

# TopSolid'Wood

## Nesting training



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

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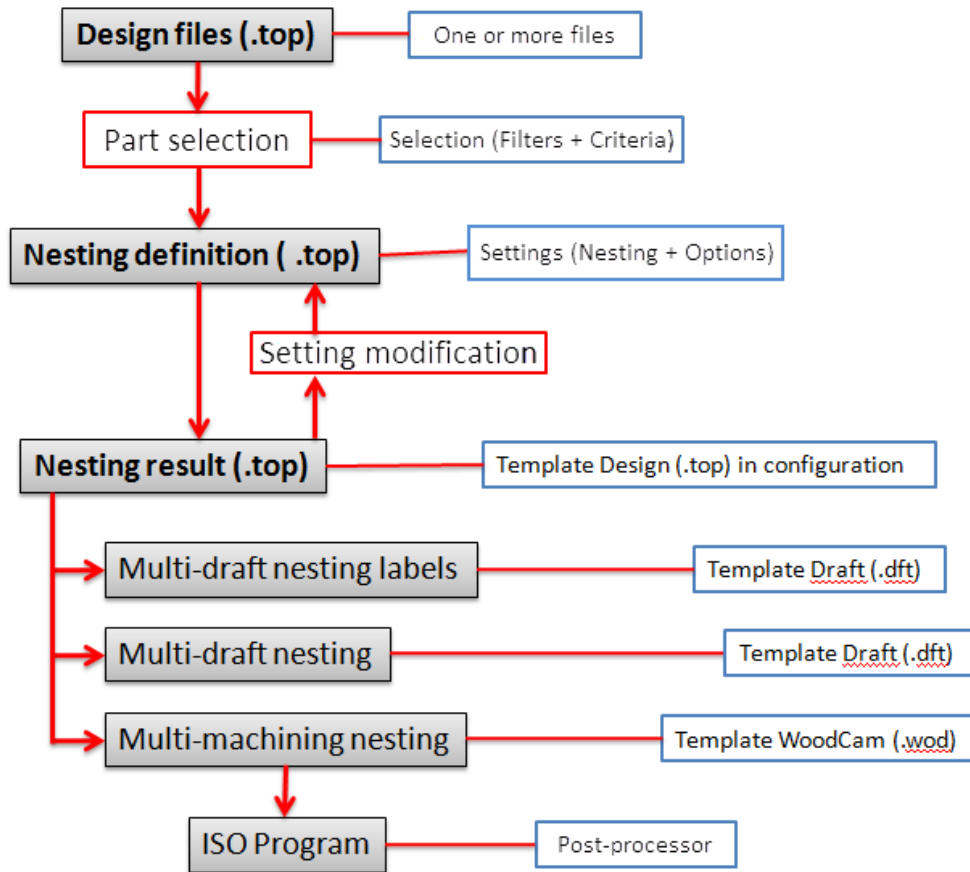
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## Introduction

The nesting is a function in **TopSolid'Wood** which allows you, from a Design document, to optimally nest all the Design file's parts on defined panels. This makes it possible, for example, to optimize the number of panels in order to machine specific-shaped parts, or machine several parts in a single panel positioning on a CNC.

### General procedure



# Preliminary settings

## Nesting parameter settings

- From a Design document, open the nesting parameters using **Tools > Options > Nesting > Nesting default parameters**.

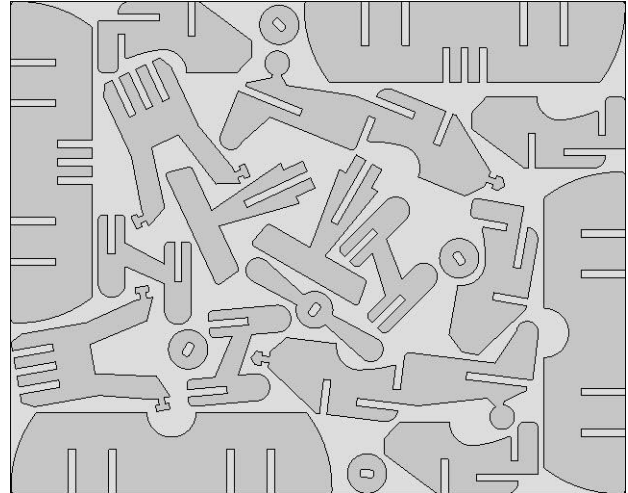
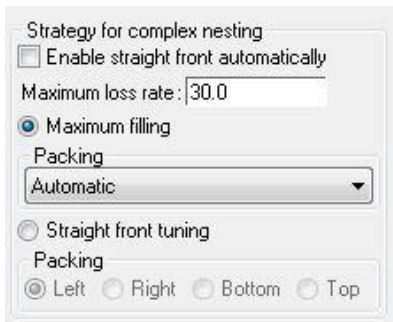


**Note:** All the parameters shown here are default parameters. These then can be modified when creating the nesting.

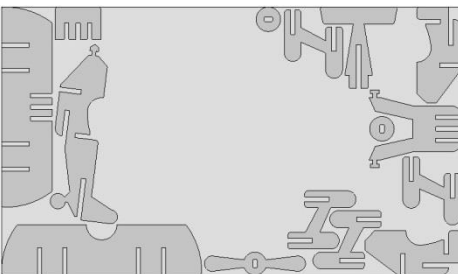
## Complex nesting parameters

**Note:** A complex nesting enables parts to be nested according to their shape, and not to their enclosing rectangle.

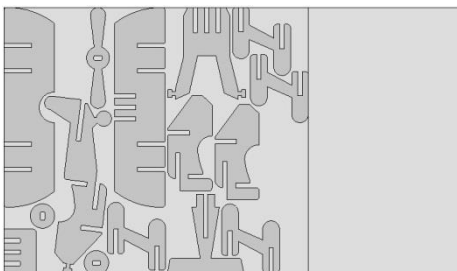
The complex nesting mode is selected when creating the nesting.



- Strategy for complex nesting:**
  - Maximum filling:** The nesting will place the part to cover the maximum area of the panel, with an **automatic** packing in the **down left, down right, up left** or **up right** corner of the panel.
  - Straight front tuning:** The nesting will place the part to one side of the panel (**Left, Right, Bottom** or **Top**) to obtain a maximum loss part.
- The **Enable straight front automatically** option is enabled with the **Maximum filling** mode. When the panel maximum filling exceeds the given loss rate (**Maximum loss rate** option), this option is used to nest the panel in **Straight front tuning** mode to obtain a loss part.



Nesting in **Maximum filling, Automatic packing** mode.

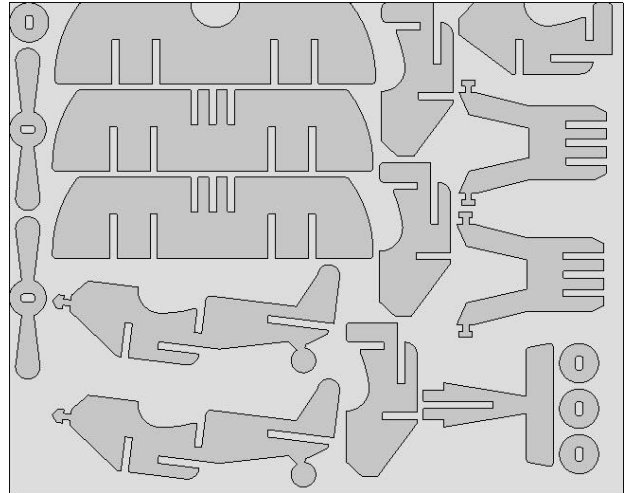
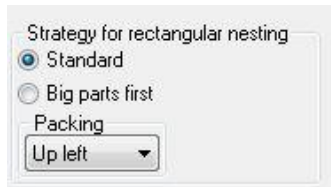


Nesting in **Straight front tuning, Left packing** mode.

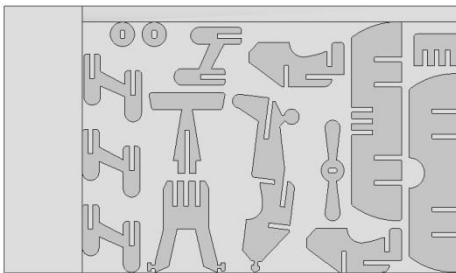
## Rectangular nesting parameters

**Note:** A rectangular nesting allows parts to be nested according to their enclosing rectangle, and not to their shape.

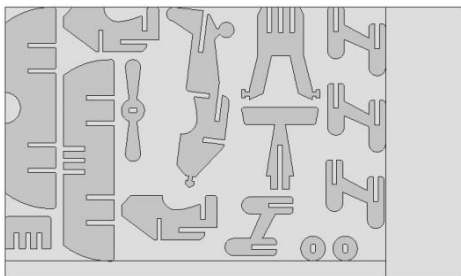
The rectangular nesting mode is selected when creating the nesting.



- **Strategy for rectangular nesting:**
  - **Standard:** Parts are nested to obtain a minimum loss rate.
  - **Big parts first:** Big parts are nested first. The calculation time is better, but the loss rate may be higher.
- **Packing:** Defines the corner where the nesting will start.

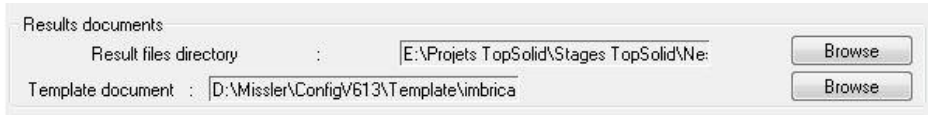


Rectangular nesting with **down right packing**.



Rectangular nesting with **up left packing**.

### Result document parameters



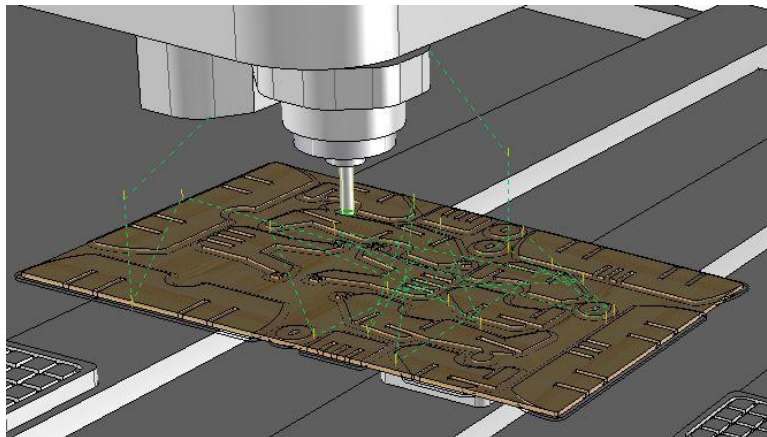
- **Result files directory:** Allows you to set a default folder where the nesting files will be automatically saved. This folder can be modified when creating a nesting. If no folder is specified, the nesting files will be saved in the project directory.
- **Template document:** A 3D document can be selected here as a nesting template. It can be used, for example, to insert a default text in the nesting.

Example of a default text added to the nesting using the template document.



### Gaps between parts

The gap between parts is used to adjust the minimum distance between two nested parts. In general, this value is at least the diameter of the tool used to cut the parts.





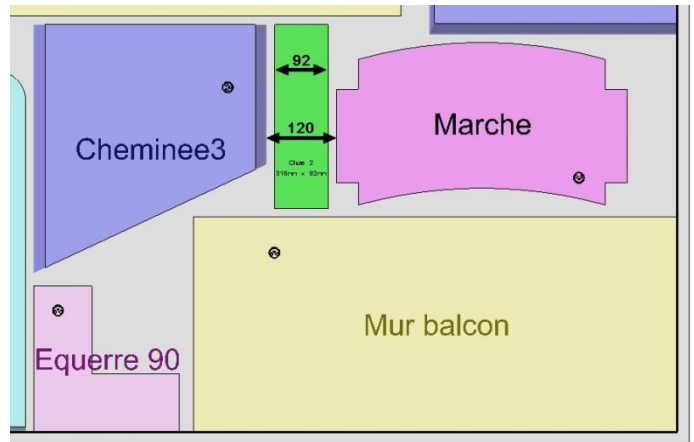
### Generate loss parts



- **Generate loss parts:** This option generates in unused nesting areas some loss rectangular parts which will be calibrated during machining.
- **Loss part minimum length/width:** Minimum dimensions of the free space available in the nesting panel to generate a loss part.

