

TRUSTILE REVIT DOOR FAMILIES

Overview

TruStile Revit door families are built to permit easy configuration of door elevations (panels) to match the options available in our online configurator. There are host door families that define door behavior, like single and double doors, and separate door panel families. A single swing host door family can potentially host any of the eligible panel types such as a TS3000.

Our Revit families also provide features that are not available in stock families from Autodesk. This is a summary of key features for TruStile Revit door families.

- Door Elevations
 - 11 Sticking and Six panel options
 - Top panel or all panels can be assigned to Glazing
 - 3D and 2D Swing display settings, angle and visibility
 - Customizable rail and stile dimensions
- Materials
 - 14 wood species
 - MDF paint-grade door
 - Two glass options – clear and frosted
- Height, width and thickness of door
 - Uneven panel option - double doors
 - Frame matching wall thickness option
 - Rough in dimensions option
- Detail Level
 - Coarse - sticking and dashed elevation lines hidden
 - Medium - dashed elevation lines appear
 - Fine - sticking detail shown
- Nested Frame Family - Permits exchanging door frame families.
- Clash Detection - Visible option for seeing clashes as well as being detected by Revit Interference Checking or Navisworks Clash Detective.
- Schedules - pre-configured examples in a sample project file
- Shared Parameters - Resource file to make it easier for doors from other sources to schedule with TruStile doors.

When you choose TruStile doors for your project we've got everything you'll need to select, place, schedule and render them.

Using Doors

Downloading Doors

You'll need to download a door that matches the behavior you need, for example like one of these.

- Door-TruStile-Double-Swing.rfa

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- Door-TruStile-Single-Swing.rfa

Each door family will include the default panels (TS3000 and FL100 series). For now, we only offer these two but will soon roll out 30-40 additional door elevation types (panels).

To add these to your Revit project:

- On the Insert ribbon > click Load Family
- Browse to the folder where you save your downloaded files
- Select the family or families
- Click Open

Placing a Door

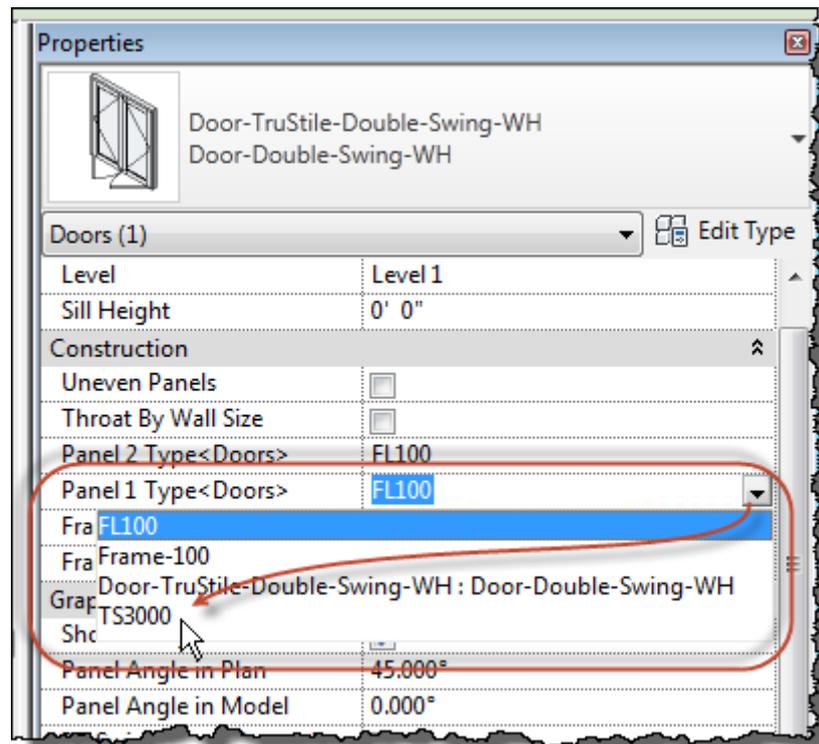
The placement of TruStile door families is identical to any other Revit door family except that host doors, door frame and door panels are listed alongside one another. This is because they share the door category to keep all door subcategories in sync. To place a door you choose the door “behaviour”, single or double for example. Once the door is placed in a wall you can reconsider the door elevation (panel) assignment as well as many other features.

