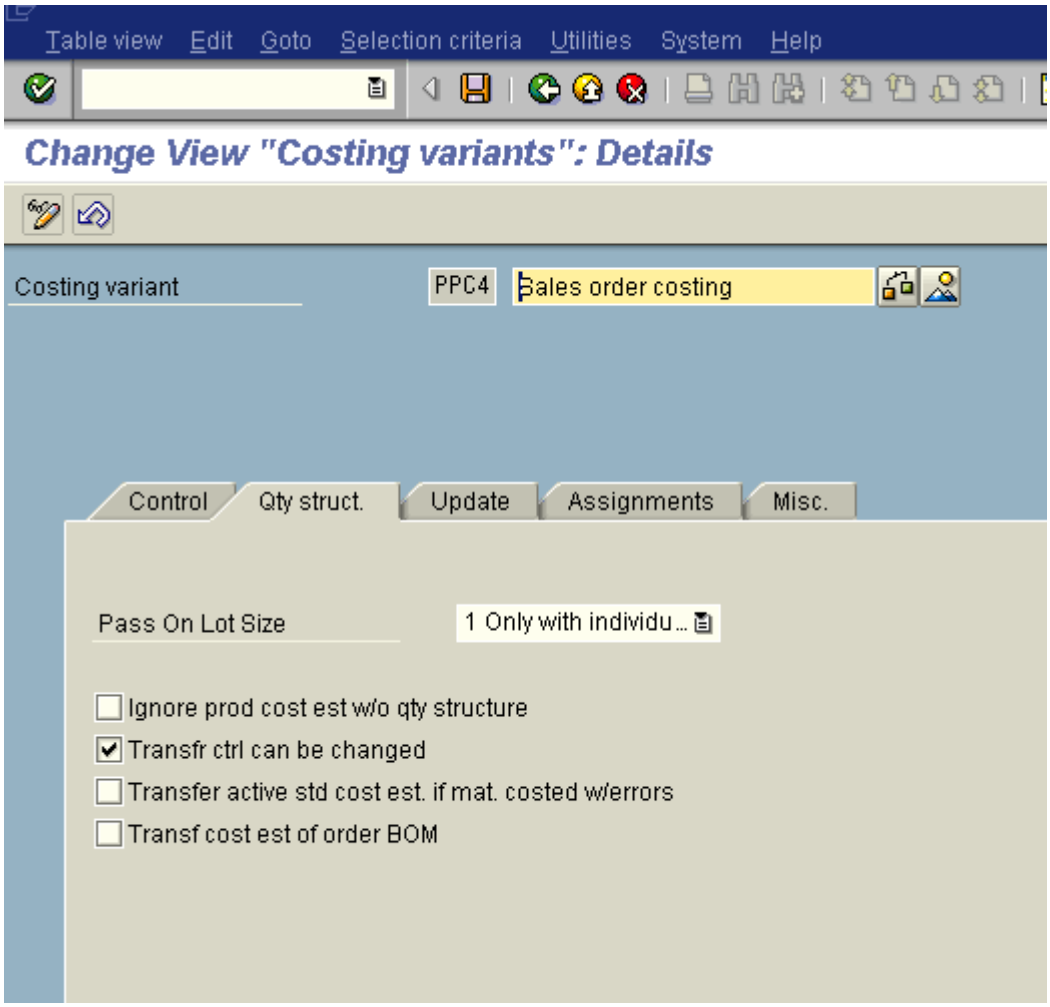


Table view Edit Goto Selection criteria Utilities System Help
Change View "Costing variants": Details
Costing variant
PPC4
Sales order costing
Control
Qty struct.
Update
Assignments
Misc.
Pass On Lot Size
1 Only with individu...
Ignore prod cost est w/o qty structure
Transfr ctrl can be changed
Transfer active std cost est. if mat. costed w/errors
Transf cost est of order BOM

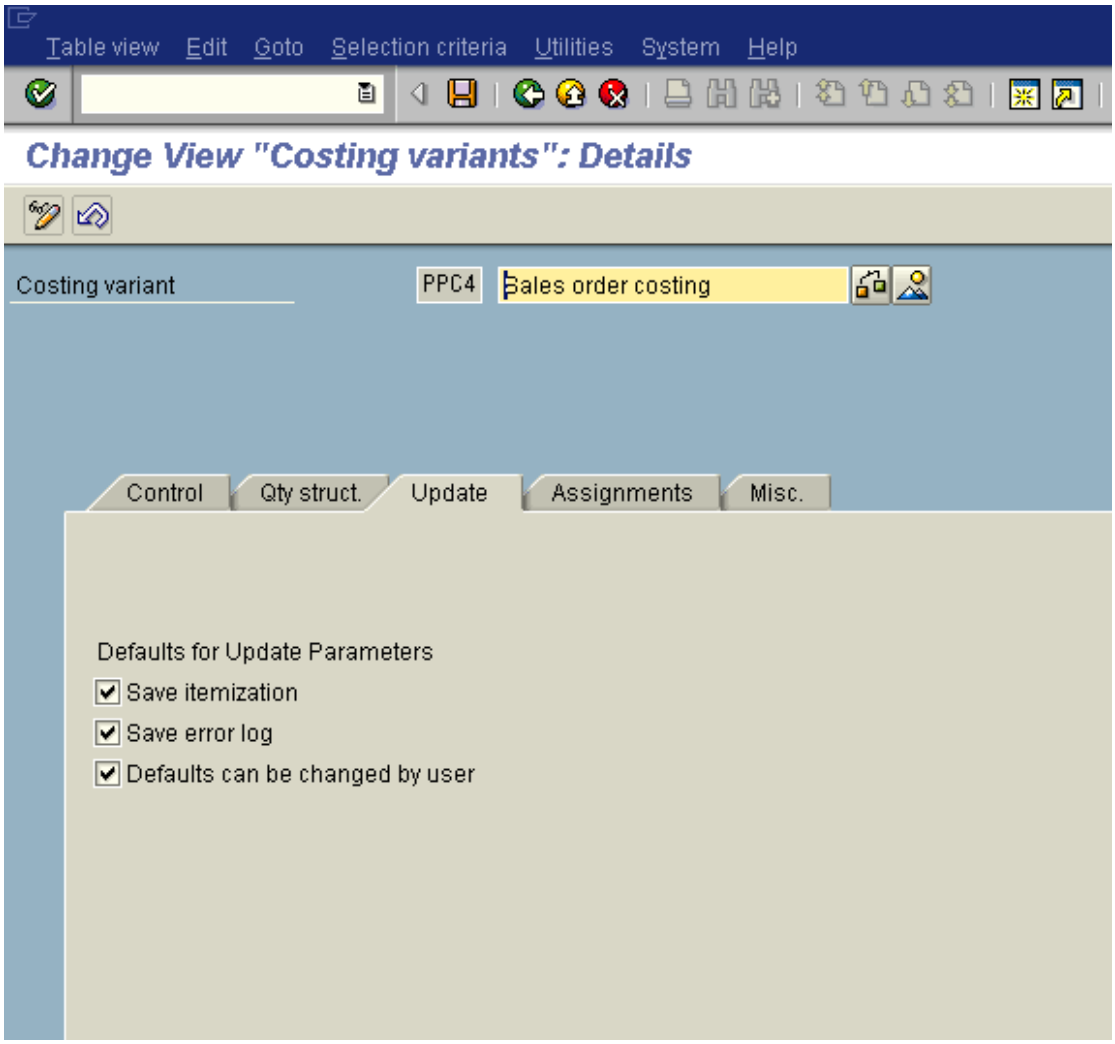


Table view Edit Goto Selection criteria Utilities System Help
Change View "Costing variants": Details
Costing variant
PPC4
Sales order costing
Control
Qty struct.
Update
Assignments
Misc.
Defaults for Update Parameters
Save itemization
Save error log
Defaults can be changed by user

