

Training Article Designer:

Article construction with carcass and front



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1. Introduction



Objectives of this exercise

- Repeat the content from the previous exercises
- Create and set a base panel
- Construction shelf with clothes rail
- Horizontal cross rails
- Set drawers and doors
- Change the pull position
- Global saving of modifiers
- Change the pull position by data setup

The abbreviations used

- **CP** Construction Principle
- **PD** Part Definition
- **ADG** Article Designer Group
- **_Customer** This abbreviation is applied for naming folders in the data system. Replace this term with your firm's name on your own system, e.g. "_Miller"
- **_C_** Set in the name of data objects instead of "_C_" e.g. "M_" for "Miller" to mark the data object as your own.
- **3-Point-Button** 

Preparation

Prior to this exercise, please **turn off** the **Article Mode**. You can find the button in the AutoCAD status bar.

Article Mode **active**:



Article Mode **inactive**:



2. The Article Designer

Details on how to implement points 2.1- 2.3 are in the exercise “Create and divide articles”.

2.1 Start the Article Designer

Open the tab “Article Designer” and click on the button “Top View”.

Now you are in the Article Designer.



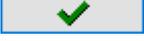
2.2 Save the article

First save the article under a new name.

imos

Article Name

Description

Enter an article name and end the process with .

2.3 Define size of the article

Define the size of your article.

In order to do this, set the following dimensions (in mm): **H: 2000 W: 1000 D: 560**

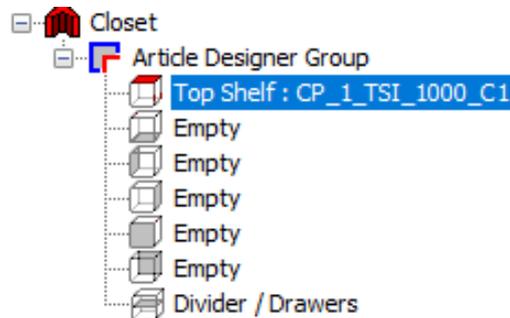
— □ ×

Height	Width	Depth
<input type="text" value="2000"/>	<input type="text" value="1000"/>	<input type="text" value="560"/>

3. Create and assign parts

3.1 Top shelf

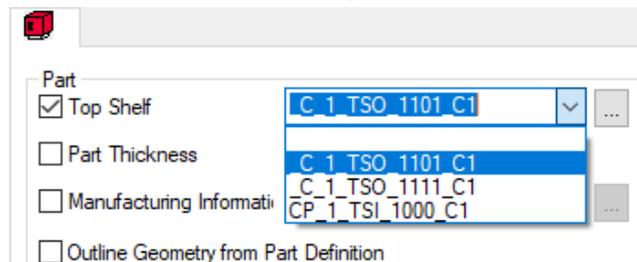
By double clicking once on the top shelf symbol, a CP for the top shelf is inserted in the ADG.



The CP “**CP_1_TSI_1000_C1**” is automatically assigned by the program. However, for the cabinet an onset top shelf is required on which 1, 2 and 4 edges are edge banded.



In the exercise “**Construction Principles**” you have already created a CP with these attributes. Assign this CP “**_C_1_TSO_1101_C1**” to the top shelf. For this purpose, open the dropdown list in the settings of the top shelf and select the desired CP.



Tip

If you do not find the desired CP in the dropdown list, look it up in the customer-specific folder structure of the Element Manager.

3.2 Side panels

3.2.1 Left side panel

Now proceed with inserting the left cabinet side.

The CP “**CP_1_LS_1111**” is automatically set for the outside panels by the program. However, for the cabinet you need side panels, which are edged on edges 1 and 4 (front and bottom), that means side panels with the edging code **1001** instead of 1111. Change to the Element Manager to assign the desired CP to the side panels.



Create a CP together with the necessary PD and save it in your personal folder.
If necessary, follow the steps 1-17 below.



It might happen from time to time that you need to create new CPs and corresponding PDs.

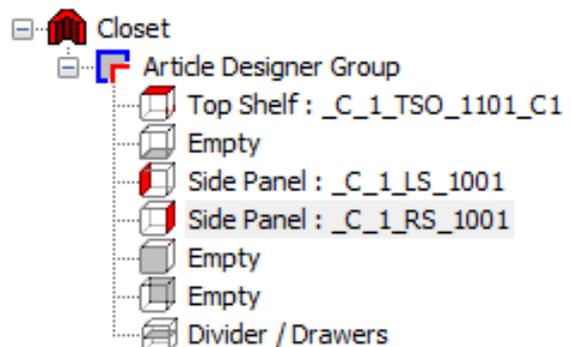
The **necessary steps 1-6 and 13-17** are in the list “**Process for creating a CP and PD**”.
The steps **7-12** are not important in this example, because a PD with the corresponding attribute is available.

The process for creating a CP and PD

1. Select a very similar CP
2. Change the name of the selected CPs
3. Save the new CP
 - Now you have a CP with the desired name.
 - Now by selecting/ creating the correct PD, it is assigned to the required material.
4. Open the node **Part Definition** in the CP.
5. Click on the 3-Point-Button next to the value of the Part Definition.
 - Now you are in the previously assigned PD.
6. Select a very similar or if available the desired PD.
7. Change the name of the selected PD.
8. Save the new PD.
9. Change the attribute values (e.g. the profiles of the edges)
10. Save the changed PD.
11. Create (if necessary) a new directory.
12. Drag your new PD in the correct directory.
13. Leave the Element Manager, in this case with “**Apply**”.
 - Now you have created the required PD and the name of this PD has been assigned to the CP as an attribute value.
14. Save the changed CP.
15. Create (if necessary) a new directory.
16. Drag your new CP in the correct directory.
17. Leave the Element Manager, in this case with OK
 - Now you have created the required CP and assigned it to the article.

3.2.2 Right side panel

Proceed the same way as above for the right side panel.



3.3 Bottom shelf

We need an **inset bottom shelf** with the edge code **1000**, i.e. a CP “**CP_1_BSI_1000_C1**” with matching PD.

Open the Element Manager via the 3-Point-Button and create the CP and PD. Save the CP and corresponding PD under your name in your Folder structure and assign it to the shelf.

Please refer to the steps 1-3 and 15-17 of the procedure above whilst creating.

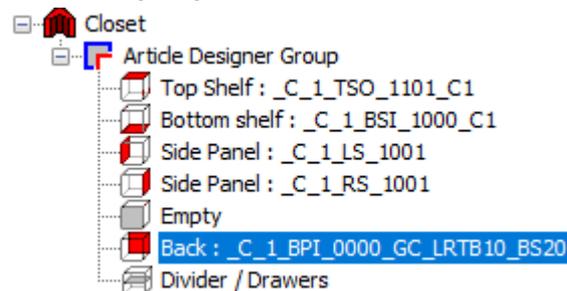


3.4 Back panel

To complete the top ADG, you still need a back panel.

Create your own CP for the back panel by saving the available one under the customer-specific name and assign it to the back panel in the ADG. (Steps 1-3 and 15-17 in the displayed process above).

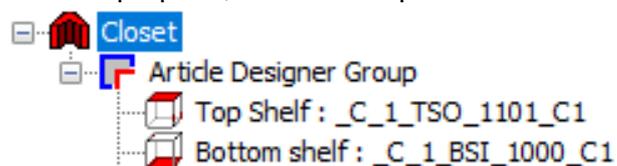
After assigning the back panel, the top ADG of the cabinet appears as follows:



3.5 Base panel

Now a base panel is inserted in the cabinet.

For this purpose, select the top level of the article structure, the article name.



In the settings two tabs appear.

- Base settings to the article
- Base settings to the base panel

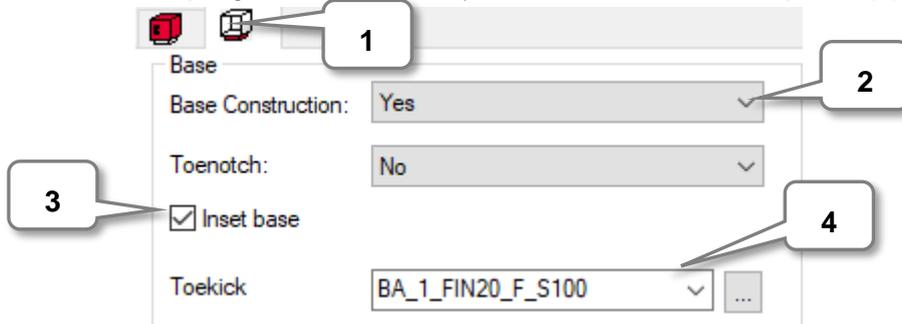
Open the tab **Base** (1).

Here all settings for the base panel as well as assigning base-CPs can be made.

From the dropdown-list “**Base Construction**” – select the option “**Yes**” (2).

Checkmark “**Inset base**” (3) in the option.

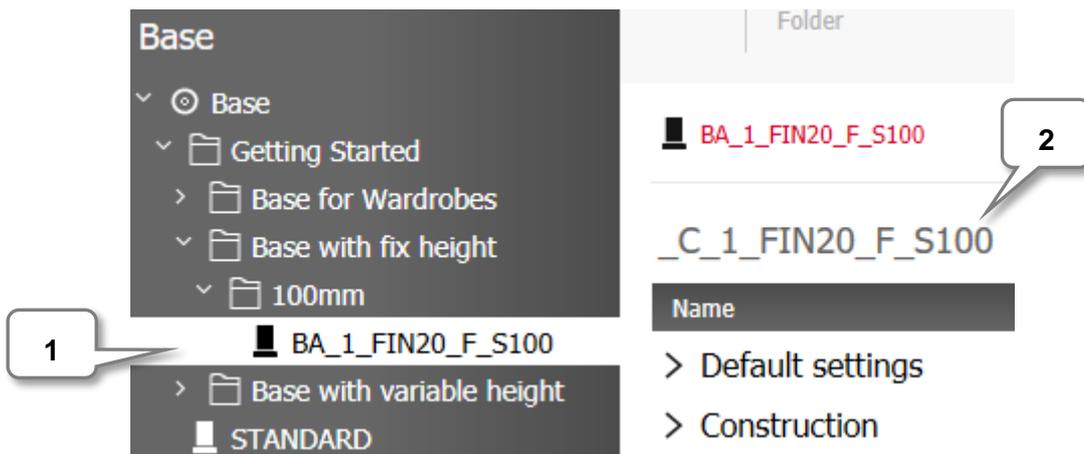
The program automatically sets a CP for the base panel (4).



