# **creo**<sup>®</sup> **parametric 9.0.2.0** Quick Reference Card

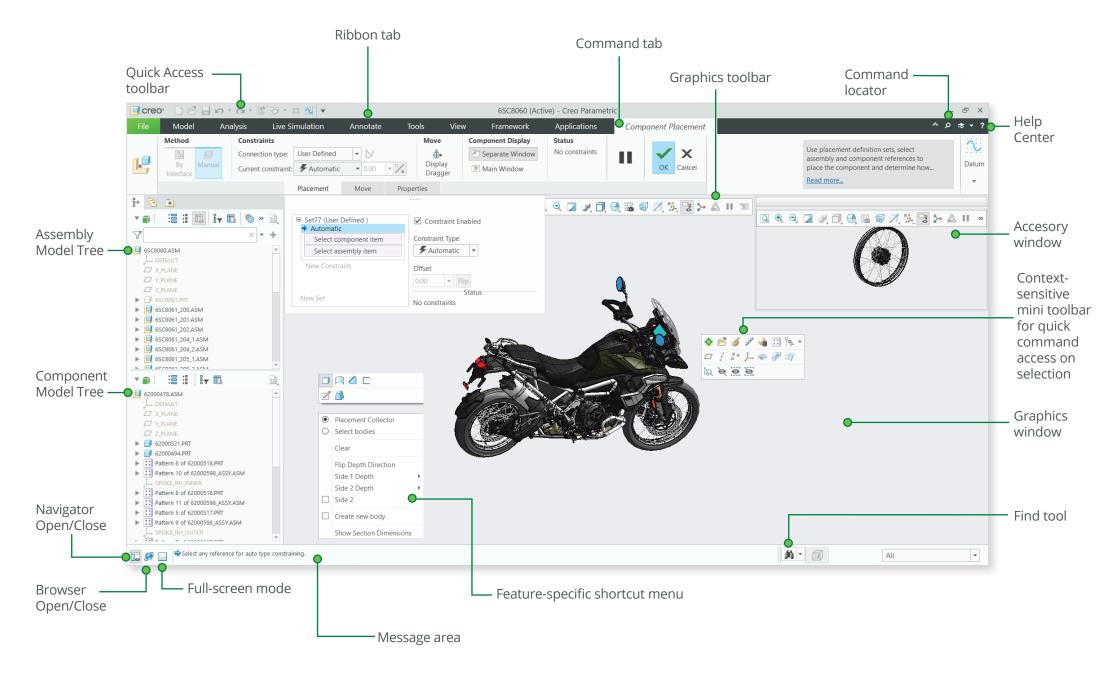
### reo<sup>®</sup>

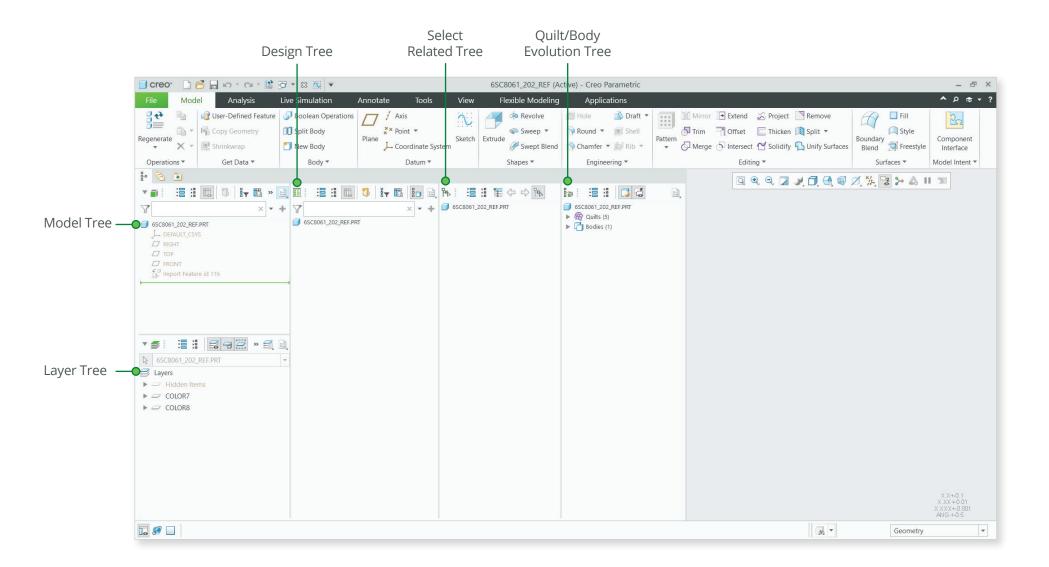


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### **User Interface**





### File Menu

| File Model Analysis Live Simulation Annotate Tools |  | Creo Parametric Options  | х        |
|--|--|--|----------|
| New Options  | Favorites  | Change how entities are displayed.   |          |
| Continue   | -  | Geometry Display Settings  | <b>A</b> |
|  | <ul> <li>Appearance<br/>System Appearance<br/>Model Display</li> <li>Entity Display</li> <li>Global<br/>Environment<br/>Selection<br/>Notification Center<br/>Data Exchange<br/>Update Control</li> <li>Core<br/>Sketcher<br/>Sheetmetal<br/>Assembly<br/>Detailing</li> </ul> | Geometry Display Settings         Default geometry display:       Shade With Edges         Edge display quality:       Medium         Tangent edges display style:       Solid         Tangent edges display style:       Solid         Anti-Aliasing:       Off         Uines Anti-Aliasing:       Off         Yext Show