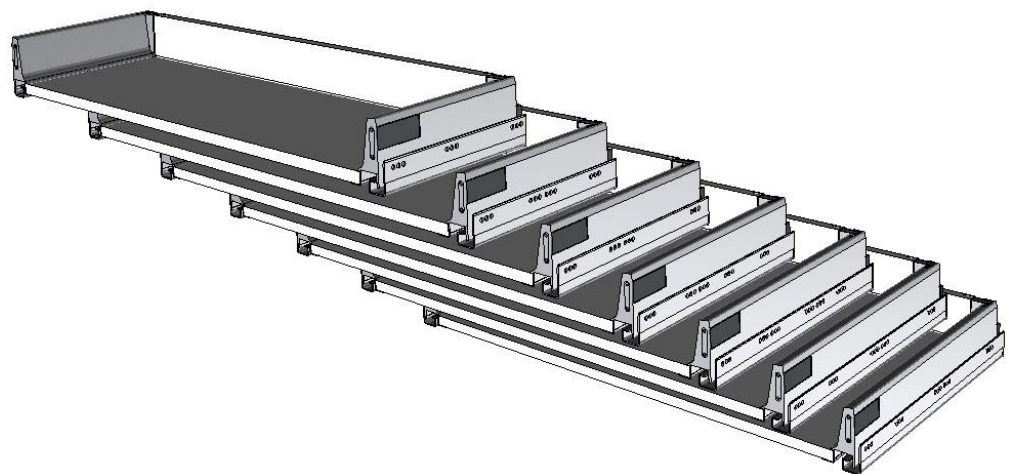


TopSolid'Wood

Creation of drawers



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Version 6.15 Rev.01

Note: If you are experiencing problems using this training guide, please feel free to send your feedback and comments at edition@topsolid.com.

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Introduction

Hardware manufacturers allow the 3D models of their products to be downloaded. This makes it possible to get the real geometries of hardware in **TopSolid'Wood** to correctly position the associated machinings.

It is necessary to follow this way of working to be able to properly use the 3D files recovered from a manufacturer of runner systems.

The files provided for this documentation are **Blum TandemBox Antaro** drawer runners and **M Height** sides.

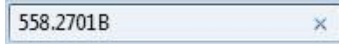
Creation of runners

Recovering files

The 3D files of **Blum** and **Hettich** hardware are installed on DVD 2.

Libraries can be installed under: **C:\Missler\V615\z\woo\lib**.

It is possible to search for components by entering the supplier's reference in the Windows search field.



Saving files

The 3D files of the drawers provided by manufacturers are not configured. There is a 3D file per runner length.

This first section will allow these runners to be saved in a library in order to simulate to the software a single configured file using a **catalog code**.

- Open the 9 right runners provided in the **Tandembox Antaro\Runners\Right** folder.

Note: These runners can be opened simultaneously by selecting them from Windows Explorer and dragging them into **TopSolid's** graphical area.

Nom	Modifié le	Type	Taille
TANDEMBOX#V=558_2701b#I=00#R=NR.top	09/12/2013 18:40	Document TopSol...	67 Ko
TANDEMBOX#V=558_3001b#I=00#R=NR.top	09/12/2013 18:40	Document TopSol...	71 Ko
TANDEMBOX#V=558_3501b01#I=00#R=NR.top	09/12/2013 18:40	Document T...	
TANDEMBOX#V=558_4001b01#I=00#R=NR.top	09/12/2013 18:40	Document T...	
TANDEMBOX#V=558_4501b01#I=00#R=NR.top	09/12/2013 18:40	Document T...	
TANDEMBOX#V=558_5001b#I=00#R=NR.top	09/12/2013 18:40	Document T...	
TANDEMBOX#V=558_5501b#I=00#R=NR.top	09/12/2013 18:40	Document T...	

- Save the first runner in the library by selecting **Assembly > Define component > Edit/Save standard template**.



- Select **Save standard template**.
- Select **Standard: My 3D standard**.
- Then enter:

- **New family:** *BLUM drawers*
- **New type:** *TANDEMBOX runners*
- **New variant:** *Right*
- **New version:** *00*

- Check the **Supplier code** box, and then enter the length of the saved runner in the **New code** field.

Note: The length of the opened runner is displayed in the file name:

TANDEMBOX#V=558_2701b#I=00#R=NR.top

TANDEMBOX#V=558_3001b#I=00#R=NR.top

TANDEMBOX#V=558_3501b01#I=00#R=NR.top

- Validate with **OK** to save the runner in the library.
- Repeat this procedure to save the 9 runners in the library.
- Create the catalog by selecting **Assembly > Define component > Edit catalog header**.
- Validate the dialog box by pressing **Enter** to generate the Excel catalog.

TOP_code		
	A	B
1	\$code	
2	270	
3	300	
4	350	
5	400	
6	450	
7	500	
8	550	
9	600	
10	650	


Catalog optimization


Excel catalogs make it easy to order data in the file cells. However, these files take a long time to load when using components.

You can convert these catalogs to **.cat** format in order to reduce the load times of components in **TopSolid'Wood**.

- From the Excel catalog, start **File > Save As**.
- Leave the default destination directory and file name.
- Select **Type: Text (Tab delimited) (*.txt)** in the drop-down list.
- Validate by clicking the **Save** button.
- Validate all **Excel** warning messages, and then close this file without saving it.
- Open the **Windows** folder of the library where the runners were saved.

Note: Here we find the saved runners, the **Excel** catalog and the new catalog in **Text** format.

- Delete the **Excel** catalog.  Tandembox runners#V=Right#I=00.xlsx
- Rename the **Text** catalog in order to change its **.txt** extension to **.cat**.

 Tandembox runners#V=Right#I=00.cat

Note: If file extensions are not displayed, open the options of the **Windows** folders using **Alt > Tools > Folder Options > View > Uncheck Hide extensions for known file types**.

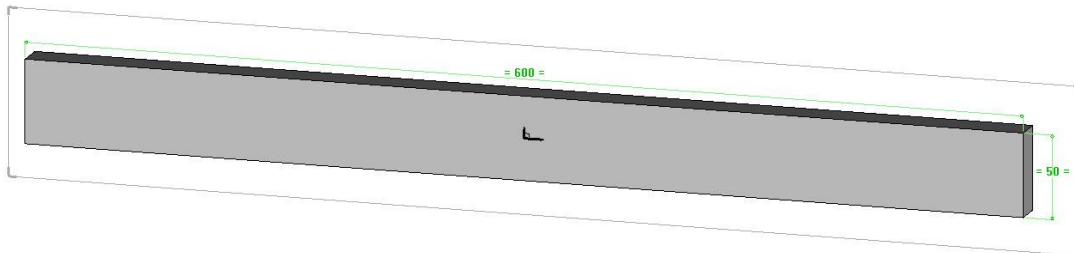
Creating the tools and key points

Creating the drawer runners in **TopSolid'Wood** allows you to automatically perform machinings on the elements in which drawers are inserted.

