

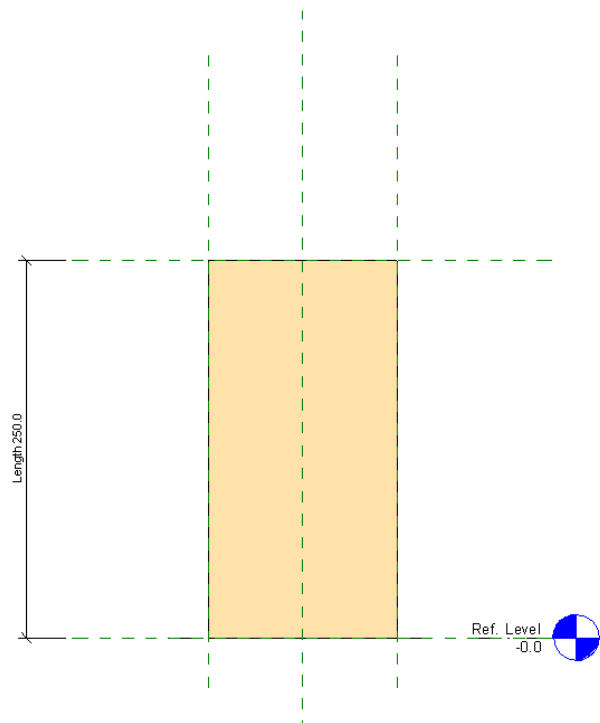
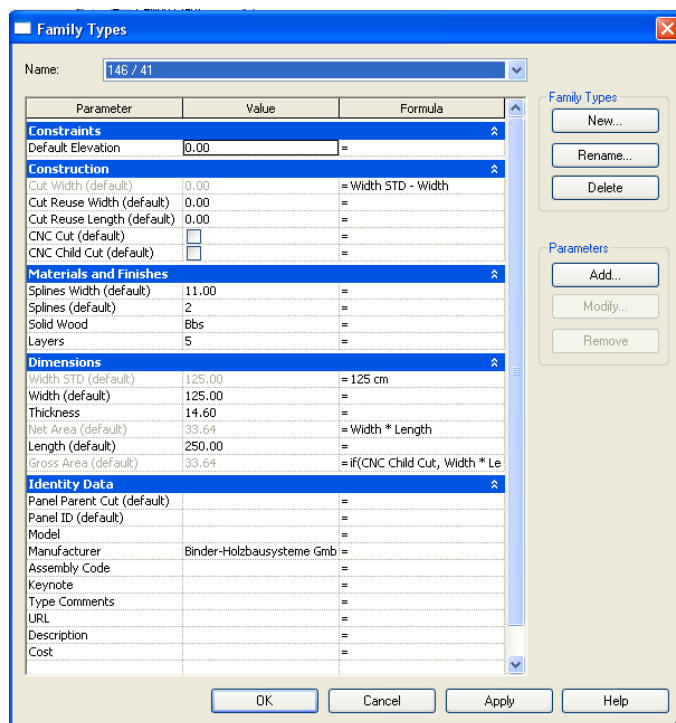
## Using BBS Autodesk Revit families

### Loading the right BBS family into your project

First download the BBS families from the webpage <http://www.holzbuild.com/08revitsource/bbs-revit-families.html> into your Revit Library. The BBS families are created as “Generic Models”.

NOTE: Each family contains the Types for each available panel thickness. The Type name indicates: thickness of the panel / thickness of the outer layers (in mm).

### The panel properties



The **instance parameters** are:

Cut Reuse (Width and length): dimensions of cut-out being used for another panel

CNC Cut: check this field if the cut-out is being used to make another panel

CNC Child Cut: check this field if this is the cut-out panel being used

Splines Width: default value is 11.0 cm

Splines: default number of splines associated with each panel type (thickness)

Width: default and maximum value is 125.0 cm

Length: this can be adjusted to any length (suggested maximum is 38')

Panel parent Cut: indicate parent panel ID (optional for CNC cut-outs)

Panel ID: this is to identify the panel (allows duplicates)

Comments: optional field

Mark: a unique number for each panel (normally this would also indicate sequence of assembly)

The **type parameters** are:

Solid Wood (Material): default is “bbs”

Layers: default number of layers associated with the panel thickness

Thickness: original value in mm already entered for each type. When both panel sides are in quality A or B (visible), the actual thickness should be reduced by 2 mm.