Choosing a Panel

When you first place a door (single or double swing) the TS3000 door elevation (panel) is used Roman Ogee sticking and the A_Raised panel. When additional door elevations become available on our website you will need to download them separately. Once these are loaded into your project you can swap one for another. In the following example we will swap a TS3000 for the FL100.

- Select a door family (double door shown)
- On the Properties Palette > Click on Panel 1 Type <Doors>
- Choose FL100 from list
- Click Apply (Properties Palette or move your cursor back into the drawing area)
- The panel will change.

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Managing Materials

We have provided corresponding materials to support rendering TruStile doors in your projects. You can assign any of the following: (14 wood species, paint grade MDF and 2 glass materials). The default selection is paint grade MDF. All the materials are stored in the door family (host) and are assigned to door elevations (panels) from the host. It is not necessary or possible to assign materials to the door elevations (panels) themselves.

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Name	Category
081400-TruStile-Panel-Glass-Clear	Glass
081400-TruStile-Panel-Glass-Frosted-White	Glass
081400-TruStile-Panel-Wood-Cherry	Wood
081400-TruStile-Panel-Wood-Clear Pine	Wood
081400-TruStile-Panel-Wood-Douglas Fir	Wood
081400-TruStile-Panel-Wood-European Beech	Wood
081400-TruStile-Panel-Wood-Hickory	Wood
081400-TruStile-Panel-Wood-Knotty Elder	Wood
081400-TruStile-Panel-Wood-Knotty Pine	Wood
081400-TruStile-Panel-Wood-Mahogany	Wood
081400-TruStile-Panel-Wood-Maple	Wood
081400-TruStile-Panel-Wood-MDF	Wood
081400-TruStile-Panel-Wood-Poplar	Wood
081400-TruStile-Panel-Wood-Red Oak	Wood
081400-TruStile-Panel-Wood-Select Alder	Wood
081400-TruStile-Panel-Wood-Walnut	Wood
081400-TruStile-Panel-Wood-White Oak	Wood

Managing Door Elevations (Panels)

If we take the TS3000 panel as an example, it offers many sticking (11) and panel (six) choices. The default style you get when you download the TS3000 door elevation (panel) with Ogee sticking and A_Raised panel.

Door Elevation Configuration (panel types)

If you want to use additional configurations for TS3000 you need to create additional Types (Revit term) which is a typical Revit family task. You can follow these steps to create additional types which will let you assign different sticking, panel and dimensions to each.

- Expand the Project Browser until you can see TS3000 under category: Doors
- Double Click on TS3000
- In the Type Properties dialog click Duplicate
- Enter a new name, for example TS3000-1
- Choose different sticking and panel options and if necessary rail and stile dimensions.
- This new panel will be available for any door that you choose to use it in.

Sticking Options (Layers Group)

The Groups (blue band in the image below separating parameters) we can assign parameters to be listed under are limited to a pre-set list by Autodesk. We chose the Layers Group for Sticking Options to segregate them from other parameters. We can't create our own Groups yet. Each check box below matches the options available on our Configurator, choose only one.

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Construction	
Construction Type	
Function	
Layers	
Traditional	<input type="checkbox"/>
Square Stick	<input type="checkbox"/>
Quirk Molding	<input type="checkbox"/>
Quarter Round	<input type="checkbox"/>
Quarter Bead	<input type="checkbox"/>
One Step	<input type="checkbox"/>
Ogee	<input checked="" type="checkbox"/>
Low Profile	<input type="checkbox"/>
Bolection Molding	<input type="checkbox"/>
Big Bolection Molding	<input type="checkbox"/>
Bevel	<input type="checkbox"/>

- Construction Type - Built in parameter, not assigned.
- Function - Built in parameter, it can only be assigned to either Exterior or Interior.

