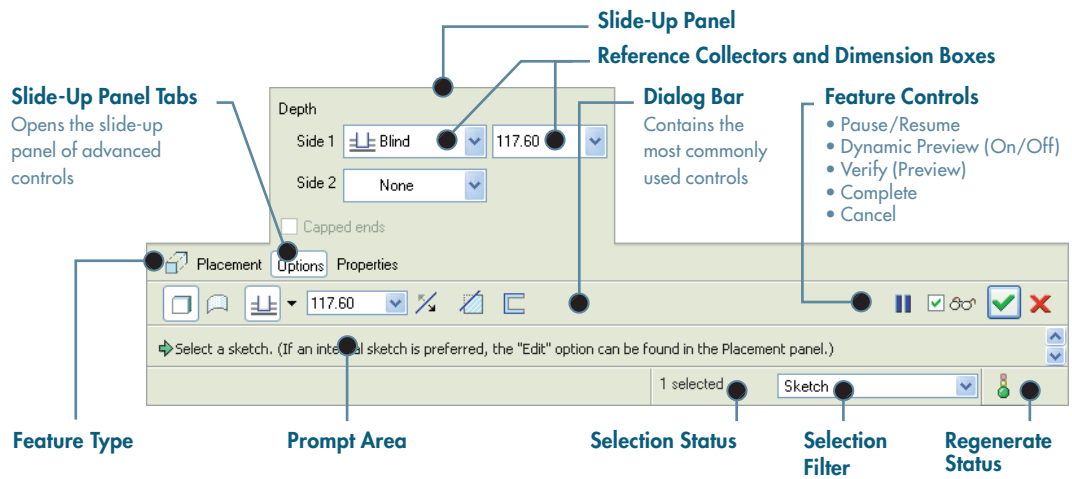


Dashboard Example: Extrude

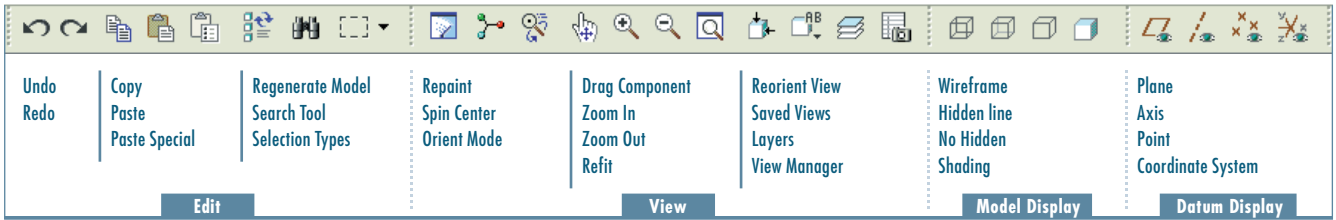


Common Dashboard Controls

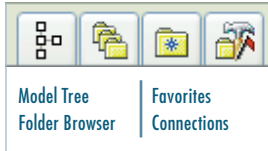
Feature		Hole		Round		Depth			Material		
Solid	Surface	Standard	Straight	Set Mode	Transition Mode	Blind	To Selected	Through All	Change Depth	Remove Material	Thicken Sketch