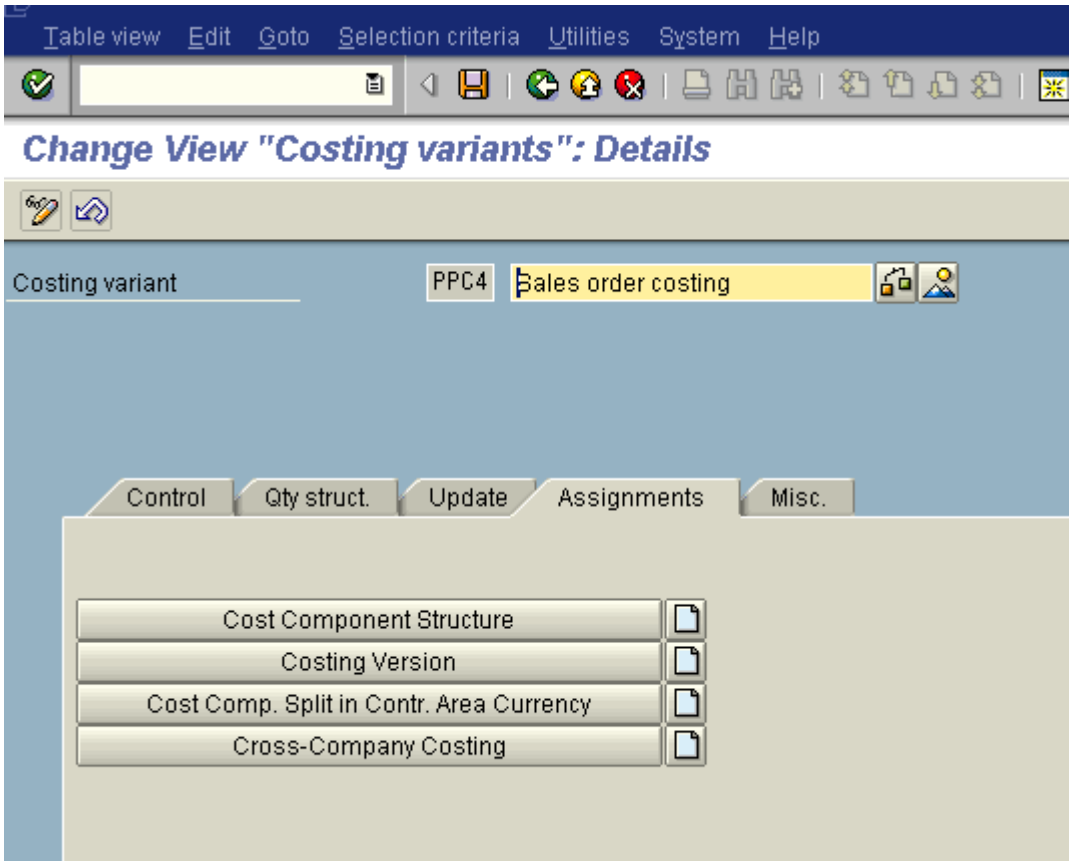


Table view Edit Goto Selection criteria Utilities System Help
Change View "Costing variants": Details
Costing variant
PPC4
Sales order costing
Control
Qty struct.
Update
Assignments
Misc.
Cost Component Structure
Costing Version
Cost Comp. Split in Contr. Area Currency
Cross-Company Costing

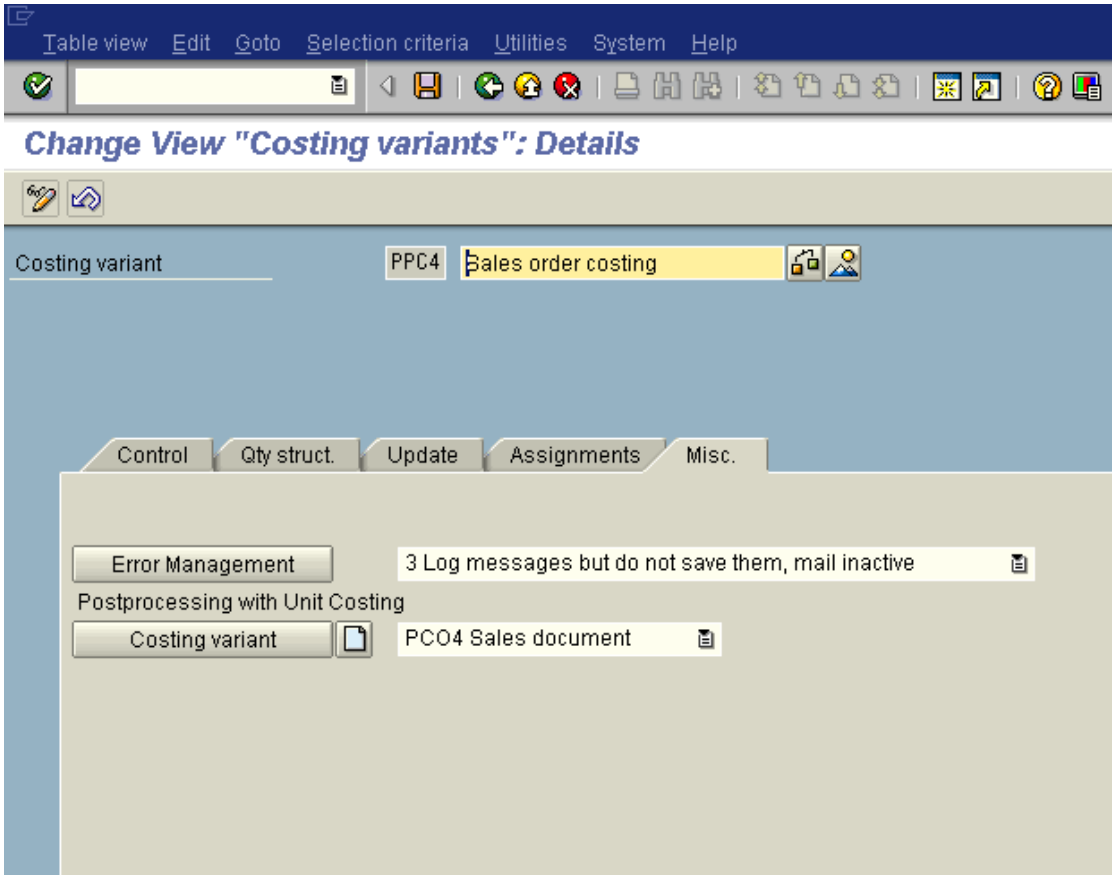


Table view Edit Goto Selection criteria Utilities System Help
Change View "Costing variants": Details
Costing variant
PPC4
Sales order costing
Control
Qty struct.
Update
Assignments
Misc.
Error Management
3 Log messages but do not save them, mail inactive
Postprocessing with Unit Costing
Costing variant
PCO4 Sales document

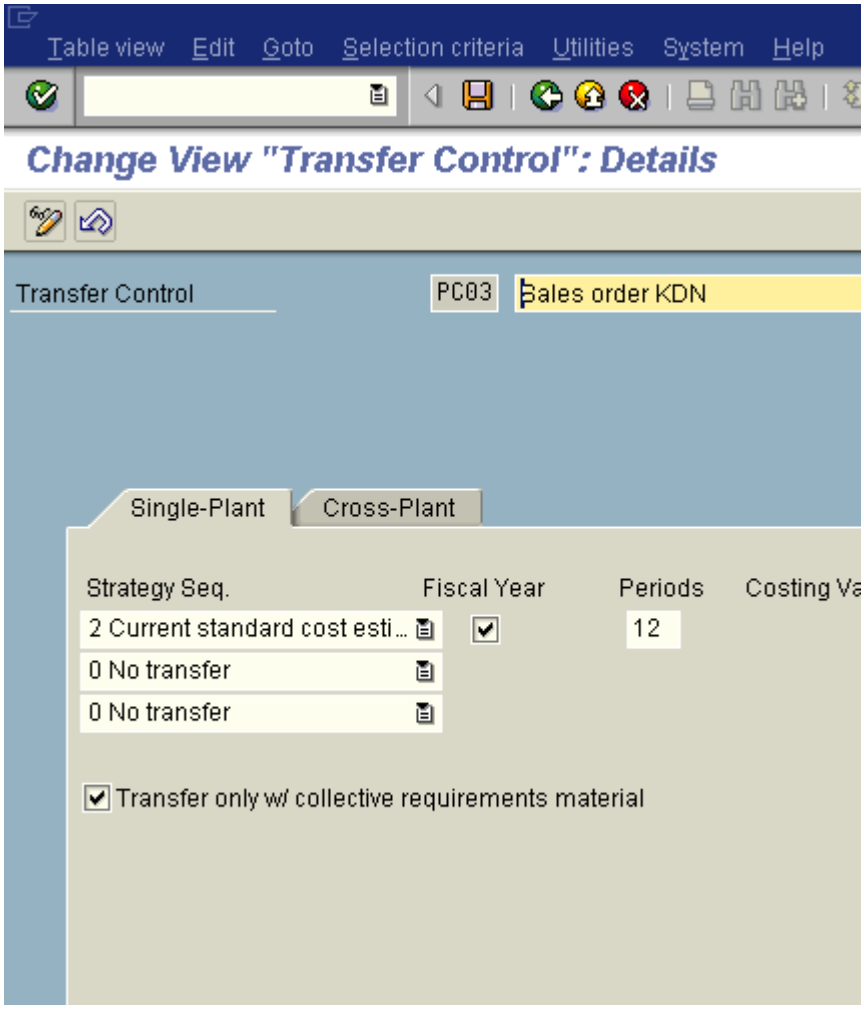
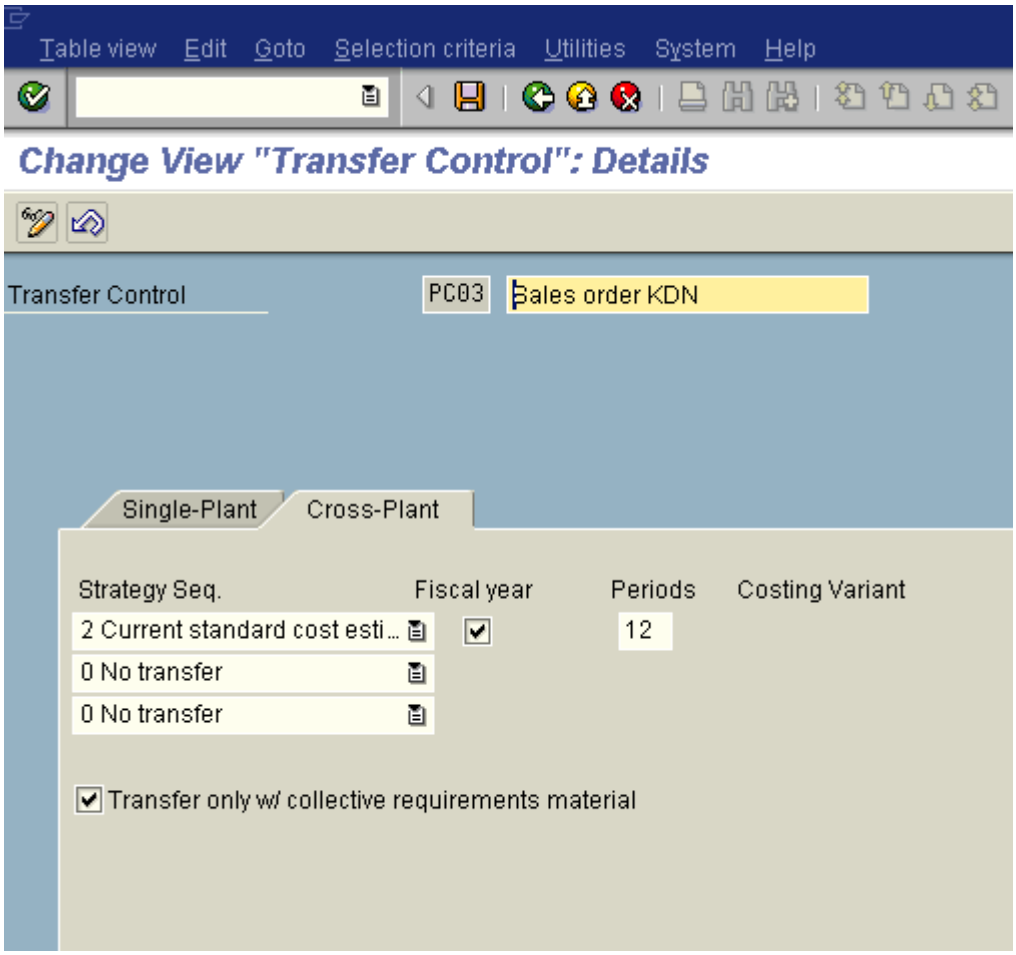


