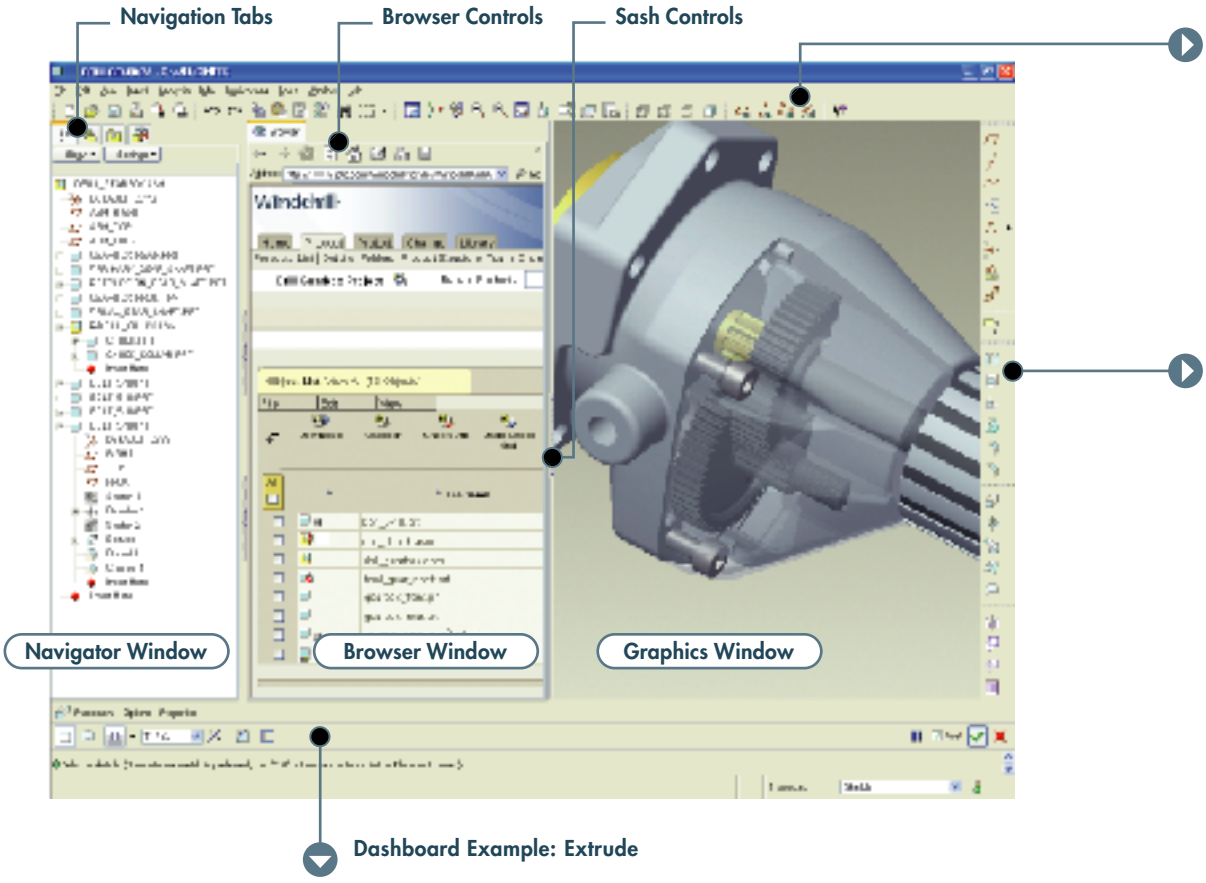
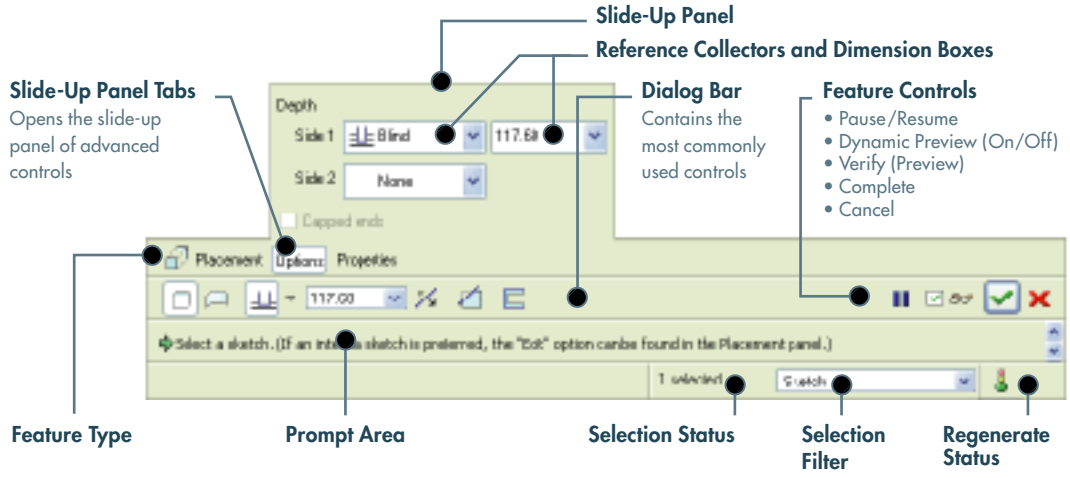
PTC®