Dimensions

Dimensions	
Stile Width Latch Side	0' 5"
Stile Width Hinge Side	0' 5"
Stile Height Top	0' 5"
Stile Height Intermediate	0' 3 1/2"
Stile Height Bottom	0' 8 1/4"
Panel Body Sticking Inset	0' 1 1/2"
Panel Body Inset	0' 3 1/2"
Inner Panel Thickness (Outer)	0' 0 7/8"
Inner Panel Thickness	0' 0 1/2"
Glazing Thickness	0' 0"
Rough Width	
Rough Height	
Thickness	
Width	
Height	

- Stile Width Latch Side - Set the width of the latch side stile (usually the same as hinge).
- Stile Width Hinge Side - Set the width of the hinge side stile (usually the same as latch).
- Stile Height Top - Set the height of the top rail/stile.
- Stile Height Intermediate - Set the height of the intermediate rail/stile.
- Stile Height Bottom - Set the height of the bottom rail/stile.
- Panel Body Sticking Inset - Set where the sticking begins.
- Panel Body Inset - Set where the panel body begins.
- Inner Panel Thickness (Outer) - Set the outer panel thickness.
- Inner Panel Thickness - Set the inner panel thickness.
- Glazing Thickness - Built-in parameter, not used.

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- Rough Width - Built-in parameter, not used.
- Rough Height - Built-in parameter, not used.
- Thickness - Built-in parameter, not used. This value is assigned in the host door family.
- Width - Built-in parameter, not used. This value is assigned in the host door family.
- Height - Built-in parameter, not used. This value is assigned in the host door family.

Identity Data Group

Identity Data	
Keynote	
Model	TS3000
Manufacturer	TruStile
Type Comments	
URL	
Description	Door Elevation TS3000
Assembly Description	
Assembly Code	
Type Mark	10
Fire Rating	
Cost	
OmniClass Number	
OmniClass Title	

- Model - Assigned to match the Door Elevation type (panel).
- Manufacturer - Preset to TruStile
- Description - Preset to Door Elevation XX####, it is used to filter door panels from doors in a panel only schedule. The criteria “contains” “Door Panels” is used.
- All other parameters are built-in and available to all Revit families. They can be used at your discretion.

Panel Options (General Group)

Each panel that is available is listed below, choose only one at a time.

General	
F_Senior Bevel	<input type="checkbox"/>
E_Senior Raised	<input type="checkbox"/>
D_Double Hip	<input type="checkbox"/>
C_Flat	<input type="checkbox"/>
B_Scoop	<input type="checkbox"/>
A_Raised	<input checked="" type="checkbox"/>

TruStile Door Schedule

A preformatted door schedule and panel schedule are available as a download too. Once you download the schedule project file (a Revit project file) you can use the Insert from File feature to extract one or both schedule and add it to your own project. A related file of Shared Parameters is also available to make it easier to match other door content with TruStile doors.

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Door Properties Overview

The following information provides greater insight for each parameter that is available to control each TruStile door. These parameters are the Instance (unique) parameters for a door. The nested panel families are controlled by these parent parameters.

Constraints Group

Constraints	
Level	Level 1
Sill Height	0' 0"

- Level - Built in parameter for doors, reassign a door to a different level if necessary
- Sill Height - Built in parameter for doors, will move the door relative to the level assignment.

Construction Group

Construction	
Uneven Panels	<input type="checkbox"/>
Throat By Wall Size	<input checked="" type="checkbox"/>
Panel 2 Type<Doors>	TS3000
Panel 1 Type<Doors>	TS3000
Frame Type Selector<Doors>	Frame-100
Frame Type	

