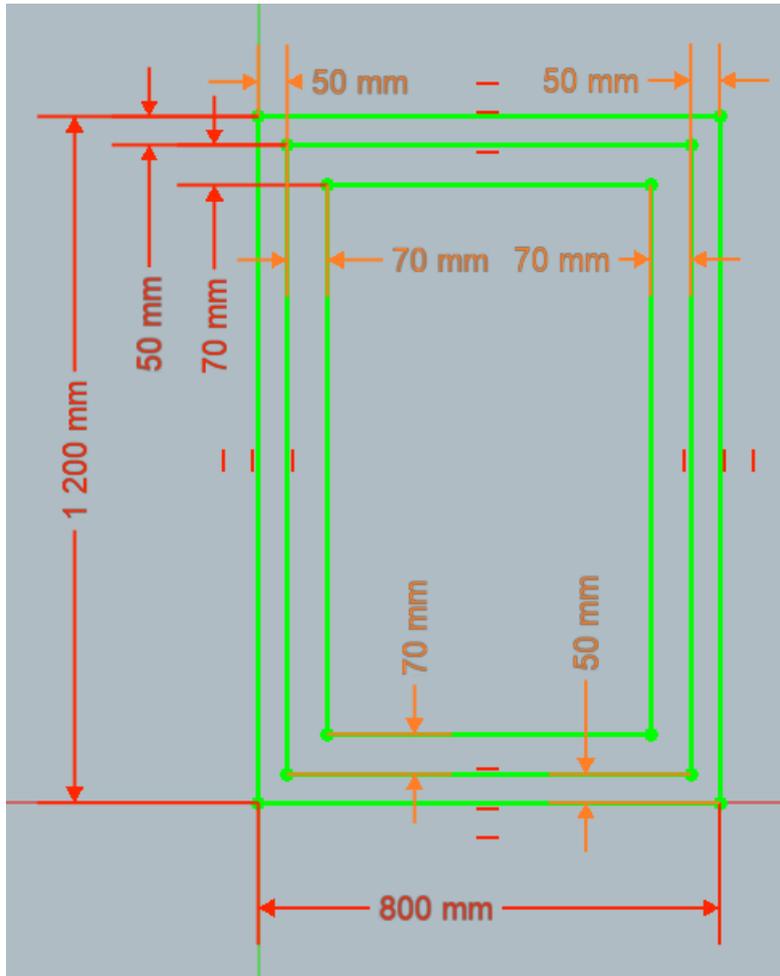# Arch : create a window from sketch

by jpg87

1- Prepare the sketch of the elements of the window

- Go to the **Sketcher WB**.

- Create a new sketch in a vertical plane (XZ for example).

- Build the different closed outlines (Wires) needed to build your window.
  In this simple example only 3 rectangles are needed:

Note 1 : The construction of such a sketch is supposed to be mastered.
The main dimensions are named, in order to easily reproduce identical dimensions, for example :

- **Height** (1400 mm) and **Width** (1000 mm) which will appear in the window settings and be easily changed later if necessary.

- **FrameF** (50 mm) for the width common to all elements of the OuterFrame (**F**ixed frame of the window).

- **FrameO** (70 mm) for the width common to all elements of the InnerFrame (**O**pening frame of the window).

Note 2 :