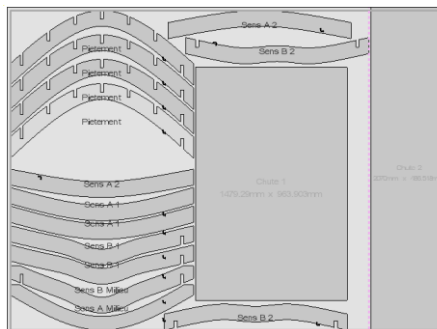
**Note:** The generated loss part will be smaller than the provided minimum dimensions since there are two gaps between parts.

The minimum loss part dimension is 100mm.  
 A loss part is therefore generated in an area of 120mm.  
 However, the final loss part dimension is 92mm because the gap between parts is 14mm (120-2x14=92mm).

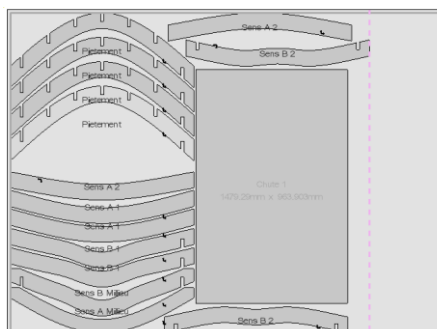


- **Generate last loss part:** This option can be unchecked if the last loss part of a panel should not be created.

#### Last loss part created

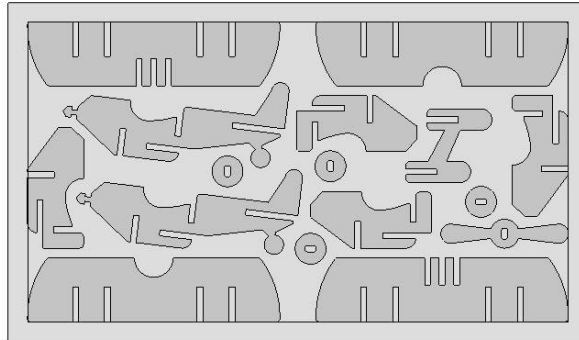


#### Last loss part not created



## Margins

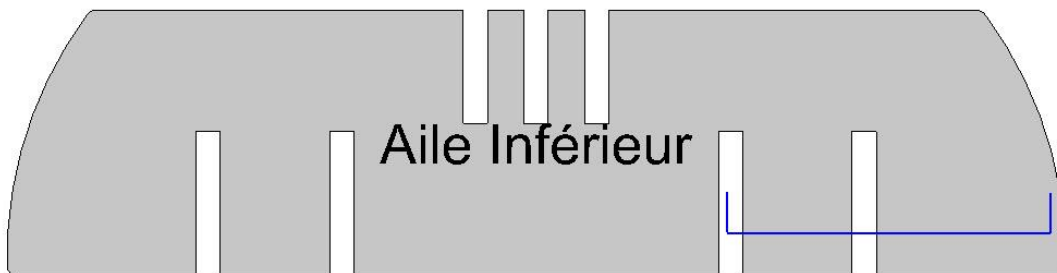
- **Margins:** Allows you to apply margins to the four sides of the panel during the nesting.



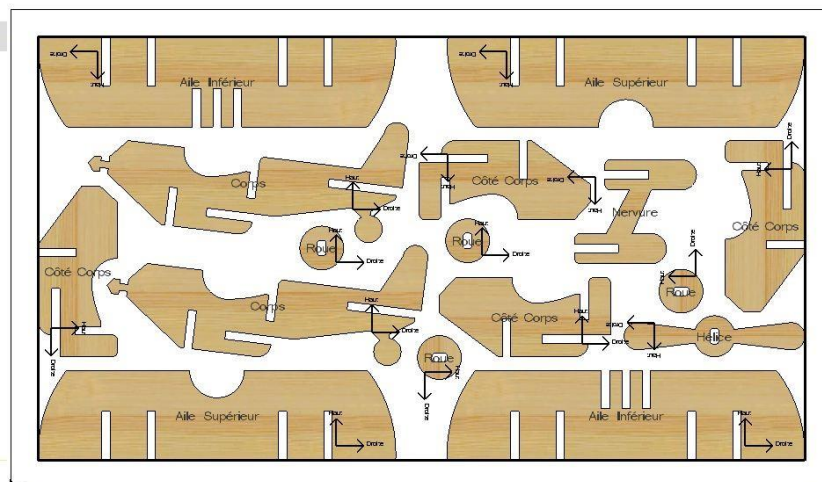
## Label symbol



- **Generate label symbol:** Places a label symbol on nesting parts to simplify the reading direction in label documents.
- **Position:** Sets the position of the label symbol on the part.
- **Label symbol document:** Defines a **Design** file as a label symbol.  
If no label symbol is defined here, the default label symbol will be used (shown in blue below).



Example of a customized grain orientation label symbol.

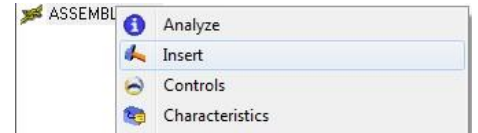


### Creating a label symbol template

- Create a new **Design document**.
- Draw the new label symbol using **Curves** and/or **Texts**.

**Note:** The center of the label symbol is the absolute coordinate system, the top of the label symbol is the Y+ direction and the right of the label symbol is the X+ direction.

- From the tree, insert the label symbol elements in the main assembly:  
**right-click** on **ASSEMBLY** > **Insert** > **Select elements**.
- Save the Design file.



**Note:** The default label symbol file is under: **Missler\V613\bin\dnestinglabelsymbol.top**.

### Standard support adjustments

Standard support adjustments allows you to create and modify in the database the panels used to nest the parts.



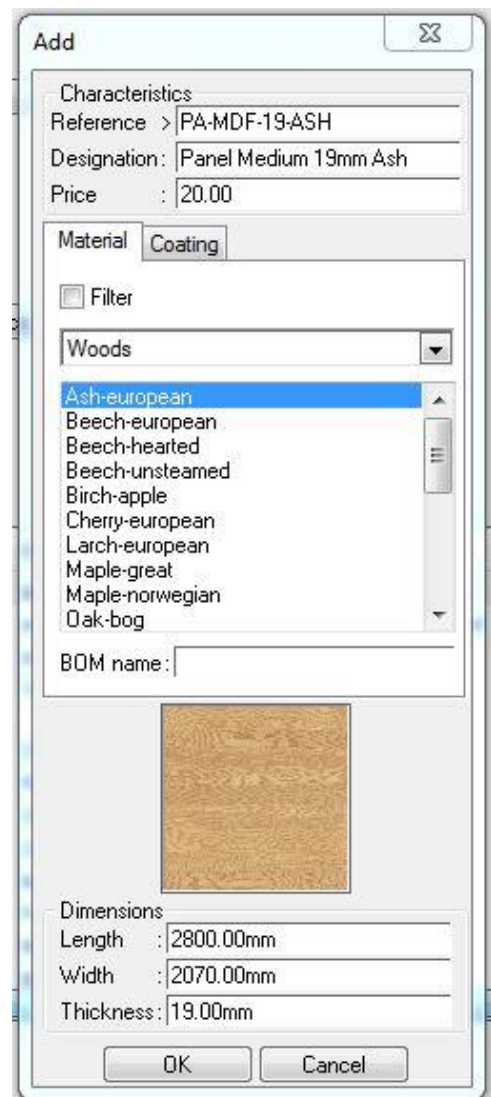
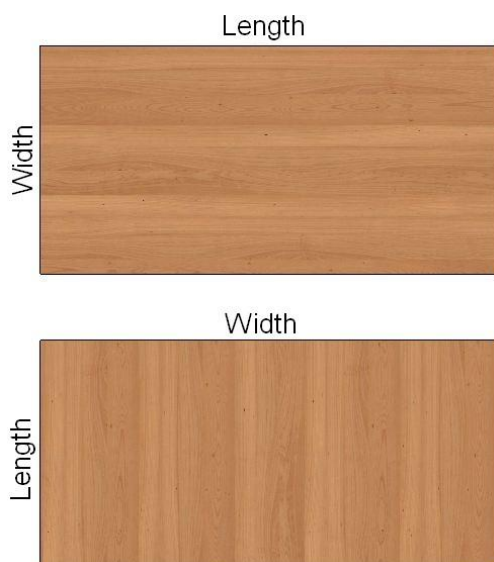
### Creating/Modifying panels

- Select **Add** to create a new panel.
- Select **Copy** to copy an existing panel.
- Select **Modify** to modify a panel.
- Select **Delete** to delete a panel.

When adding or modifying a panel, the following window appears.

- Panel **reference**
- Panel **designation**
- Panel **material**
- Panel **coating**
- Panel **dimensions**
- **OK**
- **Cancel**

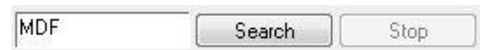
**Note:** If the panel has grain orientation, the grain orientation dimension must be the panel length.



## Miscellaneous

### Panel search

Allows you to find panels more easily in the database.



- **Search:** Starts the search function based on the text entered in the search field.
- **Stop:** Quit the search function.

**Note:** The search is carried out on the **Reference**, **Designation** and **Material** columns. The search is case sensitive.

### Displaying the panel database

Reference	Designation	Material	Coating	Dimensions
2000x1000x10	panel 10mm	balsa		2000 x 1000 x 10
2000x1000x5	panel 5mm	brazilian tulipwood		2000 x 1000 x 5
2000x1000x20	panel 20mm	steel		2000 x 1000 x 20
PA-CP-6	ContrePlaqué 6mm	CP		600 x 350 x 6
MDF EZ 19		MDF EZ		2800 x 2100 x 19
CP 38	CP 38	CP		2800 x 2070 x 38
Plateau Meleze	Plateau Meleze	Meleze		981 x 210 x 50
CP30	CP30	CP		600 x 75 x 30
Chene L20	Chene L20	Chêne lamellé		2800 x 2070 x 20
PA-MDF-6	Médium 6mm	MDFZ1		2800 x 2070 x 6
PannelNews	PannelNews	01_Moccasin		2800 x 2070 x 18
PA-MDFEZ-19-PRUNE	MDF EZ 19mm Décors Prune	MDF EZ	Prune	2800 x 2070 x 19
PA-MDFEZ-19-PIN	MDF EZ 19mm Décors Pin	MDF EZ	Pin	2800 x 2070 x 19

Displaying the database allows you to view the panel database.

**Note:** By default, the database is sorted alphabetically according to the **Reference** column. This sorting can be modified by clicking another column header.

## Generic support

The standard support database should normally contain all the **Panel Material/Thickness/Dimensions** combinations used.

As there may be many combinations, the process can be simplified by defining a generic support using a "virtual" material.

Not considering the material will significantly reduce the number of supports.

For example, a white melamine board will have the same thickness and dimensions as a blue or yellow melamine board most of the time.

Then, when generating a nesting, you will just have to select the generic board with the right dimensions.

Of course, for a full control of the nesting generated with all the stock with their reference supplier information, it is possible to create all the supports.