Table view Edit Goto Selection criteria Utilities System Help
Change View "Transfer Control": Details
Transfer Control
PC03
Sales order KDN
Single-Plant
Cross-Plant
Strategy Seq.
Fiscal Year
Periods
Costing Va
2 Current standard cost esti...
12
0 No transfer
0 No transfer
Transfer only w/ collective requirements material



3.3 Results Analysis

3.3.1 Create Results Analysis Keys

Same configuration as done in the product cost by order component

3.3.2 Define Cost Elements for Results Analysis

Same configuration as done in the product cost by order component

3.3.3 Define Results Analysis Versions

Same configuration as done in the product cost by order component

3.3.4 Define Valuation Methods for Results Analysis

Same configuration as done in the product cost by order component

3.3.5 Define Line IDs

Same configuration as done in the product cost by order component

3.3.6 Define Assignment for Results Analysis

Same configuration as done in the product cost by order component

3.3.7 Define Update for Results Analysis

Same configuration as done in the product cost by order component

3.3.8 Define Posting Rules for Settlement to Financial Accounting

Same configuration as done in the product cost by order component

3.3.9 Maintain Number Ranges for Results Analysis Documents

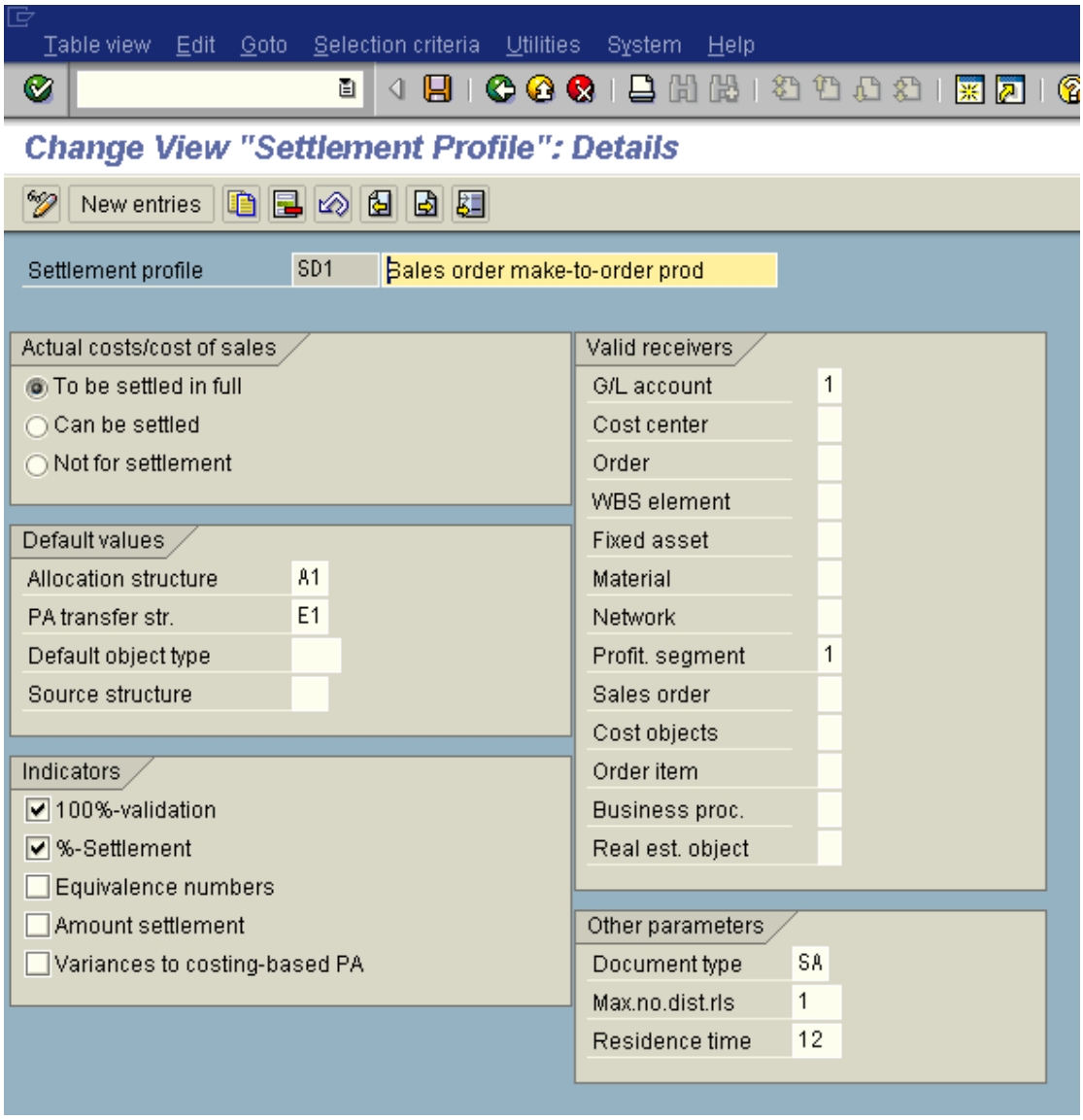
Same configuration as done in the product cost by order component

3.4 Settlement

3.4.1 Create Settlement Profile

IMG → Controlling → Product Cost Controlling → Cost Object Controlling → Product Cost by Sales Order → Period-End Closing → Settlement → Create Settlement Profile

In the settlement profile, you define a range of control parameters for **settlement**.
The settlement profile for the sales order item must allow settlement to a profitability segment or a G/L account. The requirements class of the sales order item determines what settlement profile is proposed.
The settlement rule for settling the sales order item to Profitability Analysis is generated by the system automatically when you create the order with a sales order item that carries costs and revenues.



3.4.2 Create PA Transfer Structure

IMG → Controlling → Product Cost Controlling → Cost Object Controlling → Product Cost by Sales Order → Period-End Closing → Settlement → Create PA Transfer Structure

In the PA transfer structure you determine which cost element groups are assigned to which value fields in Profitability Analysis (CO-PA). You make these assignments within so-called "assignment lines".
Settlement lets you transfer costs, revenues, sales deductions and production variances to costing-based Profitability Analysis. The PA transfer structure defines which quantities or values of a sender are to be transferred to which value fields in CO-PA as part of settlement.