The lower left vertex of the larger frame must be confused with the origin of the sketch mark so as not to distort the usual placement parameters of the window on its future host wall.
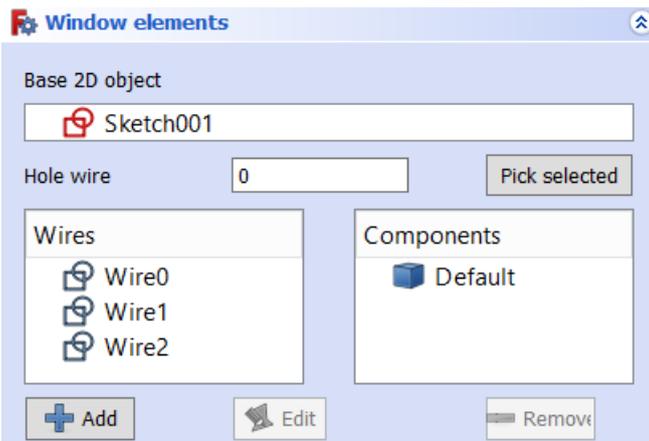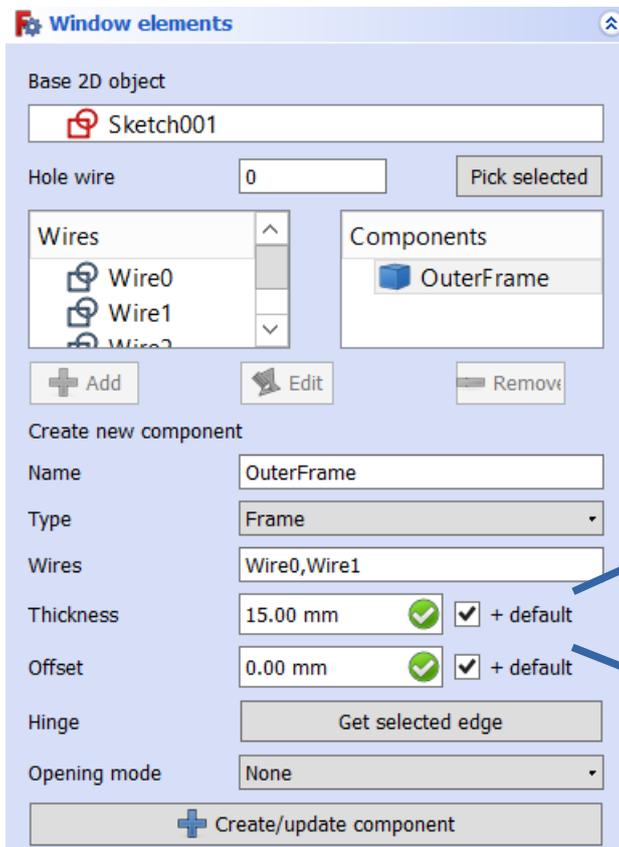
2- Create the window

- Go to **Arch WB**.
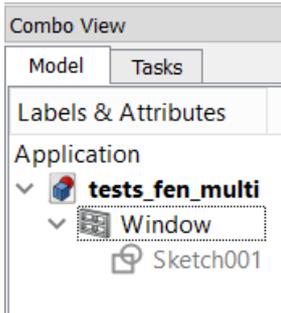
- Select the sketch from which you want to build your window.

- Click on the **Create Window** tool.

- Double click in the tree view on **Window** to edit its parameters.

You get this :

- Select the **Default** component that was created automatically and click **Remove**.

21- Create the outer frame :

- In the Window elements, click **Add**.
- Name the component : **OuterFrame**.
- Select the type: **Frame**.
- Click in the order on the concerned **wires** in the left list. (**Wire0** will correspond at the same time to the hole in the wall).
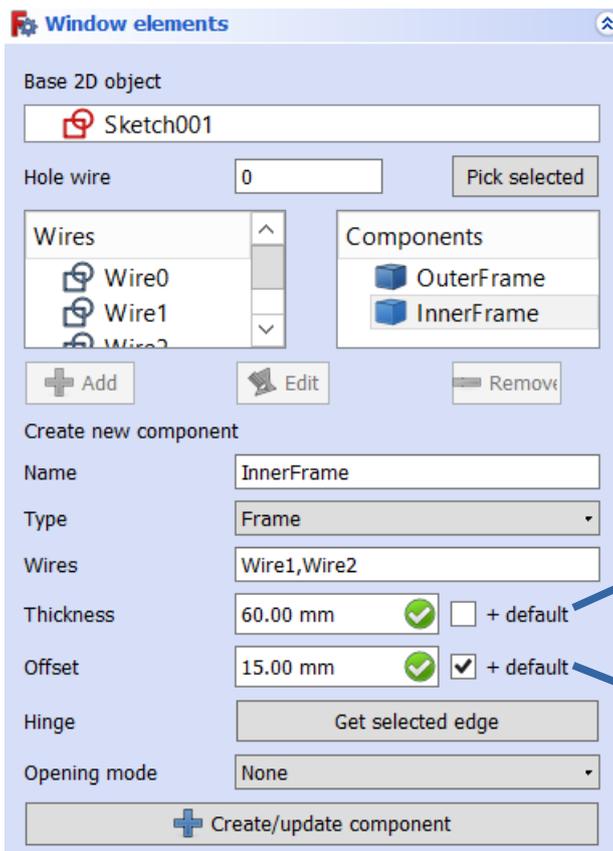
- Set the **Thickness** parameter.