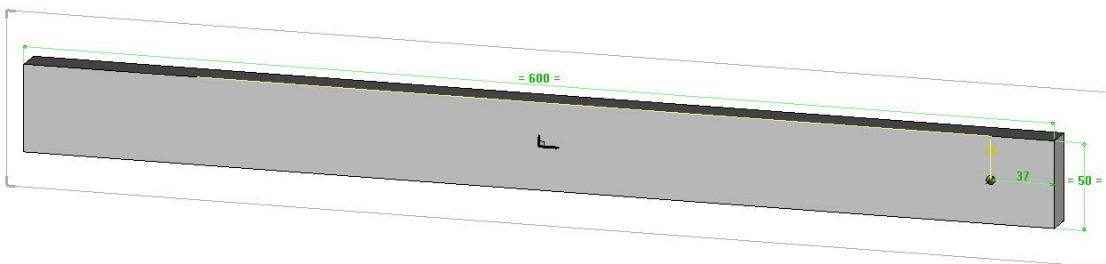
To do this, you must create in the runners the tools that will help drill the sides. There is a function for creating the tools automatically in the components from a template file.

Creating the template

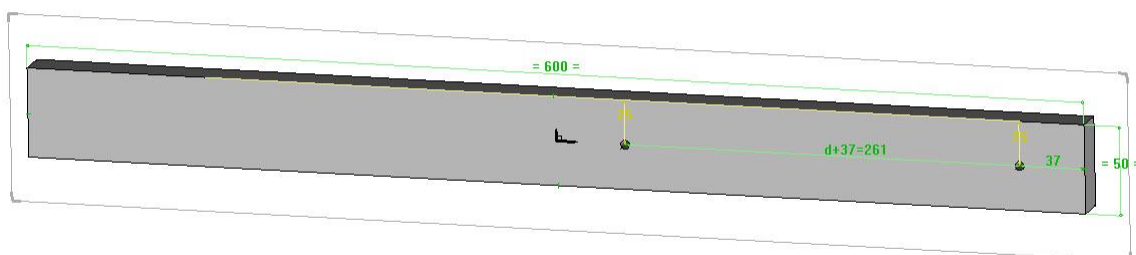
- Create a new **Design** document without template.
- Create a part 600mm long, 50mm wide and 19mm thick.





- Create a parameter:
 - **Unit:** Length
 - **Value:** 224mm
 - **Name:** *d*
 - **Designation:** *Drilling distance*
- Create a first drilling centered on the part's width and positioned at 37mm from the end of the part:
 - **Hole**
 - **Blind**
 - **Diameter:** 5mm
 - **Depth:** 12mm
 - **Bottom angle:** 0°

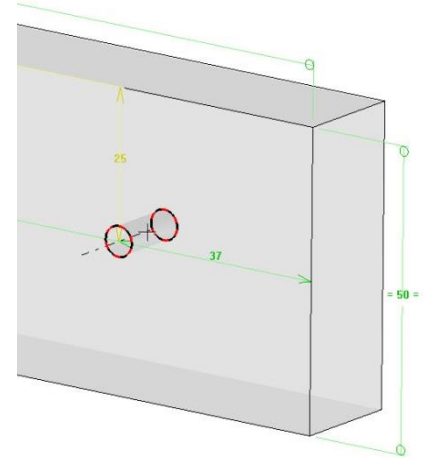




- Create a second drilling centered on the part's width and positioned at $d+37\text{mm}$ from the end of the part. This drilling is the same as the previous one.

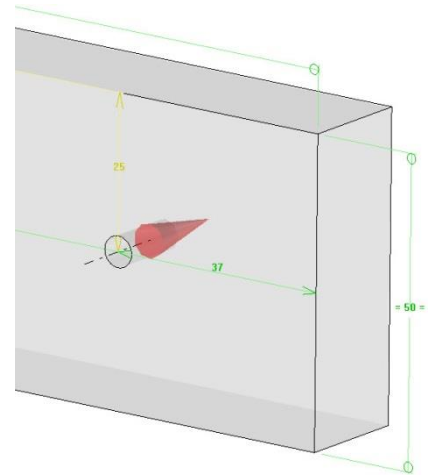


- Create a tool by selecting **Assembly > Define component > Define tool.** 
- Set **Operation type = Local operation on shapes.**
- Enter **Name of tool element: Tool1** and **Designation of the tool element: Right runner drilling.**
- Select the two drillings on the martyr part, and then validate with **Stop.**
- Validate the window with **OK.**

- Create a **coordinate system on two axes** using **Tools > Coordinate system > Coordinate system 2 axes.** 
- Select the cylinder of the 1st drilling for the **X axis.**



- Adjust the axis direction towards the part thickness, and then validate with **OK.**
- Select **Y+** for the **Y axis.** 
- Define this coordinate system as a **key coordinate system** by selecting **Assembly > Define component > Define key points.** 
- **Name of key coordinate system: cs1**
- **Designation of key coordinate system: Runner coordinate system**





- Save this file and rename it *Right martyr*.
- Define the **d** parameter as a driver.
- Define the part without specifying any designation.

Using the template

The tool template of the runners will be imported to automatically create the tools and key points in the runners.

Note: There will be no link between the template file and the runner files.

- Using **Assembly > Define component > Edit/Save template > Edit standard template**, edit the standard file **BLUM drawers > TANDEMBOX runners > Right > Code 270.**
- Set the render mode to **Realistic rendering + edges + wireframe.** 
- Select **Assembly > Define component > Import tools and publishings.** 
- Set: **Publishings = No, Key points = Automatic and Tools = Yes.**

Publishings= Key points= Tools= Document to import=

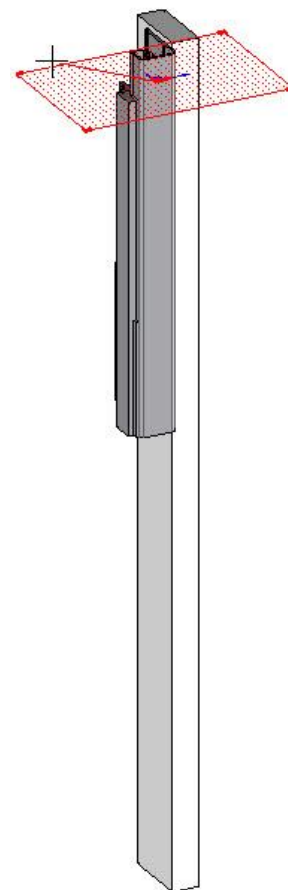
- Select **Right martyr** in the drop-down list as the **document to import.**

- Set **Drilling distance** = 224mm.
- The martyr part of the template file is then imported. Select the document's absolute coordinate system as the **destination coordinate system**.
- Select **Stop** to finish the import. 