Model: this field can be used to indicate the wood species and quality.

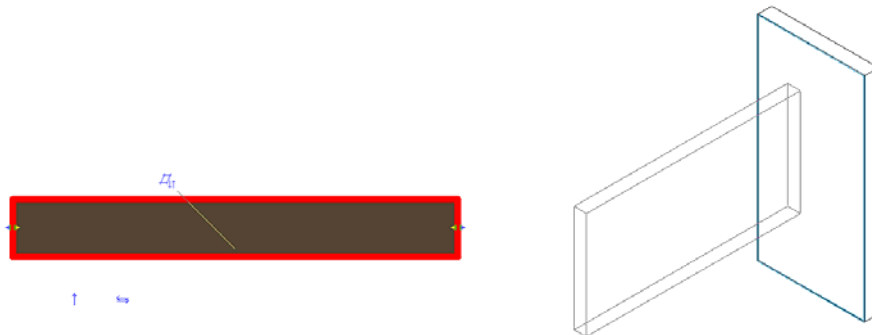
Wood Species: F (Spruce) – L (Larch) – D (Douglas) – Z (Arolla Pine) – W (White Fir)

Quality grades: A – B (visible) or C (non visible)

Example: LA-FC (one side Larch “A” – other side Spruce “C”)

### Inserting a panel in the project:

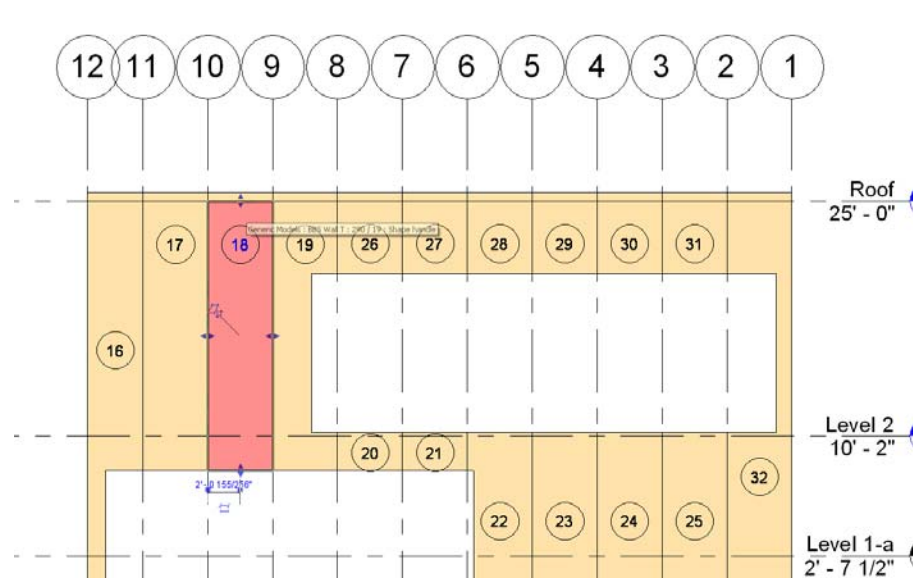
BBS panels are created as “plane based models”. When you drag a panel from the Generic Model Tab into the project you need to select a Work Plane. You can place a panel on a Level Plane or onto another panel surface.



NOTE: Click on the “Rotate after placement” box if you need to re-orient the panel after it’s placed. Note also the controls available to flip the panel surface and direction from the work plane. The placement side is always the base work plane of the panel.