## Exercise 1: Complex nesting using a file



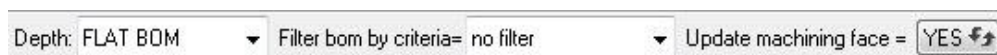
### Creating the nesting

- Open the Design file *plane.top*.
- Select the **Wood > Nesting > Automatic Nesting** function.

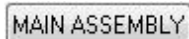


**Note:** The Design file that contains the parts to be nested must be saved before starting the nesting. Several options are available in the dialog bar:

- **Main assembly:** Used to select all the parts in the main assembly of the current document.
  - **Multi-files:** Used to select parts in several Design files (see *Exercise 2*).
  - **Depth:** Sets the depth type to select the parts in assemblies.
  - **Filter bom by criteria:** Filters the parts in the assembly.
  - **Update machining face:** With this option, if part machining faces are defined in **Update machining** mode, these part faces will be updated.
  - **Select elements to use:** Allows you to manually select several parts of the current document.
- Set:
    - **Depth = Flat BOM**
    - **Filter bom by criteria = No filter**
    - **Update machining face = Yes**

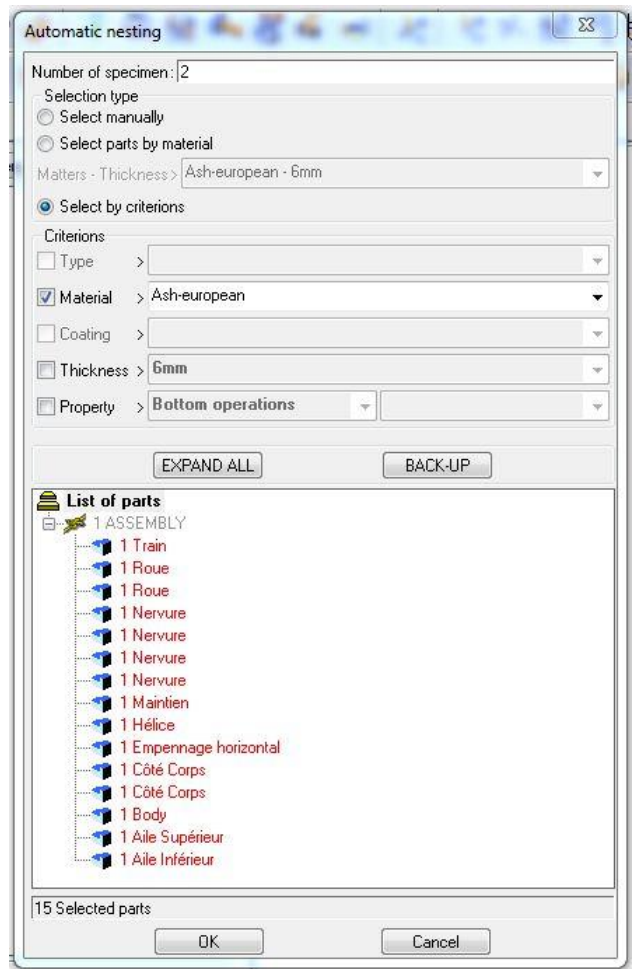


- Next select **Main assembly**.



The window for selecting parts by criteria opens.

- Select by **material** all **Ash-european** parts.
- Set **Number of specimen: 2**.
- Validate with **OK**.

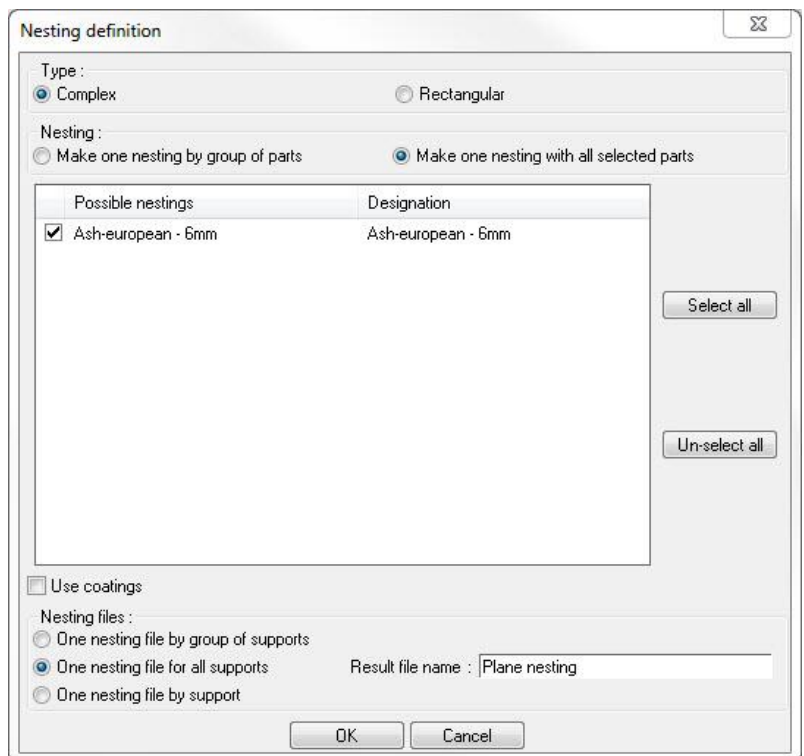


The nesting definition window opens, allowing you to set the nesting general parameters.

- In this window, set the following:
  - **Nesting: Complex**
  - **Make one nesting with all selected parts**
  - Select all **possible nestings**
  - **Do not use coatings**
  - **One nesting file for all supports**
  - **Result file name : *Plane nesting***

**Note:** In this case, all the parts must be nested on the same support and in the same Design file.

- Validate with **OK**.

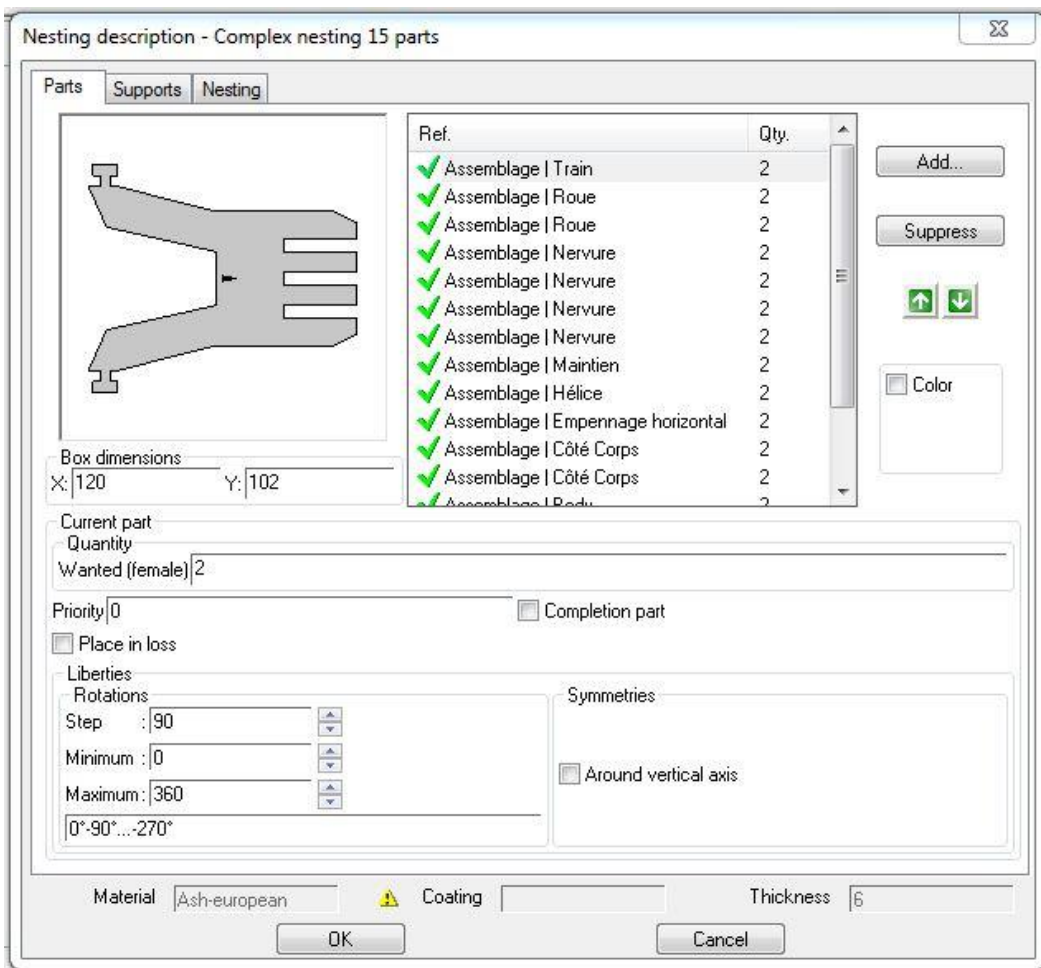


**Note:**

- **Make one nesting with all selected parts:** Allows you to perform a nesting with all parts, without considering the material, the thickness and the coating of the selected parts. This will force the parts on another type of panel.
- **Make one nesting by group of parts:** Allows you to perform a nesting for each **possible nesting**.
- **Possible nestings:** All the different materials detected in the selected parts (**material-coating-thickness**). It is possible to select/unselect all possibilities in order not to nest them.
- **Use coatings:** Allows you to use the part and panel coatings to help differentiate during nesting the parts and panels with the same material, but a different coating.
- **Nesting files:**
  - One nesting file by group of supports:** Creates a nesting file for each type of panel used. The file names are then set in the **Nesting** tab.
  - One nesting file for all supports:** Nests all panels in the same nesting file. Each group is placed on a different level. The file name is set in the **Result file name** field.
  - One nesting file by support:** Each panel is placed in a new Design nesting file. The file name is then set in the **Nesting** tab and followed by **#Panel\_Number**.

- Select a folder in which to save the nesting definition file.
- Change the default file name to *Plane nesting definition*.

The nesting configuration window opens with 3 tabs: **Parts**, **Supports** and **Nesting**.



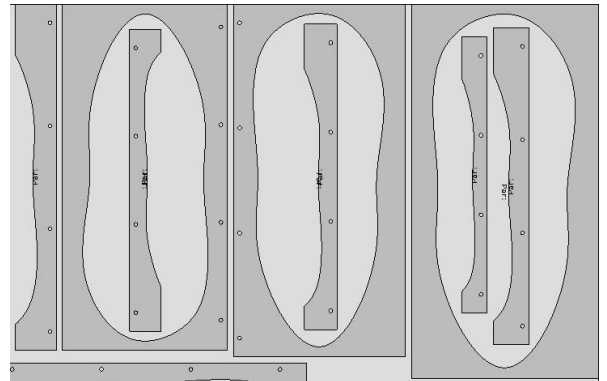


## Nesting parameters

### Parts

The **Parts** tab allows you to set the nesting parameters specific to each part. It is possible to set several parts using multiple selection (**Ctrl + left click**).

- A list of parts with each part, its assembly, its reference and its quantity.
- **Add/Suppress**: Allows you to add new parts or curves (in the current document or not) and delete parts to be nested.
- **Up and down arrows**: Moves up/down the parts in the list (this changes nothing to the nesting).
- **Color**: Allows you to assign colors to the nesting parts (by default, the part color used in the assembly).
- **Automatic color**: Allows you to assign colors to parts automatically. All identical parts will have the same color.
- A preview of the part with its box dimensions on **X** and **Y**.
- **Wanted quantity**: Quantity of the part to be nested.
- **Priority**: Used to nest the parts in order of priority. If the value is greater, the priority will be lower (parts that will be first nested have a priority 0).
- **Completion part**: Used for parts to be produced in greater quantities than required. The desired quantity may not be reached. This part will be placed on panels so long as there is available space.
- **Place in loss**: The nesting will place parts in the apertures of another parts. This option must be enabled on the part which has the aperture.