Note: The tools and the key point are then imported in the runner document.

- Save and close this file.
- Repeat the operation for the other runner lengths by setting the following drilling distances.

Runner length	Drilling distance
300mm	224mm
350mm	288mm
400mm	288mm
450 mm	320mm
500 mm	416mm
550 mm	416mm
600mm	480mm
650mm	512mm



- Once all of the right runners are done, repeat these steps to create the left runners in the library:
 - Saving files in the library
 - Catalog creation
 - Catalog optimization
 - Creation of the tool template and the key points
 - Importing the tools and the key point

Creation of additional elements

Creating the front fixing bracket

- Open the file under **Tandembox Antaro\Screw-on front fixing bracket**.
- Save it in the library as:

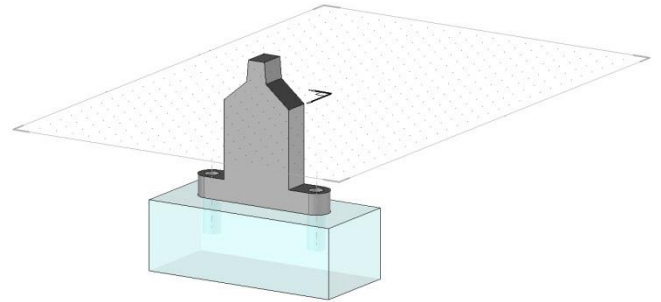
- **Family** : BLUM drawers
- **New type**: Accessories
- **New variant**: Screw-on TANDEMBOX front fixing bracket
- Uncheck **Supplier code**.

- Define the set by selecting **Wood > Define > Define**



set:

- **Designation**: Screw-on front fixing bracket
- **Reference**: ZSF.3502
- **Supplier**: Blum
- **Assembly nature**: Single unit



- Using a sketch, create a martyr part in front of the front fixing bracket.
- Make two drillings on this martyr part, aligned on the drillings of the front fixing bracket:

- **Hole**
- **Blind**
- **Diameter**: 5mm
- **Depth**: 10mm
- **Bottom angle**: 0°

- Define these two drillings as a **tool**:



- **Name of tool element**: Tool1
- **Designation of the tool element**: Front fixing bracket drilling

- Make layer 1 current and switch off layer 0.
- Create a coordinate system identical to the absolute coordinate system using the **Tools > Coordinate system** command, and then press **Enter** to copy the current coordinate system.



- Define this coordinate system as a **key point**:



- **Name of key coordinate system**: cs1
- **Designation of key coordinate system**: Right coordinate system

- Create a duplicate coordinate system of this coordinate system by selecting **Tools > Coordinate systems > Duplicate coordinate system**.



- Select the previous coordinate system and configure the following transformation:

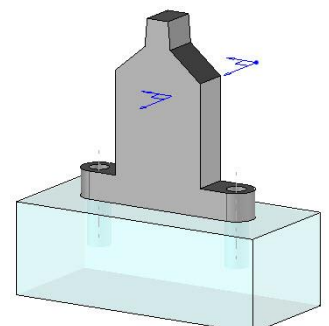
- **Transformation**: Translation
- **Direction**: X-
- **Translation distance**: 31mm

- Define this second coordinate system as a **key point**:





- **Name of key coordinate system** : cs2
- **Designation of key coordinate system**: Left coordinate system

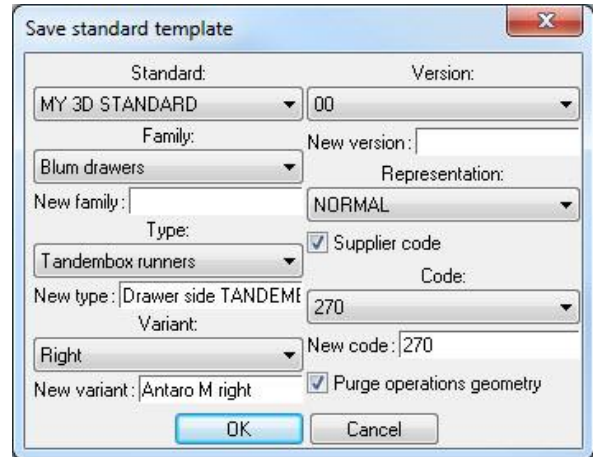
- Save and close this file.



Creating the sides

- Open the 9 right sides provided in the **Tandembox Antaro\Stainless steel drawer side\Right** folder.
- Save the first drawer in the library by selecting **Assembly > Define component > Edit/Save standard template**. 

- Click on **Save standard template**. 
- Select **Standard: My 3D standard**.
- Then complete the following:



- **Family: BLUM drawers**
- **New type: Drawer side Tandembox**
- **New variant: Antaro M right**
- **Version: 00**
- Check **Supplier code**, and then provide the length of the saved side in the **Code** field.

Note: The length of the opened side is displayed in the file name:

TANDEMBOX intivo#V=358m2702ia#I=00#R=NR.top
 TANDEMBOX intivo#V=358m3002ia#I=00#R=NR.top
 TANDEMBOX intivo#V=358m3502ia#I=00#R=NR.top

- Validate with **OK** to save the side in the library.


- Set the render mode to **Realistic rendering + edges + wireframe**. 


- Define the **absolute coordinate system** as a **key point**. 

- Repeat this procedure to save the other sides in the library.
- Then create the catalog by selecting **Assembly > Define component > Edit catalog header**.
- Validate the dialog box by pressing **Enter** to generate the Excel catalog.



TOP_code	
	A B
1	\$code
2	270
3	300
4	350
5	400
6	450
7	500
8	550
9	600
10	650

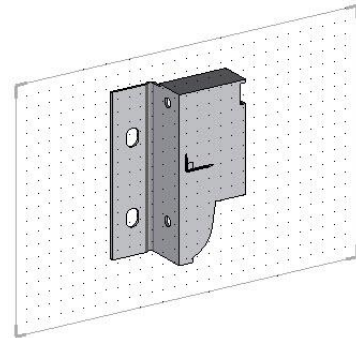
Catalog optimization

- From the Excel catalog, start **File > Save As**.
- Leave the default destination directory and file name.
- Select **Type: Text (Tab delimited) (*.txt)** in the drop-down list.
- Validate by clicking the **Save** button.
- Validate all **Excel** warning messages, and then close this file without saving it.
- Open the **Windows** folder of the library where the sides were saved.
- Delete the **Excel** catalog.  Drawer side Tandembox#V=Antaro M right#I=00.xlsx
- Rename the **Text** catalog in order to change its **.txt** extension to **.cat**.