colors assigned to model surface         Accurate removal of hidden lines in the part mode         Accurate removal of hidden lines in the assembly mode         Datum Display Settings         Yext Show datum planes         Yext Show datum p |          |
| Help   | Applications     Customize     Ribbon     Quick Access Toolbar     Shortcut Menus     Keyboard Shortcuts     Window Settings     Configuration Editor  | <ul> <li>Usplay shaded datum planes</li> <li>Show datum planes with a color fill</li> <li>Fill transparency:</li> <li>Show datum suring camera operations</li> <li>Show datum plane tags</li> <li>Show datum axis tags</li> <li>Show datum axis tags</li> <li>Show datum points</li> <li>Show datum points</li> <li>Show datum point ags</li> <li>Show datum point ags</li> <li>Show datum cordinate system</li> <li>Show coordinate system tags</li> </ul>  | 4        |
|  | Export Configurations  |  | Apply    |

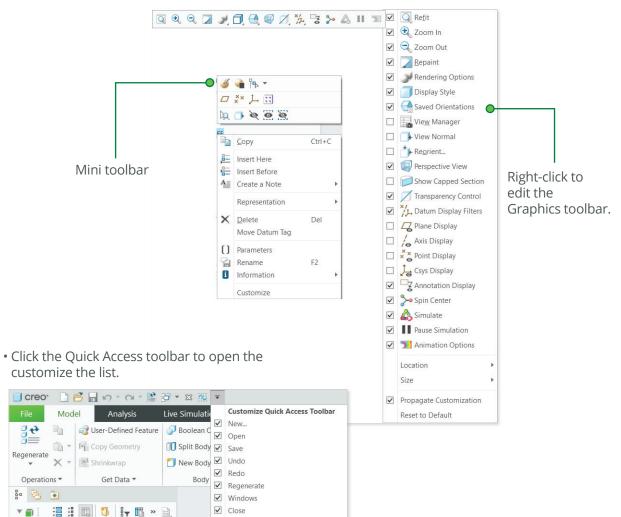
### **UI** Customization

#### Common dashboard controls

• Right-click a command to add the Quick Access toolbar or to access the ribbon customization window.