- **Liberties**: Adjusts the part rotation.  
**Step**: Part rotation step (a 90° step will give 4 rotation possibilities on 360°).  
If the step is high, the calculation time will be faster, but the nesting can be performed with a higher loss rate.

**Note**: A part with grain orientation will have a step of 180°.

**Maximum/minimum**: Two angle values between which the part can turn.

The last field summarizes the different nesting possibilities: **First angle° - Second angle° ... - Last angle°**.

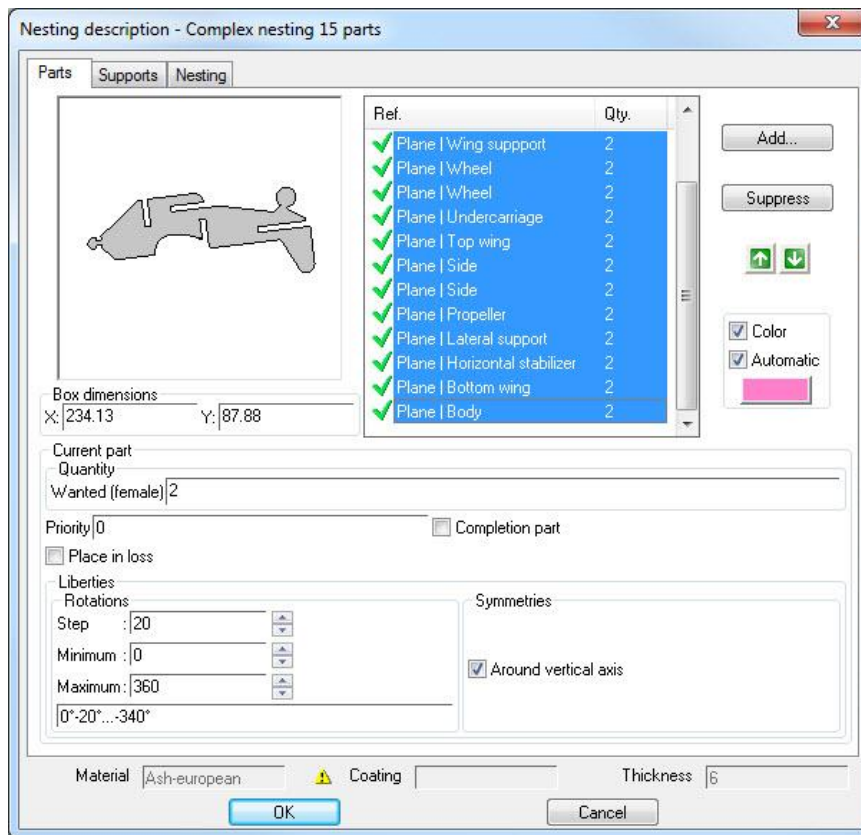
- **Symmetries around vertical axis**: Allows the part to be placed symmetrically on the support.

**Note**: Do not use this option if the two part's faces are not exactly the same.

- **Warning**: Warnings are displayed before the material, coating and thickness boxes if one of the nested parts is not exactly the same as one of the selected supports. These warnings are indicative and will not stop the nesting creation.



- Select all the parts in the list and apply the following parameters:
  - **Color > Automatic.**
  - **Step: 20°/Minimum 0°/Maximum 360°.**
  - **Allow symmetries around vertical axis.**




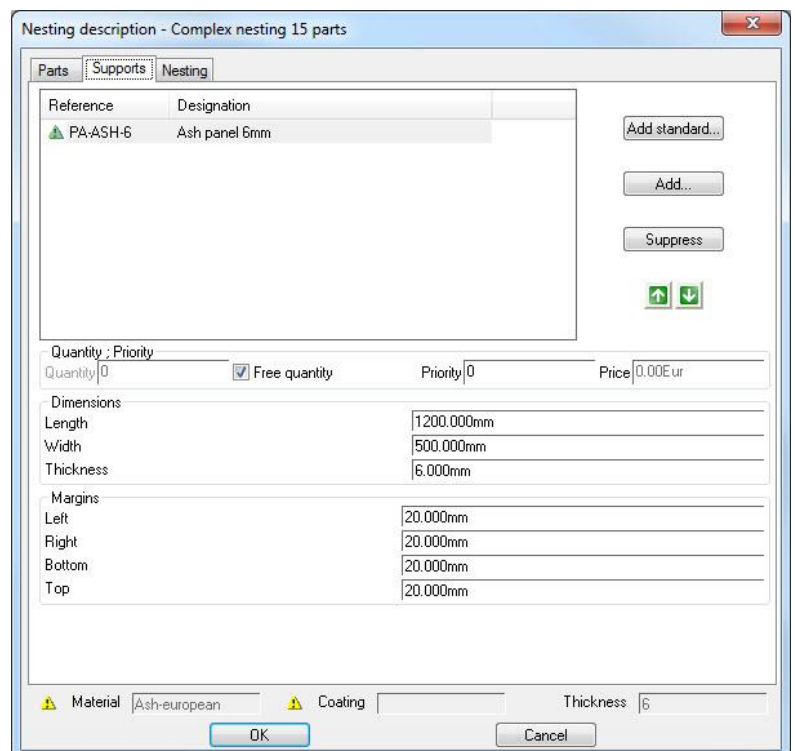
## Supports

The **Supports** tab allows you to select the panels to nest the parts.

If matching supports are found in the support database (material, thickness and coating if the **Use coatings** option is checked), they are automatically added to the list.

- **Add standard:** Used to add an existing standard support and manage them (modification, creation...).
- **Add:** Creates a new support for this nesting only (it will not be saved).
- **Suppress:** Removes a support from the list.
- **Quantity** or **Free quantity:** Allows you to provide a specific quantity or not for the selected support.
- **Priority:** The greater the value, the less the priority. The support with a priority 0 will be used first.
- **Margins:** Margins applied to the support's sides (default parameter values). These margins are the same for all supports in the list.

- Select **Add.** 
- Set:
  - **Reference:** PA-ASH-6
  - **Designation:** Ash panel 6mm
  - **Material:** Woods > Ash-european
  - **Length:** 1000mm
  - **Width:** 500mm
  - **Thickness:** 6mm
- Validate the panel with **OK.**
- Select the **Free quantity** option.
- Apply 20mm margins to each panel's side.



Nesting description - Complex nesting 15 parts

Reference	Designation
PA-ASH-6	Ash panel 6mm

Quantity: Priority  
 Quantity: 0  Free quantity Priority: 0 Price: 0.00Eur

Dimensions  
 Length: 1200.000mm  
 Width: 500.000mm  
 Thickness: 6.000mm

Margins  
 Left: 20.000mm  
 Right: 20.000mm  
 Bottom: 20.000mm  
 Top: 20.000mm

Material: Ash-european Coating: Thickness: 6

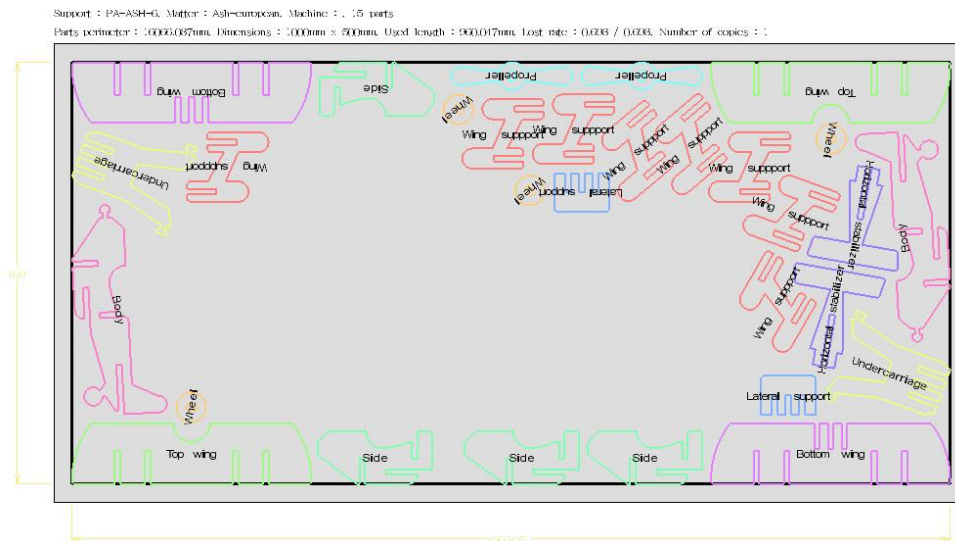
Buttons: Add standard..., Add..., Suppress, ↑, ↓, OK, Cancel

## Nesting

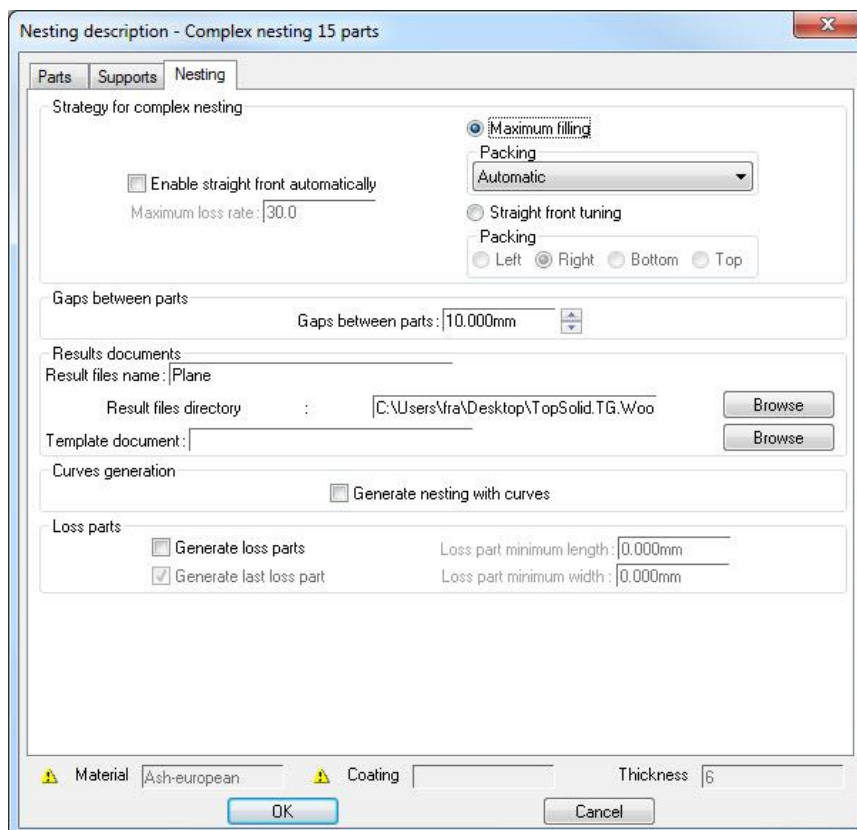
The **Nesting** tab allows you to set the nesting parameters. By default, the settings are those configured in **Tools > Options**.

- Set:
  - **Maximum filling – Automatic packing.**
  - **Gaps between parts: 10mm.**
  - Uncheck **Generate nesting with curves.**
  - Uncheck **Generate loss parts.**

**Note:** The **Generate nesting with curves** option performs the nesting with the outside contour of the part only. Without this option, the 3D parts are nested.



- Validate with **OK** to generate the nesting.



A nesting generates two types of files:

- **One nesting definition file:** This file contains a simple text which summarizes all the nesting parameters:
  - The number of generated result files.
  - The support's material and thickness.
  - The gap between parts.
  - The list of nested parts.
  - The support's reference and designation.
  - The support's margins.

This file allows you to modify the nesting (parameters and nested parts) and recalculate the result.

- **One or more nesting result files:** These files contain the results of the parts nested on the support. Here it is possible to move the parts on the support (only for a complex nesting). These files are used to generate the draft files (supports and labels) and machine the panels.