- Uneven Panels - The value for parameter *Panel 1 Width* is used when *Uneven Panels* is checked and the value for parameter *Panel 2 Width Manual* is ignored. When unchecked the values for *Panel 1 Width* and *Panel 2 Width Manual* are added together.
- Throat By Wall Size - Checked will cause frame to match the thickness of the host wall. Un-checked will use the parameter value for *Throat Depth Manual* found under the Dimensions group
- Panel 2 Type <Doors> - Choose the second panel here (in a plan view it is the panel on the right), only relevant for multi-panel doors.
- Panel 1 Type<Doors> - Choose the first panel here (in a plan panel it is the panel on the left)
- Frame Type Selector<Doors> - Choose the frame type here
- Frame Type (built in parameter, not used)

Graphics Group

Graphics	
Show Swing in Views	<input checked="" type="checkbox"/>
Panel Angle in Plan	90.000°
Panel Angle in Model	120.000°
3D Swing Space Protection	<input type="checkbox"/>

- Show Swing in Views - Turns off the display of swing lines in plans and other views.
- Panel Angel in Plan - Permits changing the swing angle shown in plan views
- Panel Angle in Model - Permits opening/closing the 3D panel

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- 3D Swing Space Protection - Displays a collision solid that matches the dimensions of the panel and swing. Clash detection will find the solid regardless but this option allows the user to see the solid clash element.

Materials and Finishes Group

Materials and Finishes	
Panel Finish Material Panel 2	081400-TruStile-Panel-Wood-MDF
Panel Finish Material	081400-TruStile-Panel-Wood-MDF
Inner Panel Finish Material Top Panel 2	081400-TruStile-Panel-Wood-MDF
Inner Panel Finish Material Top	081400-TruStile-Panel-Wood-MDF
Inner Panel Finish Material Panel 2	081400-TruStile-Panel-Wood-MDF
Inner Panel Finish Material	081400-TruStile-Panel-Wood-MDF
Frame Finish Material	081400-TruStile-Panel-Wood-MDF
Frame Material	
Finish	

- Panel Finish Material Panel 2 - Assign the material for the rails and stiles for Panel 2
- Panel Finish Material - Assign the material for the rails and stiles for Panel 1.
- Inner Panel Finish Material Top Panel 2 - Assign the material for the top most panel separately for Panel 2, for example when it is glazing.
- Inner Panel Finish Material Top - Assign the material for the top most panel separately for Panel 1, for example when it is glazing.
- Inner Panel Finish Material Panel 2 - Assign the material for the lower panels separately from the top panel for Panel 2.
- Inner Panel Finish Material - Assign the material for the lower panels separately from the top panel for Panel 1.
- Frame Finish Material - Assign the material for the frame
- Frame Material - Revit Stock Parameter, not used.
- Finish - Revit Stock Parameter, not used.

Dimensions Group

Dimensions	
Throat Offset Interior	0' 0 1/2"
Throat Offset Exterior	0' 0"
Throat Depth Manual	0' 5"
Panel Thickness	0' 1 3/4"
Panel Height	7' 0"
Panel 2 Width Manual	2' 0"
Panel 1 Width	3' 4"
Host Push Side Inset Manual	2' 0"

- Throat Offset Interior - Use this to add more material depth to the frame beyond the exterior face of the host wall, if desired.
- Throat Offset Exterior - Use this to add more material depth to the frame beyond the interior face of the host wall, if desired.

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- Throat Depth Manual - Defines how deep the frame shall be if the parameter *Throat by Wall Size* is not checked.
- Panel Thickness - Assign the desired panel thickness.
- Panel Height - Assign the desired panel height
- Panel 2 Width Manual - For uneven panels specify the smaller panel here.
- Panel 1 Width - For equal panel sizes specify the panel width here. When the parameter *Unequal Panels* is used this parameter drives Panel 1 Width and Panel 2 Width is added to determine overall width.
- Host Push Side Inset Manual - Used in combination with the three parameters; *Throat by Wall Size*, *Throat Offset Interior* and *Throat Offset Exterior* to determine where the door assembly to be placed in the wall. Typically a value equal to half the wall's thickness will place the interior face of the door frame at the middle of the wall's thickness.

