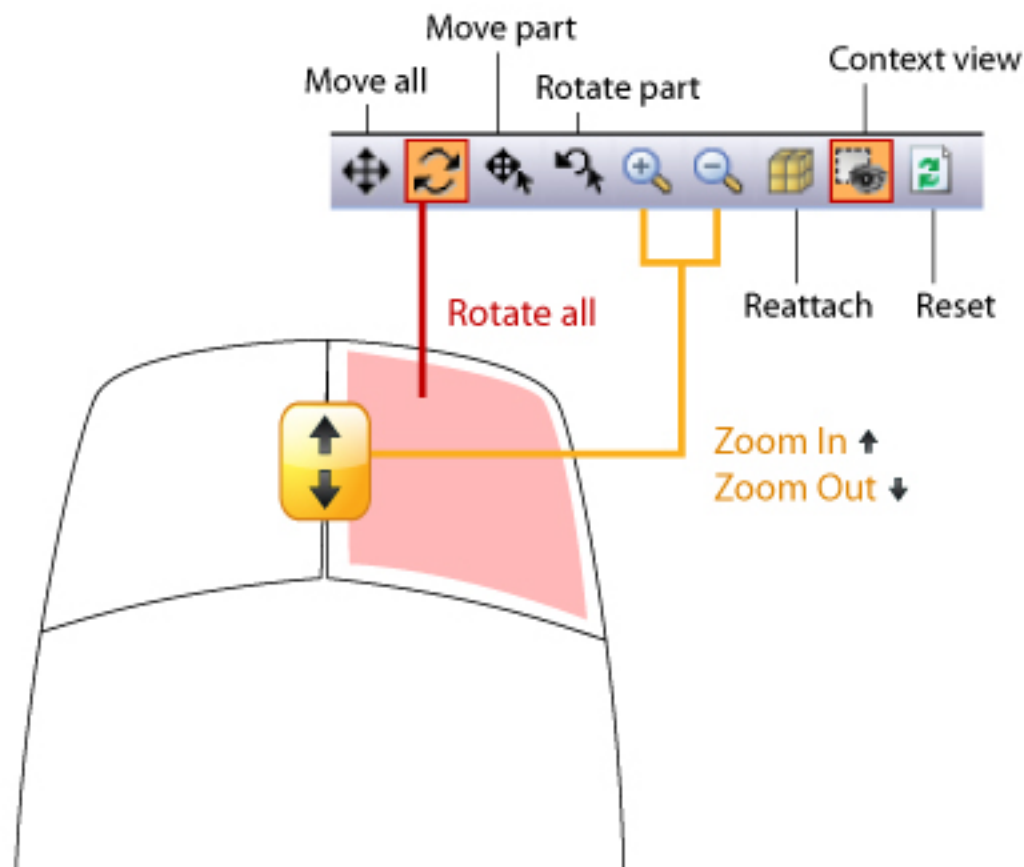


How to control 3D model using the toolbar tools and mouse.















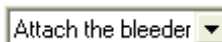



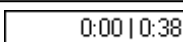







Toolbar

You can perform most actions in the NGRAIN Viewer 4.0 using the buttons on the toolbar. Once loading has completed, all of the toolbar buttons become available and you can fully interact with the model.

The NGRAIN toolbar icons have been improved in this release. The following table provides a list of the available buttons and their associated functions.










Table 1. Functions available from the toolbar.

Button	Command	Description
	Move All	Move the whole model, which moves your viewing position left, right, up, or down.
	Rotate All	Rotate the whole model, which allows you to view it from a different angle.
	Move Part	Select and move parts.
	Rotate Part	Select and rotate parts.
	Zoom In	Zoom in on the model.
	Zoom Out	Zoom out from the model.
	Select All	Select all parts.
	Invert Selection	Invert the part selection.
	Attached Parts Selection	Part selection includes all attached and constrained parts.
	Attach	Attach selected parts.
	Attach All	Attach all parts without selecting them first.
	Normal View	Switch back to normal view after viewing parts in context or displaying an X-ray of the model.
	Context View	View selected parts in the context of the model.
	X-ray View	Display an X-ray of the model.
	Animation Selector	Select an animation to play.
	Play	Play the selected animation.
	Pause	Pause the currently playing animation.
	Stop	Stop the currently playing animation.
	Animation Timer	View the elapsed time and the length of the selected animation.
	Cross-section	Open/close the Cross-section palette.
	Reset	Return the model to its startup state.
	Show/Hide ScreenTips	Temporarily enable or disable ScreenTips.
	Set Background Color	Change the background color of the workspace.
	Help	Open NGRAIN Viewer Help.