> If this box is checked, the default Frame value of this window will be added to the value entered here.

- Set the **Offset** parameter.

> If this box is checked, the default offset value of this window will be added to the value entered here.

- Click on **Create/update component**.

22- Create the inner frame :

Window elements

Base 2D object
Sketch001

Hole wire: 0   Pick selected

Wires
- Wire0
- Wire1
- Wire2

Components
- OuterFrame
- InnerFrame

Add | Edit | Remove

Create new component

Name	InnerFrame
Type	Frame
Wires	Wire1,Wire2
Thickness	60.00 mm ✓ ☐ + default
Offset	15.00 mm ✓ ☑ + default
Hinge	Get selected edge
Opening mode	None

Create/update component

- In the Window elements, click **Add**.
- Name the component : **InnerFrame**.
- Select the type: **Frame**.
- Click in the order on the concerned **wires** in the left list.
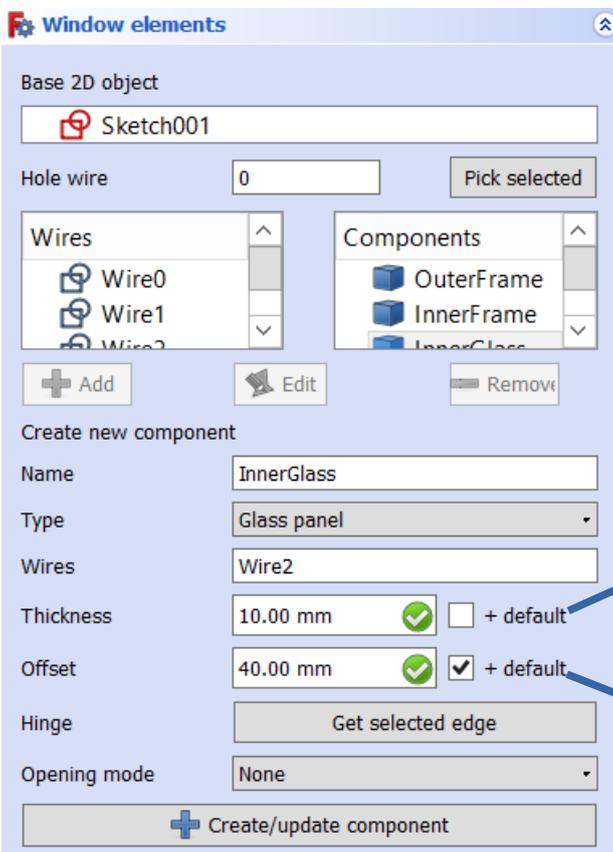
- Set the **Thickness** parameter.

  If this box is checked, the default Frame value of this window will be added to the value entered here.

- Set the **Offset** parameter.

  If this box is checked, the default offset value of this window will be added to the value entered here.

- Click on **Create/update component**.

23- Créer la vitre ou le panneau plein :

Window elements

Base 2D object
Sketch001

Hole wire: 0   Pick selected

Wires
- Wire0
- Wire1
- Wire2

Components
- OuterFrame
- InnerFrame
- InnerGlass

Add | Edit | Remove

Create new component

Name	InnerGlass
Type	Glass panel
Wires	Wire2
Thickness	10.00 mm ✓ ☐ + default
Offset	40.00 mm ✓ ☑ + default
Hinge	Get selected edge
Opening mode	None

Create/update component

- In the Window elements, click **Add**.
- Name the component : **InnerGlass**.
- Select the type: **Glass panel**.
- Click in the order on the concerned **wires** in the left list. (the smallest)

- Set the **Thickness** parameter.

  If this box is checked, the default Frame value of this window will be added to the value entered here.

- Set the **Offset** parameter.

  If this box is checked, the default offset value of this window will be added to the value entered here.

- Click on **Create/update component**.

- When you have finished defining all the components, click **Close**.

3- Define the wall hote

Propriété	Valeur
Standard Co...	
Subtractions	
Tag	
Window	
Area	960000.00 mm^2
Frame	50.00 mm
Height	1200.00 mm
Hole Depth	0.00 mm
Hole Wire	0
Hosts	Wall
Louvre Spac...	0.00 mm
Louvre Width	0.00 mm
> Normal	[0.00 1.00 -0.00]
Offset	90.00 mm
Opening	0
Subvolume	
Symbol Elev...	false
Symbol Plan	false
Width	800.00 mm

Vue \ Données

- Select the **Window** component of the window you just created in the tree.