 Drawer side Tandembox#V=Antaro M right#I=00.cat

Creating the bottom adapters

- Open the two files for the bottom adapters under **Tandembox Antaro\Bottom fixing bracket**.
- Save the right adapter in the library: 
 - **Family:** BLUM drawers
 - **Type:** Accessories
 - **New variant:** *Bottom adapter TANDEMBOX M right*
- Define the **absolute coordinate system** as a **key point**. 
- Repeat these steps for the left adapter.




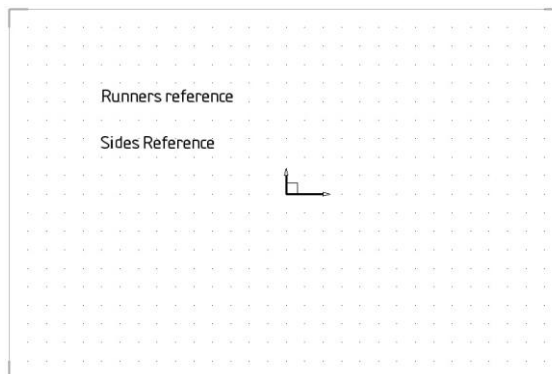
Creation of complete drawers

Creating the parameters

- Create a new **Design** document without template.
- Create two length parameters:
 - **Value:** 270, **Name:** *d*, **Designation:** *Drawer depth*
 - **Value:** 800, **Name:** *l*, **Designation:** *Drawer width*

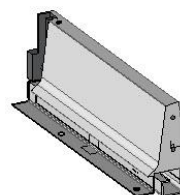
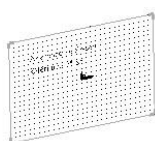
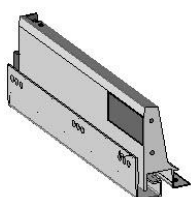
Two texts will be created in order to be able to vary the references of the runners and sides depending on the depth selected from the drawer catalog.

- Select **Tools > Text**. 
- Enter **Text:** *Runners reference*.
- Name this text using the **Edit > Name** function:
 - **Name:** *ru_ref*
 - **Designation:** *Runners reference*
- Validate this text by pressing **Enter**, and then position it in the graphical area.
- Create a second **Text:** *Sides reference*.
- Name this text using the **Edit > Name** function:
 - **Name:** *si_ref*
 - **Designation:** *Sides reference*
- Save this file in the library:
 - **Standard:** *My 3D standard*
 - **Family:** *BLUM drawers*
 - **New type:** *Complete drawers*
 - **Variant:** *TANDEMBOX Antaro M 30kg*
 - Uncheck **Supplier code**



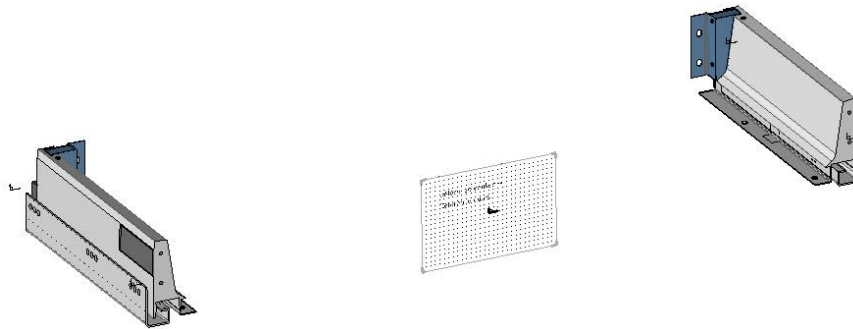
Inserting the runners and sides

- On layer 1, create a **duplicate coordinate system** of the absolute coordinate system in **translation** to **X+** at a **distance** of $l/2$.
- Create a second **duplicate coordinate system** of the absolute coordinate system in **translation** to **X-** at a **distance** of $l/2$.
- On the right-hand coordinate system insert the **Runners TANDEMBOX right 270mm**, and then the **Drawer side TANDEMBOX Antaro M right**.
- Then on the left-hand coordinate system insert the **Runners TANDEMBOX left 270mm**, and then the **Drawer side TANDEMBOX Antaro M left**.



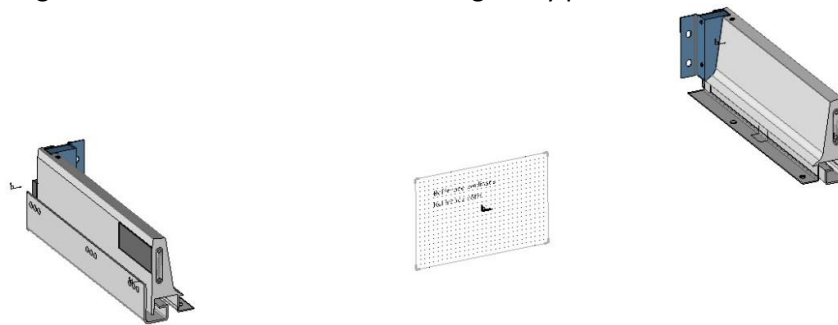
Inserting the adapters

- Make layer 2 current.
- Create two duplicate coordinate systems of the left and right coordinate systems in **translation** to **Z-** at a **distance** of *d*.
- Insert the left and right adapters on these coordinate systems.




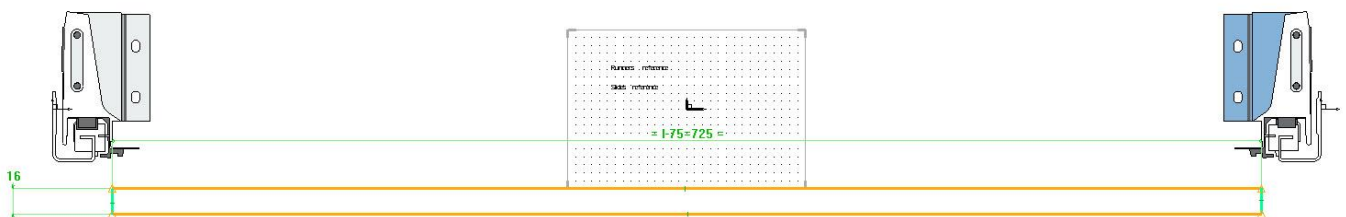
Inserting the front fixing brackets

- Insert the front fixing bracket on the two front left and right key points.