To use your own CPs for the base panel, change to the **Element Manager**. For this purpose, use the 3-Point Button.

Select a **100mm high** toe kick (1) under **Getting Started / Base with fix height**.

Customize the name of the CP (2).

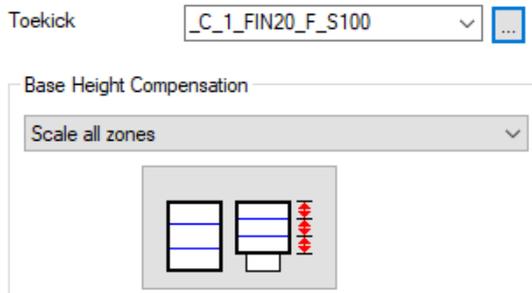


... and save the new created base-CP.

Then create a customer-specific folder and move the base-CP to this folder (Steps 1-3 and 15-17 in the displayed process in chapter 3.2.1).



Define whether the base height should be added to the height of the cabinet or not in the Article Designer. Under “**Base Height Compensation**”, select the option “**Scale all zones**”.

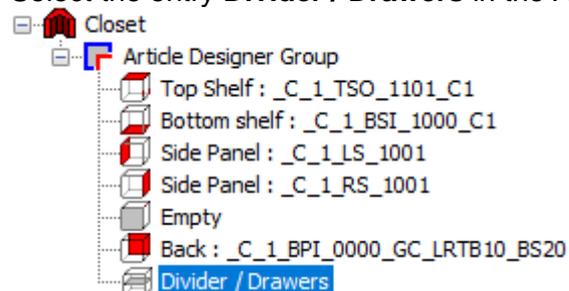


Hint

- “**Scale all zones**” → The cabinet height of 2000mm remains
- “**Increase total height**” → The base height of 100mm is added to the cabinet height of 2000mm. The total height is then 2100mm.

3.6 Divider

Now you can continue with inserting the divider. Select the entry **Divider / Drawers** in the ADG.



Next make the following settings:

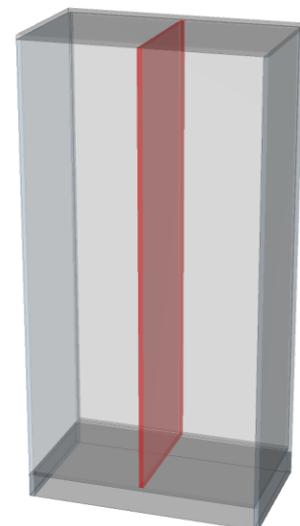
Division: Partitions / Side Panels
Part type: Partition

A CP with an edge on the front side (edging code **1000**) is required for the divider.

First, change via the 3-Point Button next to the value of the **CP-Divider** to the **Element Manager**.

Follow the steps 1-3 and 15-17 of the procedure displayed in chapter 3.2.1 to create the CP “**_C_1_PA_1000_C1**” and a matching PD. Apply the next CP and return to the Article Designer.

You can now enter **First Linear Division** of **1:1**.



Divider

Part type: Partition

CP Divider: _C_1_PA_1000_C1

Part Thickness: 19.00

Manufacturing Informati...

Options

Definition Type: Perpendicular

Angle: 0

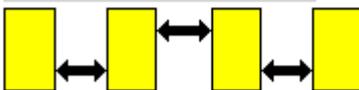
First Linear Division: 1:1

Second Linear Division:

Dimension Reference:

Zone

Part



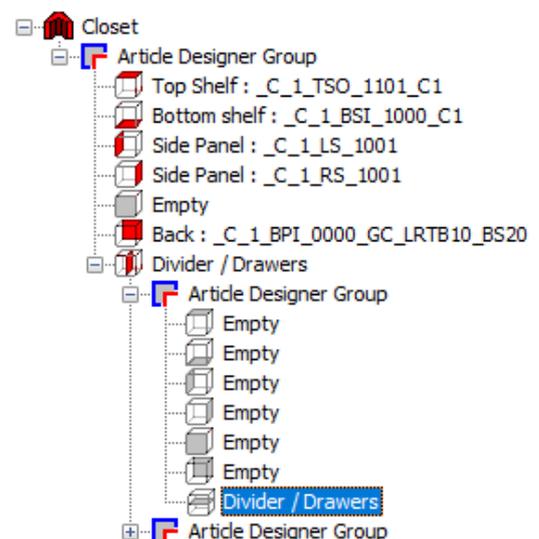
Thereby, all necessary settings for the divider have been made.

3.7 Setup of the right cabinet part

3.7.1 Fixed shelves

In the right ADG, two fixed shelves and one adjustable shelf are required.

Select **Divider / Drawers** in the right ADG.



Afterwards make the following settings:

Division: Shelves
Part type: Fixed shelf

The CP “**CP_1_FS_1000_C1**” is automatically assigned to the **Divider**.

To select / create a suitable CP and PD, change to the **Element Manager**.

Divider

Part type: Fixed Shelf

CP Divider: CP_1_FS_1000_C1

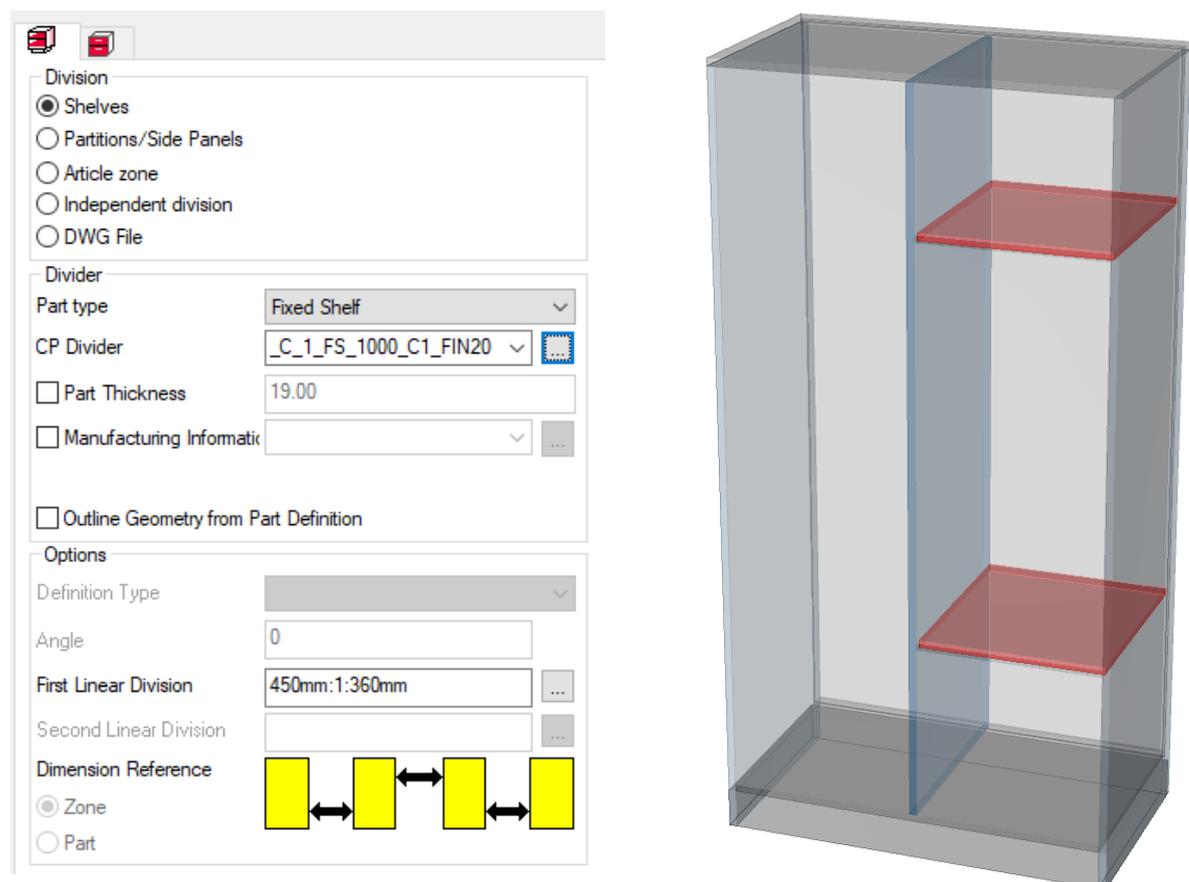
Use the CP “_C_1_FS_1000_C1_FIN20” created in an earlier exercise. Don’t forget to re-name and save the PD in your personal folder as well, as assign it to the CP and use the new CP in your construction.



In the Article Designer enter the **First Linear Division** for the fixed shelf:

450mm:1:360mm and confirm with “Enter”

The article appears in the graphical preview as follows:



3.7.2 Adjustable shelf

The next step is to define the adjustable shelf. It is placed between the two fixed shelves.

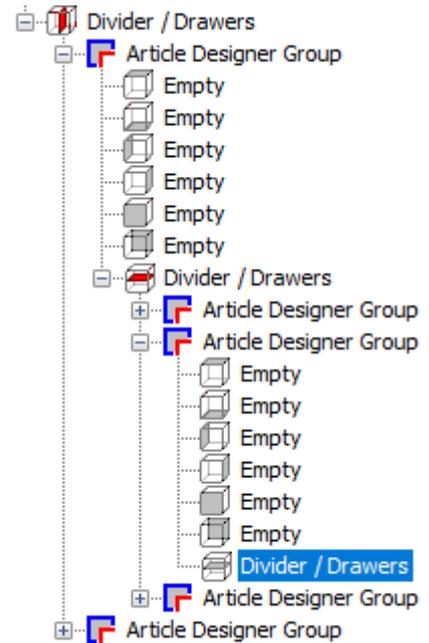
Select the entry **Divider/ Drawers** in the (just created) **middle ADG**.

