

### Large Tool Set

- Select (Spacebar) Lasso
- Paint Bucket (B) Eraser (E)
- Make Component Tag
- Line (L) Freehand
- Rectangle (R) Rotated Rectangle
- Circle (C) Polygon
- Arc 2 Point Arc (A)
- 3 Point Arc Pie
- Move (M) Push/Pull (P)
- Rotate (Q) Follow Me
- Scale (S) Offset (F)
- Tape Measure (T) Dimensions
- Protractor Text
- Axes 3D Text

- Flip Field of View
- Orbit (O) Pan (H)
- Zoom (Z) Zoom Window
- Zoom Extents Previous
- Position Camera Walk
- Look Around Section Plane

### Solid Tools

- Outer Shell Intersect (Pro)
- Union (Pro) Subtract (Pro)
- Trim (Pro) Split (Pro)

### Sandbox (Terrain)

- From Contours From Scratch
- Smoove Stamp
- Drape Add Detail
- Flip Edge

### Standard Views

- Iso
- Front
- Back
- Top
- Right
- Left

### Style

- X-Ray
- Wireframe
- Shaded
- Monochrome
- Back Edges
- Hidden Line
- Shaded with Textures

### Dynamic Components

- Interact
- Configurator Tool
- Component Attributes

### Location

- Add Location
- Toggle Terrain

### Warehouse

- 3D Warehouse
- Share Component
- Send to LayOut (Pro)
- Extension Warehouse
- Share Model
- Classifier (Pro)

**Middle Button (Wheel)**


|                  |                |
|------------------|----------------|
| Scroll           | Zoom           |
| Click-Drag       | Orbit          |
| Shift+Click-Drag | Pan            |
| Double-Click     | Re-center view |

| Tool                   | Operation          | Instructions  |
|------------------------|--------------------|---|
| <b>2 Point Arc (A)</b> | Bulge              | specify bulge amount by typing a number and Enter   |
|                        | Radius             | specify radius by typing a number, the R key, and Enter   |
|                        | Segments           | specify number of segments by typing a number, the S key, and Enter   |
| <b>3 Point Arc</b>     | Alt + Arrows       | use Option '+' or Option '-' to change the number of segments.<br>lock direction: up = blue, right = red, left = green, and down = parallel/perpendicular |
| <b>Circle (C)</b>      | Shift              | lock current inferences   |
|                        | Radius             | specify radius by typing a number and Enter   |
|                        | Segments           | specify number of segments by typing a number, the S key, and Enter   |
| <b>Eraser (E)</b>      | Ctrl               | soften/smooth (use on edges to make adjacent faces appear curved)   |
|                        | Shift              | hide  |
|                        | Alt                | unsoften/unsmooth   |
| <b>Field of View</b>   |                    | drag the mouse or manually enter a value using the Field of View box  |
| <b>Follow Me</b>       | Alt                | use face perimeter as extrusion path  |
|                        | <i>Expert Tip!</i> | first Select path, then choose the Follow Me tool, then click on the face to extrude  |

|                          |                     |   |
|--------------------------|---------------------|---|
| <b>Flip</b>              |                     | click the plane to control the direction of the flip operation                                  |
|                          | Ctrl                | toggle between flip and copy  |
| <b>Lasso</b>             | Shift               | add/subtract from selection   |
|                          | Alt                 | add to selection  |
|                          | Shift+Alt           | subtract from selection   |
| <b>Line (L)</b>          | Alt                 | lock in current inference direction   |
|                          | Arrows              | lock direction; up = blue, right = red, left = green, and down = parallel/perpendicular         |
|                          | Length              | specify length by typing a number and Enter   |
| <b>Look Around</b>       | Eye Height          | specify eye height by typing a number and Enter   |
| <b>Move (M)</b>          | Ctrl                | toggle copy mode, allows multiple consecutive   |
|                          | Shift               | hold down to lock in current inference direction  |
|                          | Alt                 | auto-fold (allow move even if it means adding extra edges and faces)                            |
|                          | Arrows              | lock direction; up = blue, right = red, left = green, and down = parallel/perpendicular         |
|                          | Distance            | specify move distance by typing a number and Enter  |
|                          | External Copy Array | X copies in a row: move first copy, type a number, the X key, and Enter                         |
|                          | Internal Copy Array | X copies in between: move first copy, type a number, the / key, and Enter                       |
| <b>Offset (F)</b>        | Alt                 | allow results to overlap  |
|                          | Distance            | specify an offset distance by typing a number and Enter   |
| <b>Orbit (O)</b>         | Alt                 | hold down to disable "gravity-weighted" orbiting  |
|                          | Shift               | hold down to activate Pan tool  |
| <b>Paint Bucket (B)</b>  | Ctrl                | fill material – paint all matching adjacent faces   |
|                          | Shift               | replace material – paint all matching faces in the model  |
|                          | Ctrl+Shift          | replace material on object – paint all matching faces on the same object                        |
|                          | Alt                 | hold down to sample material  |
| <b>Protractor</b>        | Ctrl                | toggle guide creation   |
|                          | Arrows              | toggle lock rotation plane  |
| <b>Push/Pull (P)</b>     | Ctrl                | push/pull a copy of the face (leaving the original face in place)                               |
|                          | Double-Click        | apply last push/pull amount to this face  |
|                          | Distance            | specify a push/pull amount by typing a number and Enter   |
| <b>Rectangle (R)</b>     | Alt                 | start drawing from center   |
|                          | Dimensions          | specify dimensions by typing length, width and Enter ( <i>ie. 20,40</i> )                       |
| <b>Rotated Rectangle</b> | Shift               | lock in current direction/plane   |
|                          | Alt                 | lock drawing plane for first edge (after first click)   |
|                          | Dimensions, Angle   | click to place first two corners, then type width, angle and Enter ( <i>ie. 90,20</i> )         |
| <b>Rotate (Q)</b>        | Ctrl                | rotate a copy   |
|                          | Angle               | specify an angle by typing a number and Enter   |
|                          | Slope               | specify an angle as a slope by typing a rise, a colon (:), a run, and Enter ( <i>ie. 3:12</i> ) |
| <b>Scale (S)</b>         | Ctrl                | hold down to scale about center   |
|                          | Shift               | hold down to scale uniformly (don't distort)  |
|                          | Amount              | specify a scale factor by typing a number and Enter ( <i>ie. 1.5 = 150%</i> )                   |
|                          | Length              | specify a scale length by typing a number, a unit type, and Enter ( <i>ie. 10m</i> )            |
| <b>Search (Shift+S)</b>  |                     | search SketchUp command list for tools or commands  |
| <b>Select (Spacebar)</b> | Ctrl                | add to selection  |
|                          | Shift               | add/subtract from selection   |
|                          | Ctrl+Shift          | subtract from selection   |
| <b>Tape Measure (T)</b>  | Ctrl                | toggle create guide or measure only   |
|                          | Arrows              | lock direction; up = blue, right = red, left = green, and down = parallel/perpendicular         |
|                          | Resize              | resize model: measure a distance, type intended size, and Enter                                 |
| <b>Zoom (Z)</b>          | Shift               | hold down and click-drag mouse to change Field of View  |

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**Middle Button (Wheel)**


- Scroll Zoom
- Click-Drag Orbit
- Shift+Click-Drag Pan
- Double-Click Re-center view

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