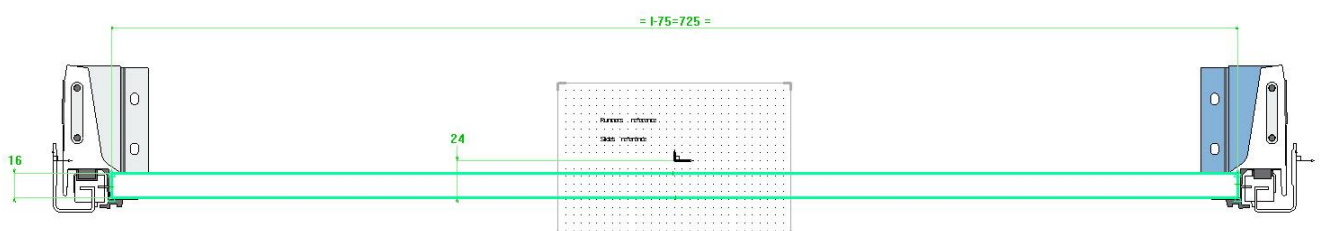


Creating the panels

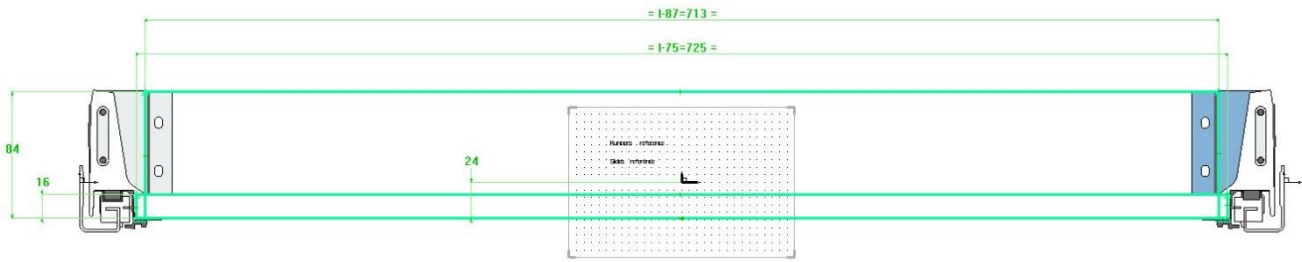
- Make layer 3 current, and then create a new sketch. 
- Draw any rectangular contour.
- Dimension the height of this rectangle to *16mm*.
- Dimension its width to $l-75mm$. Apply a **symmetry constraint** on **Y** to this dimension.








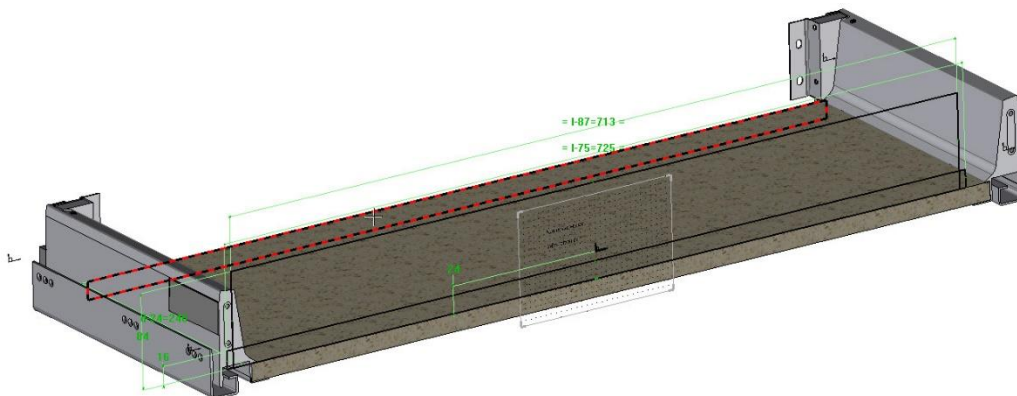
- Dimension the distance between the bottom of the rectangle and the absolute coordinate system to a distance of *24mm*.



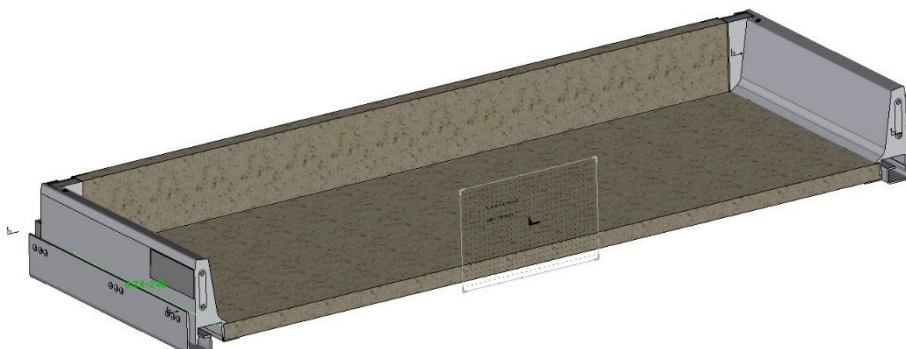
- Create a second **rectangular contour** to create the back.
- Dimension its width to $l-87mm$. Apply a **symmetry constraint** on **Y** to this dimension.
- Dimension the height of the rectangle to $84mm$.
- Align the bottom of this rectangle with the bottom of the base.



- End the sketch. 
- Start the **Create extruded shape** function, and then set the **Sketch = Local** mode. 
- Select the base sketch.
- In the advanced parameters , set **Offset from starting curve = -37mm**.
- Click the **Direction** option to impose the **Z**-direction.
- Enter **Height: $d-24mm$** .
- Use the **Driving elements** function, and then select the base to display its sketch again. 
- Then extrude the back.
- Open the advanced parameters , and then select the rear of the base.



- Validate the advanced parameters with **OK**.
- Enter **Height: $16mm$** .
- Define the two parts:
 - **Designation: Base / Back**
 - **Material: wood > particle board.**



Creating the catalog

Creating the catalog of this drawer makes it possible to vary several elements according to the selected code:

- The drawer depth.
- The reference of the runners.
- The reference of the sides.
- The code of the right runner.
- The code of the left runner.
- The code of the right side.
- The code of the left side.

To vary the codes of the runners and sides, you must first name the components.

- Use the **Edit > Name** function.
- Select the left runner, and then enter **Name: lr**.
- Name the right runner to *rr*, the left side to *ls* and the right side to *rs*.

- Create the catalog of the component by selecting **Assembly > Define component > Edit catalog header**. 