Afterwards make the following settings:

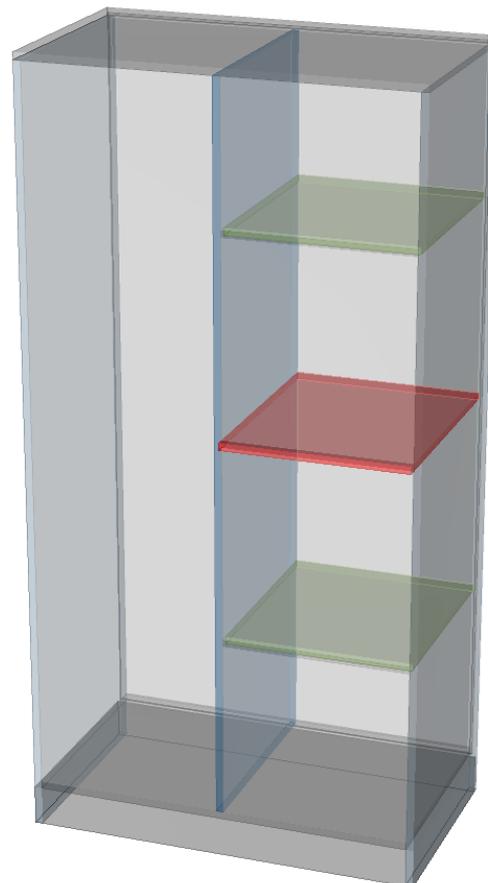
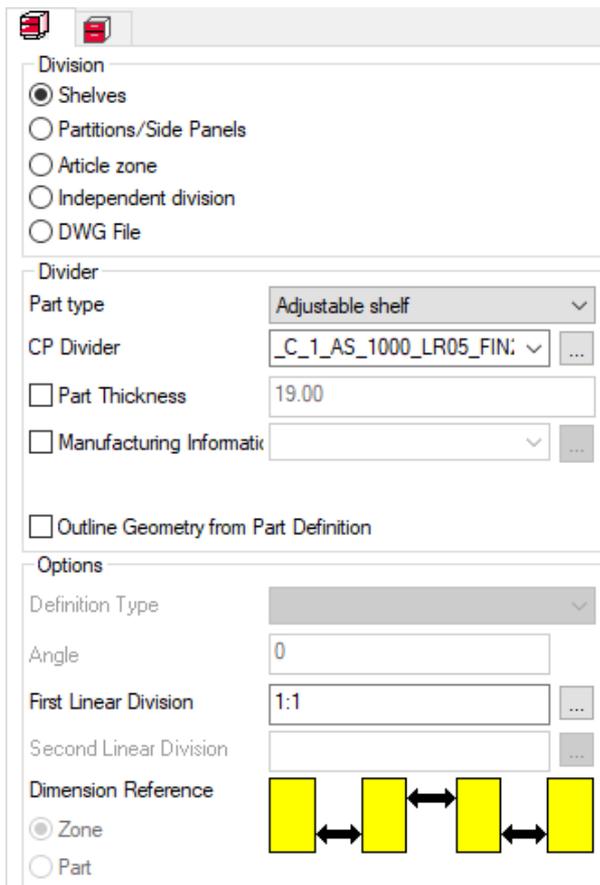
Division: Shelves
Part type: Adjustable shelf

The CP “**CP_1_AS_1000_LR05_FIN20**” is automatically assigned.

Create and apply the needed CP and PD on your own.



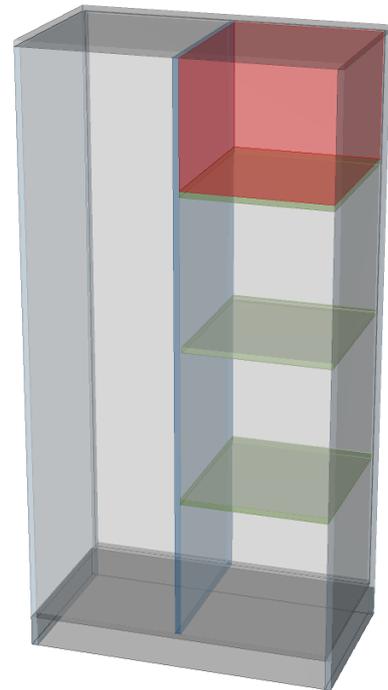
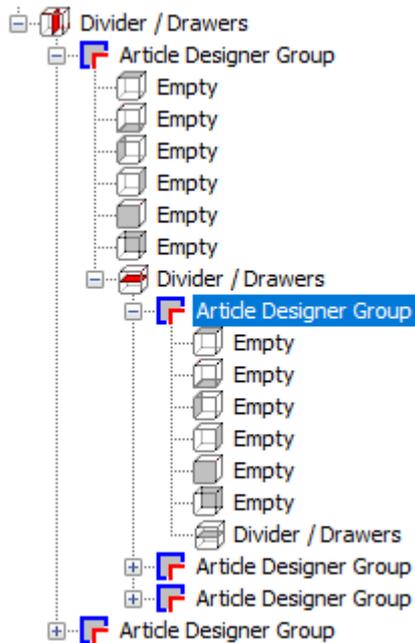
Now enter the **First Linear Division “1:1”** for the adjustable shelf in the Article Designer.



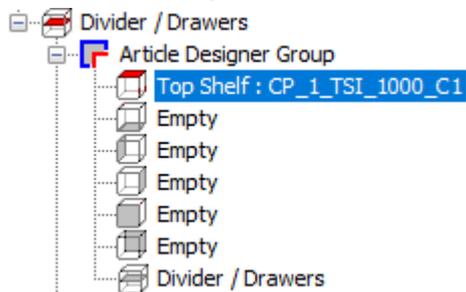
3.8 Cross rail

Later in the exercise inset doors will be set up. Now a cross rail is set up under the top shelf so that these doors have a stop.

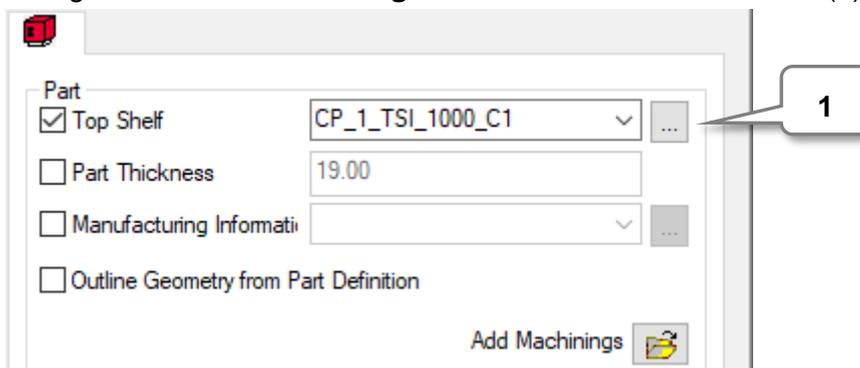
First open the relevant ADG.



Next, insert a **top shelf** in the ADG.



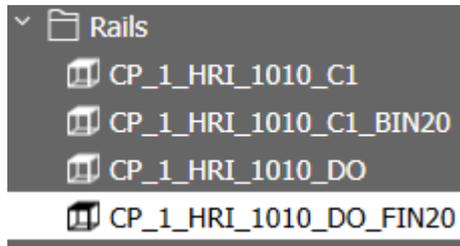
Change to the **Element Manager** to select a cross rail as a CP (1).



Select the CP "CP_1_HRI_1010_DO_FIN20".

HRI: Horizontal Rail Inset
DO: Dowel

... and change the name to “_C_1_HRI_1010_DO_FIN20”.



Save the new CP in your folder structure:



Hint



It is not necessary to change the front inset in the master data. The front inset is automatically fit to the door's material thickness.

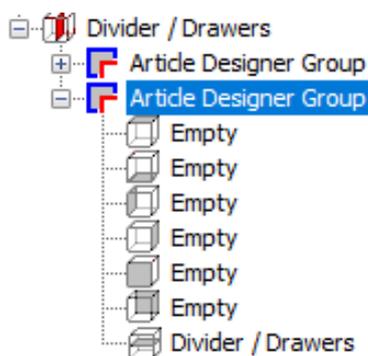
Create the user-specific PD “_C_1_RA_1010” and assign it to the CP. Add the CP to your construction.

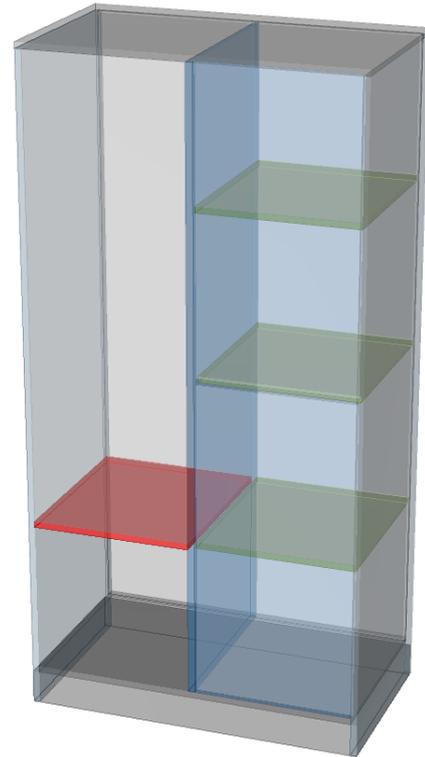
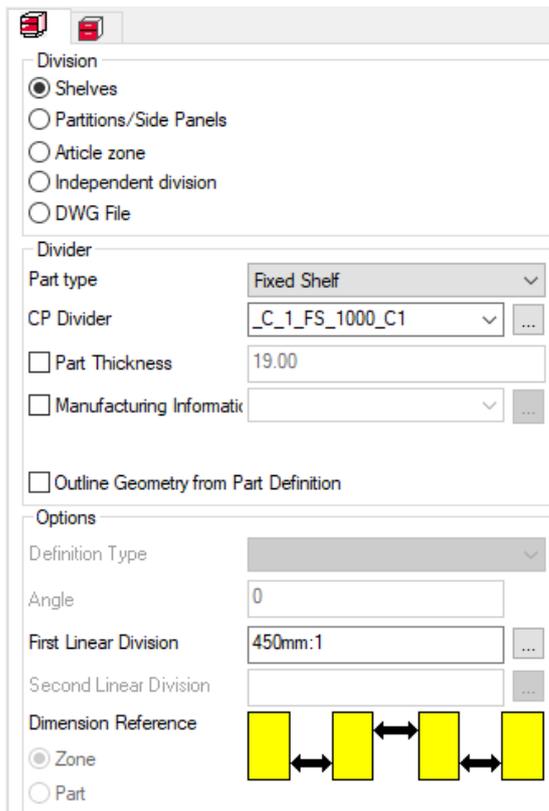
3.9 Setup of the left cabinet part

The left cabinet part contains 3 drawers which are covered with a fixed shelf and a fixed shelf with a clothes rail.