- In the **Data** tab of the Window Properties, click on the **Hosts** line, click on « **...** » and choose **Wall** which will host the window.

- Adjust the frame thickness by giving a value to **Frame**.

- The **Height** and **Width** values are 0 because they give priority to the values you specified in the sketch. If you specify new values, they will be needed to resize your window.

- The **Offset** value, initially set to 0, will depress the window relative to the outside of the wall.

4- Refine the positioning of the window

- In the tree view, select the **sketch** associated with the window.

- **1** : Go to the **Data** tab at the bottom left of the screen and look for the **Base** part in the properties.

- **2 – 3** : You must set the values in X, Y, Z of the position of the window in the wall.

- Attention : one of these values corresponds to the position of the host wall (here y = 0 is the position of the front wall that receives the window.

- To update the hole in the wall, right-click **Wall** in the tree view, then **Mark to recalculate**, and then click **Recalculate**.

- **Note also that in the Sketch area, you will find the dimensions of the hole in the wall that you can correct if necessary.**

5- Result
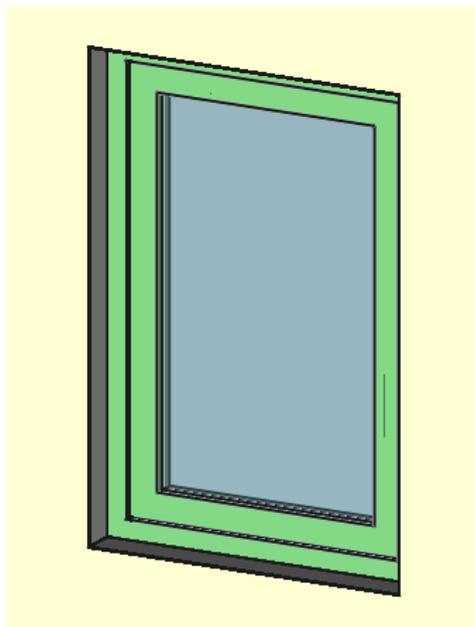
Another example :

Window with four independent opening elements :
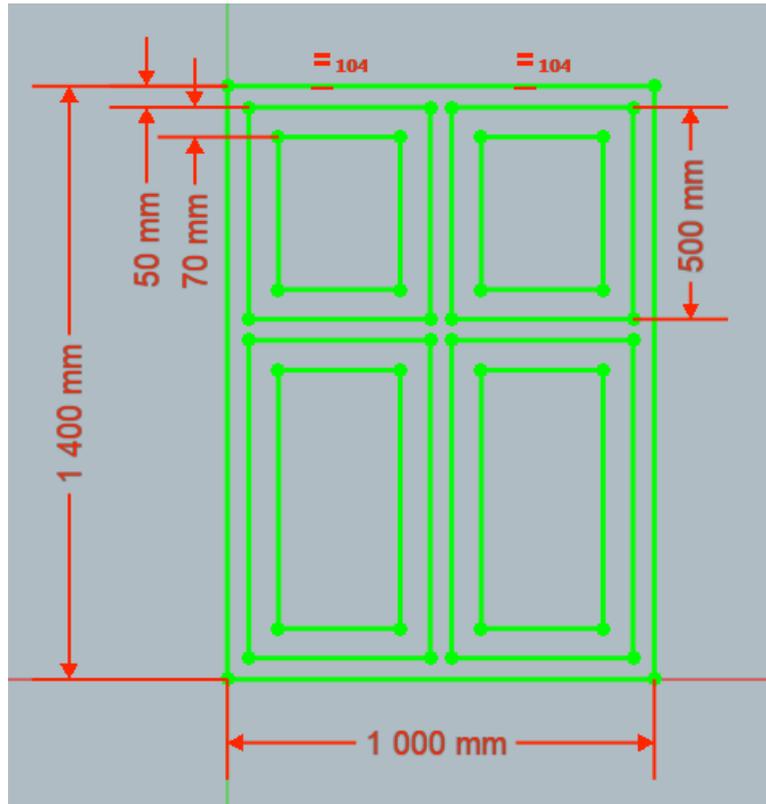
Note : The construction of such a sketch is supposed to be mastered.

All the constraints of verticality, horizontality, vertical and horizontal alignments of the frames have been hidden.

Only the named dimensions are shown (except the 500 mm one).

Result