Identity Data, Phasing and Other Groups

Identity Data		⤴
Comments		
Mark	7	
Phasing		⤴
Phase Created	New Construction	
Phase Demolished	None	
Other		⤴
Throat Depth Actual	0' 8 1/2"	
Rough In Jamb Additional Width	0' 0"	
Rough In Head Additional Height	0' 0"	
Panel 2 Width	3' 4"	
Host Throat Report	0' 8"	
Host Push Side Inset Actual	0' 0"	
Door Panel Opening Total Width	6' 8"	
Door Panel Opening Total Height	7' 0"	
Head Height	0' 0"	

Identity Data

- Comments - Built in parameter, use as required
- Mark - Built in parameter, provides a place to store a unique "number" for a door.

Phasing

- Phase Created and Demolished - Built in parameters to define phase relationships for documentation. It is part of a standard Revit feature.

Other

- Throat Depth Actual - Reporting Parameter that matches and displays (reports) the thickness of the host wall.

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- Rough In Jamb Additional Width - Permits increasing the space on either side of the door for rough in geometry if required. The specified value is added to both sides of opening.
- Rough In Head Additional Height - Permits increasing the space above the door for rough in geometry if required.
- Panel 2 Width - Not editable, it is part of a formula.
- Host Throat Report - Not editable, it is part of a formula.
- Host Push Side Inset Actual - Not editable, it is part of a formula.
- Door Panel Opening Total Width - Not editable, it is part of a formula. It is used to schedule the total width of a door, a single consistent column for door width regardless of door behaviour (single, double etc.)
- Door Panel Opening Total Height - Not editable, it is part of a formula. It is used to schedule the total height of a door by adding the value for the parameter *Rough In Head Additional Height* to the value for parameter *Panel Height*.
- Head Height - Built in Parameter - not used.

Known Issues

Door Mark parameters

You will most likely receive the error message “Elements have duplicate ‘Mark’ values” when you change the Mark parameter values see Figure 1. This occurs because the panel families are hosted inside a parent door family and the panel family is “shared”. This setting permits Revit to schedule both the door assembly (host family) and door “panels” (door elevations in TruStile parlance). When both families share the same category and are shared they all get a unique Mark parameter value initially, but sequentially. We don’t have control over this except to provide unique Mark parameter values when we start assigning doors with numbers (mark parameter). We recommend assigning unique Mark parameter values for panels in the Panel Schedule, for example P1, P2, P3 etc. This way their numbers won’t compete with the numbers you want to use to identify the door assembly (host family).

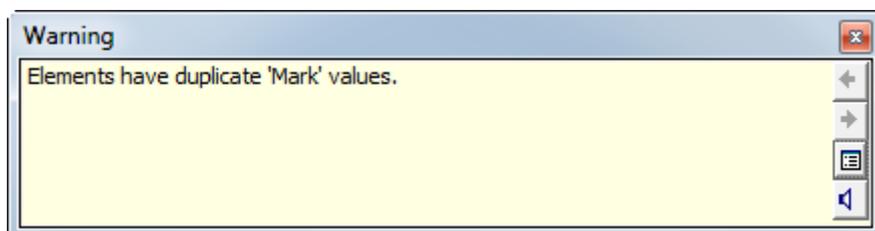


Figure 1 - Duplicate 'Mark' value error message.

Ghost Image of Frame

When you load and place the very first door family it looks like the frame is outside the wall see Figure 2. This will disappear as soon as you place the door in the wall. This appears to be a graphic defect that affects shared and nested families. The frame and panels are both nested and shared. Please disregard the appearance of the ghosted frame location.

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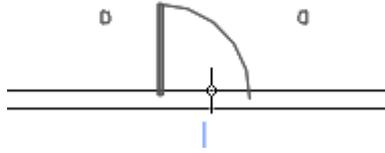


Figure 2 - Ghost of door and frame before placement.

Sort Order of Panels

When you choose another panel or frame type you'll see a list of all the door families available in the project. This is a side effect of the nested and shared features of Revit. The added flexibility it offers can create some confusion when you need to swap a panel from one type to another. The naming convention of the door host is deliberately different from the panels see Figure 3. The company name TruStile appears in the name of the host while it does not in the panel and frame families. This will help segregate them as well as make it a bit more obvious which families to choose from. The order that Revit displays them in the drop down list box is beyond our control. Just remember to scroll and examine your choices carefully.