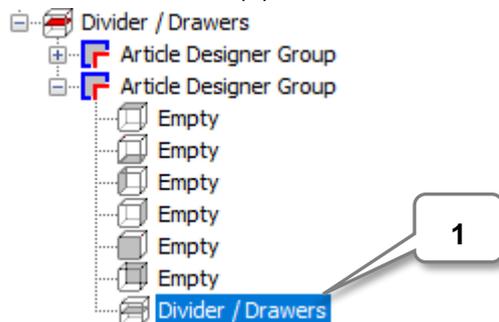
3.9.1 Drawers

First create an insertion zone for the 3 drawers by inserting a fixed shelf. The **fixed shelf** is set **450mm above the bottom shelf**. For this purpose, use a CP without a front reveal (if necessary, create this CP the same way as described in the examples before).





For inserting the drawers, open the ADG on the bottom on the left side. Select the entry **Divider/Drawers** (1) in the ADG.

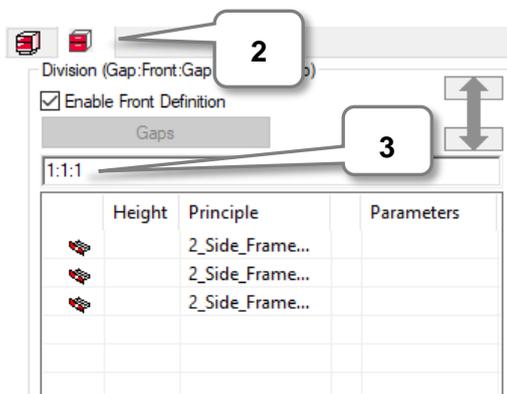


Change to the second tab **"Drawers"** (2) to make the settings for the drawers.

Here the settings of the drawer can be defined.

In the text field enter **"1:1:1"** (3) to set up three drawers of the same size.

Close the entry with **Enter**!



Hint

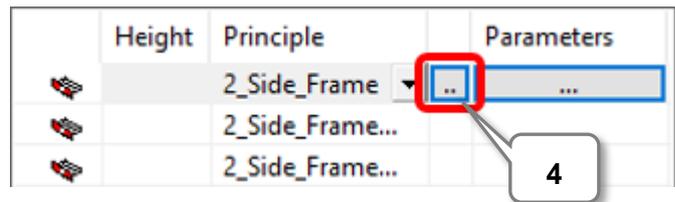
The entry “1” sets one drawer.

In accordingly larger insertion zones multiple drawers can be inserted as well.

For example, relative divisions 1:1; 1:1:1; 2:2:1,100mm:100mm:1 etc. are also possible for inserting several drawers in an insertion zone.

The construction of the drawer and the fittings are defined by a Construction Principle. The program automatically sets the CP “2_Side_Frame_System_1”.

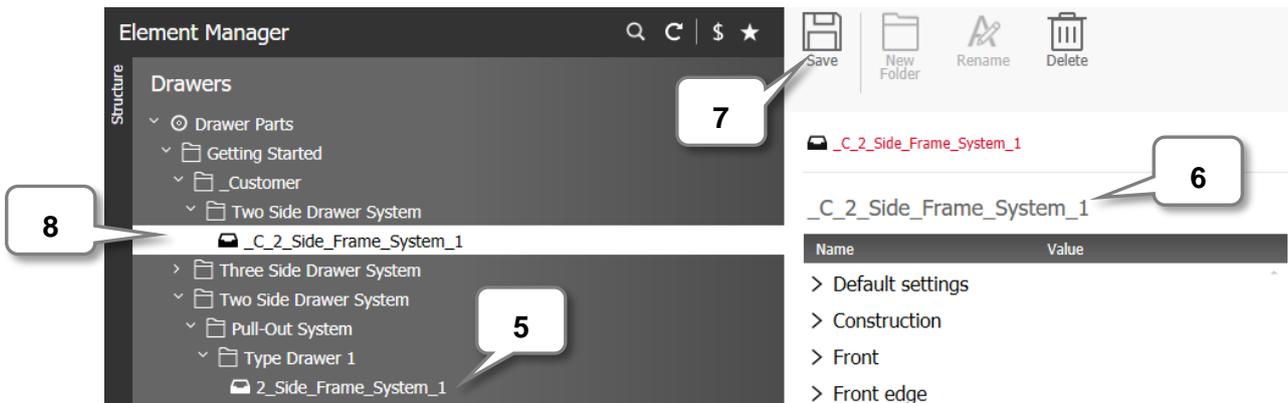
Create your own CP
 “_C_2_Side_Frame_System_1” and apply it to all three drawers.
 To do so, click in a line with the CP and open the **Element Manager** via the 2-Point-Button (4).



Hint

The process of creating drawer CPs it the same as for every other CP.

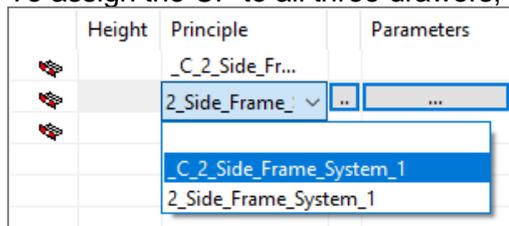
Select a similar CP (5), customize it (6) and save the changes (7) and move it to your user-specific folder structure (8).



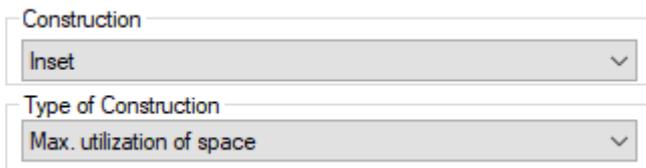
Leave the Element Manager by clicking “**Apply**”.



To assign the CP to all three drawers, you can use the drop-down-menu.

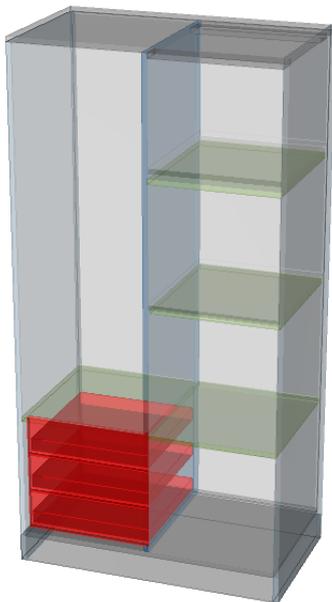


You can now make further settings for the construction. Select for the **Construction** the option **Inset** from the dropdown menu.



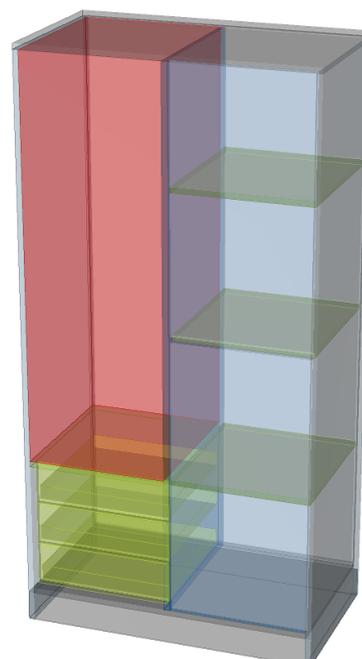
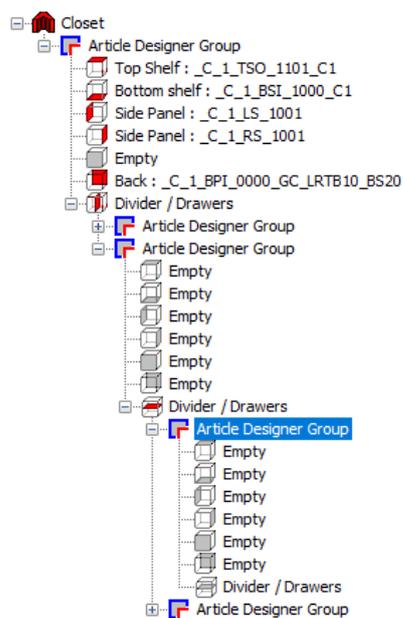
Thereby, all necessary settings for the drawer have been made.

The graphical preview displays the article as follows:



3.9.2 Fixed shelf

You now need a fixed shelf in the top left zone. Open the related ADG.