### Nesting definition file

```

NESTINGS DEFINITION
1 nesting

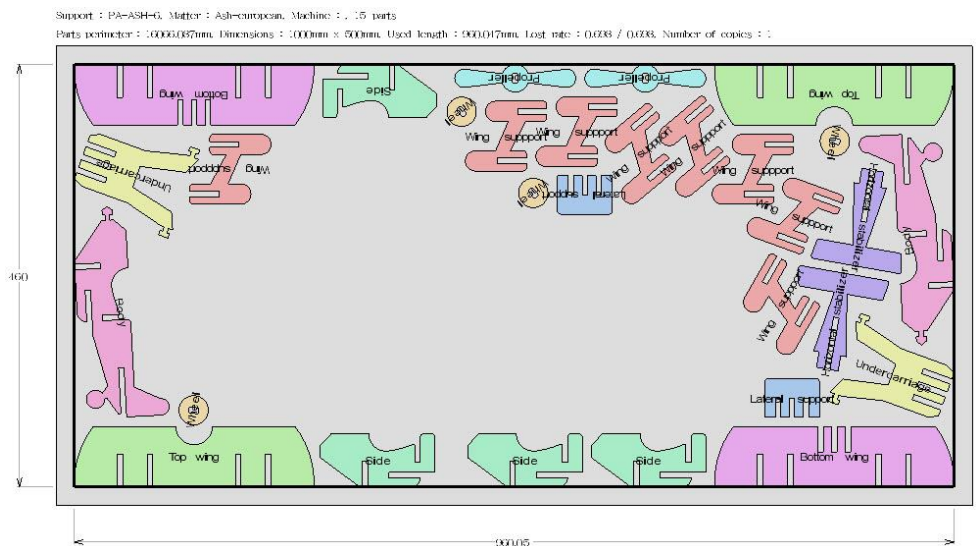
Nesting descriptor Ash-european_6
Gap between parts = 10mm

Parts :
Plane | Wing support (x2)
Plane | Wing support (x2)
Plane | Wing support (x2)
Plane | Wing support (x2)
Plane | Wheel (x2)
Plane | Wheel (x2)
Plane | Undercarriage (x2)
Plane | Top wing (x2)
Plane | Side (x2)
Plane | Side (x2)
Plane | Propeller (x2)
Plane | Lateral support (x2)
Plane | Horizontal stabilizer (x2)
Plane | Bottom wing (x2)
Plane | Body (x2)

Supports :
Ash panel 6mm (PA-ASH-6)

Margins :
Left margin : = 20mm
Right margin : = 20mm
Bottom margin : = 20mm
Top margin : = 20mm
    
```

### Nesting result file



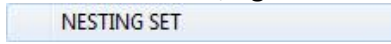
## Modifying the nesting

You can modify all the parameters of a generated nesting.

- Close the nesting result file.

**Note:** To recalculate the nesting, the result files must be closed.

- Open the nesting definition file to be modified.
- From the tree, **right-click > Edit set > Nesting set.**



The different possible nestings that were performed are shown here.

- On the nesting to be modified, **right-click > Modify.** 

The nesting parameter window opens. It is the same as when the nesting is created, with an additional **Result file** tab: it displays the nesting result files with their creation date.

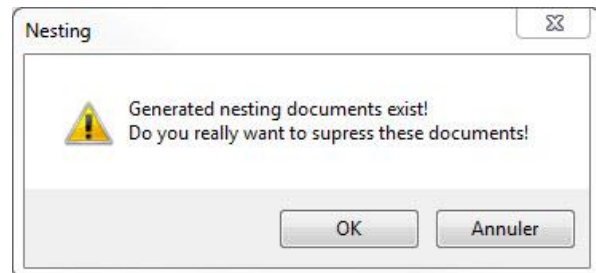
NESTINGS	DEFINITION
1	nesting
Nesting descriptor Ash-european_6	
Gap between parts = 10mm	
Parts :	
Plane	Wing support (x2)
Plane	Wing support (x2)
Plane	Wing support (x2)
Plane	Wing support (x2)
Plane	Wheel (x2)
Plane	Wheel (x2)
Plane	Undercarriage (x2)
Plane	Top wing (x2)
Plane	Side (x2)
Plane	Side (x2)
Plane	Propeller (x2)
Plane	Lateral support (x2)
Plane	Horizontal stabilizer (x2)
Plane	Bottom wing (x2)
Plane	Body (x2)
Supports :	
Ash panel 6mm (PA-ASH-6)	
Margins :	
Left margin : = 20mm	
Right margin : = 20mm	
Bottom margin : = 20mm	
Top margin : = 20mm	

- Open the **Nesting** tab.
- Change the **strategy** to **Straight front tuning > Left packing.**
- Validate the window with **OK.** 

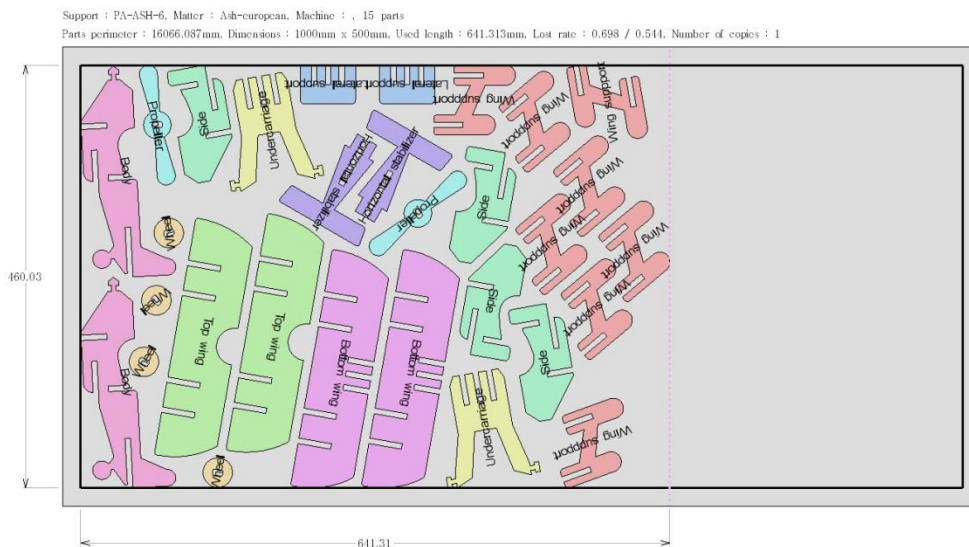
Straight front tuning  
 Packing  
 Left  Right  Bottom  Top

**Note:** The nesting modification will generate new nesting result files and replace the old generated files. A window appears to confirm the deletion of these files.

- Validate the file deletion with **OK.**



The new nesting result file is generated.

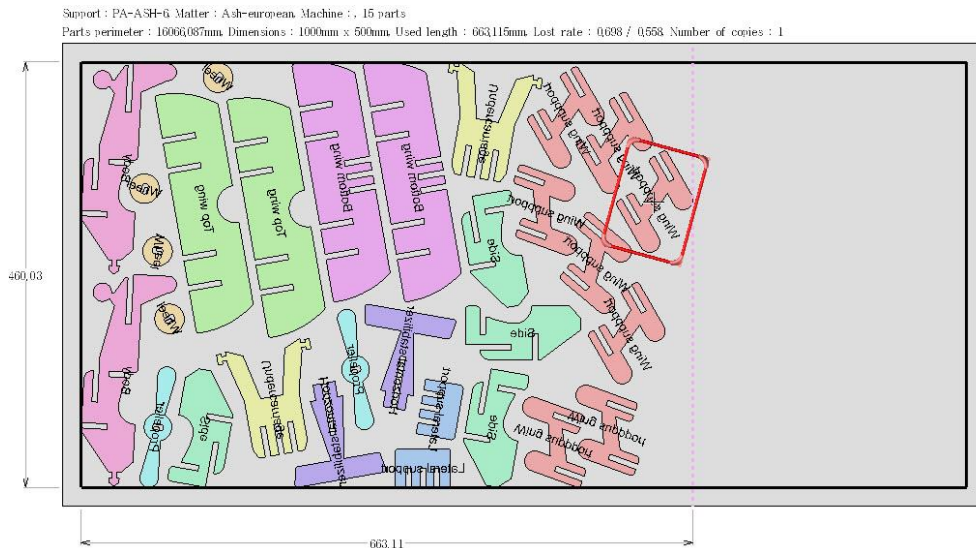


With a complex nesting, it is also possible to manually move the parts in a nesting.

**Note:** You cannot move the parts in a rectangular nesting.

- From the nesting result file, select **Move parents**.
- Select the part to move in the nesting support.

**Note:** The part can only be moved on the same support.

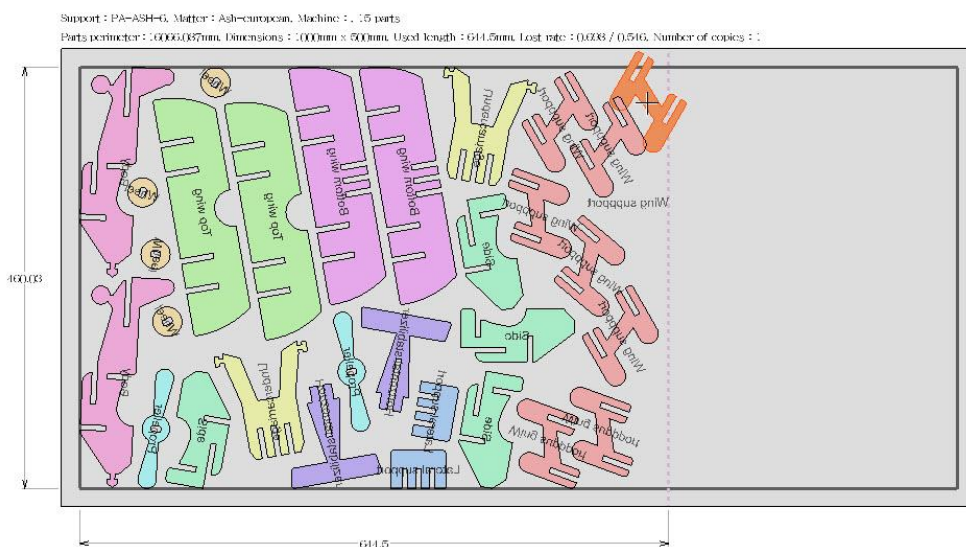


Several options are available to move the part:

- **Rotate:** This option allows the part to rotate with a default step using the **90.0** button. Select this button to modify the rotation step.

The **Rotation =** field displays the part's global rotation angle.   Rotation=

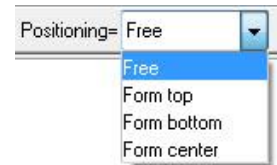
- **Free moving:** This option set to **Yes** is used to move the part freely on the support, without considering the other parts, the support's margins and the gap between parts. If the part is placed on another part, in the support's margins or in a gap with another part, the moved part is shown in orange and it will not be possible to validate the new part's positioning. Free moving=



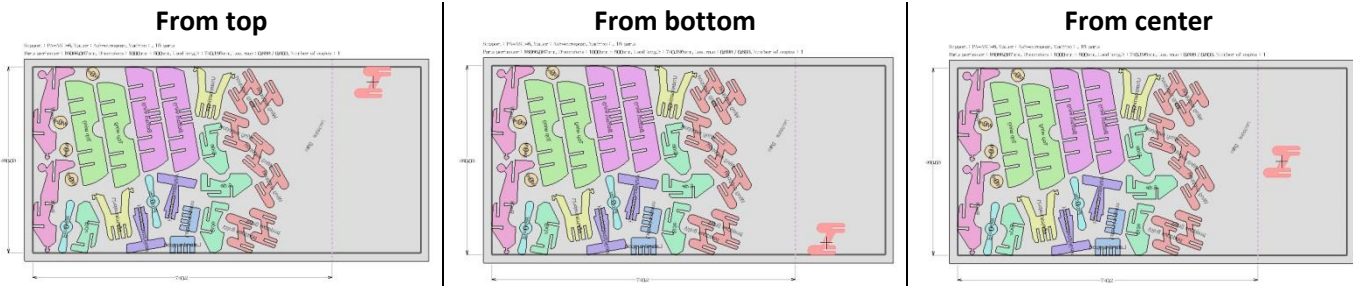
- **Free positioning:** When this option is set to **Yes**, it is possible to validate a bad positioning of the part (when the part is orange with the **Free moving = Yes** option).