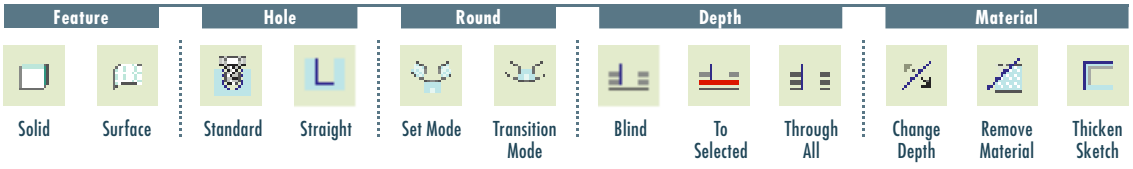
Pro|ENGINEER® WILDFIRE 2.0

QUICK REFERENCE CARD



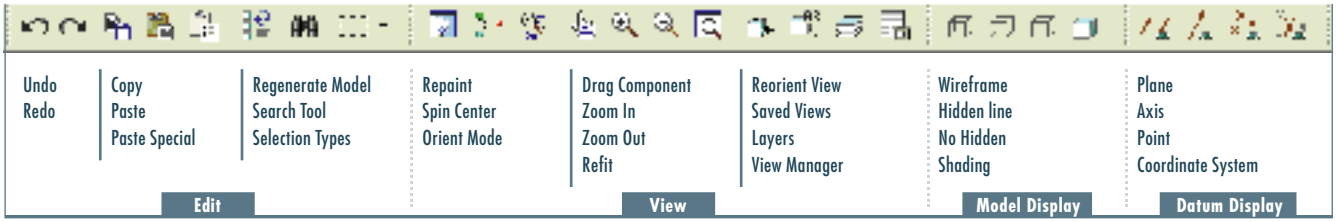


Common Dashboard Controls



Pro/ENGINEER ICON GUIDE

Main Toolbar



Edit	View	Model Display	Datum Display
Undo	Copy	Regenerate Model	Repaint	Drag Component	Reorient View	Wireframe	Plane
Redo	Paste	Search Tool	Spin Center	Zoom In	Saved Views	Hidden line	Axis
	Paste Special	Selection Types	Orient Mode	Zoom Out	Layers	No Hidden	Point
				Refit	View Manager	Shading	Coordinate System

Navigator Tabs

Model Tree
Folder Browser
Favorites
Connections

Browser Controls

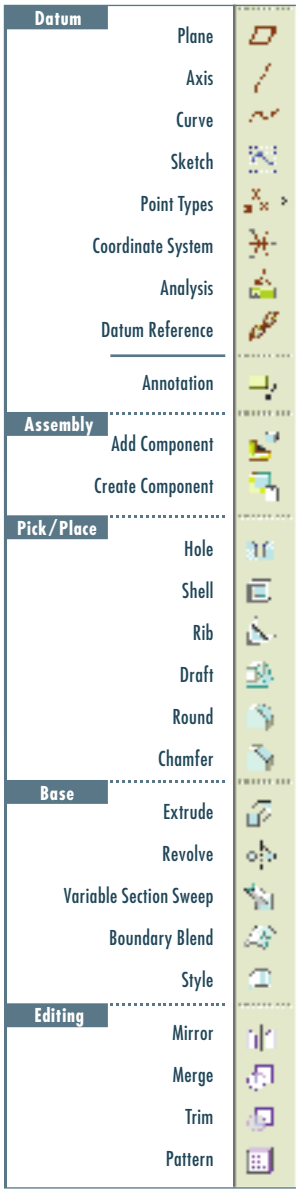
Back
Forward
Stop
Refresh
Home
History
Print
Save