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|--|---|----------|-----------------------|------------------------------|---|----------------------|------------------------|-------------------------|--------|--------------------------|
| File Model A   | nalysis Live Simulation   | Annotate | e Tools               | √iew                         | Applications  |                      |                        |                         |        |                          |
| Regenerations * Get Data *   | O Split Body  |          |                       | oolbar<br>is Tool<br>olbar E | bar   | Draft Shell<br>Rib • | Pattern                | Mirror<br>Trim<br>Merge | Offser | t 🗖<br>ect 🞦<br>diting 🕶 |
| Favorites  |   |          | Creo Parametric Optic |                              |   |                      |                        |                         |        | ×                        |
|  | Customize: Ribbon   |          |                       |                              |   |                      |                        |                         | Ψ.     |                          |
| Appearance     System Appearance     Model Display     Entity Display      Global  | Select a Mode on the right to chang<br>Category: All Commands (Design F   |          | ize by dragging comma | nds fro                      | Show: Current Mode  | on into th           | e selected<br>All Tabs | mode.                   | •      |                          |
| Environment<br>Selection<br>Notification Center<br>Data Exchange<br>Update Control | Filter Commands:<br>Name  Cascade Menu><br><separator></separator>  | Shortcut |                       |                              | <ul> <li>♥ Model</li> <li>▶ Ø Operations</li> <li>▶ Ø Get Data</li> <li>▶ Ø Body</li> <li>▶ Ø Datum</li> <li>▶ Ø Shapes</li> </ul>                          |                      |                        |                         |        |                          |
| <ul> <li>Core<br/>Sketcher<br/>Sheetmetal<br/>Assembly<br/>Detailing</li> </ul>    | Separator >     Separator |          |                       | + 4                          | <ul> <li>▶ ☑ Engineering</li> <li>▶ ☑ Editing</li> <li>▶ ☑ Surfaces</li> <li>▶ ☑ Model Intent</li> <li>▶ ☑ Analysis</li> <li>▶ ☑ Live Simulation</li> </ul> |                      |                        |                         |        | +<br>+                   |
| Applications     Customize   | Accumulate Data   |          |                       |                              | <ul> <li>▶ ✓ Annotate</li> <li>▶ ✓ Tools</li> <li>▶ ✓ View</li> </ul>   |                      |                        |                         |        |                          |
| Ribbon<br>Quick Access Toolbar<br>Shortcut Menus<br>Keyboard Shortcuts             | Activate<br>Activate  | Ctrl+A   |                       |                              | <ul> <li>Flexible Modeling</li> <li>Applications</li> <li>Common (Global Tab)</li> </ul>  |                      |                        |                         |        |                          |
| Window Settings  | Active Plane Orientation  |          |                       |                              |   |                      |                        |                         |        |                          |
| Configuration Editor   | Reset   Export Import   |          | •                     |                              | New   Rename Modifi   | y Ŧ                  |                        | OK                      | Car    | rcel                     |
| caport configurations  |   |          |                       |                              |   |                      |                        | UK                      | Car    | no.et                    |

• Click Customize on the mini-toolbar or on the shortcut menu, appearing on right click.



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More Commands... Show Below the Ribbon

### Keyboard shortcuts

#### Key tips

Press the ALT key to activate the key tips.

|   | Component * Datum *   | Cut & Surface * Modifiers * Model Display *   |           |  |  |  |  |
|---|---|---|-----------|--|--|--|--|
|   |   | Creo Parametric Options   | ×         |  |  |  |  |
| Favorites   | Customize: Keyboard Shortcuts   |   | -         |  |  |  |  |
| <ul> <li>Appearance<br/>System Appearance<br/>Model Display<br/>Entity Display</li> </ul> | Assign Keyboard Shortcuts to a command by click<br>single key and a modifier key. | ing in the Shortcut column and pressing a single key (including function keys) or a combinati | ion of a  |  |  |  |  |
| Global  | Category: All Commands (Design Assembly)  | Show: All Commands  |           |  |  |  |  |
| Environment   | Filter Commands:  |   |           |  |  |  |  |
| Selection<br>Notification Center  | Name A Shortcut   | Description   |           |  |  |  |  |
| Data Exchange   | Name A Shortcut   | Description<br>3D Box Select  |           |  |  |  |  |
| Update Control  | 3D Print  | Start the 3D Print application.   |           |  |  |  |  |
| Core  | Abort Run   |   |           |  |  |  |  |
| Sketcher  | About AFX   | Show current AFX date code information  |           |  |  |  |  |
| Sheetmetal<br>Assembly  | About Creo Parametric   | Display the program information, Creo Parametric version number and the                       |           |  |  |  |  |
| Detailing   | ww About Intelligent Fastener   | Information on Intelligent Fastener.  |           |  |  |  |  |
| Applications  | About PT/Products   | Display the program information, PT/Products version number and the                           |           |  |  |  |  |
| Applications  | Accumulate Data   | Store historical data in saved probes.  |           |  |  |  |  |
| Customize   | Activate  | Activate the selected model.  |           |  |  |  |  |
| Ribbon<br>Quick Access Toolbar  | Activate  | Activate selected study   |           |  |  |  |  |
| Shortcut Menus  | Ctrl+A Ctrl+A   | Activate this window.   |           |  |  |  |  |
| Keyboard Shortcuts  | Activate Cross-section  | Sets the selected Cross-section active.   |           |  |  |  |  |
| Window Settings   | Active Annotation Plane   | Show the active annotation orientation that is used for new annotations.                      |           |  |  |  |  |
|   | Active Plane Orientation  | Display the model with the active datum plane parallel to the screen.                         | *         |  |  |  |  |
| Configuration Editor  | Reset * Export Import   |   |           |  |  |  |  |
| Export Configurations   |   |   | DK Cancel |  |  |  |  |