**Note:** Be careful with this option because the machining can be wrong with a bad positioning of the part.

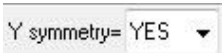
- **Positioning:** Sets the part's positioning on the support.  
**Free:** The part can be positioned freely on the support.  
**From top:** The part's top will be positioned only on the support's top.  
**From bottom:** The part's bottom will be positioned only on the support's bottom.  
**From center:** The part's center will be positioned only on the support's center.



**Note:** If the part is rotated, the side can change.



- **Y symmetry:** This option allows you to make a symmetry of the part on Y to position it.

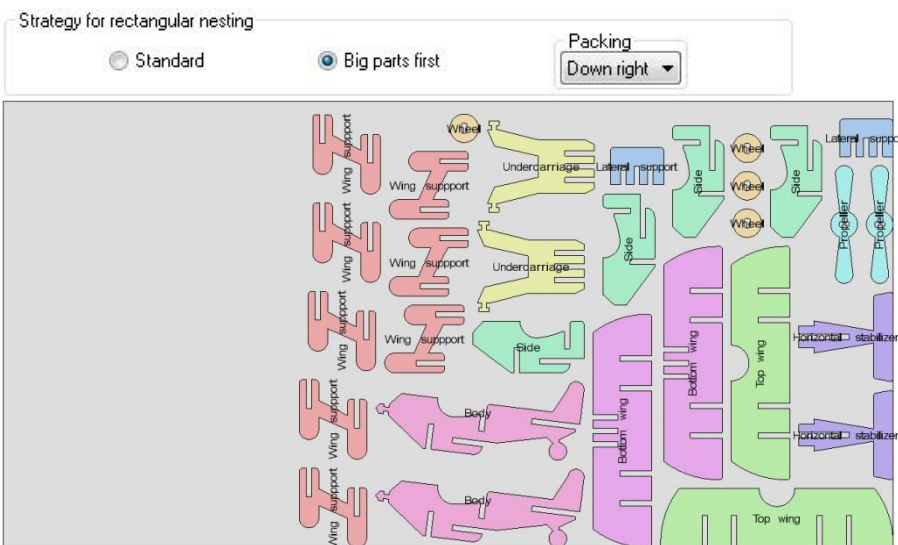
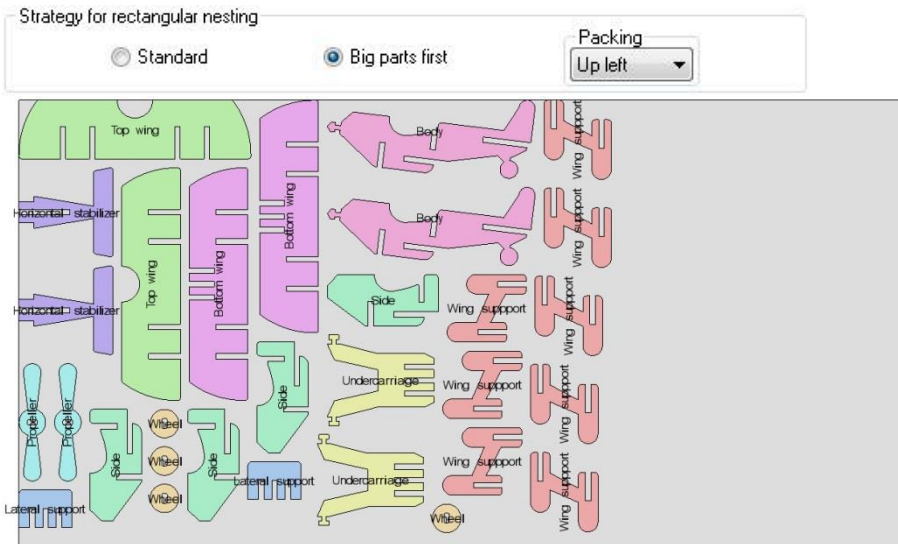
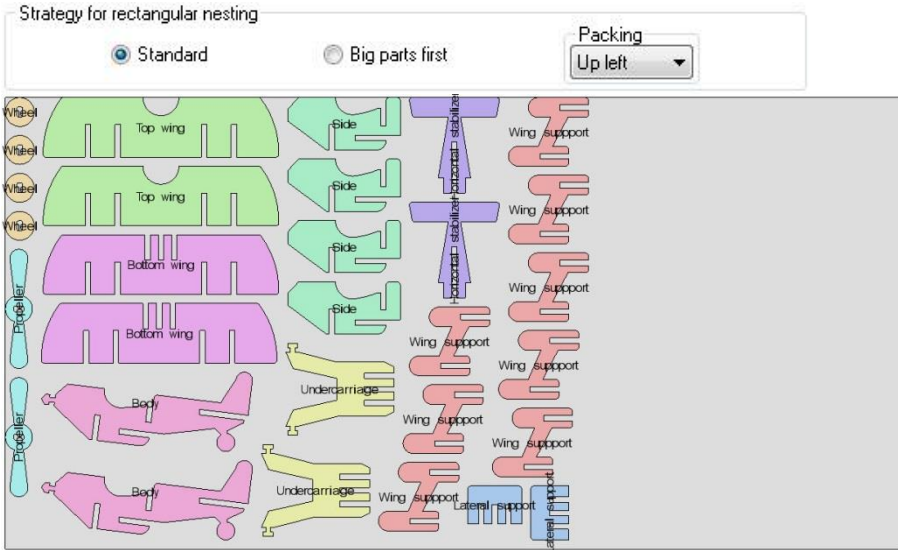


- Move the part and **left-click** to position it.
- Save and close the files.