Related information

[Parts panel](#)

Select a sequence of parts

1. To select parts using the workspace, you must:
 - Switch from *move all*  or *rotate all*  mode to *move part*  or *rotate part*  mode.
 - Switch from **Context View**  or **X-ray View**  to **Normal View** .
2. Toggle the desired selection mode: Attached Parts Selection  or individual part selection .
3. Do one of the following:
 - Click on a part in the workspace.
 - Click on the name of a part or assembly in the **Parts** panel.
4. Hold down the **Shift** key on your keyboard, then click on the name of another part or assembly in the **Parts** panel.

The part or assembly is highlighted and added to the part selection, along with all the parts and assemblies positioned between it and the part or assembly you selected in Step 3. If Attached Parts Selection is enabled, their attached parts and constrained parts are also highlighted and added to the part selection.

Related tasks

[Select multiple parts and/or assemblies](#)

Select multiple parts and/or assemblies

1. To select multiple parts and/or assemblies by clicking on them, do one of the following:
 - Click on a part in the workspace.
 - Click on the name of a part or assembly in the **Parts** panel.

The part (or all of the parts included in the assembly) is highlighted. If Attached Parts Selection is enabled, their attached parts and constrained parts are also highlighted.

2. Hold down the **Ctrl** key on your keyboard, then do one of the following:
 - Click on another (unselected) part in the workspace.
 - Click on the name of another (unselected) part or assembly in the **Parts** panel.

The part (or all of the parts included in the assembly) is highlighted and added to the part selection. If Attached Parts Selection is enabled, their attached parts and constrained parts are also highlighted and added to the part selection.

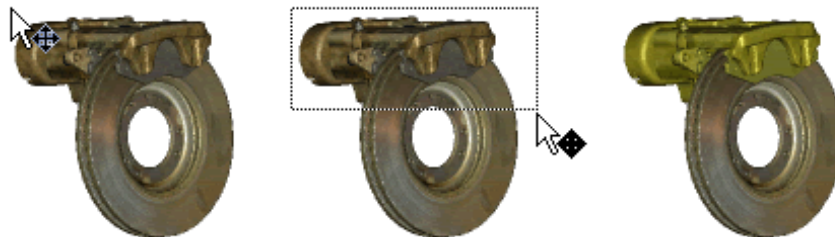
3. Repeat Step 2 as many times as you want.

Tip: You can also select multiple parts by dragging in the workspace.

- a. Position the mouse pointer above and to the left of the parts that you want to select.
- b. Drag the mouse pointer to create a bounding outline (dotted rectangle) around the parts.
- c. Release the mouse button when the bounding outline surrounds the parts that you want to select.

The parts that were completely surrounded by the bounding outline are highlighted and included in the part selection (see Figure 1). If Attached Parts Selection is enabled, the parts that were completely surrounded by the bounding outline and all of its attached and constrained parts are highlighted.



Figure 1. Selecting multiple parts by dragging in the workspace.



Related tasks

[Select a sequence of parts](#)






Parts panel

If the **Parts** panel is included in the NGRAIN Viewer, you can select parts and assemblies from a list. Parts are identified in the **Parts** panel by a part icon ; assemblies and sub-assemblies are identified by an assembly icon .

Each part is a defined portion of the 3D model — you can view parts in the workspace and interact with them independently (that is, once you have selected a part, you can move or rotate it, hide it, or view it in context). An assembly, however, isn't an actual part; rather, it is a group of related parts. The name of the assembly is simply a label or identifier for the group. When you select an assembly, you select all the parts (and sub-assemblies) that are included in the group.

The icons and text displayed in the **Parts** panel vary, depending on whether parts are visible or hidden and whether they have links and callouts associated with them.

Table 1. Icons and descriptions from the Parts panel.

Icon	Description
	Indicates individual parts of a model.
	Indicates a hidden part.
	Indicates part assemblies and sub-assemblies.
	Indicates hidden part assemblies and sub-assemblies or that a part within that assembly is hidden.
	Indicates a callout is associated with a part.
Caliper Rear	Indicates a part or assembly that has associated links.

If the **Properties** panel is included in the NGRAIN Viewer, you can view the properties of parts. The **Properties** panel is automatically updated with selected part properties.

If the **Animations** panel is included in the NGRAIN Viewer, you can select, play, pause, and stop animations. All animations in the current configurations and their duration are displayed in the **Animations** panel.

Related information

[Toolbar](#)