Drawing Toolbar

Set Drawing Model
Update Views
Drawing View
Lock View Movement
Snap Lines
Show and Erase
Standard Dimension
Align Dimensions
Cleanup Dimensions
Note

Hyperlink
Repeat Formatting
Geometric Tolerance
Standard Symbol
Custom Symbol
Move Special
Table
Update Table
Cleanup Balloons
Change Sheet

Feature Creation Toolbar



Datum
Plane
Axis
Curve
Sketch
Point Types
Coordinate System
Analysis
Datum Reference

Annotation

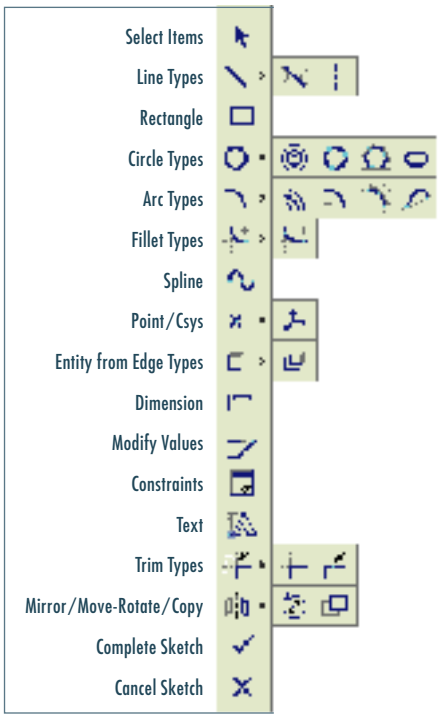
Assembly
Add Component
Create Component

Pick/Place
Hole
Shell
Rib
Draft
Round
Chamfer

Base
Extrude
Revolve
Variable Section Sweep
Boundary Blend
Style

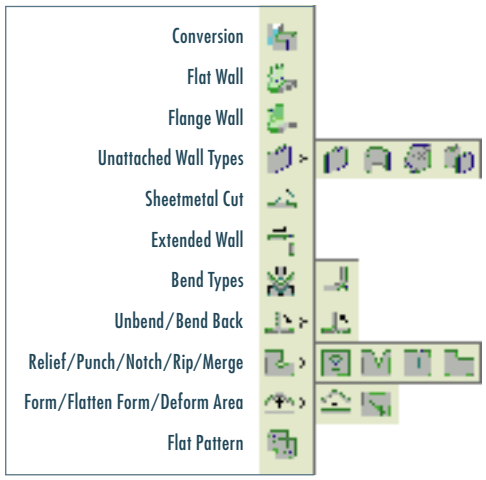
Editing
Mirror
Merge
Trim
Pattern

Sketcher Toolbar



Select Items
Line Types
Rectangle
Circle Types
Arc Types
Fillet Types
Spline
Point/Csys
Entity from Edge Types
Dimension
Modify Values
Constraints
Text
Trim Types
Mirror/Move-Rotate/Copy
Complete Sketch
Cancel Sketch

Sheetmetal Toolbar



Conversion
Flat Wall
Flange Wall
Unattached Wall Types
Sheetmetal Cut
Extended Wall
Bend Types
Unbend/Bend Back
Relief/Punch/Notch/Rip/Merge
Form/Flatten Form/Deform Area
Flat Pattern

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

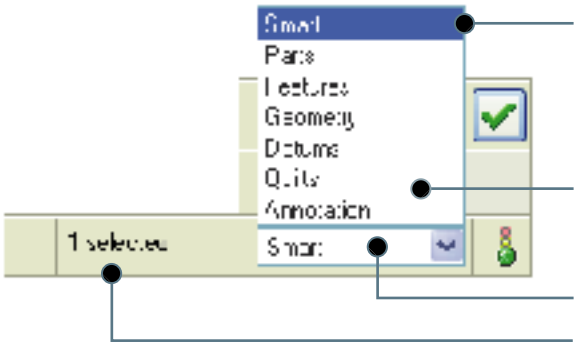
System Color Assignments

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



Smart Filter
(2-level filter)
EXAMPLE: Select a **Feature** first, then select **Geometry** (Surface / Edge / Vertex) from the Feature

Filters
Limit the scope of **Selection**

Active Filter

TIP:
Double-click to view items in Selection list

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:

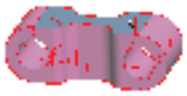
1 Select a surface patch
2 Hold down SHIFT
3 Place the pointer over an edge of the patch to highlight the **Loop Surfaces**
4 Select the Loop Surfaces (The initial surface patch is de-selected)
5 Release SHIFT

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

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DOC-RC60388-EN-340