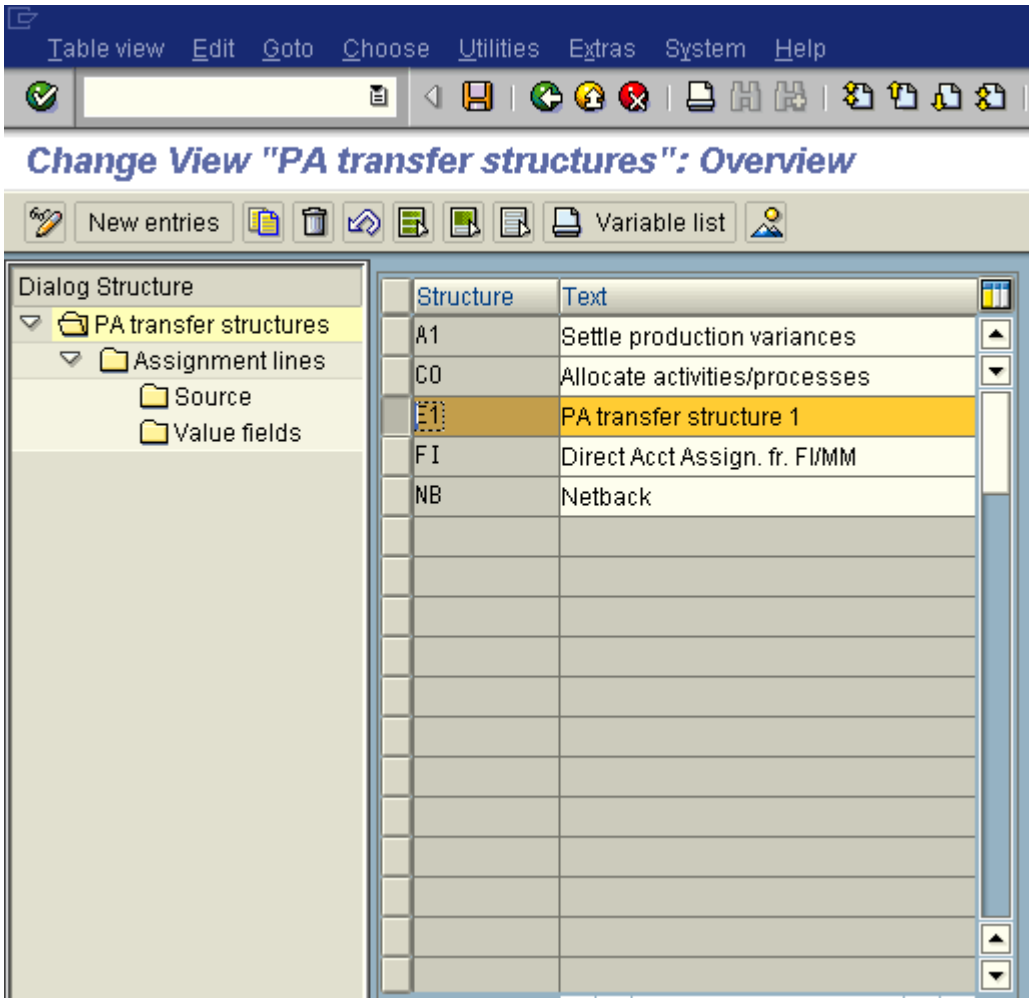
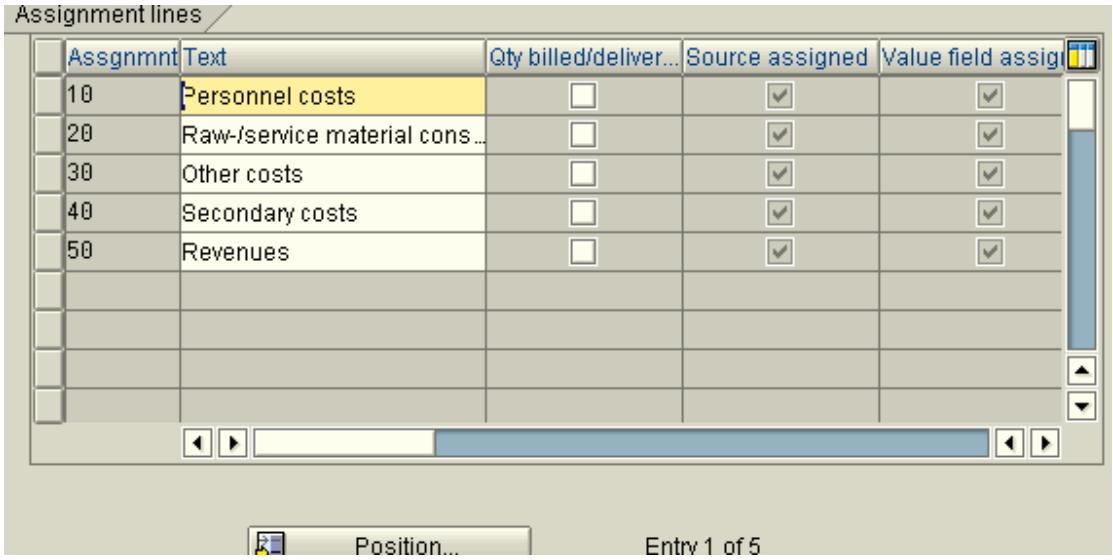


Table view Edit Goto Choose Utilities Extras System Help
Change View "PA transfer structures": Overview
New entries
Variable list
Dialog Structure
PA transfer structures
Assignment lines
Source
Value fields
Structure
Text
A1
Settle production variances
CO
Allocate activities/processes
E1
PA transfer structure 1
FI
Direct Acct Assign. fr. FI/MM
NB
Netback

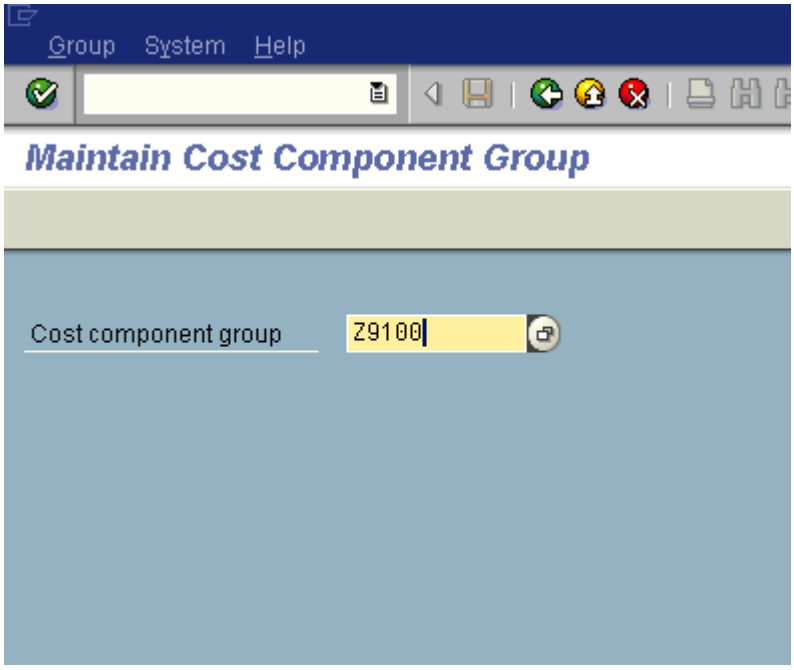

Assignment lines
Assgnmnt
Text
Qty billed/deliver...
Source assigned
Value field assig
10
Personnel costs
20
Raw-/service material cons...
30
Other costs
40
Secondary costs
50
Revenues
Position...
Entry 1 of 5