Filter options

#### Key shortcuts

You can use standard keyboard shortcuts in Creo Parametric. For example:



Copy/Paste shortcuts are also available in Assembly Mode.

### Selection and Mouse Controls

#### Filters limit the scope of selection Mouse controls Highlight geometry Over geometry Default selection filter: When selecting geometry, extended context operations, Until highlighted such as operations on features or parts, • Query next item are supported. To select features or parts directly, press ALT+left mouse button, or • Select highlighted geometry switch the filter. Add or remove items from selection Ctrl Geometry Edge Construct chains or Shift Surface surface sets Datums On background Find tool -Curve Clear selection Geometry Search Tool Ouilt (available for Flexible Annotation Modeling and Datum Rotate the model using keyboard shortcuts Vertex Reference Features) Part • Rotate model to right + 🗭 Shift Feature 薦 7 1 selected Rotate model to left Shift Geometry Rotate model upward + | Shift Active filter Rotate model downward + • Select using 3D box Shift Rotate the model around screen Center Tip: Double-click to view items in • Rotate model to right Alt Shift selection window Rotate model to left Alt Shift

Shift

Shift

+ |

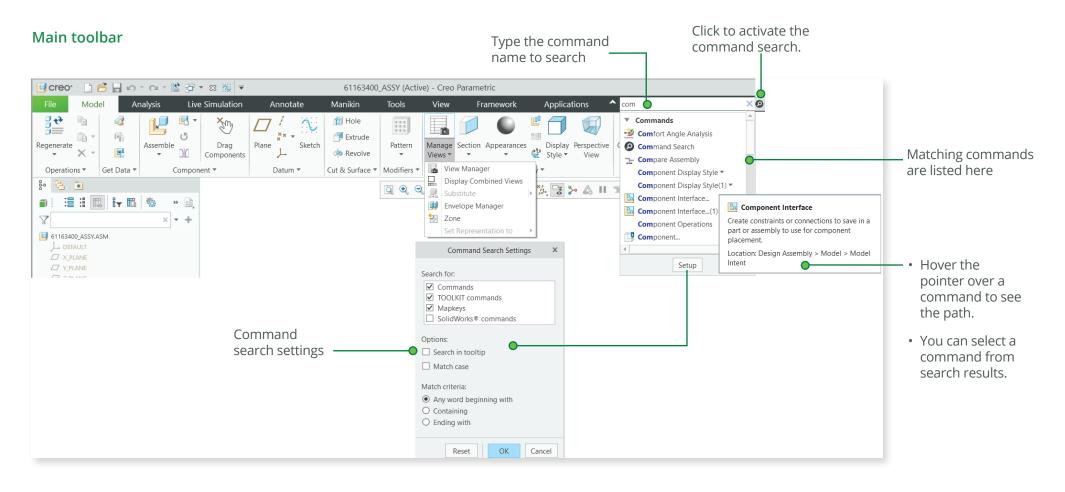
Alt

Alt

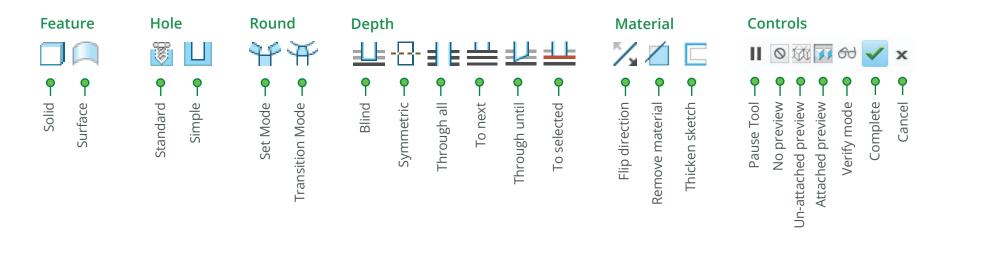
Rotate model upward

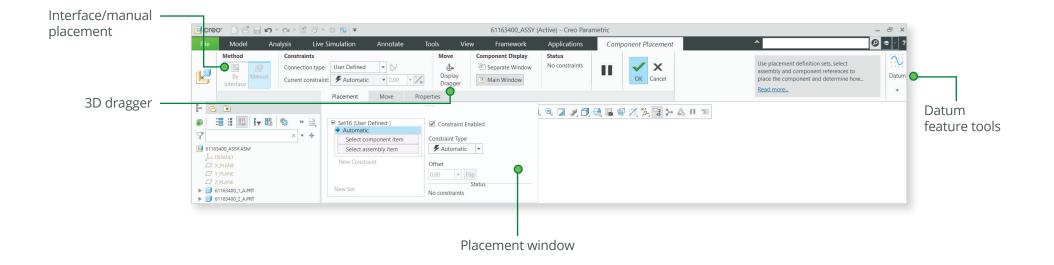
Rotate model downward

### **Command Locator**



### Common dashboard controls



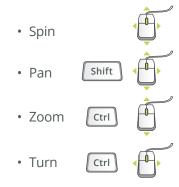