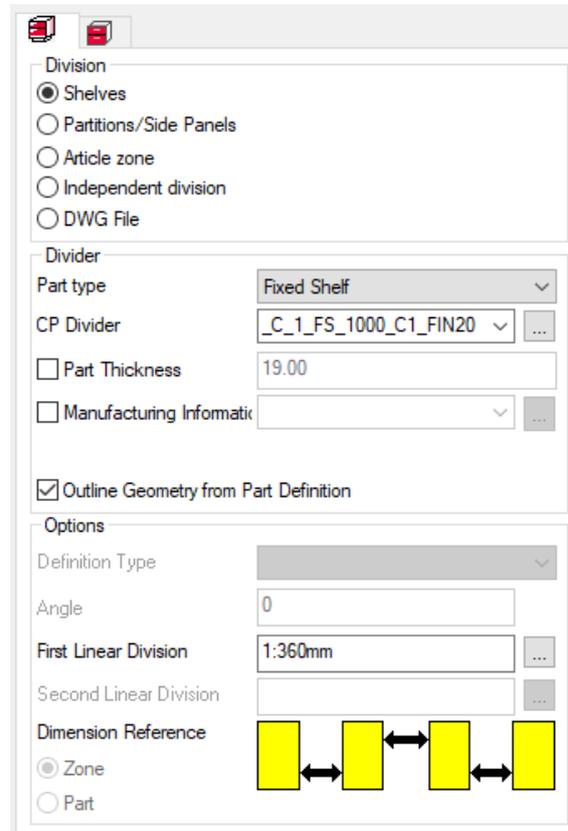


Select **Divider / Drawers** in this ADG.

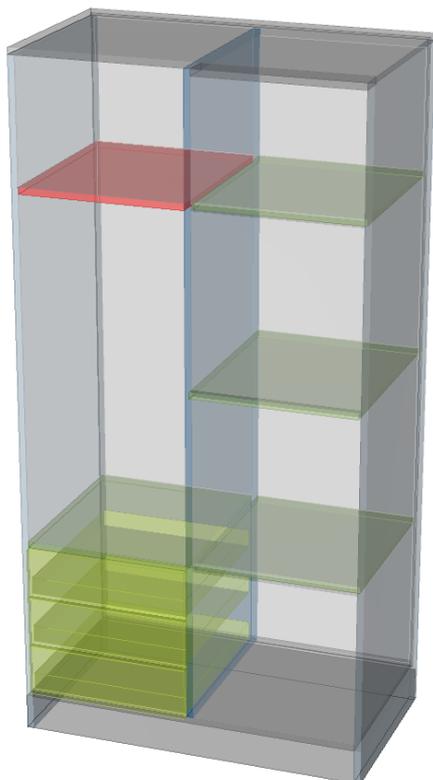
Apply the settings displayed on the right and set a **linear division** of **1:360mm**.

Select a **fixed shelf with 20mm front reveal**.

Pick the according CP from the drop-down-list.



The article should now look like this:

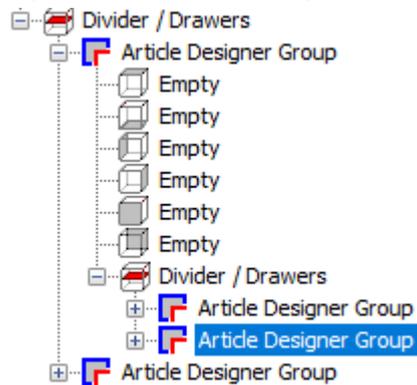


3.9.3 Clothes rail

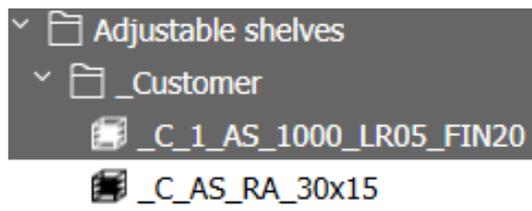
A Clothes rail is a SPP (**S**tretchable **P**urchased **P**art). The CP brings a virtual shelf to which the clothes rail is attached.

To integrate a clothes rail into the closet, a virtual shelf attached SPP is required.

Open the lower, in the previous step created ADG.



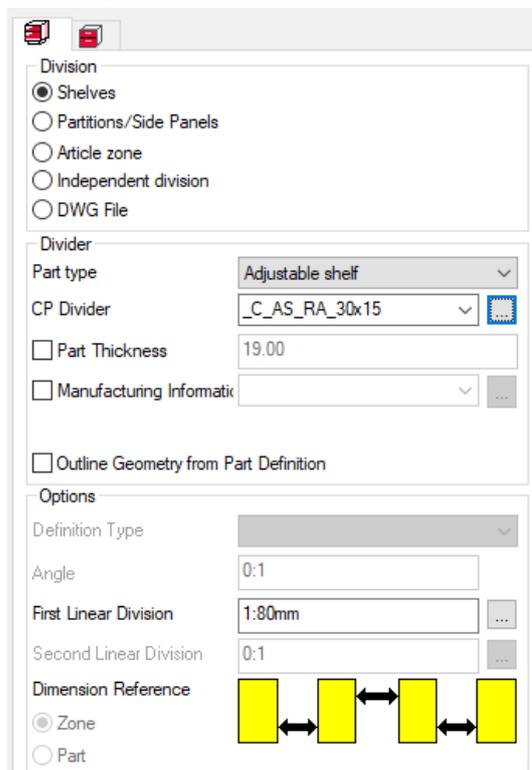
...and insert an adjustable shelf with the CP “CP_AS_RA_30x15”.



Rename the CP and save it in your folder.

some space to the shelf above.

Enter a **First Linear Division** of 1:80mm to give

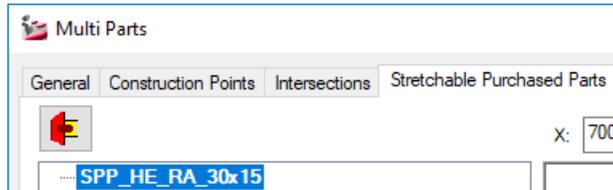


Hint

The clothes rail is part of the PD.
 You can find the entries for the clothes rail under the node **“Default Settings”** in the **Part category**.

Click on the 3-Point-Button and enter the dialog for the definition of single parts and multi parts elements

Name	Value
▼ Default settings	
Category	Adjustable Shelf
Part category	Multiple Part

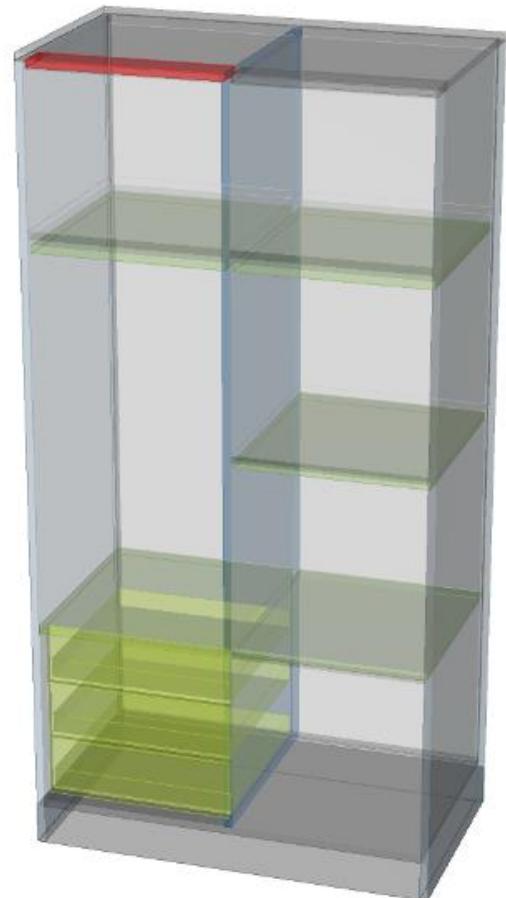


The settings regarding the clothes rail can be found in the tab **“Stretchable Purchased Parts”**

This dialog will be explained in detail in a later exercise.

3.9.4 Cross rail

Set up the same cross rail on the left as you did in the right part of the closet.

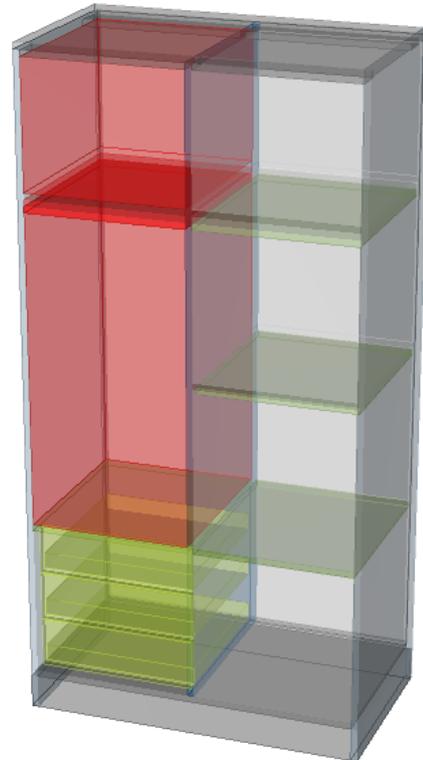
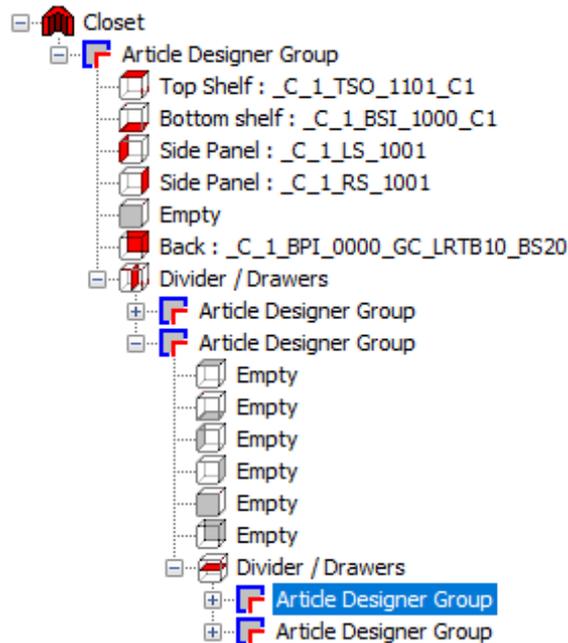


3.10 Doors

3.10.1 Door in the left cabinet part

In the left part of the cabinet insert an inset door above the drawers.

Select the top ADG of the left side of the article.



Assign a door CP by double clicking the door symbol.

The CP “**CP_SDO_H_PM_FD**” is automatically set.