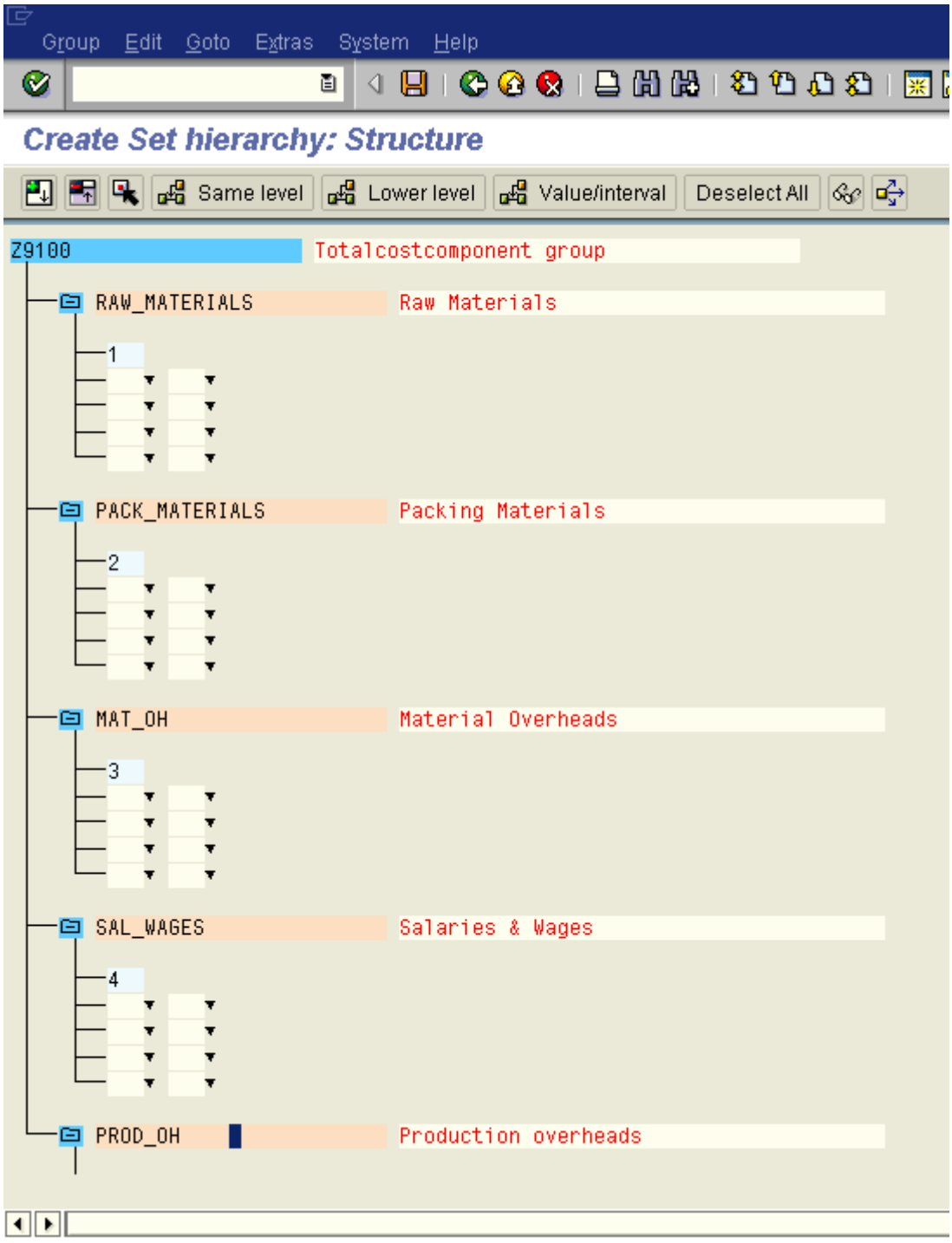
C) Information system

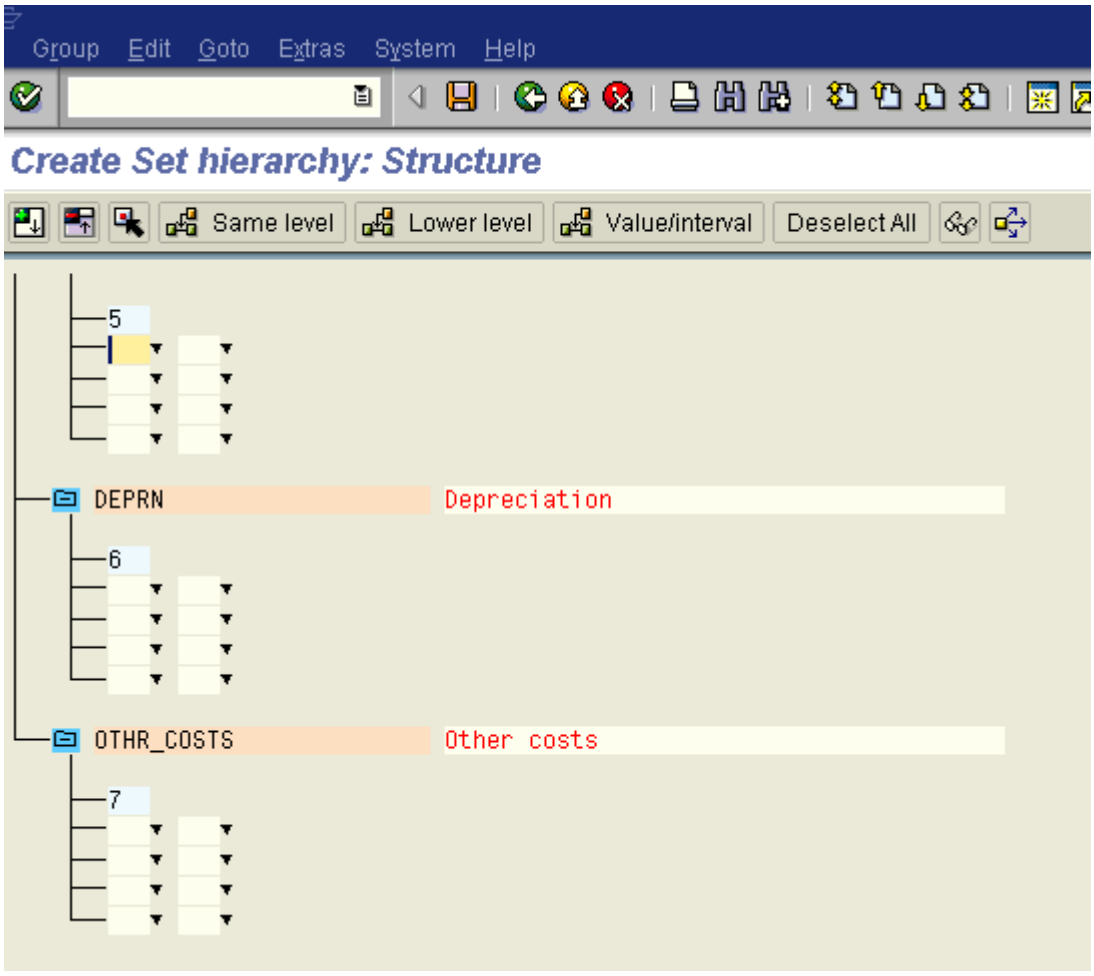
1.1 Maintain Cost component Group for Report Writer

IMG → Controlling → Product Cost Controlling → Information System → Product Cost Planning → Maintain Cost Component Group for Report Writer

In this step you define the row structure of your reports for Product Cost Planning. The results of the cost estimate for a material are updated in the form of **cost components** (this is called a **cost component split**). To be able to view the cost for each cost component in the information system, the cost components must be grouped into **cost component groups**. The report shows a separate row for each cost component and each node in the cost component group. Each node shows the summed values of the cost components contained in that node.
The cost component group is therefore a copy of the **cost component structure** and should contain all cost components in the cost component structure. You can also define alternative cost component groups that do not contain all the cost components. The standard cost component groups are structured into a hierarchy. You can change this structure as needed, but you must assign cost components to each of the lowest hierarchy nodes.




Group Edit Goto Extras System Help
Create Set hierarchy: Structure
Same level
Lower level
Value/interval
Deselect All
Z9100
Totalcostcomponent group
RAW_MATERIALS
Raw Materials
1
PACK_MATERIALS
Packing Materials
2
MAT_OH
Material Overheads
3
SAL_WAGES
Salaries & Wages
4
PROD_OH
Production overheads



Click on Save 

1.2 Maintain Summarization Hierarchies

IMG → Controlling → Product Cost Controlling → Information System → Cost Object Controlling → Settings for Summarized Analysis / Order Selection → Maintain Summarization Hierarchies

In this IMG activity, you specify the structure of your summarization hierarchy. You specify which criteria are used for the summarization of costs and quantities of objects in the definition of the summarization hierarchy.
You can use a summarization hierarchy to summarize the values of the following objects:

1) Production orders and product cost collectors
The following order types fall into this category: CO production orders (order category 04), product cost collector (order category 05), QM orders (order category 06), PPC production orders (order category 10), process orders (order category 40).

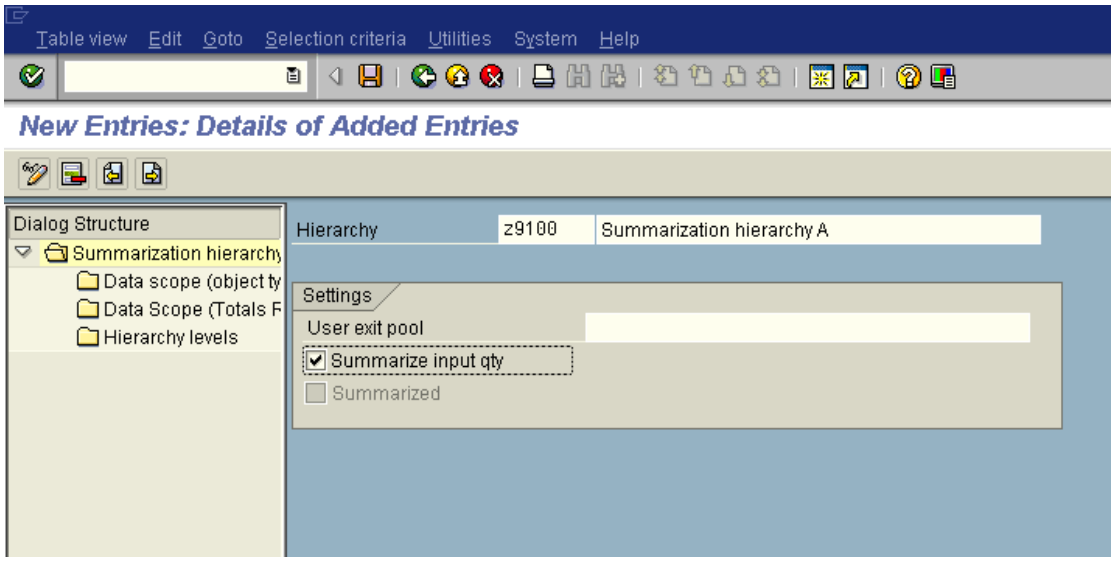
2) Sales orders without dependent orders
3) Sales orders with dependent orders
When summarizing sales orders, you can decide whether the system should also summarize the data from the assigned production orders in the sales order. You do this by choosing the corresponding object type.
You can then summarize the values (level by level) of individual objects in ascending order, according to the defined hierarchy structure.
You need to use the master data fields of the account assignment objects as criteria for summarization. Each level of the summarization hierarchy corresponds to a master data field. The system uses the master data fields to select account assignment objects for summarization. It then totals the costs and quantities for each value of a master data field (for example, plant 9100)

You can analyze individual summarization objects in the information system.
You can use summarization hierarchies to summarize various types of data, such as the following:
a) Plan costs
b) Actual costs
c) Target costs
d) Variances
e) Work in process
f) Results analysis data from calculation of profits
g) Input quantities
h) Output quantities
i) Scrap

Using a summarization hierarchy, you summarize (by period) the costs incurred for the orders of a particular material produced in a particular plant.