### Orienting the Model

#### Dynamic viewing

#### 3D Mode

Press and hold the key and the middle mouse button. Drag the mouse.



2D Mode



#### 2D & 3D Mode

Press and hold the key and roll the mouse wheel.







#### Using the Spin Center

Click the icon in the Main toolbar to enable the Spin Center:

- Enabled The model spins about the location of the spin center.
  - Disabled The model spins about the location of the mouse pointer.

#### Using Orient Mode

Click the icon in the Main toolbar to enable Orient mode:

- Provides enhanced Spin/Pan/Zoom control.
- Disables selection and highlighting.
- Right-click to access additional orient option.
- Use the shortcut: CTRL+SHIFT+middle mouse button.

#### Using Component Drag Mode in an Assembly

Click the icon in the Main toolbar to enable Component drag mode:



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- Allows movement of components based on their kinematic constraints or connections.
- Click a location on a component, move the mouse, click again to stop motion.
- Middle-click to disable Component Drag mode.
- Use the shortcut: CTRL+ALT+left mouse button and drag.

#### **Component placement controls**



#### Object Mode

Provides enhanced Spin/Pan/Zoom control:

- 1. Enable Orient mode.
- 2. Right-click to enable Orient Object mode.
- 3. Use Dynamic Viewing controls to orient the component.
- 4. Right-click and select Exit Orient mode.

### Model appearance

#### Changing model appearance Assigning appearance

#### **Object-action**

- 1. Select Surface/Quilt/Intent Surface/Part.
- 2. Click to open the Appearances list.
- 3. Select or create the desired appearance.

