

Tools palette

Click on a button in the Tools palette to choose a tool (the chosen button displays dark gray)

A button with an arrow in the upper-right corner indicates another related tool(s) is available. (Click-hold to expose the related tool(s))

Drag the Title bar to reposition the palette.

Click the Close box to turn the palette display “off”.

^ - indicates the Shift key.

Item Selection

Items may be selected in two ways: 1) bounding box corners visible; 2) vertices visible. Items in a closed folder can only be selected with vertices visible using the Direct Selector tool.

Lasso icon


Select vertices on selected items.


Library (book icon)

See Libraries palette for tool operation.


Selector tools

Keyboard Modifiers

 - key

When a tool other than a Selector tool is in use, hold  key to use a Selector tool, temporarily.

 - Option keys

When a tool other than a Selector tool is in use, hold  - Option keys to select an item(s) by its bounding box, or to intuitively make a copy of an item(s). (Described below.) Use is temporary.

Selector (black arrow icon) [s]


Select an item(s), and/or a vertex(es) on a selected item(s).


Hold Shift key to make multiple selections.

* Hold Option key to select an item(s) by its bounding box.

* Hold Option key when dragging an item(s) to intuitively create a copy of the item; release mouse to place the copy. (Cursor changes to black arrow with (+).)

Hold Control key for intuitive vertex smoothing/sharpening (cursor changes to a white arrowhead): click-drag on a sharp-corner vertex to convert it to a smooth-curve vertex; click on a smooth-curve vertex to convert it to a sharp-corner vertex; click-drag a handlebar-end of a selected smooth-curve vertex to move it independent of the opposite end.

* Hold  key to select a rib(s) from a selected 3D spline mesh(es): click on a rib on selected 3D spline mesh. (May be in preparation to perform a 3D Operation on the selected rib).

* Hold -Option keys, select-drag a rib to intuitively create a copy of the rib (spline contour); release mouse to place the copy.

Direct Selector (white arrow icon) [d]

Select individual object(s) and vertices that are part of a closed group(s) structure (closed folder in Groups palette).

Use keyboard functions as described for the Selector tool.


Viewing tools

Keyboard Modifiers

Space key

When a tool other than the Hand tool is in use, hold Space key to use the Hand tool. Use is temporary.

Space - keys

When a tool other than the Magnifier tool is in use, hold Space -  keys to zoom-in with the Magnifier tool. Use is temporary.

Space - Option keys

When a tool other than the Magnifier tool is in use, hold Space - Option


keys to zoom-out with the Magnifier tool. Use is temporary.

Hand icon

Pan the view in the View windows.

In the 3D View window:

Rotate the view;

Hold  key, then drag to zoom in/out;

Hold Option key, then drag to pan the view.

Magnifier icon

Zoom the view in/out in the View windows: click, or drag a marquee area to zoom-in; double-click in View windows to fit-to-window.

Hold Option key, then click to zoom-out. (Cursor changes from (+) to (-) in the magnifier icon.)

Tool Info palette

Zoom In % / Zoom Out % (2 data fields)

Make numeric entry in the data fields to determine the amount of view enlargement/reduction for a click of the mouse.

Item Manipulation tools

Scale

Enlarge/Reduce the size of selected item(s) (affects item dimensions in the current active View window only (2D); use Transform to scale in 3D)

Select item by its bounding box; click in View window to set the Anchor point, (cursor changes to square-crosshair) then drag item bounding box corner; release mouse to complete resize operation.

Hold Shift key to constrain scale on horizontal or vertical axis; or constrain to proportional 2D scale (drag along 45° snap line from Anchor).

Hold Option key to make a scaled copy of selected item.

Tool Info palette

Anchor (pull-down menu)

Determines the point in space about which the scale will occur. Click-hold to expose the menu, then drag the desired option; release the mouse to select the option.

Incremental % (data field and button)

Make numeric entry to scale precisely, as outlined above. Click on the button to toggle "on/off".

2D Rotate [r]

Turn the selected item about an axis perpendicular to the plane of the active View window.

Select item by its bounding box; click in View window to set the Anchor point, (cursor changes to crossed arrows) then drag item bounding box corner; release mouse to complete rotate operation.

Hold Option key to make a rotated copy of selected item.

Tool Info palette

Anchor (pull-down menu)

Determines the point in space about which the rotation will occur. Click-hold to expose the menu, then drag the desired option; release the mouse to select the option.

Incremental Degrees (data field and button)

Make numeric entry to rotate precisely, as outlined above. Click on the button to toggle "on/off".

3D Rotate

Turn the selected item about a point in 3D space.

Same operation as described for 2D Rotate. Shows 3D preview in the active View window.

Tool Info palette

Anchor (pull-down menu)

Determines the point in space about which the rotation will occur. Click-hold to expose the menu, then drag the desired option; release the mouse to select the option.

Mirror

Reflect the selected item across a plane perpendicular to the plane of the active View window (replaces the selected item with a mirror-image item).

Select item by its bounding box; click-hold in View window to set the Anchor point, then drag cursor around the Anchor point; release mouse to complete mirror operation. (The item is reflected and rotated about the Anchor point).

Hold Shift key to constrain rotation to 45° increments.

Hold Option key to make a mirror-image copy of selected item.

Tool Info palette

Anchor (pull-down menu)

Determines the point in space about which the reflection will occur. Click-hold to expose the menu, then drag the desired option; release the mouse to select the option.

Incremental Degrees (data field and button)

Make numeric entry to rotate precisely, as outlined above. Click on the button to toggle "on/off".

Add Vertex/Rib (pen icon with (+))

Add a vertex to the selected 2D contour.

Add a rib to the selected 3D mesh.

Delete Vertex/Rib (pen icon with (-))

Delete a vertex from the selected 2D contour.

Delete a rib from the selected 3D mesh.

Scissors icon [k]

Split the selected 2D contour.

Split the selected 3D mesh along a rib.

2D Fillet †

Create a smooth curve connection between two straight lines of the selected 2D contour. (Replaces the sharp corner with a curved corner.)

Click on the sharp-corner vertex; set the corner Radius in Tool Info palette.

Tool Info palette

Radius (data field)

Make numeric entry (Units) to determine the radius of the fillet.