Pro/ENGINEER ICON GUIDE

Main Toolbar



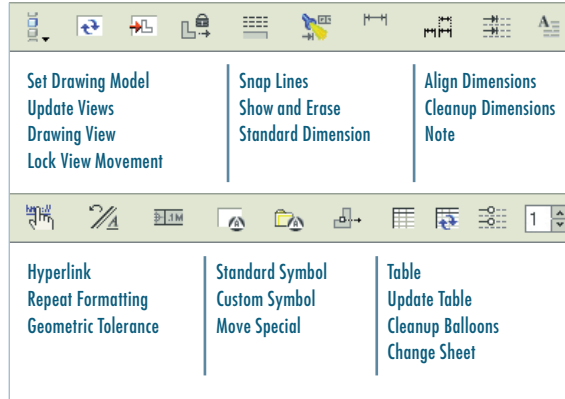
Navigator Tabs



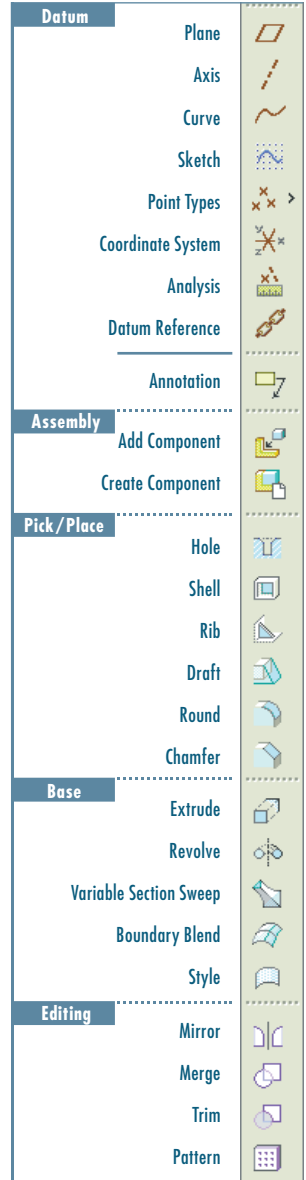
Browser Controls



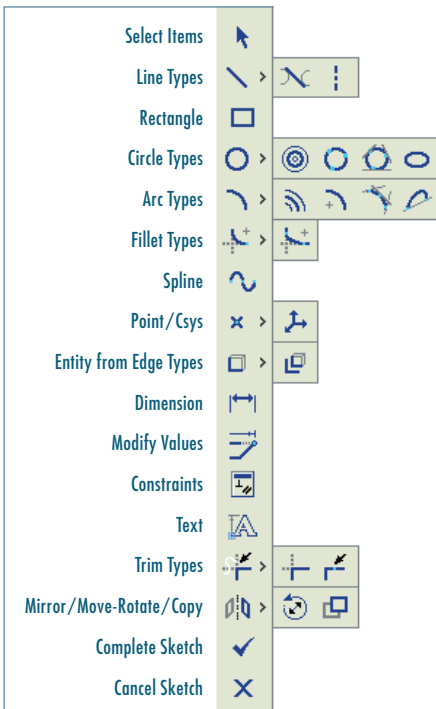
Drawing Toolbar



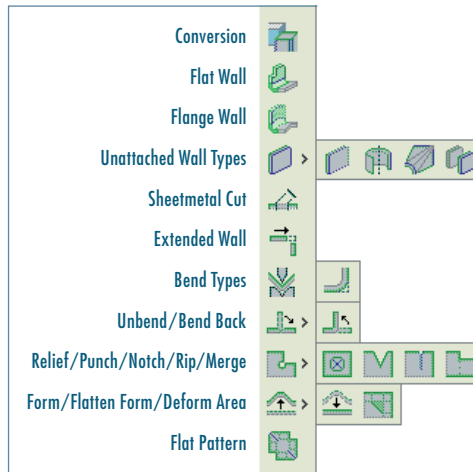
Feature Creation Toolbar



Sketcher Toolbar



Sheetmetal Toolbar






Keyboard Shortcuts







Regenerate	CTRL + G	Copy	CTRL + C
New File	CTRL + N	Paste	CTRL + V
Open File	CTRL + O	Undo	CTRL + Z
Save File	CTRL + S	Redo	CTRL + Y
Search	CTRL + F	Repaint	CTRL + R
Delete	DEL	Standard View	CTRL + D

MAKING SELECTIONS

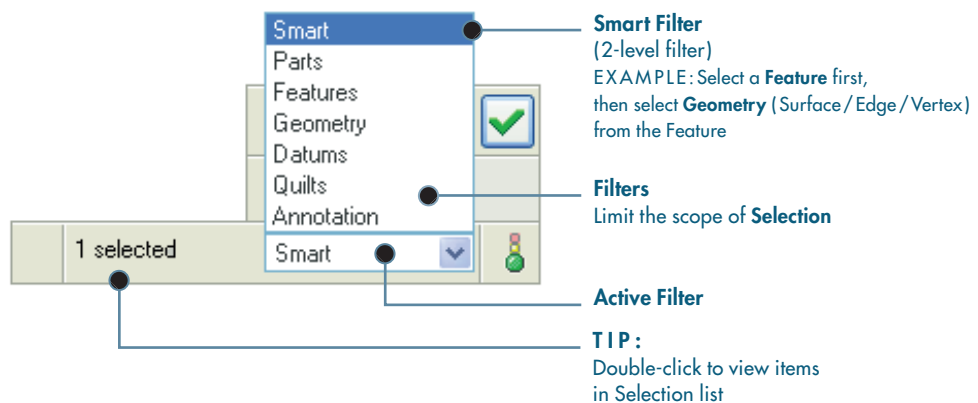
System Color Assignments

Cyan		Preselection Highlight Item will be added to or removed from the set of selected items
Red		Selected Geometry Items currently selected
Yellow		Preview Geometry Results of the current operation when complete

Making Selections

Mouse Controls		
Highlight Geometry	>>	 Over Geometry
Query to Next Item	>>	 Until Highlighted
Select Highlighted Geometry	>>	
Add or Remove Items from Selection	>>	CTRL + 
Construct Chains of Surface Sets	>>	SHIFT + 
Clear Selection	>>	 On Background