SDO: → **S**ingle **D**oor **O**nset
 H: → **H**inge
 PM: → **P**ull **M**iddle
 FD: → with **F**ront **D**efinition



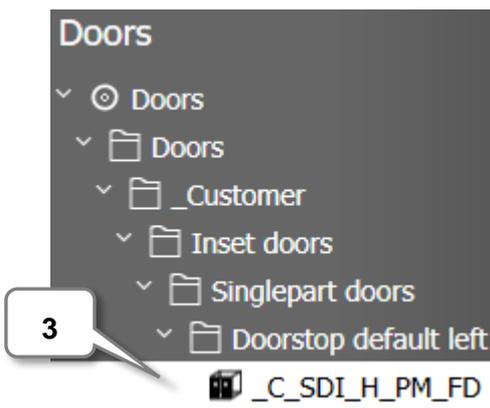
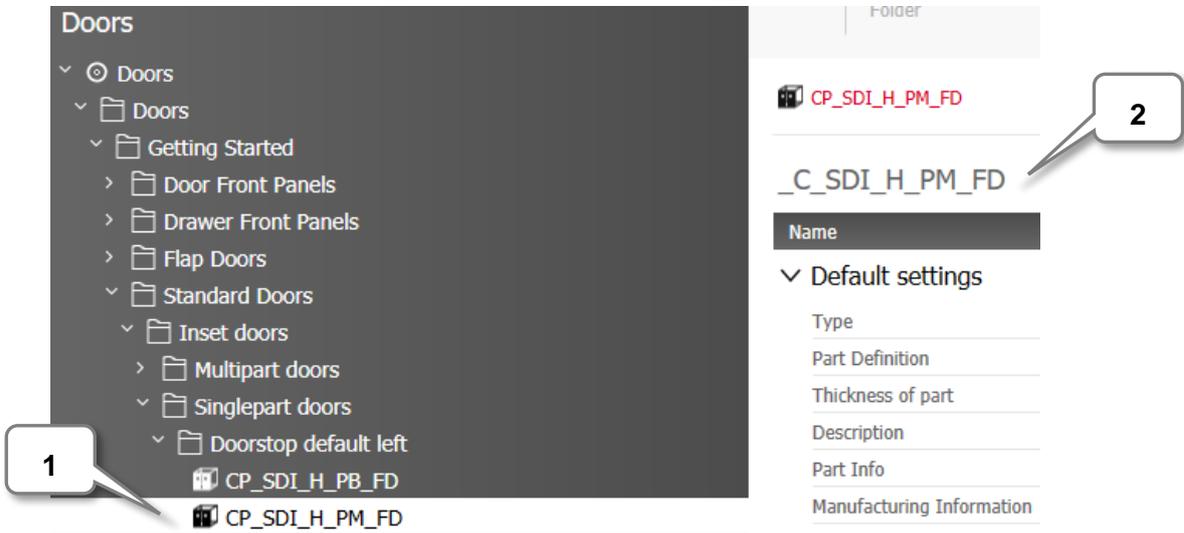
Name rules for door-CPs:

- | | |
|--------------|-------------------------------------------|
| • SDO | S ingle D oor O nset |
| • SDI | S ingle D oor I nset |
| • DDO | D ouble D oor O nset |
| • DDI | D ouble D oor I nset |
| • H | H inge |
| • PT | P ull T op |
| • PM | P ull M iddle |
| • PB | P ull B ottom |
| • FD | F ront D efinition |

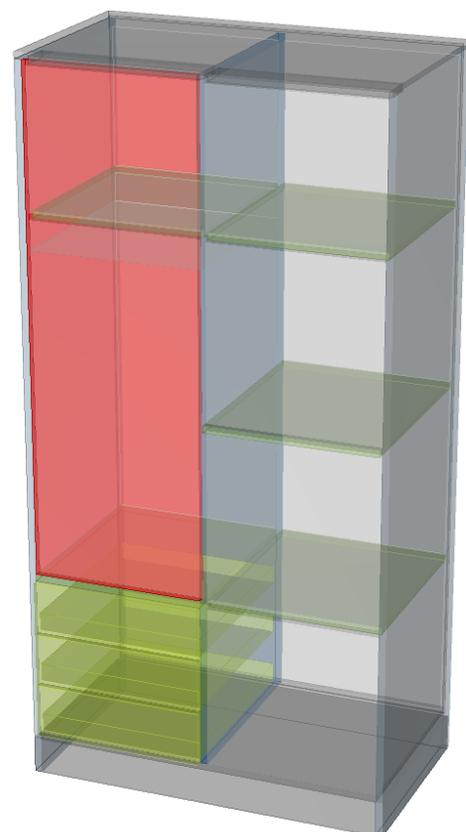
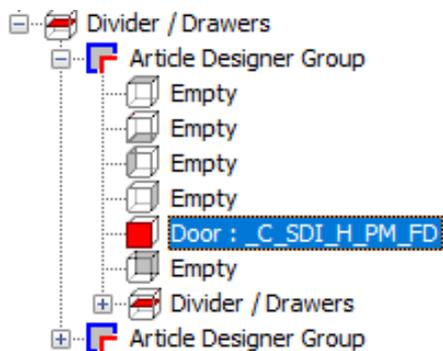
As this door is onset, we need to change the CP to an **inset single door**.

Change to the Element manager and choose a suitable CP for an inset door with a pull in the middle (1).

Change the name to “_C_SDI_H_PM_FD” (2) and save the CP in your own folder (3).



Leave the Element Manager by clicking “**Apply**” and return to the Article Designer.

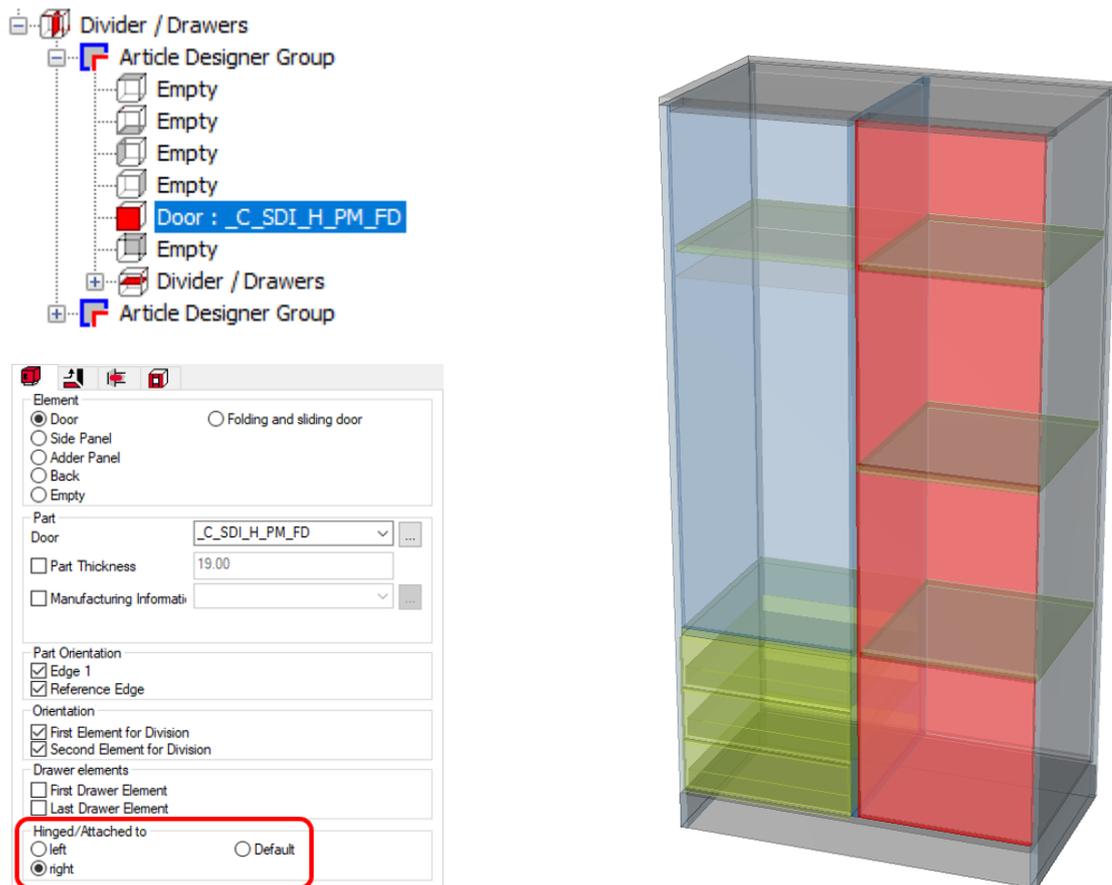


3.10.2 Door in the right cabinet part

In the right cabinet part insert an inset single door as described in the previous chapter as well. However, this door is inserted over the complete height of the cabinet.

Use the just created CP also for this door.

As this door has the stop on the right side, set the **stop on right** on the register **part** in the settings of the AD.



Hint

The hinge side of a door is defined via the CP.

Here the **hinge** for a single door with right or left can be defined in the node **Construction**.

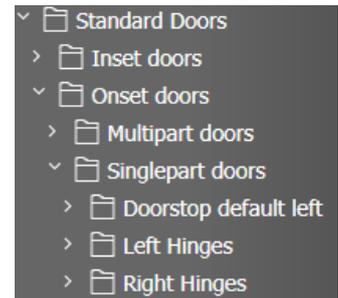
If "default" is set in the Article Designer, then the data object, in this case, the door-CP with hinge, set in the CP, is used.

Name	Value
> Default settings	
✓ Construction	
Construction	Inset
Filler	<input type="checkbox"/>
Hinged/Attached to	Left



Hint

In the Element Manager you can find right and left hinged doors. Those door CPs are used for the article configuration via an XML-catalogue. In this case, not only the hinged side is switched but the complete CP is exchanged.