Click on 

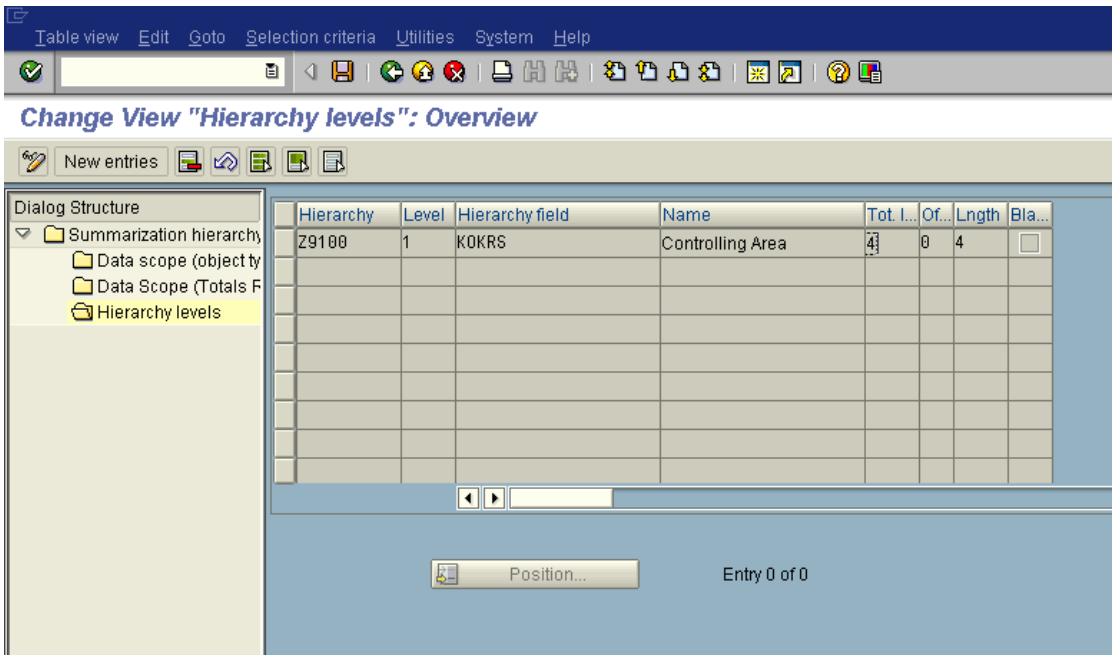
Update the following: -



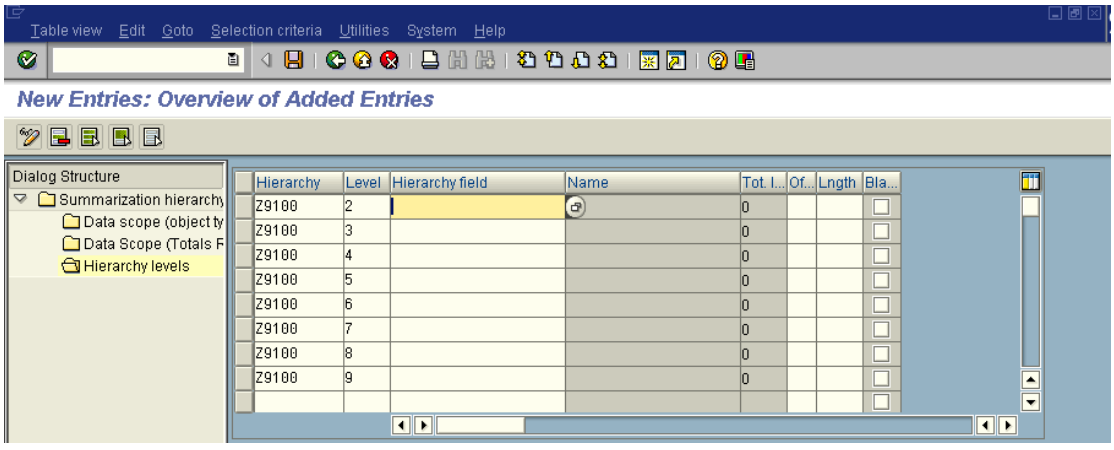
Click on Save 

Select 

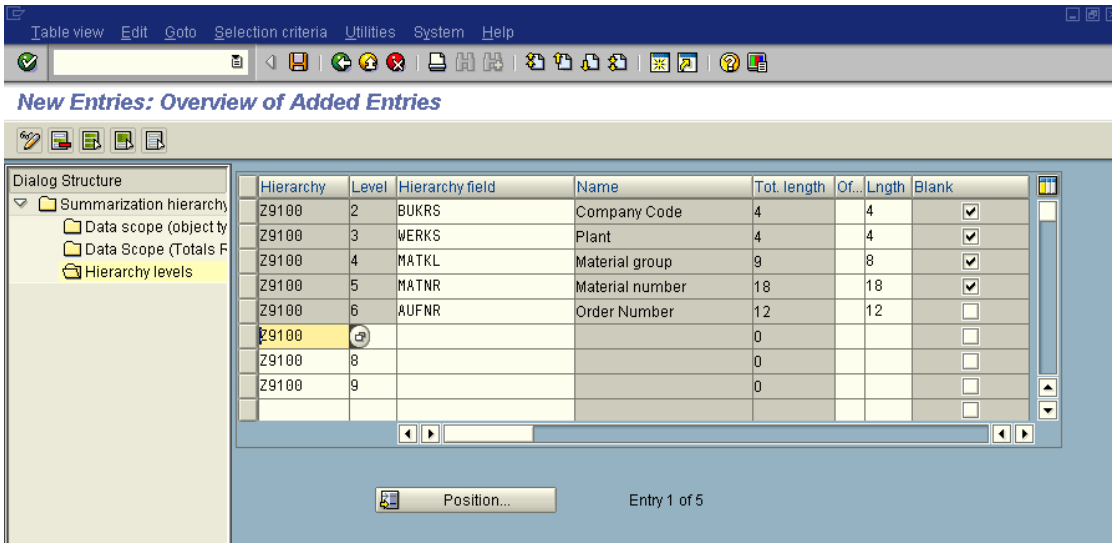
Double Click 



Click on 



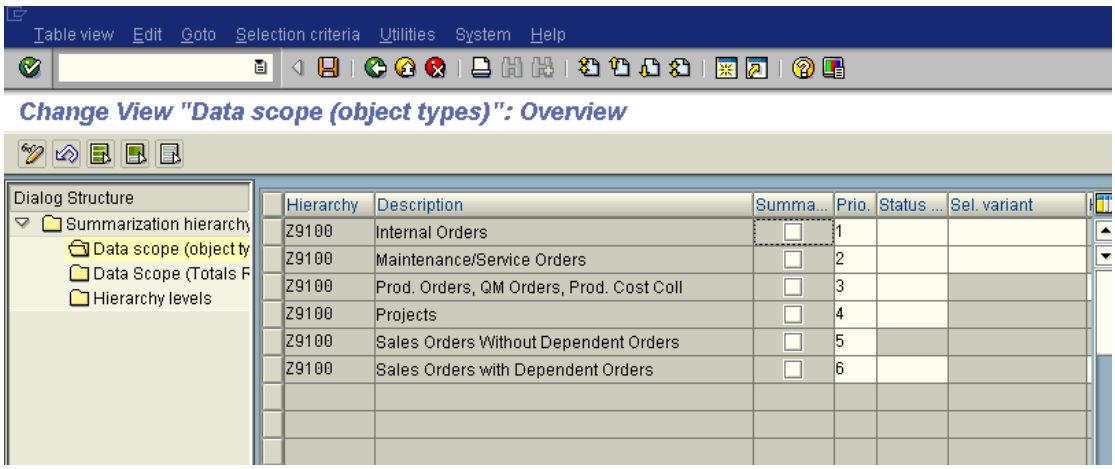
Update the following: -



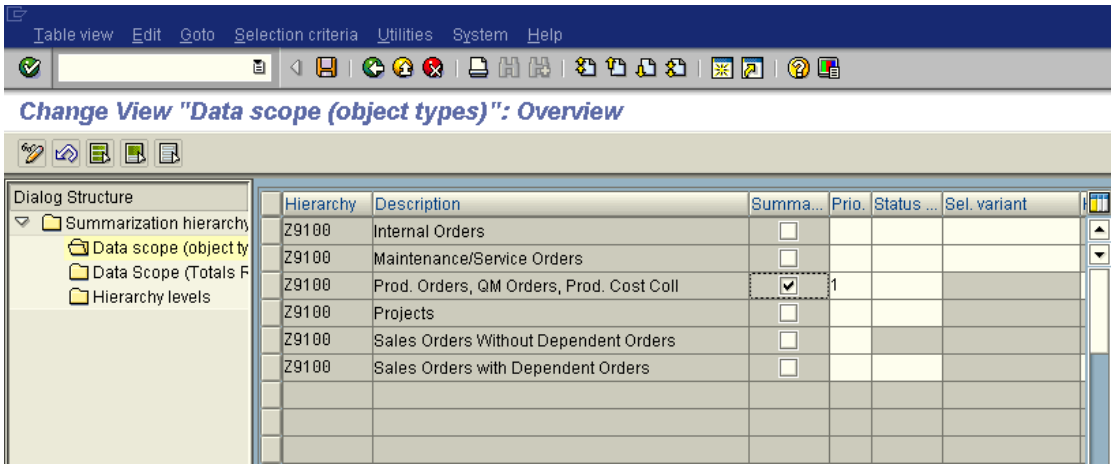
Click on Save 

Select 

Double Click 



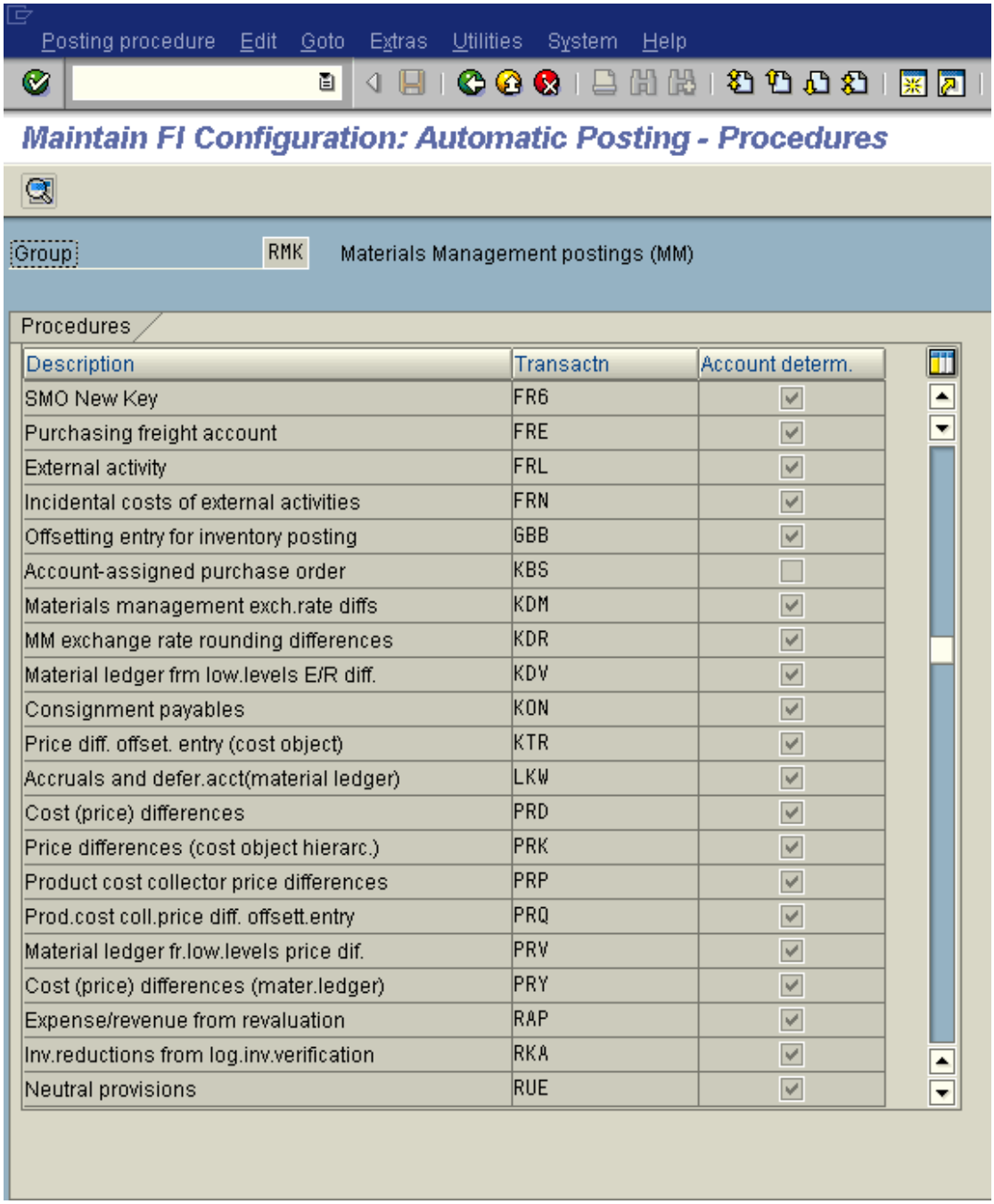
Change the priorities. Make the Prod. Order, QM order, Prod. Cost collector as 1
And click on summarization



Click on Save 

D) Appendix

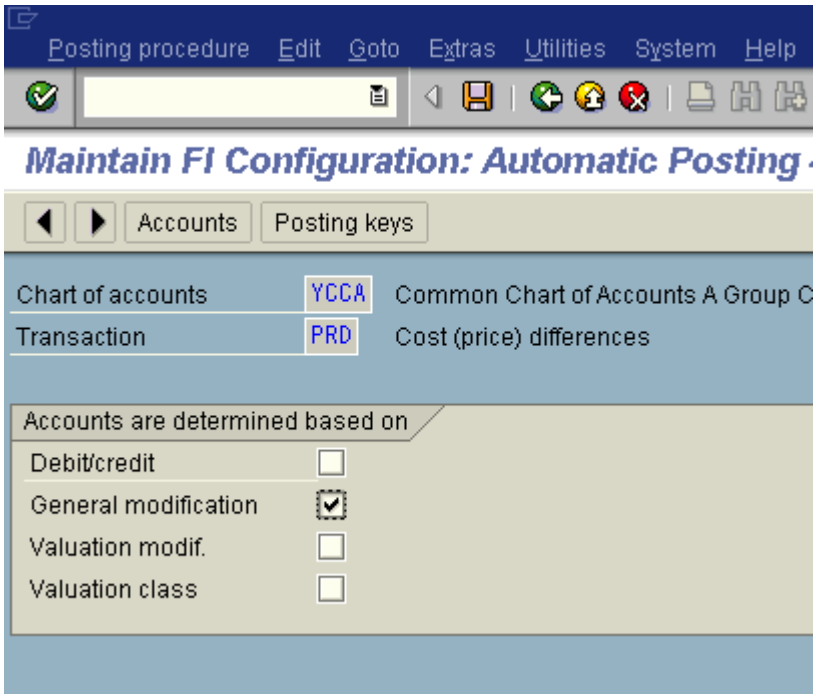
1. Customizing settings in OBYC



Description	Transactn	Account determ.
SMO New Key	FR6	☑
Purchasing freight account	FRE	☑
External activity	FRL	☑
Incidental costs of external activities	FRN	☑
Offsetting entry for inventory posting	GBB	☑
Account-assigned purchase order	KBS	☐
Materials management exch.rate diffs	KDM	☑
MM exchange rate rounding differences	KDR	☑
Material ledger frm low.levels E/R diff.	KDV	☑
Consignment payables	KON	☑
Price diff. offset. entry (cost object)	KTR	☑
Accruals and defer.acct(material ledger)	LKW	☑
Cost (price) differences	PRD	☑
Price differences (cost object hierarc.)	PRK	☑
Product cost collector price differences	PRP	☑
Prod.cost coll.price diff. offsett.entry	PRQ	☑
Material ledger fr.low.levels price dif.	PRV	☑
Cost (price) differences (mater.ledger)	PRY	☑
Expense/revenue from revaluation	RAP	☑
Inv.reductions from log.inv.verification	RKA	☑
Neutral provisions	RUE	☑