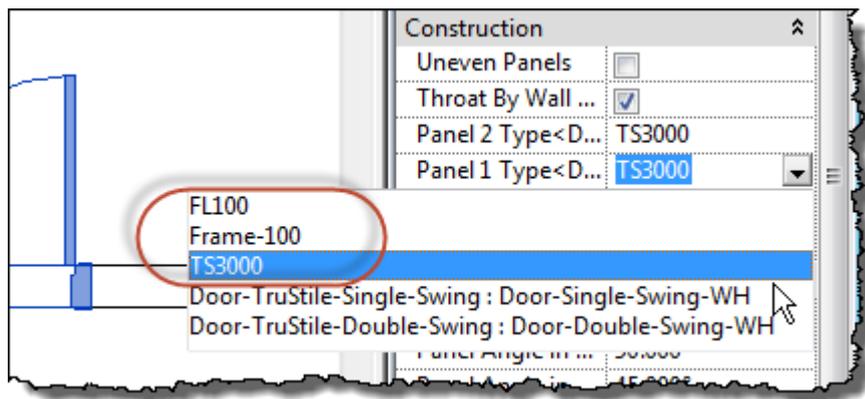


Figure 3 - Panels and Doors in the drop down list box.

Project Browser Families List

Similar to the sort order issue you'll find door, panel and frame families are listed under the Door category in the Project Browser. This is also a side effect of the nested and shared features of Revit. The naming convention used should help to differentiate them from one another. Doors are what you place in the project. Frames and Panels are assigned within the properties of the doors (host behaviour). In the image below (see Figure 4) doors are in the red circle while the frame and panels are highlighted in yellow (shaded).

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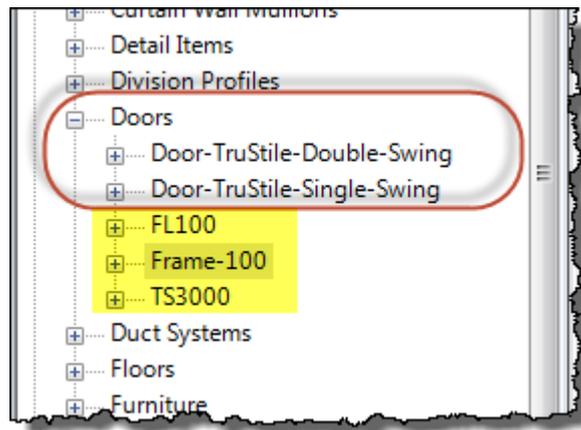
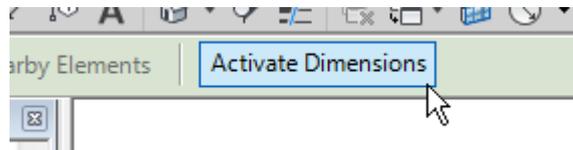


Figure 4 - Project Browser displays doors, frames and panels together.

Temporary Dimensions

Ordinarily when a family is selected Revit will display Temporary Dimensions. These make it somewhat easier to reposition a family. We are currently researching the cause but Temporary Dimensions do not appear when the TruStile door families are selected. We suspect it is also a side effect of nested and shared families. You can force Revit to display them however by clicking the Activate Dimensions button that appears on the Options Bar when elements are selected.



Sticking Detail

Door elevations (panels) families do not show in plan views. This is intentional. Most documentation scales for plan views are not fine enough to justify showing the panel geometry in plan. All stock Autodesk Revit content uses symbolic lines to show panel and plan swing geometry. Our doors are consistently with this practice. Sticking geometry will be visible in elevations and 3D views when the Detail Level parameter is set to Fine. At most scales this additional detail will probably appear too heavy (thick) and may not be desirable. Use Detail Level: Fine at your discretion.