- Open the drop-down list and select **All parameters and texts**.
- From the Excel file, delete the column of the **I** parameter (drawer width).



Note: The **I** parameter will simply be a driver parameter in order to be able to control the drawer width.

- On the line of the column headings, type the following in 4 additional columns:
 - *lr.code*
 - *rr.code*
 - *ls.code*
 - *rs.code*

	A	B	C	D	E	F	G	H
1	\$code	d	ru_ref	si_ref	lr.code	ls.code	rr.code	rs.code

Note: In a catalog, typing the name of a component followed by *.code* allows you to drive the component code depending on the catalog.

- Then complete the **drawer codes**, the **depth parameter** values, the **references** of the **runners** and **sides**, as well as the **codes** of the **runners** and **sides** to be used, as shown below.



	A	B	C	D	E	F	G	H
1	\$code	d	ru_ref	si_ref	lr.code	ls.code	rr.code	rs.code
2	270	270	558.2701B	358M2702IA	270	270	270	270
3	300	300	558.3001B	358M3002IA	300	300	300	300
4	350	350	558.3501B01	358M3502IA	350	350	350	350
5	400	400	558.4001B01	358M4002IA	400	400	400	400
6	450	450	558.4501B01	358M4502IA	450	450	450	450
7	500	500	558.5001B	358M5002IA	500	500	500	500
8	550	550	558.5501B	358M5502IA	550	550	550	550
9	600	600	558.6001B	358M6002IA	600	600	600	600
10	650	650	558.6501B	358M6502IA	650	650	650	650

- Save this file in the **Text (Tab delimited) (*.txt)** format.
- Delete the **Excel** catalog.
- Rename the **Text** catalog in order to change its **.txt** extension to **.cat**.


Creating in place sub-sets

Creating in place sub-sets allows elements to be grouped together in a file so that they appear in the form of a bill of material under an additional assembly.


Here, the runners will be grouped together in order to obtain a single BOM line. The same procedure will be repeated for the sides and the bottom adapters.

- Start **Wood > Define > Define set.** 
- Select the **New in place sub-set** function. 
- Set **Serial set = No, Insert in = Main assembly, Name of new sub-set: Runners.**

Serial set= Insert in= Name of new sub-set:

- Validate by pressing **Enter**.
- Click the **Insert** button, and then select the left runner. 

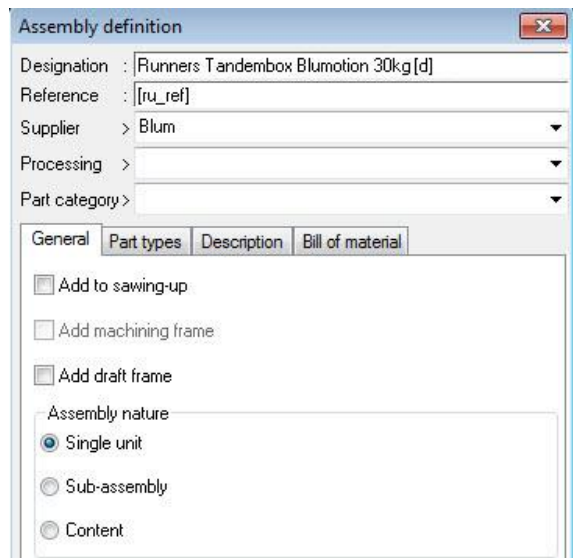
Note: A warning message informs you that the runner will be removed from the main assembly to be placed in the **Runners** sub-set.

- Validate the warning message with **Yes**.
- Set **Length axis: X+** and **Width axis: Y+**.
- Uncheck **Add to sawing-up** in the assembly definition window, and then validate with **OK**.
- Click the **Insert** button, and then select the right runner.
- Click the **Characteristics** button to define this in place sub-set. 

- **Designation:** *Runners TANDEMBOX Blumotion 30kg [d]*
- **Reference:** *[ru_ref]*
- **Supplier:** *Blum*
- **Assembly nature:** **Single unit**

Note: Entering the *[d]* variable in the designation displays the depth of the drawer used.




Entering *[ru_ref]* in the reference allows the **ru_ref** text (whose value is configured in the catalog according to the selected depth) to be recovered.



- Then create a new in place sub-set named *Sides*.
- Insert the two drawer sides in this sub-set.
- Define the sub-set using the **Characteristics** function:
 - **Designation:** *Sides TANDEMBOX Antaro M stainless steel [d]*
 - **Reference:** *[si_ref]*
 - **Supplier:** *Blum*
 - **Assembly nature:** **Single unit**

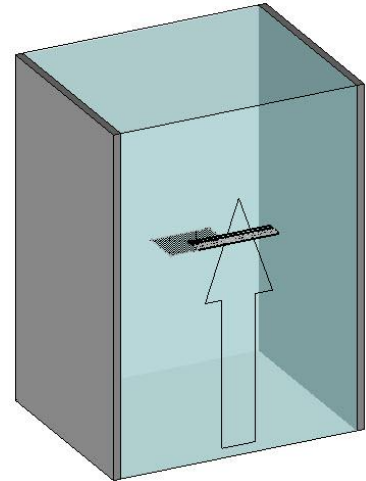
- Finally, create a new in place sub-set named *Adapters*.
- Insert the two bottom adapters in this sub-set.
- Define the sub-set using the **Characteristics** function:
 - **Designation:** *Back adapters M left/right*
 - **Reference:** *Z30M000S.04*
 - **Supplier:** *Blum*
 - **Assembly nature:** **Single unit**
- Define the assembly by selecting **Wood > Define > Define set > Characteristics:**
 - **Designation:** *Drawer TANDEMBOX Antaro 30kg M Stainless steel [d]*
 - **Assembly nature:** **Sub-assembly**
- Validate the assembly definition window with **OK**.

Defining the drivers and key points

- Define the I parameter as a driver.
- On layer 4, create a coordinate system on 2 axes.
- Select **Through point**, and then select **Point**. 
- Choose the **Cartesian point**. 
- Select the origin of the absolute coordinate system as the **origin point** and then enter:
 - **Coordinate X:** *-1/2*
 - **Coordinate Y:** *-33.1mm*
 - **Coordinate Z:** *37mm*
- Select **Direction: Z-**.
- Next select the **Through point** option, and then select the previously created point.
- Select **Direction: Y+**.
- Define this coordinate system as a **key point**: 
 - **Name of key coordinate system:** *cs1*
 - **Designation of key coordinate system:** *Bottom left side point*
- Save and close this file.

Creation of a drawer unit

A drawer unit will be created from a driver block to automatically place a repetition of drawers. Their depth will be selected based on the depth of the driver block.



