Revu Tutorial: 3D Viewing

Revu supports viewing 3D content in a PDF. Once you open a PDF file with 3D content, a floating toolbar, called the 3D Hover Bar, will appear in the upper left-hand corner of the workspace. This toolbar lets you customize your interaction with the 3D model. There are also two other ways to access these features: the 3D Panel and by using mouse controls in the model window.

3D Hover Bar

This button contains a drop-down menu to enable your mouse to go into different viewing modes.

Rotate – Moves the camera around the model
Spin – Rotates the model around a specific point
Pan – Moves the model up/down and left/right
Zoom – Increases or decreases the size of the model
Camera – Rotates the viewpoint from the position of the camera, letting you look up, down, and around the model

If a 3D PDF already has defined views, each view name will be listed in the drop-down menu next to the home icon. Pressing the home icon at any point resets the model view to the default view.

This toggles the Animation Cycle. When the Play button is clicked, it switches to Pause  .

There are two default settings for animation, Rotate and Cycle View. Access these options by clicking the arrow next to the Play button.

Rotate - Spins the model. Go to *Edit/Preferences/Rendering 3D* to control the spin rate and the direction of the rotation. The mouse navigation (zoom, pan) is still available to use as the model is spinning during the Rotate animation mode.

Cycle Views - Cycles between predefined Views. The transition time and length of time spent on a particular view are controlled in the *Edit/Preferences/Rendering 3D* menu.

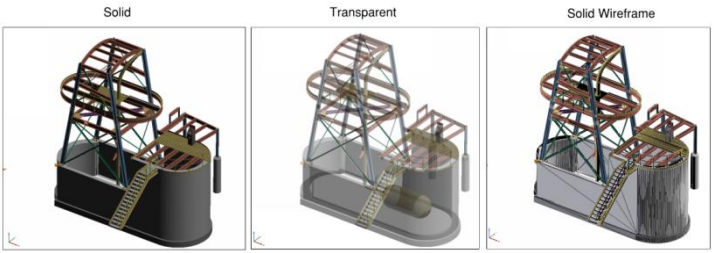
Use this button to switch between the Perspective and Orthogonal views. The **Perspective view** makes objects closer to the camera appear larger than objects further away, similar to real-world viewing. The **Orthogonal view** keeps the relative size of the objects the same, regardless of the viewing distance.

This button contains a drop-down menu to select the different Geometry Render Modes which control the visible display of the model elements. The three basic types of shading for the models are Solid, Transparent and Solid Wireframe.

Solid - Applies a material to each individual part so other 3D geometry behind the solid part is not visible.

Transparent - Sets the opacity of the elements in the model so items behind parts of the model may be viewed.

Solid Wireframe - Displays the triangular meshes which define the elements of the model being viewed.



For more information about all available Geometry Render Modes, please read the **3D Viewing Help Guide.**

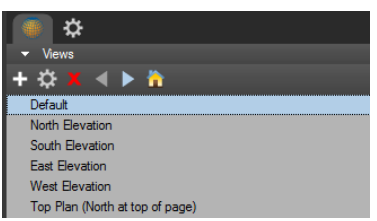
This button lets you change the lighting. The options include White, Day, Bright, Primary Color, Night, Blue, Red, Cube, CAD Optimized, and Headlamp.

This button gives you different color options for changing the background color.

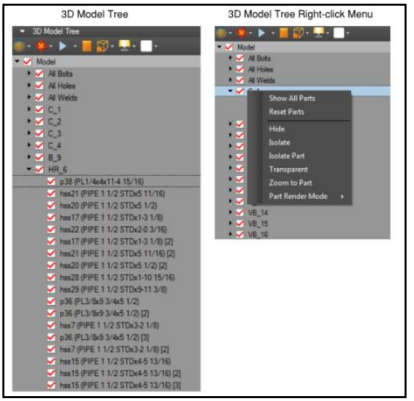
The 3D Panel

The 3D Panel (Alt + 3) is comprised of two sections, Views and 3D Model Tree.

The **Views** control panel can be used to manage the views present in the current 3D model. New views may be defined, edited or deleted via this panel.



Selecting a named view (Default, North Elevation, etc.) updates the display in the 3D Model Window. The camera position and 3D component visibility is controlled based on the definition of the view. Clicking the Right and Left arrow icons move forward and backward through the view list. Home switches the 3D workspace to the Default View.



The **3D Model Tree** displays a list of the components in a 3D model. Parts may be grouped together to form assemblies or functional groupings of 3D elements.

Each component of a 3D model is selectable using the Model Tree. Right-clicking on any element displays a right-click menu which may be used to perform commands related to controlling visibility of the parts. Visibility settings such as render mode (transparency, wireframe) or whether or not to hide the element may be set.

3D Rendering Options

To control the settings of your 3D Model, go to *Edit/ Preferences/ Rendering 3D* or click the icon on the Views control panel. Some of these options include:

Enable 3D Annotation Rendering – Controls whether or not to display 3D contained in the current PDF. This option is checked on by default.

Show 3D Orientation Axis – Check this to display the X-Y-Z axis in the lower left corner of the 3D view.

Enable View Transitions – Enable a smooth camera move from one predefined view to the next. Set the time value to control the length of time it takes to move from one predefined view to the next. The default setting 0.7 seconds.

Maximum Frame Rate – Set the number of frames per second Revu will attempt to render. The higher the number, the more taxing the 3D viewing process will be on the workstation. If a high-end graphics processor is present in the workstation, this value could be set to Unlimited.

Rotate – Revolution Time – This value sets the time it takes in seconds to complete one complete rotation of the model. To make the rotation go slower, increase this number. The default setting is 10 seconds. To make the rotation continuously play, check the Loop checkbox.

Cycle Views - Delay time – Sets the time the view will display on the screen before transitioning to the next view. To make the delay longer, increase this value. The default setting is 2 seconds. To continuously repeat the sequencing through the views, check the Loop checkbox. To reverse the order of the view sequencing, check the Reverse checkbox.