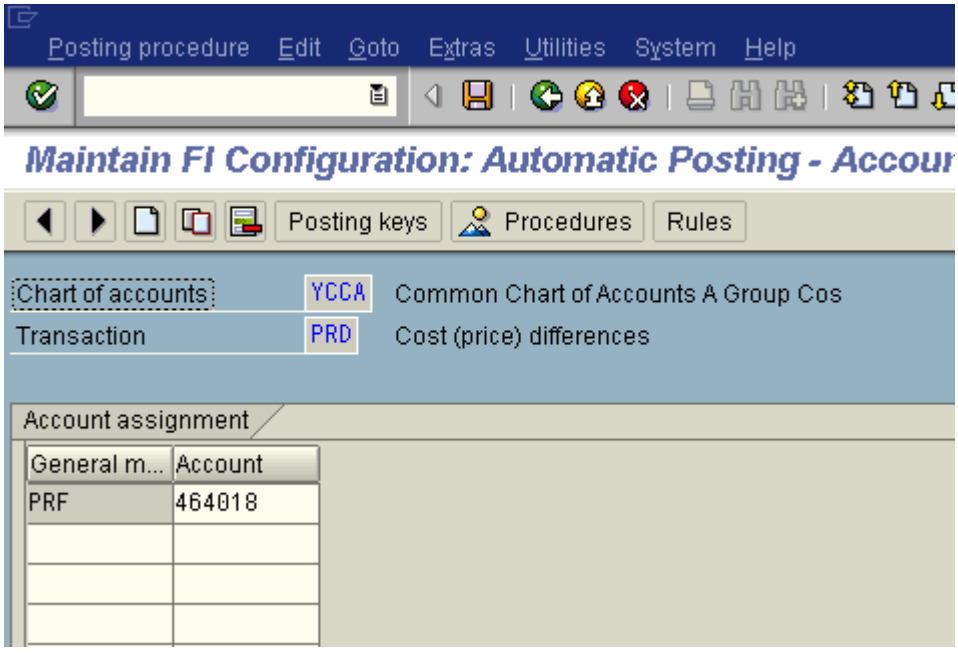
Double Click

Cost (price) differences	PRD	☑



Click on Save

Update the following: -



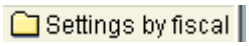
Click on Save

Note that GL code 464018 – Price difference production variance should not be created as a cost element in the controlling area, since we are using the variance categories.

2. Attach primary cost component structure to version in controlling area (Optional)

This setting is relevant if you have defined the cost component structure as primary cost component. This structure needs to be assigned to the plan version 0 in controlling are 9100. So that primary cost from cost centers flows into the product cost component structure.

Select

Double Click 

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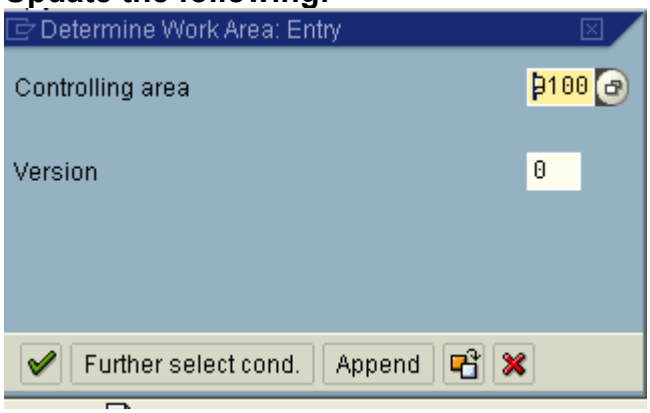
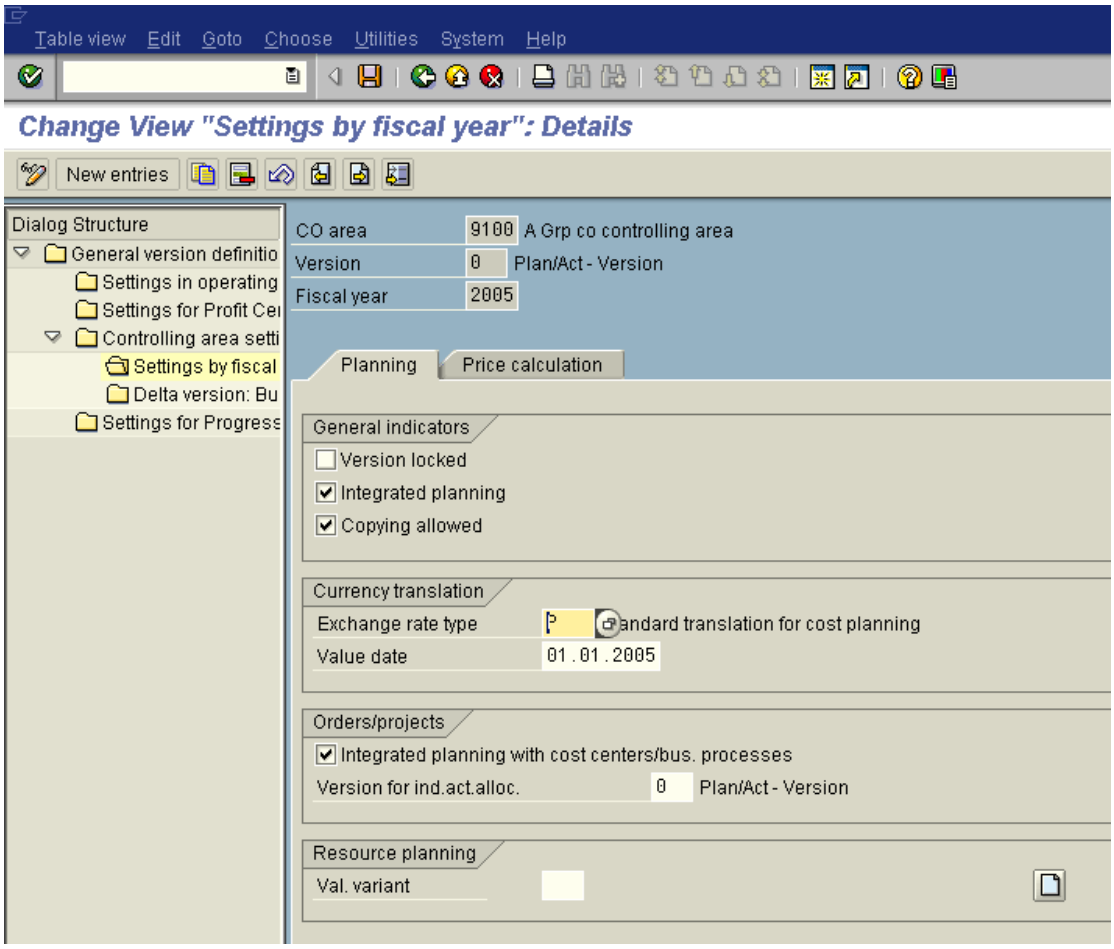
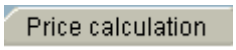


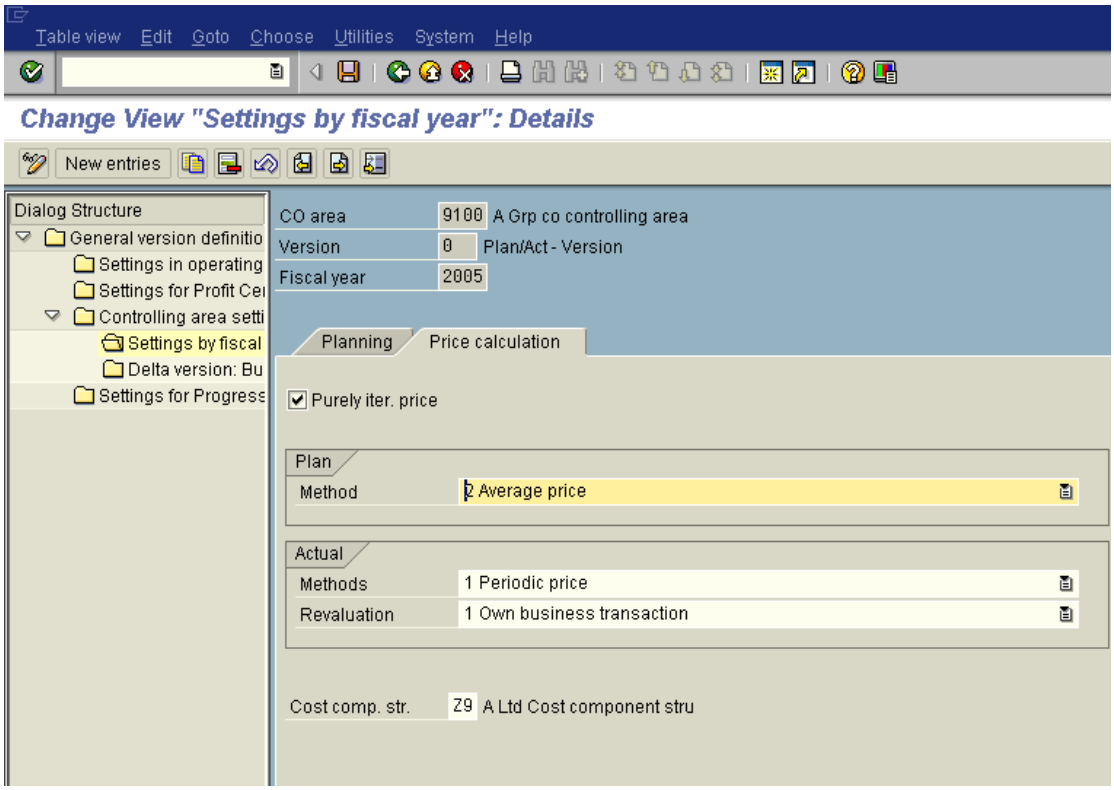
Select 

Click on 



Click on 

Update the cost component structure Z9



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