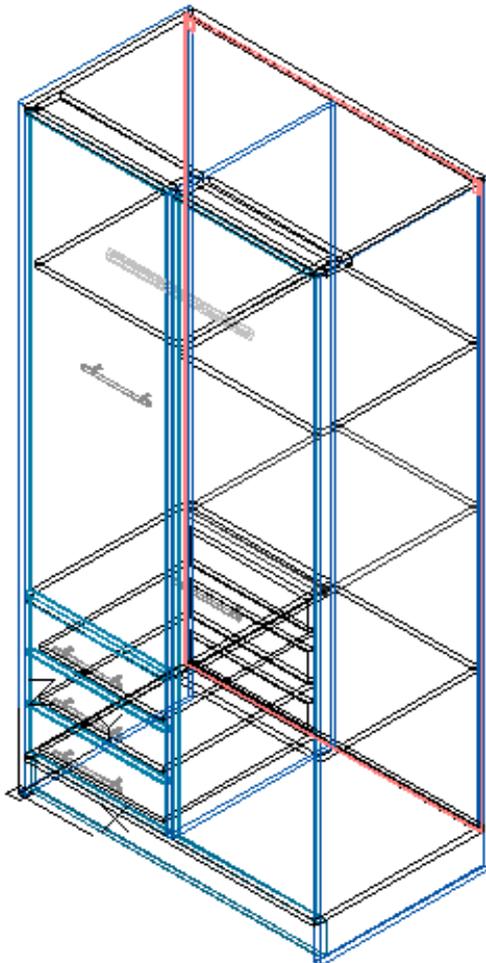


4. Set up the Article



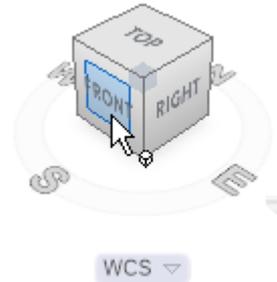
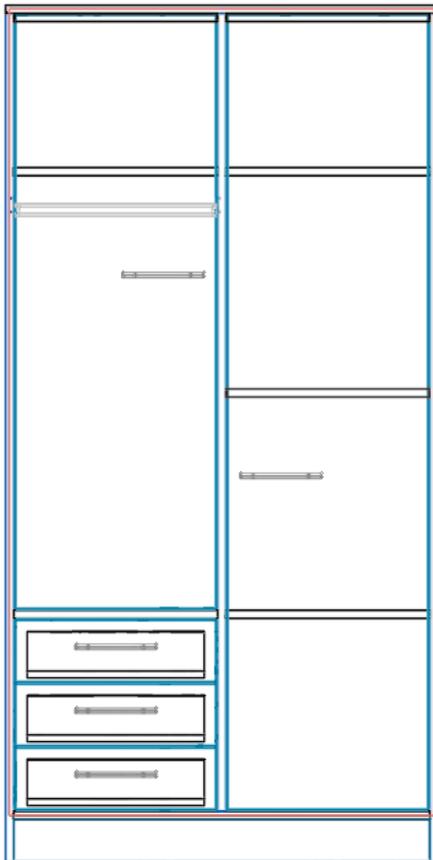
Before setting the article in the drawing area, do not forget to finally save.

Leave the Article Designer by clicking on  and now you are in the drawing area. Set up the article.



5. Change pull position

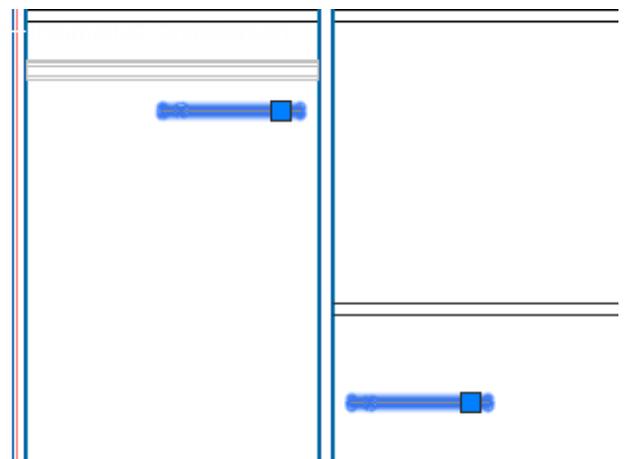
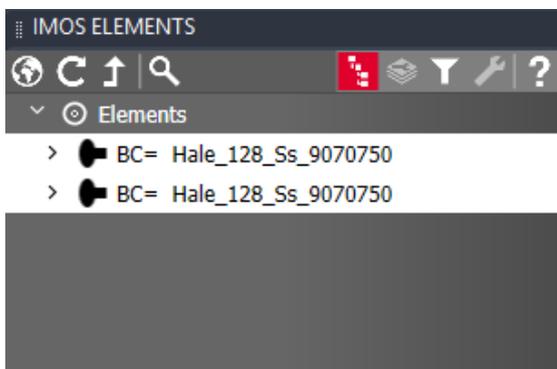
As both doors have different sizes, the middle set pulls are on different heights. Now change the pull position to place both pulls on the same height. Set the view on **Front**.



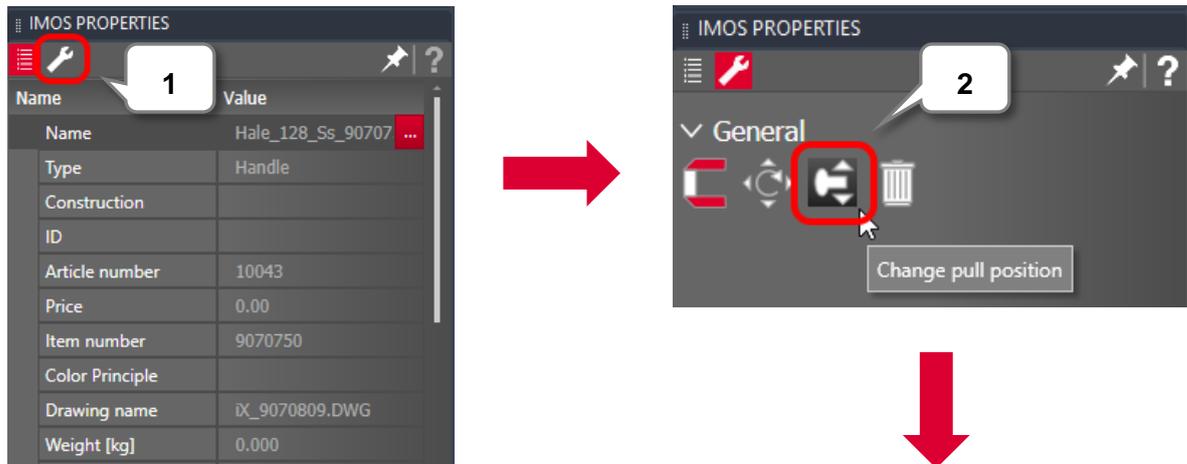
Select both pulls in the drawing. The Article Mode has to be **deactivated**.



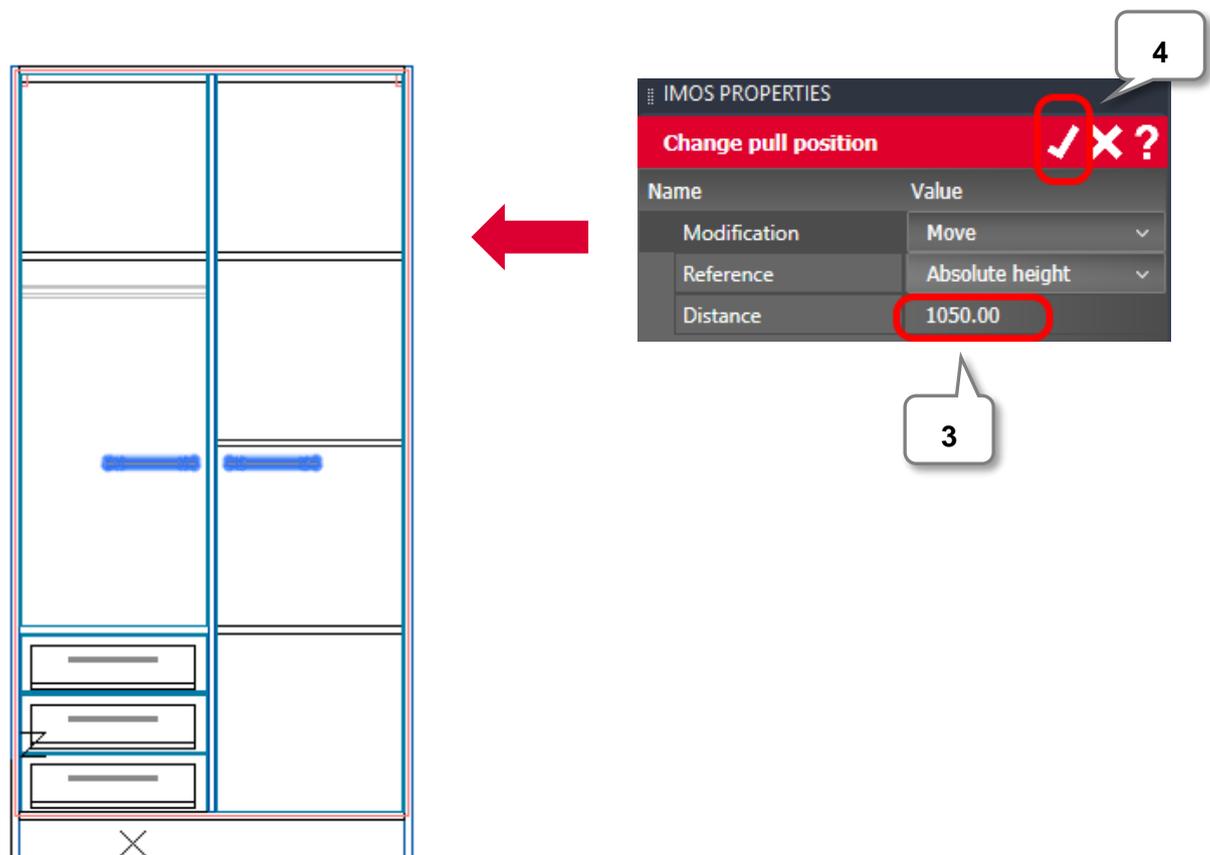
The two selected pulls are now listed in the imos Elements.