Creating the driver block

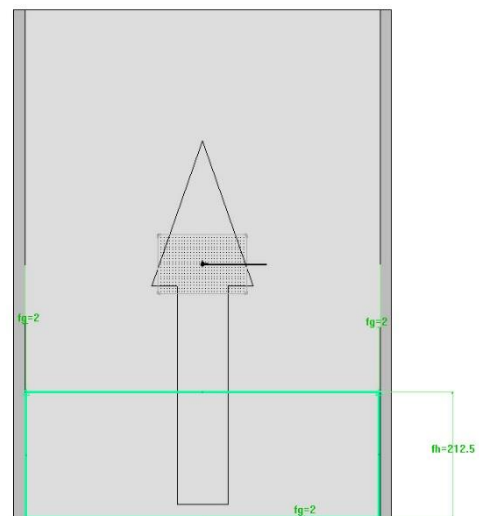
- Create a new **Design** document.
- Create a **driver block** by selecting **Assembly > Define component > Define driver > Driver block**.
- On layer 1, create two martyr parts for the sides.
- Create a parameter without unit:
 - **Value:** 4
 - **Name:** *n*
 - **Designation:** *Number of drawers*



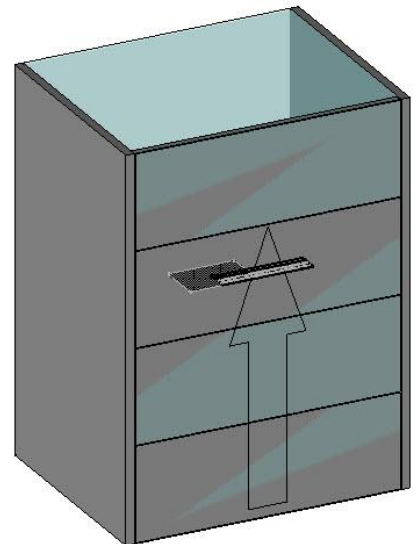
- Create three length parameters:
 - **Value:** 2, **Name:** *fg*, **Designation:** *Front gap*
 - **Value:** 19, **Name:** *th*, **Designation:** *Thickness*
 - **Value:** $(db.z-(n+1)*fg)/n$, **Name:** *fh*, **Designation:** *Front height*
- Define the **n** parameter as a driver.
- Save this file in the library:
 - **Standard:** **My 3D standard**
 - **Family:** **BLUM drawers**
 - **New type:** *Drawer units*
 - **Variant:** *TANDEMBOX*
 - Uncheck **Supplier code**

Creating the fronts

- On layer 2, create a coordinate system on 2 axes:
 - **X axis:** X+
 - **Y axis:** Z+
- Make this coordinate system current.
- In a new sketch, create a rectangular contour.
- Dimension this rectangle to a distance of *fg* from the bottom, the right and the left of the driver block.
- Dimension this rectangle to a height of *fh*.

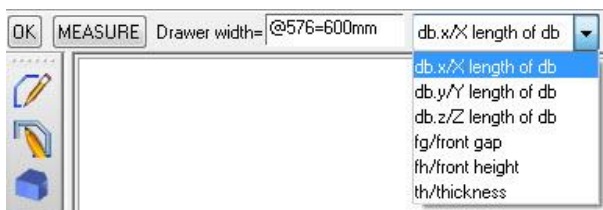


- Extrude this contour:
 - **Direction: Z+**
 - **Offset from starting curve: $(db.y/2)-th$**
 - **Height: th**
- Repeat this part:
 - **Propagation: Linear**
 - **Propagation direction or first point: Y+**
 - **Distance per instance: $fh+fg$**
 - **Total number : n**
- Define the fronts:
 - **Designation: Front**
 - **Material: wood > particle board**

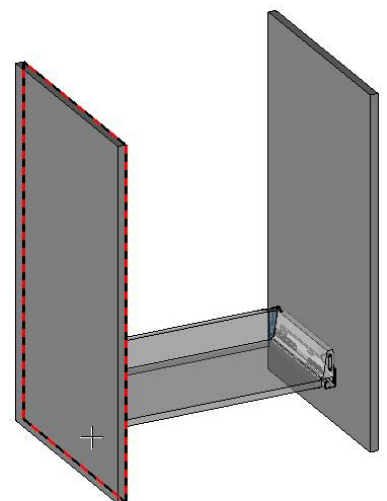



Inserting the drawers

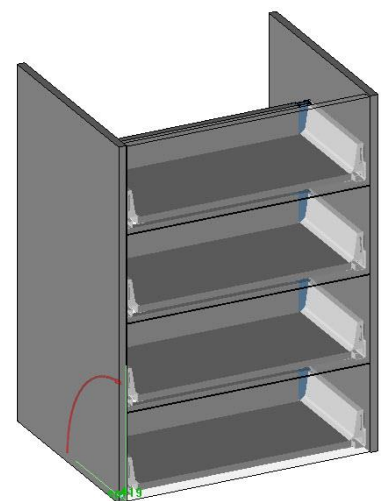
- Make layer 3 current, and then switch off layers 0 and 2.
- Include the standard **BLUM > Complete drawers > TANDEMBOX Antaro M 30 kg.**
- To specify the **drawer width**, select the document parameter **db.x/X length of db** in the drop-down list.



- Position the **Bottom left side point** component key point on the inner face of the left-hand martyr part.
- Select the lower face of the martyr part as the **first alignment face or edge**.
- Enter **Distance = 4mm**.
- Select the front face of the martyr part as the **second alignment face or edge**.
- Enter **Distance = th** .






- Select the **Repeat** option to repeat this drawer. 
- Display layer 2, and then select a drawer front to repeat the drawer just like the fronts.
- Select the **Automatic** option to create the drawer processes on the fronts.

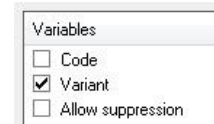


Automatic selection of the drawer depth

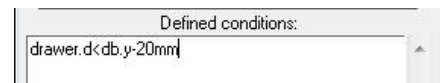
The next step will consist in configuring the drawer to make sure the correct length is automatically selected according to the depth of the driver block.

- Start the **Modify element** function, and then select a drawer. 
- Click the **Template** option. 
- Select **Assembly > Define component > Define sub-component**. 
- Select the template of the drawer repetition.
- Enter **Name:** *drawer* and validate by pressing **Enter**.
- Check the **Variant** box.


Note: Checking the **Variant** box allows you to interchange this drawer template with another template from your library defined in the same way (key point and tools).



- In the **Defined conditions** field, type: *drawer.d<db.y-20mm*.