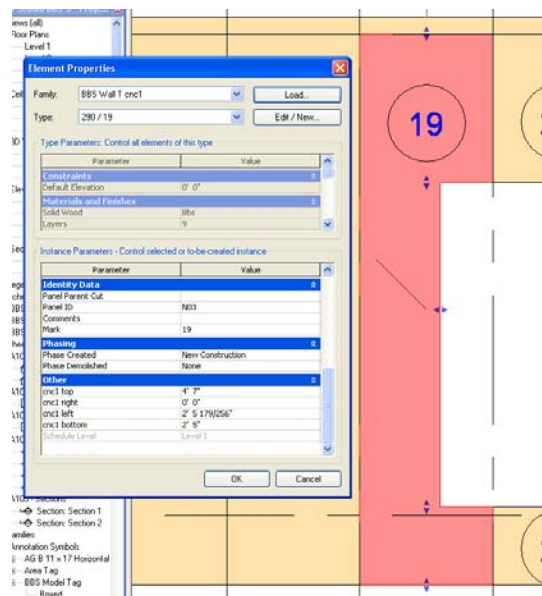
## Adjusting the panel dimensions:

Once you insert a panel into your model, you can adjust its position and size by simply using the “align” tool and by stretching the panel anchors.

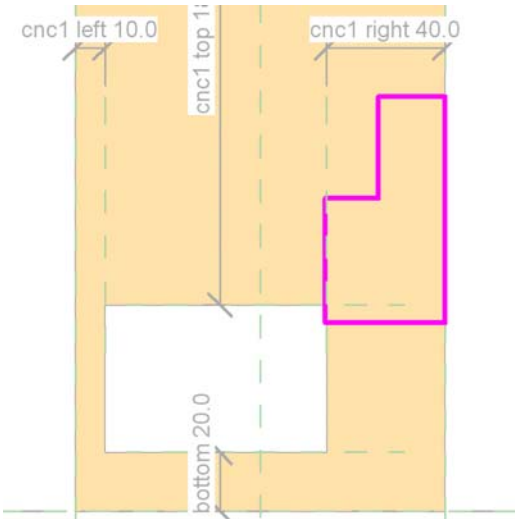


## Creating a CNC cut:

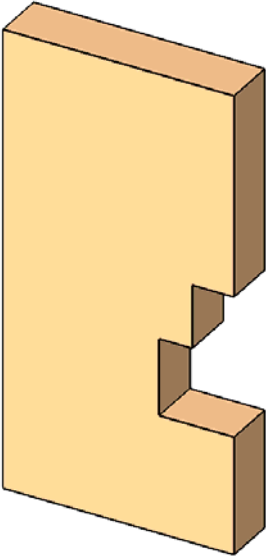
Wall panel families are preloaded with one or two CNC cuts. You can use these families and adjust the CNC cut position and size. Note that to create the cut shown below, you have to manually enter “0” in the “cnc1 right” instance parameter.



If you need to create more complex cuts, you can always edit the family, modify the void extrusion and save with a new name. Open the family and select the cut extrusion to edit, unlock and modify the cut profile:



Finish Sketch, save the modified family with a new name and load into the project.



## Material Takeoff and exporting data:

When creating a new material takeoff, select from “generic models.”