USING FILTERS



ADVANCED SELECTION: Chain and Surface Set Construction

DEFINITIONS

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

Individual Chains

One-by-One

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

- 1 Select an edge
- 2 Hold down SHIFT
- 3 Select the edge again
- 4 Select adjacent edges
- 5 Release SHIFT

Rule-Based Chains

Tangent

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

- 1 Select an edge
- 2 Hold down SHIFT
- 3 Highlight **Tangent** chain (Query may be required)
- 4 Select tangent chain
- 5 Release SHIFT

Boundary

To select the outermost boundary edges of a quilt:

- 1 Select a one-sided edge of a quilt
- 2 Hold down SHIFT
- 3 Highlight **Boundary** chain (Query may be required)
- 4 Select boundary chain
- 5 Release SHIFT

Surface Loop

To select a loop of edges on a surface patch:

- 1 Select an edge
- 2 Hold down SHIFT
- 3 Highlight **Surface** chain (Query may be required)
- 4 Select surface loop
- 5 Release SHIFT

From-To

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

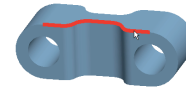


- 1 Select the **From** edge

- 2 Hold down SHIFT



- 3 Query to highlight the desired **From-To** chain



- 4 Select From-To chain

- 5 Release SHIFT

Multiple Chains

- 1 Construct initial chain
- 2 Hold down CTRL
- 3 Select an edge for new chain
- 4 Release CTRL
- 5 Hold down SHIFT
- 6 Complete new chain from selected edge



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 Hold down CTRL
- 3 Select additional patches (Query may be required)
- 4 Release CTRL

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**

Quilt Surfaces

To select all the surface patches of a quilt:

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

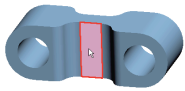
Loop Surfaces

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

- 1 Select a surface patch
- 2 Hold down SHIFT
- 3 Place the pointer over an edge of the patch to highlight the **Loop Surfaces**
- 4 Select the Loop Surfaces (The initial surface patch is de-selected)
- 5 Release SHIFT

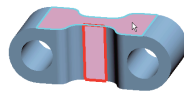
Seed and Boundary Surfaces

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

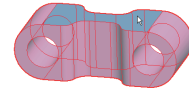


- 1 Select the **Seed** surface patch

- 2 Hold down SHIFT



- 3 Select one or more surface patches to be used as boundaries



- 4 Release SHIFT (All surfaces from the Seed up to the Boundaries are selected)

Excluding Surface Patches from Surface Sets

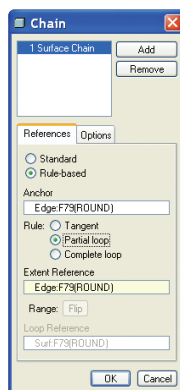
To exclude surface patches during or after construction of a surface set:

- 1 Construct a surface set
- 2 Hold down CTRL
- 3 Highlight a patch from the surface set
- 4 Select the patch to de-select it
- 5 Release CTRL

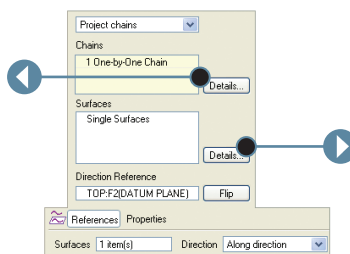
CONSTRUCTING CHAINS AND SURFACE SETS USING DIALOG BOXES

To explicitly construct and edit Chains and Surface Sets, click **Details** next to a collector:

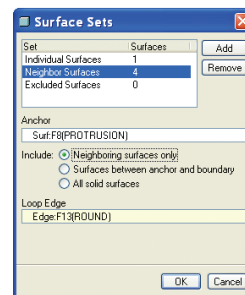
Chain Dialog Box



Dashboard Collector



Surface Set Dialog Box







ORIENTING THE MODEL



DYNAMIC VIEWING

3D Mode

Hold down the key and button. Drag the mouse.




SPIN	>>	
PAN	>>	SHIFT + 
ZOOM	>>	CTRL + 
TURN	>>	CTRL + 

2D Mode

PAN	>>	
ZOOM	>>	CTRL + 

2D and 3D Modes

Hold down the key and roll the mouse wheel.

ZOOM	
FINE ZOOM	SHIFT + 
COARSE ZOOM	CTRL + 



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 options
- Use the shortcut: CTRL + SHIFT + Middle-click




Using Component Drag Mode in an Assembly

Click the icon in the Main Toolbar to enable Component Drag mode.

- 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

COMPONENT PLACEMENT CONTROLS

Allows reorientation of components during placement

COMPONENT DRAG	>>	CTRL + ALT + 
SPIN	>>	CTRL + ALT + 
PAN	>>	CTRL + ALT + 

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