## Different nesting parameters and results

### Rectangular nesting



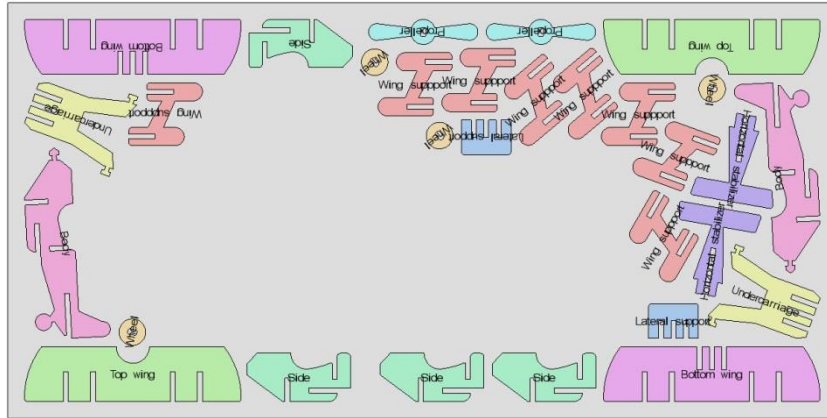
### Complex nesting

Strategy for complex nesting

Enable straight front automatically  
Maximum loss rate: 30.0

Maximum filling  
Packing: Automatic

Straight front tuning  
Packing:  Left  Right  Bottom  Top

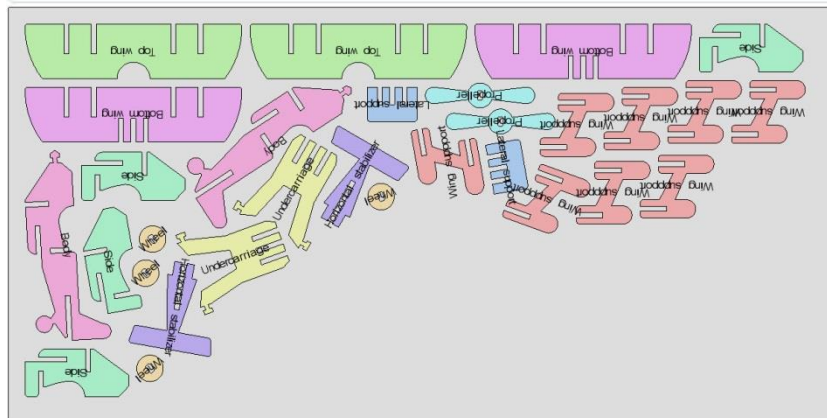


Strategy for complex nesting

Enable straight front automatically  
Maximum loss rate: 30.0

Maximum filling  
Packing: Up left

Straight front tuning  
Packing:  Left  Right  Bottom  Top

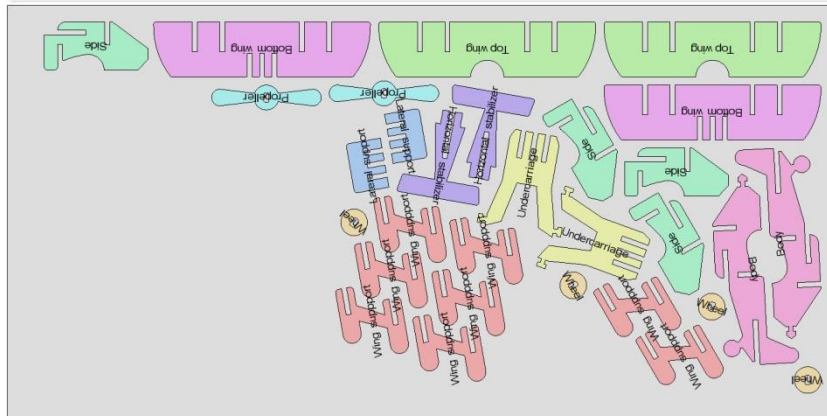


Strategy for complex nesting

Enable straight front automatically  
Maximum loss rate: 30.0

Maximum filling  
Packing: Up right

Straight front tuning  
Packing:  Left  Right  Bottom  Top

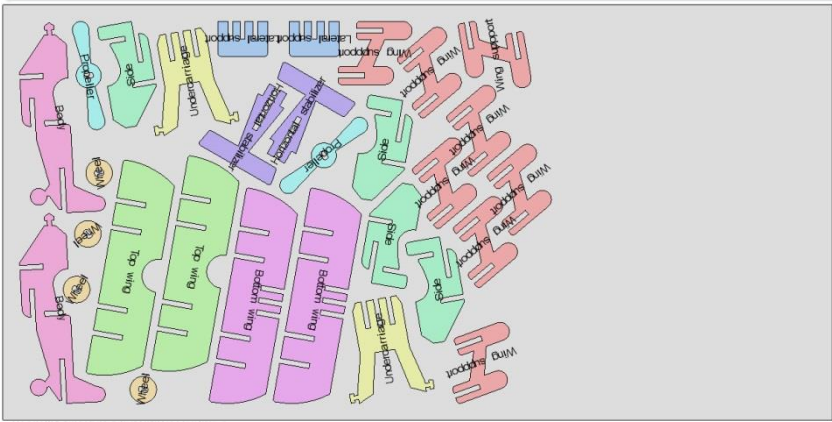


Strategy for complex nesting

Enable straight front automatically  
Maximum loss rate: 30.0

Maximum filling  
Packing: Down right

Straight front tuning  
Packing:  Left  Right  Bottom  Top

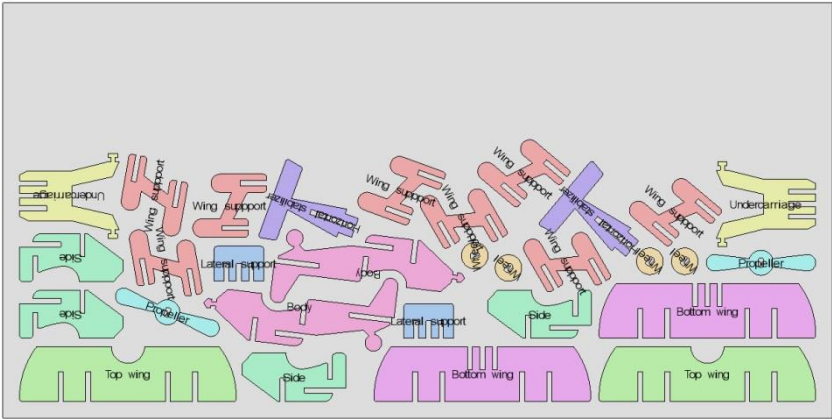


Strategy for complex nesting

Enable straight front automatically  
Maximum loss rate: 30.0

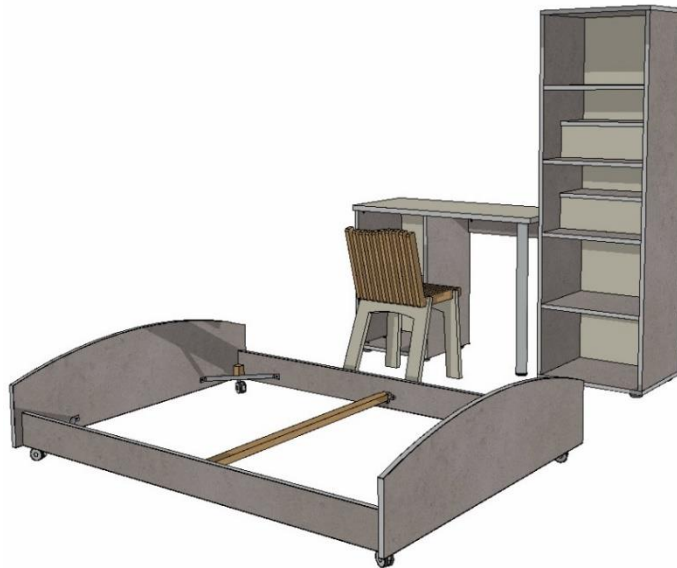
Maximum filling  
Packing: Up right

Straight front tuning  
Packing:  Left  Right  Bottom  Top



## Exercise 2: Creating a project

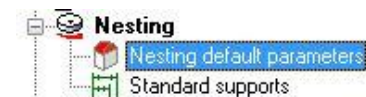
In this exercise, two projects will be nested together.



### Configuring TopSolid'Wood

#### Nesting parameters

- Open the nesting parameters from a Design document using **Tools** > **Options** > **Nesting** > **Nesting default parameters**.



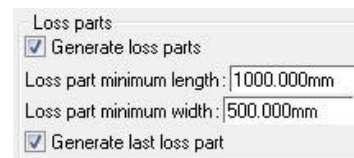
- For the **strategy for complex nesting**, set the following.

- Uncheck **Enable straight front automatically**.
- Set **Straight front tuning** > **Packing**: **Left**.

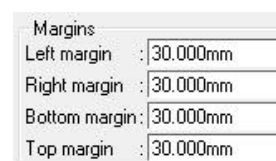


- Enter **Gaps between parts**: *20mm*.
- Check **Generate loss part**:

- **Loss part minimum length**: *100mm*
- **Loss part minimum width**: *500mm*
- Check **Generate last loss part**.

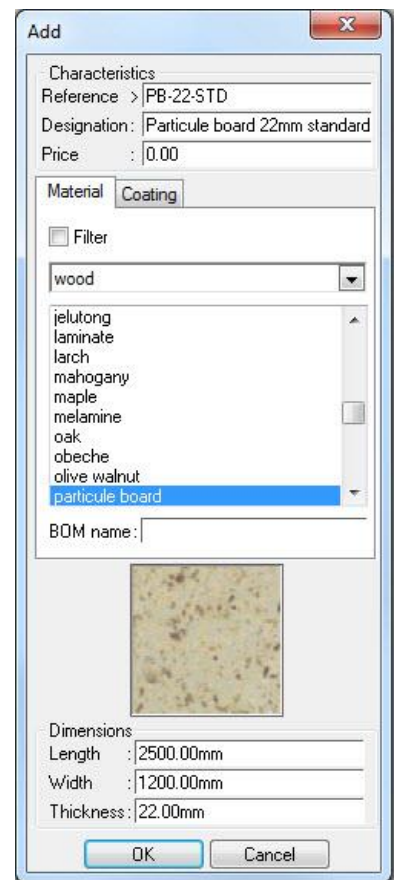
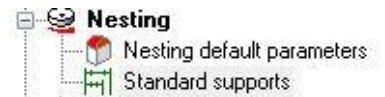


- Set all margins to *30mm*.



### Standard supports

- Open the **Standard supports** configuration.
- Select **Add** to create a new support.
- Create the following support:
  - **Reference:** *PB-22-STD*
  - **Designation:** *Particle board 22mm standard*
  - **Material:** **Wood > Particle board**
  - **Length:** *2500mm*
  - **Width:** *1200mm*
  - **Thickness:** *22mm*
- Validate the support with **OK**.



- Next create the two following supports:

<b>Reference</b>	<i>PB-8-STD</i>	<i>LAM-30</i>
<b>Designation</b>	<i>Particle board 8mm standard</i>	<i>Laminate 30mm</i>
<b>Material</b>	<b>Wood &gt; Particle board</b>	<b>Wood &gt; Laminate</b>
<b>Length</b>	<i>2100mm</i>	<i>2500mm</i>
<b>Width</b>	<i>1100mm</i>	<i>1200mm</i>
<b>Thickness</b>	<i>8mm</i>	<i>30mm</i>

**Note:** To create the second particle board support, you can select the first created support, copy it and modify the copied support.


Reference	Designation	Material	Coating	Dimensions
☞ LAM-30	Laminate 30mm	laminate		2500 x 1200 x 30
☞ PB-22-STD	Particule board 22mm standard	particule board		2500 x 1200 x 22
☞ PB-8-STD	Particule board 8mm standard	particule board		2100 x 1100 x 8

- Validate the options with **OK**.


### Creating the nesting

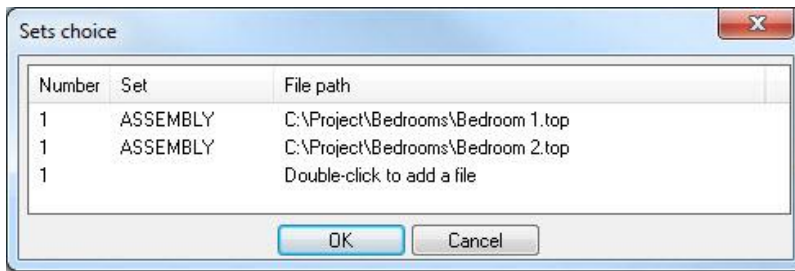
- Create a new Design document.

**Note:** When a nesting is performed on several Design files, it is not necessary to open these files.

- Start the **Wood > Nesting > Automatic nesting** function. 
- Set:
  - **Depth: Flat BOM**
  - **Filter BOM by criteria = No filter**
  - **Update machining face = Yes**



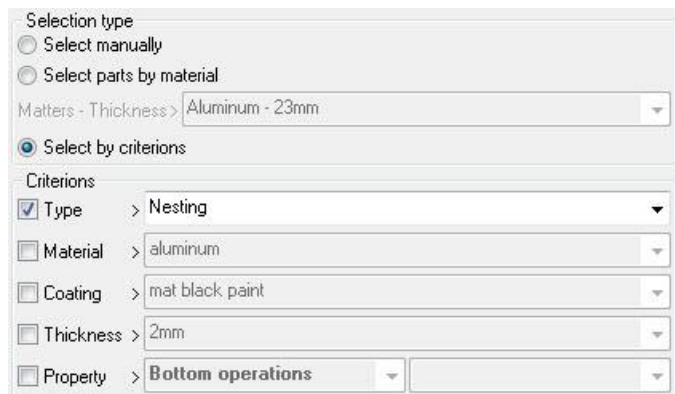
- Select the **Multi-files** option. 
- Double-click on the text **Double-click to add a file**.
- Select the first bedroom file *Bedroom 1.top*.
- Then add the second bedroom file *Bedroom 2.top*.
- For these two assemblies, select the main set **ASSEMBLY** and set a number of 1 copy to produce for each assembly.



- Validate the file selection with **OK**.

A complete bill of material of the two main assemblies in the selected files is calculated.

- Make a **selection by criterions > Type > Nesting**.
- Validate the part selection window with **OK**.




The nesting parameter window opens.

- Select as nesting **Type: Complex**.
- Select as **Nesting: Make one nesting by group of parts**.

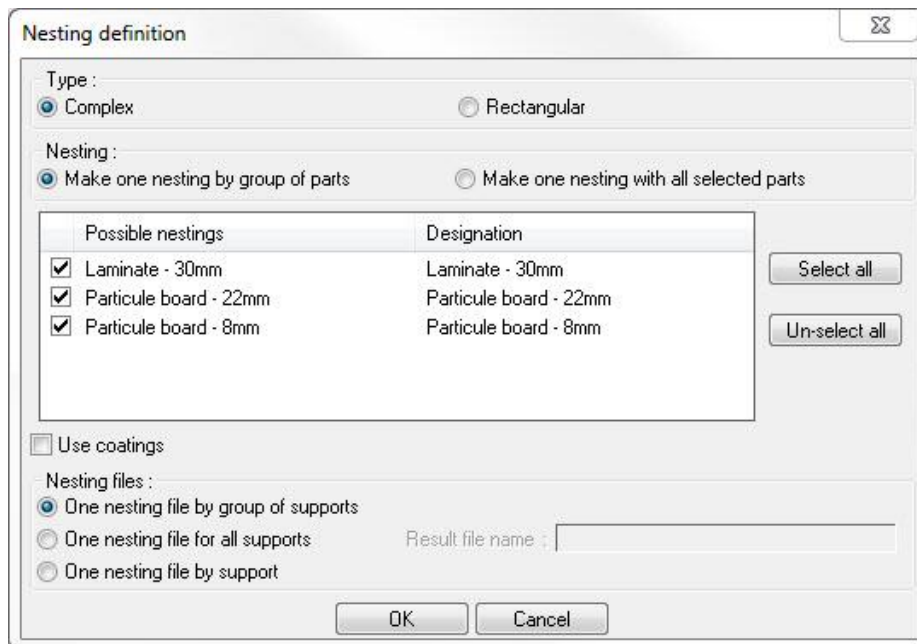
**Note:** For all the selected parts, three nestings are possible (grouped by **Material – Coating – Thickness**):

- **Laminate – 30mm**
- **Particle board – 22mm**
- **Particle board – 8mm**

The **Make one nesting by group of parts** option will allow you to generate one nesting file for each possible nesting.

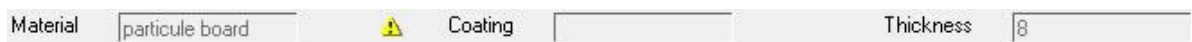
- Select all the possible nestings (they are normally selected by default). 
- Uncheck **Use coatings**.
- Select the **One nesting file by group of supports** option.

**Note:** The **One nesting file by group of supports** option allows you to generate one nesting file for each possible nesting. It is the most suitable option to manage the nestings with different material groups.