#### Action-object

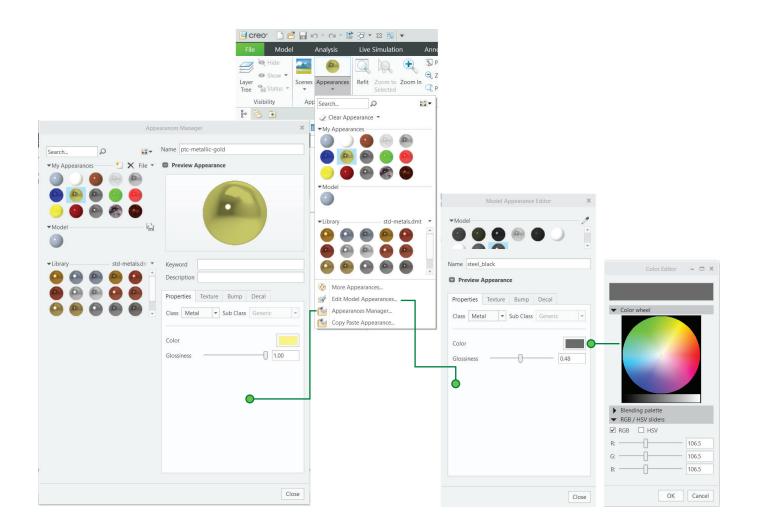
- 1. Click to open the Appearance list.
- 2. Select or create the desired appearance.
- 3. Select from: Surface, Quilt, Intent Surface, or Part.

#### Edit appearances in the current model

- 1. Select Edit Model Appearances from the Appearance list.
- 2. Adjust the appearance attributes using draggers.
- 3. Select the Map tab to map images and textures.
- 4. To edit the texture placement, select the surfaces using the *color* picker.

#### Manage appearances

- Build a custom library of appearances.
- Include predefined plastics or metals library appearances.
- Edit, create, or delete appearances in the custom library palette.
- Define, save, or retrieve custom appearance (\*.dmt) files.



#### Creo Parametric 9.0 Quick Reference Card

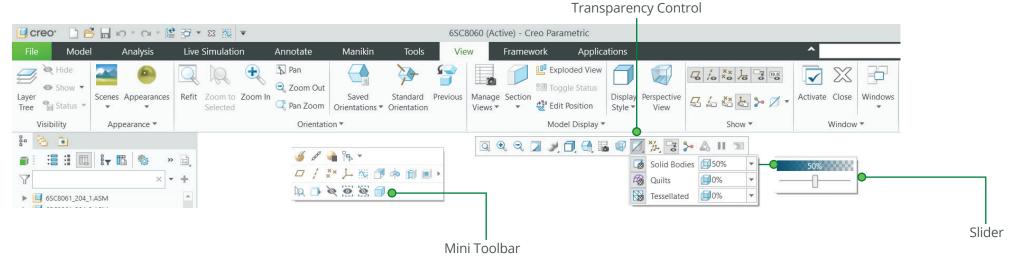
## Model appearance

[Continued]

#### Transparency control for bodies



the graphics toolbar or click **View** > **Show** > **M Transparency Control**.



#### • Supported for:



· Solid bodies—Control transparency of all solid bodies. By default, solid bodies are 50% transparent.



• Quilts—Control transparency of all quilts.



• Tessellated—Contol transparency of tessellated bodies. For example, trueSolid, faceted, or volumetric geometries.

• Set transparency percentage levels—Move the slider or type a value in percentage to set the exact transparency value.

• Make a selected body transparent using the Make Transparent command on the mini toolbar.

### Advanced Selection: Chain and Surface Set Construction

#### **General definitions**

#### Chain

A collection of adjacent edges and curves that share common endpoints. Chains can be open ended or closed loop, but they are always defined by two ends.

#### Surface set

A collection of surface patches from solids or quilts. The patches do not need to be adjacent.

#### Methods of construction

#### Individual

Constructed by selecting individual entities (edges, curves, or surface patches) one at a time. This is also called the One-by-One method.

#### **Rule-based**

Constructed by first selecting an anchor entity (edge, curve, or surface patch), and then automatically selecting its neighbors (a range of additional edges, curves, or surface patches) based on a rule. This is also called the Anchor/ Neighbor method.

#### CONSTRUCTING CHAINS

#### **Multiple chains**

- 1. Construct an initial chain.
- 2. Press and hold the CTRL key.
- 3. Select an edge for a new chain.
- 4. Release the CTRL key.
- 5. Press and hold the SHIFT key.
- 6. Complete the new chain from the selected edge.

#### Individual chains

#### One-by-One

To select adjacent edges one at a time along a continuous path:

- 1. Select an edge.
- 2. Press and hold the SHIFT key.
- 3. Select the adjacent edges.
- 4. Release the SHIFT key.