In the **imos properties** window you can find the “**methods**” when you click on the wrench symbol (1) then click on “**Change pull position**” button (2)



.....change the Distance to be “**1050.00**” (3) and then click “**apply**” the right mark button (4).



Now your pulls are on the desired height and therefore the wardrobe is completed.

6. Save changed pull position

To **save** subsequent changes permanently, imos provides the option to save those modifications.

An article with modifications made (in CAD) can be recognized by the **wrench symbol** in the imos Elements under “**Global**” (Details).



When an article is selected, the modifications can be viewed in the tab with the **wrench-symbol** above the articles list.

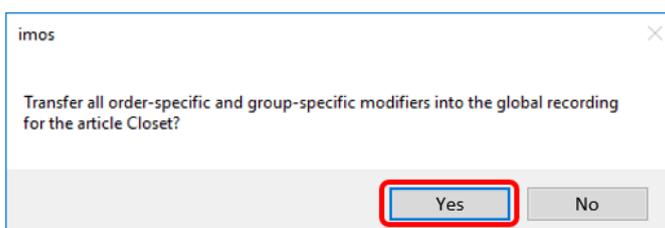
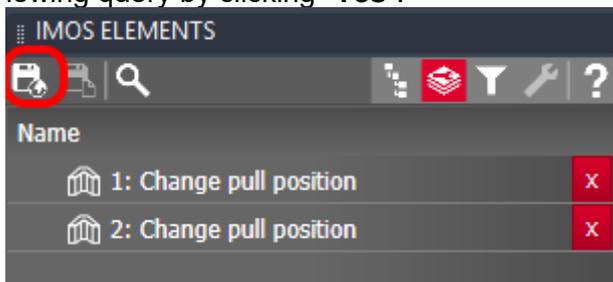


Select the **Closet** in the imos Elements and click on the tab with the wrench-symbol “**Modifier stack**”.

All modifications will be displayed.

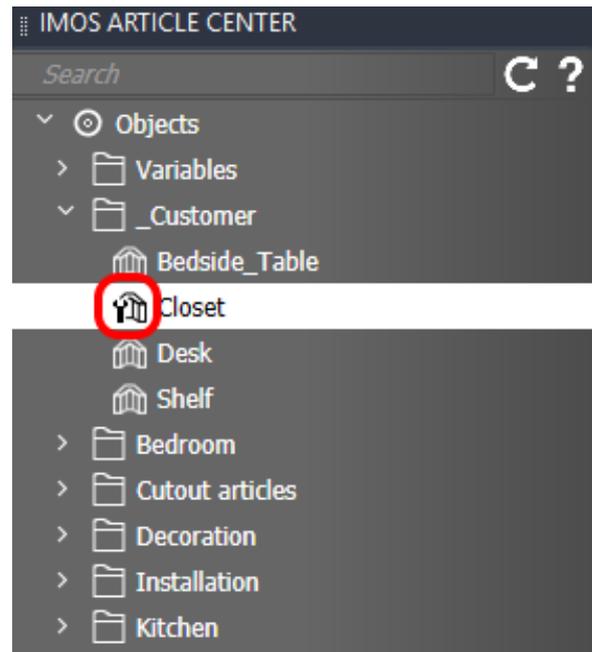


To save the changes permanently, click on the “**Global save**” button and answer the following query by clicking “**Yes**”.



If you search in imos Article Center for your article, you will notice that the **wrench symbol** appears at your article “Closet” in your article main data.

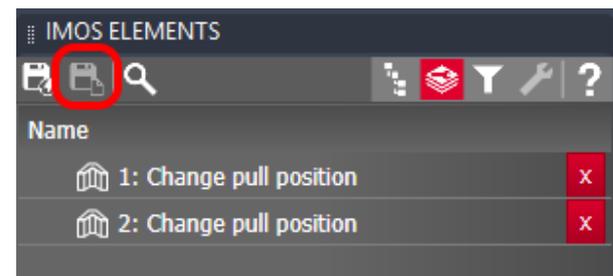
Articles, which contain saved modifications are documented this way.



Hint

It is also possible to save the changes to the article only **order-related**. For this it is necessary, that the order in which the article was changed is also saved.

If the order has not yet been saved, the symbol is greyed out and cannot be used (as shown in the screenshot on the right side).

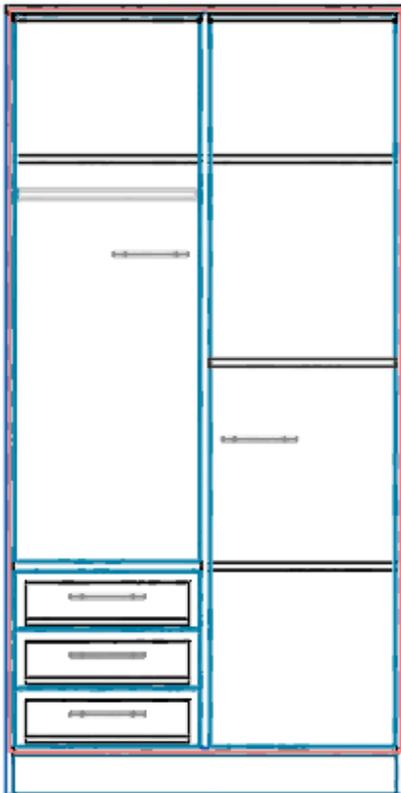


7. Change pull position by data setup

In the previous steps the pull height was changed by a “**Modifier**”. However, you should avoid working with modifiers.

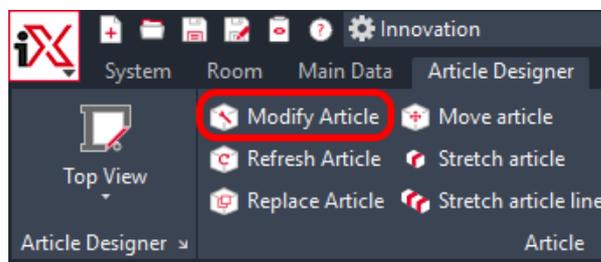
The pull height also can be changed by your data setup. In the following steps you will see, how you can change the pull height by changing your data.

Initial situation:



Modify your article with the function “**Modify Article**”. Pick your article with a click on the left mouse button.

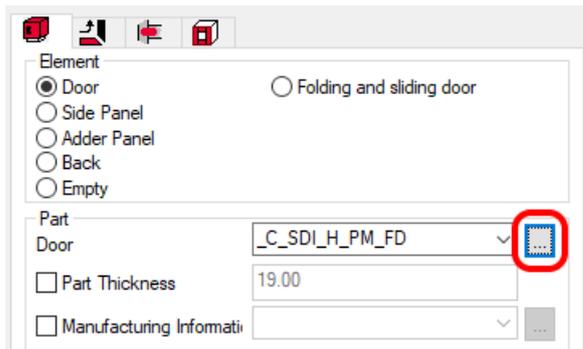
After this the Article Designer opens.



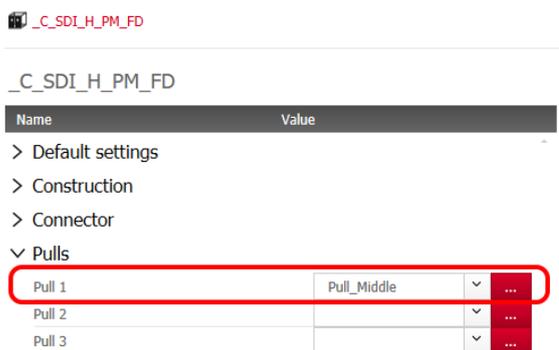
Hint

When you select the door with the function “**Modify Article**”, then the Article Designer automatically opens at the place where you planned the door.

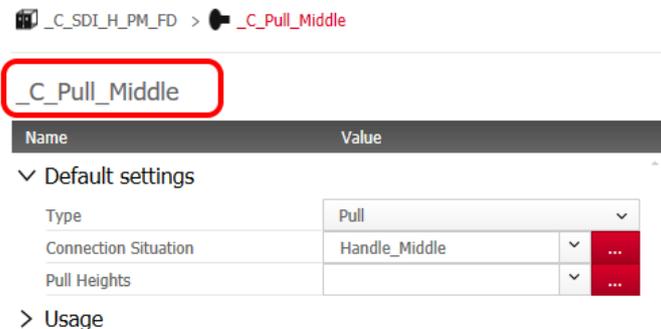
Now you can open the construction principle of the door with a click on the 3-Point-Button.



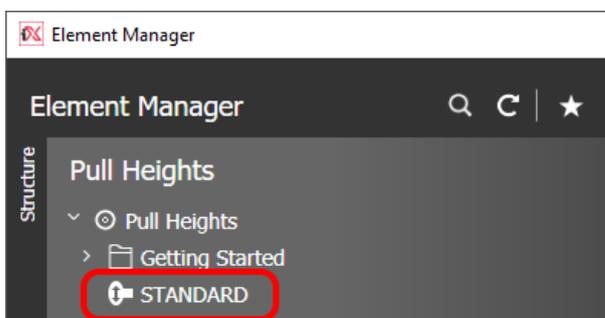
Here you can change the pull of your door.



Click on the 3-Point-Button and you will be transferred to “**Pulls & Locks**”. Choose the existing principle “**Pull_Middle**” and change the name to “**_C_Pull_Middle**”.



Click again on the 3-Point-Button in the box “**Pull Heights**”. Here you can create a new principle. Choose the “**STANDARD**”-Principle and change the name to “**_C_Pull_height**”.



Now insert the values that you see in the picture. Afterwards you can save your principle and then you can apply it.

 _C_SDI_H_PM_FD >  _C_Pull_Middle >  _C_Pull_height

_C_Pull_height

Name	Value
▼ Default settings	
Pull Heights	1050
Activate Height Lines	<input checked="" type="checkbox"/>
Snap Radius	500
Top Distance	50
Bottom Distance	50

> Usage

Switch back to the drawing space and refresh your article. Now both pulls should be on a height of **1050mm**.