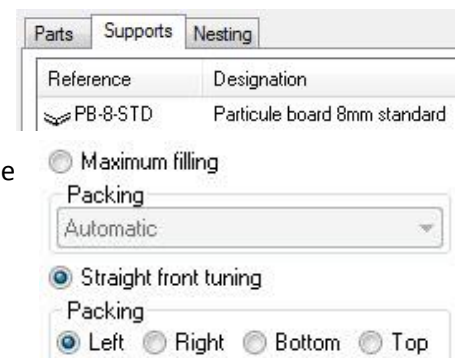


- Validate with **OK** and save the nesting definition file.

The first nesting configuration opens, allowing you to set the parameters for the **particle boards – 8mm**.



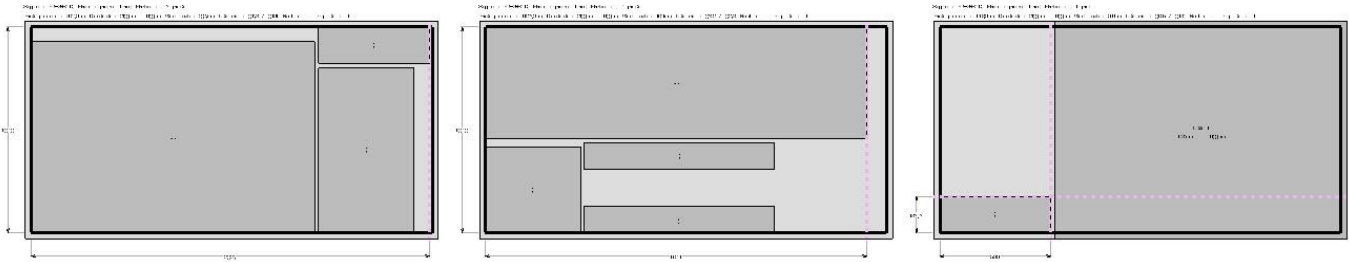
In the **Supports** tab, the support that was created in the options is automatically selected with its material and thickness.



In the **Nesting** tab, all the default parameters are set, but they can be modified.

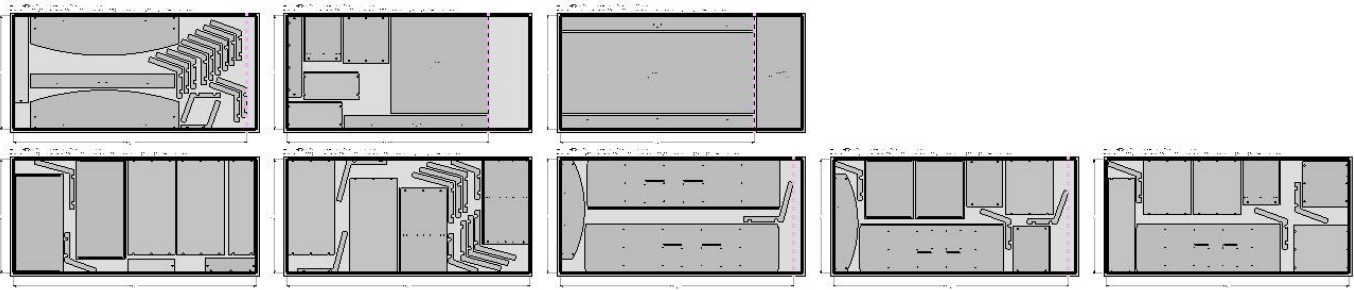
**Note:** The default **TopSolid'Wood** materials do not have the grain orientation information. The default rotation step is therefore 180°.

- Select all parts in the list and change the **step** to 90°.
- Validate with **OK** to generate the nesting.



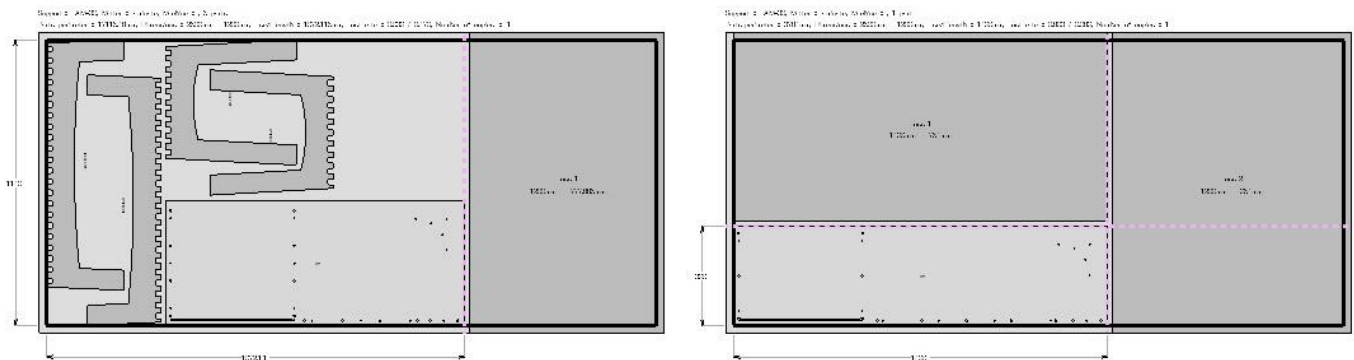
The following window allows you to configure the nesting for the **particle boards – 22mm**.

- Select all parts in the list and change the **step** to 90°.
- Validate with **OK** to generate the nesting.



The last window allows you to configure the nesting for the **laminates – 30mm**.

- Select all parts in the list and change the **step** to 90°.
- Validate with **OK** to generate the nesting.




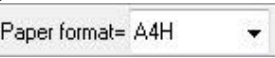

**Note:** The nesting result files are named as follows: **Material\_thickness**. These files are saved in the same folder as the nesting definition file.

- Particule\_board\_8.top
- Particule\_board\_22.top
- Laminate\_30.top



## Creating the draft document

### Support drafts

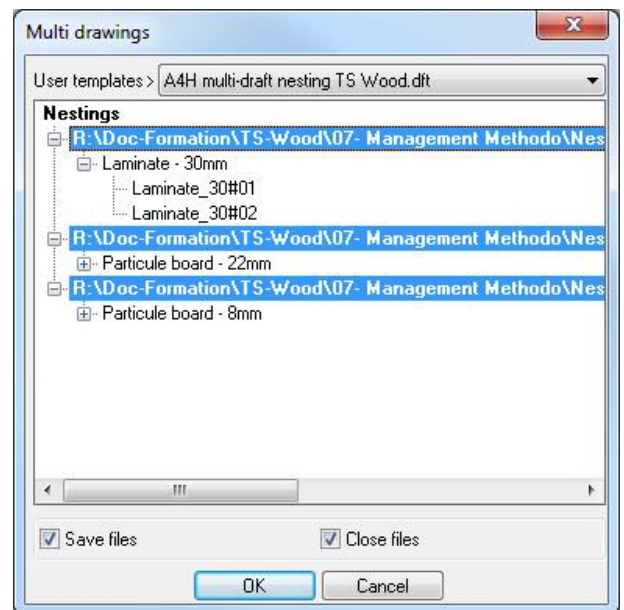
- Start the **Multi-draft nesting** function. 
- Select **Paper format = A4H**. 
- Select the **Explore** option to draft several nesting files. 
- Select the folder where the nesting files were saved and validate with **OK**.

A window opens, allowing you to select the draft template and the nestings to draft.

- Select **User templates > Standard template > A4H multi-draft nesting TS Wood**.

The **Nestings** list displays the **selected nesting files > Different nesting type contained > Support number**.

- Select the three nesting files.
- Check the **Save files** and **Close files** options.




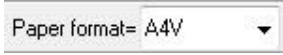

The window for selecting a folder where to save the draft files opens.

- Create a new subfolder *Nesting support drafts* and select it before validating with **OK**.

**Note:** A draft file is created for each nesting file. These file are named as follows: **Material\_thickness** and placed in a subfolder with the same name.

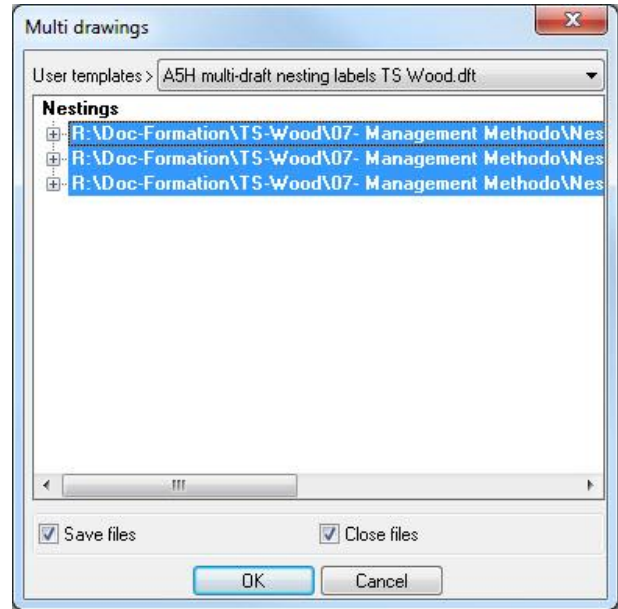


### Label drafts

- Start the **Multi-draft nesting labels** function. 
- Select **Paper format = A4V**. 
- Select **Explore** to draft several nesting files. 
- Select the folder where the nesting files were saved and validate with **OK**.

The window allows you to select the draft template and the nestings to draft.

- Select **User templates > Standard template > A5H multi-draft nesting labels TS Wood**.
- Select the three nesting files.
- Check the **Save files** and **Close files** options.



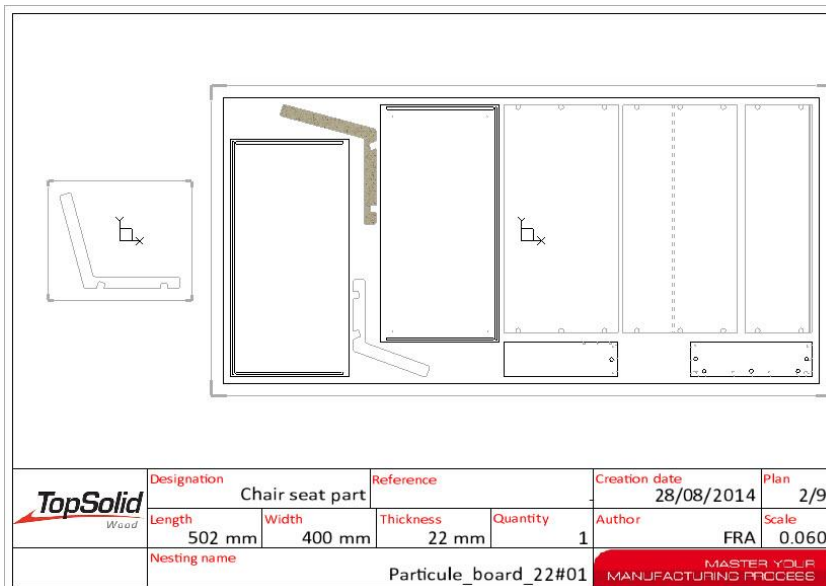
The window for selecting a folder where to save the draft files opens.

- Create a new subfolder *Nesting label drafts* and select it before validating with **OK**.

**Note:** A draft file is created for each nested panel. These files are named as follows: **Material\_Thickness\_SupportNumber** and placed in a subfolder named as follows: **Material\_Thickness**.

- ▶ Particule\_board\_22#01.dft
- ▶ Particule\_board\_22#02.dft
- ▶ Particule\_board\_22#03.dft
- ▶ Particule\_board\_22#04.dft
- ▶ Particule\_board\_22#05.dft
- ▶ Particule\_board\_22#06.dft
- ▶ Particule\_board\_22#07.dft
- ▶ Particule\_board\_22#08.dft

In each label draft file, each part nested in the support has its folio with a simple view, and a view of the part nested in the support.



# Notes

A series of horizontal dotted lines for taking notes.

A series of horizontal dotted lines for taking notes.