#### **Rule-based chains**

#### Tangent

To select all the edges that are tangent to an anchor edge:

- 1. Select an edge.
- 2. Press and hold the SHIFT key.
- 3. Highlight the tangent chain. You may need to use query.
- 4. Select a tangent chain.
- 5. Release the SHIFT key.

#### Boundary

To select the outer-most boundary edges of a quilt:

- 1. Select a one-sided edge of a quilt.
- 2. Press and hold the SHIFT key.
- 3. Highlight the boundary chain. You may need to use query.
- 4. Select a boundary chain.
- 5. Release the SHIFT key.

#### Surface loop

To select a loop of edges on a surface path:

- 1. Select an edge.
- 2. Press and hold the SHIFT key.
- 3. Highlight the Surface chain. You may need to use query.
- 4. Select a Surface loop.
- 5. Release the SHIFT key.

#### From-To

To select a range of edges from a surface patch or a quilt:

- 1. Select the From edge.
- 2. Press and hold the SHIFT key.
- 3. Use query to highlight the desired From-To chain.
- 4. Select a From-To chain.
- 5. Release the SHIFT key.

# Advanced Selection: Chain and Surface Set Construction

### [Continued]

#### CONSTRUCTING SURFACE SETS

#### Individual surface sets

#### Single surfaces

To select multiple surface patches from solids or quilts one at a time:

- 1. Select a surface patch.
- 2. Press and hold the CTRL key.
- 3. Select additional patches. You may need to use query.
- 4. Release the CTRL key.

#### Rule-based surface sets

#### Solid surfaces

To select all the surface patches of solid geometry in a model:

- 1. Select a surface patch on solid geometry.
- 2. Right-click and select Solid Surfaces.
  - Select all surfaces.
  - Select surfaces of all bodies.

#### Quilt surfaces

To select all the surface patches of a quilt:

- 1. Select a surface feature.
- 2. Select the corresponding quilt.

#### Loop surfaces

To select all the surface patches that are adjacent to the edges of a surface patch:

- 1. Select a surface patch.
- 2. Press and hold the SHIFT key.
- 3. Place the pointer over an edge of the patch to highlight the loop surfaces.
- 4. Select loop surfaces (the initial surface patch is deselected).
- 5. Release the SHIFT key.

#### Seed and boundary surfaces

To select all surface patches, from a Seed surface patch up to a set of Boundary surface patches:

- 1. Select the Seed surface patch.
- 2. Press and hold the SHIFT key.
- 3. Select one or more surface patches to use as boundaries.
- 4. Release the SHIFT key. This releases all surfaces from the seed.



#### Excluding surface patches from surface sets

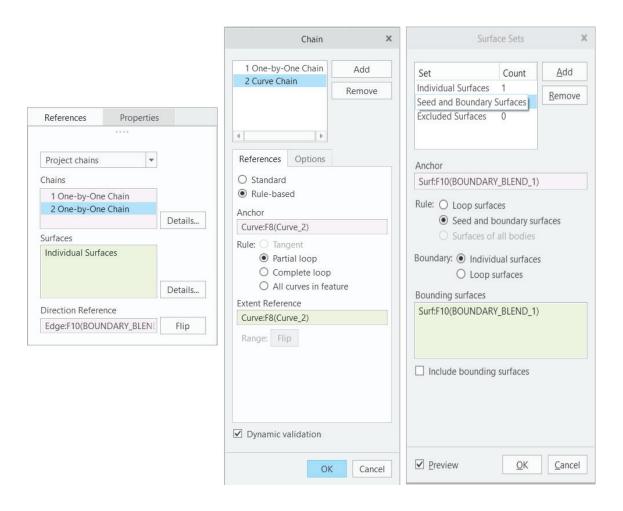
To exclude surface patches during or after construction of a surface set:

- 1. Construct a surface set.
- 2. Press and hold the CTRL key.
- 3. Highlight a patch from the surface set.
- 4. Select the patch to deselect it from the surface set.
- 5. Release the CTRL key.

### Advanced Selection: Chain and Surface Set Construction [Continued]

#### Constructing chains and surface sets using dialog boxes

To construct and edit chains and surfaces sets, click Details next to the collect.



### Advanced Selection: Geometry Search Tool