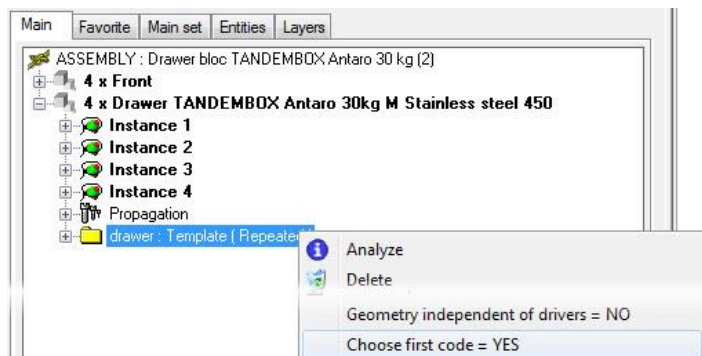


Note: By using this formula, the sub-component will be selected so that the **d** parameter (depth of the drawer set in the catalog) is always strictly less than the dimension of the driver block on **y** (**bp.y**) minus 20mm (safety value).

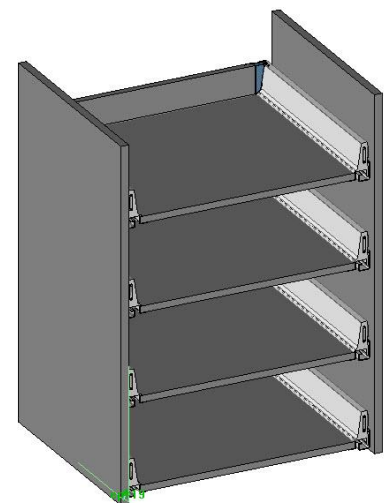
- Validate the sub-component with **OK**, and then click on **STOP** to not specify any variant driver. 

Note: The default drawer is 270mm deep. It will always be less than the depth of the driver block. Adjustment can be made in order to select the greatest possible drawer depth depending on the condition.

- Open the construction tree, and then edit the document assembly.
- Unfold the drawer repetition, and then **right-click** on the template and select **Choose first code = YES**.




- To display the drawer repetition again, select **Edit > Repeat > Show repetition**, and then select the repetition template.
- Display layer 2, save the file, and then close it.

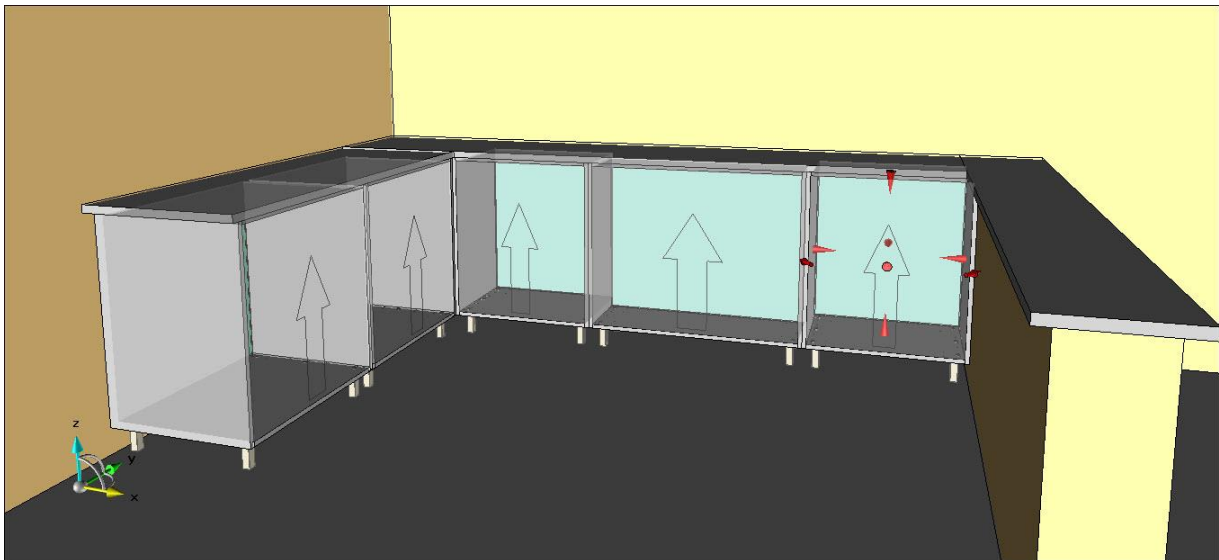


Using the drawer unit

- Open the provided file *Kitchen.top*.

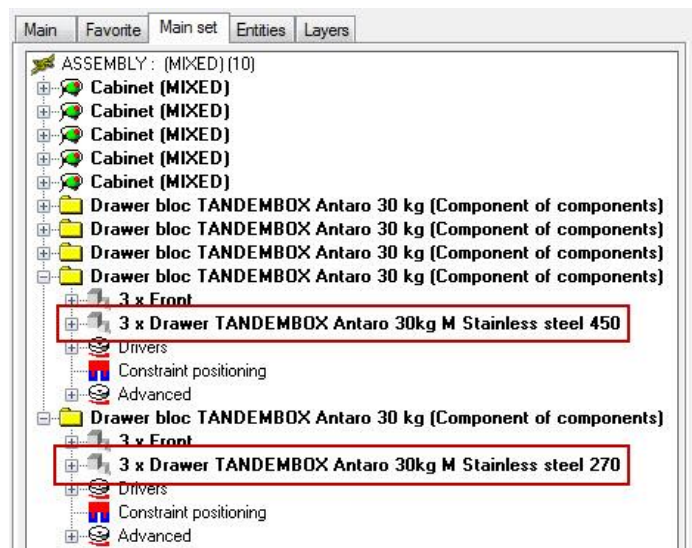
Note: This file contains 600, 500 and 350mm deep cabinets. The same drawer unit component will be used for the different depths.



- Insert the standard component **Drawer units > TANDEMBOX**. 
- In **Multiple inclusion = YES** mode, place the component in the 5 available cabinets.



- Set **Number of drawers = 3**.
- Select **Automatic** to create the runner processes in the cabinets.

The components are then calculated and the runners are selected based on the depth of the cabinet in which they are inserted.



- Start the **Modify element** function, and then select an inserted drawer unit.
- Click the **Sub-component** button. 
- Open the node of the **Drawer unit** component, and then select **Drawer TANDEMBOX Antaro 30kg M Stainless steel 550**.
- Click the **Interchange** button. 

The sub-component selection window opens. If other drawer templates were available, it would be possible to select another drawer template to modify the drawer unit.

Notes

A series of horizontal dotted lines for writing notes.