BBS Export Data															
Family	Type	Model	Level	Panel ID	Mark	Thickness	Width	Length	Net Area	Gross Area	Material Volume	Gross Volume	Gross m3	Splines	Splines Width
BBS Floor	209 / 41	FA-FN	Level 2	F01	43	0' - 8"	4' - 1"	4' - 6 1/2"	18.7	18.7	12.8	12.8	0.36	2	0' - 4 1/2"
BBS Floor	209 / 41	FA-FN	Level 2	F03	45	0' - 8"	4' - 1"	18' - 0 1/2"	74.0	74.0	50.8	50.8	1.44	2	0' - 4 1/2"
BBS Floor	209 / 41	FA-FN	Level 2	F03	46	0' - 8"	4' - 1"	18' - 0 1/2"	74.0	74.0	50.8	50.8	1.44	2	0' - 4 1/2"
BBS Floor	209 / 41	FA-FN	Level 2	F03	47	0' - 8"	4' - 1"	18' - 0 1/2"	74.0	74.0	50.8	50.8	1.44	2	0' - 4 1/2"
BBS Floor	209 / 41	FA-FN	Level 2	F03	48	0' - 8"	4' - 1"	18' - 0 1/2"	74.0	74.0	50.8	50.8	1.44	2	0' - 4 1/2"
BBS Floor	209 / 41	FA-FN	Level 2	F03	49	0' - 8"	4' - 1"	18' - 0 1/2"	74.0	74.0	50.8	50.8	1.44	2	0' - 4 1/2"
BBS Floor	209 / 41	FA-FN	Level 2	F03	50	0' - 8"	4' - 1"	18' - 0 1/2"	74.0	74.0	50.8	50.8	1.44	2	0' - 4 1/2"
BBS Floor	209 / 41	FA-FN	Level 2	F03	51	0' - 8"	4' - 1"	18' - 0 1/2"	74.0	74.0	50.8	50.8	1.44	2	0' - 4 1/2"
BBS Floor	209 / 41	FA-FN	Level 2	F03	52	0' - 8"	4' - 1"	18' - 0 1/2"	74.0	74.0	50.8	50.8	1.44	2	0' - 4 1/2"
BBS Floor	209 / 41	FA-FN	Level 2	F04	53	0' - 8"	1' - 7"	18' - 0 1/2"	28.6	74.0	19.6	19.6	0.56	2	0' - 4 1/2"
BBS Floor cnc1	209 / 41	FA-FN	Level 2	F02	44	0' - 8"	4' - 1"	18' - 0 1/2"	74.0	74.0	48.2	50.8	1.44	2	0' - 4 1/2"
BBS Roof	161 / 41	FA-FN	Roof	R01	54	0' - 6 1/2"	4' - 1"	20' - 0"	82.0	82.0	43.3	43.3	1.23	2	0' - 4 1/2"
BBS Roof	161 / 41	FA-FN	Roof	R02	55	0' - 6 1/2"	4' - 1"	20' - 0"	82.0	82.0	43.3	43.3	1.23	2	0' - 4 1/2"
BBS Roof	161 / 41	FA-FN	Roof	R02	56	0' - 6 1/2"	4' - 1"	20' - 0"	82.0	82.0	43.3	43.3	1.23	2	0' - 4 1/2"
BBS Roof	161 / 41	FA-FN	Roof	R02	57	0' - 6 1/2"	4' - 1"	20' - 0"	82.0	82.0	43.3	43.3	1.23	2	0' - 4 1/2"
BBS Roof	161 / 41	FA-FN	Roof	R02	58	0' - 6 1/2"	4' - 1"	20' - 0"	82.0	82.0	43.3	43.3	1.23	2	0' - 4 1/2"
BBS Roof	161 / 41	FA-FN	Roof	R02	59	0' - 6 1/2"	4' - 1"	20' - 0"	82.0	82.0	43.3	43.3	1.23	2	0' - 4 1/2"
BBS Roof	161 / 41	FA-FN	Roof	R02	60	0' - 6 1/2"	4' - 1"	20' - 0"	82.0	82.0	43.3	43.3	1.23	2	0' - 4 1/2"
BBS Roof	161 / 41	FA-FN	Roof	R02	61	0' - 6 1/2"	4' - 1"	20' - 0"	82.0	82.0	43.3	43.3	1.23	2	0' - 4 1/2"
BBS Roof	161 / 41	FA-FN	Roof	R02	62	0' - 6 1/2"	4' - 1"	20' - 0"	82.0	82.0	43.3	43.3	1.23	2	0' - 4 1/2"

Adjust the “project units” under Settings to display the results in the right format.

NOTE: The “Net Area” indicates the total panel area (width x length) minus cut-outs that are being used for other panels. The “Gross Area” indicates the total panel area used to calculate cost. The field “Volume” indicates the net material volume (subtracting all cuts); this data can be useful to calculate the actual panel weight.