🚩 Move Tool

Use the Move Tool to move, stretch and copy geometry. This tool can also be used to rotate components and groups. Activate the Move Tool using the [Modification Toolbar](#) or the [Tools menu](#).

Keyboard Shortcut: M

Moving a Single Entity

You can activate the Move Tool when nothing is selected to select a single entity to move. The selection click point becomes the base point for the move operation. To select and move a single entity:

1.   Select the Move Tool. The cursor will change to a four-way arrow.

2.   Click on an entity to begin the move operation.

3.   Move the cursor to move the entity. The selected entity will follow as you move the cursor.

4.   Click at the destination point to finish your move operation.

> **Note -** If the entity you are moving is connected to other entities, the other entities will be moved or modified accordingly. See the [Stretching Geometry](#) section for further information on this behavior.

Moving Several Entities

You can preselect several entities to move prior to performing a move operation. To preselect and move entities:

1.   Select the [Select Tool](#). The cursor will change to an arrow.

2.   Select the entities to be moved.

3.   Select the Move Tool. The cursor will change to a four-way arrow.

4.   Click once on an entity to begin the move operation. The point where you click on the entity is called the *move point.*

5.   Move your mouse to move the entities. The selected entities will follow as you move your mouse. Also, an inference line will appear between the start and ending points of the move, and the distance of the move is displayed dynamically in the VCB. You can also type in a specific distance as described below. The following image shows a component being moved:

6. Click at the destination point to finish your move operation.

Note - Press the Esc key at any point during the operation to start over.

Moving by Inference

The Move Tool uses SketchUp's sophisticated geometric inference engine to help you place entities in 3D space. The inference decisions, made by the inference engine, are displayed in the drawing area as inference lines and inference points. These lines and points show precise alignment between the move operation and the geometry of your model. Refer to the inference engine topic for additional information.

Locking a Move to the Current Inference Direction

Press and hold the Shift key, while the move you are performing is the specific color of an axis, to lock move operation to that axis.

Locking a Line to a Specific Inference Direction

Press and hold either the up arrow, left arrow, or right arrow keys, where up arrow equals blue, left arrow equals green, and right arrow equals red, while moving to lock the move to a specific axis.

Moving Groups and Components

If a component is glued to a face, the component will stay in the plane of that face when moved unless it is unglued. Copies of a glued component will also be glued to the originating plane.

Stretching Geometry

When you move an element that is interconnected with others, SketchUp will stretch geometry as necessary. You can move points, edges, and faces in this manner. For example, the following Face entity can be moved back in the negative red direction or up in the positive blue direction:
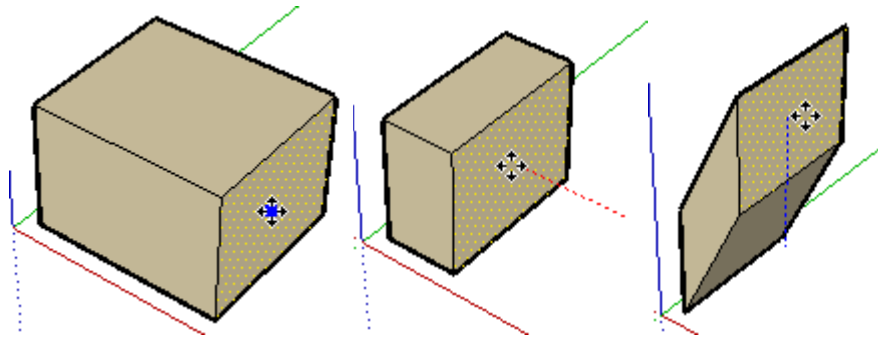
You can also move single line segments to stretch an object. In the following example, a line is selected and moved up in the blue direction to form a sloped roof.
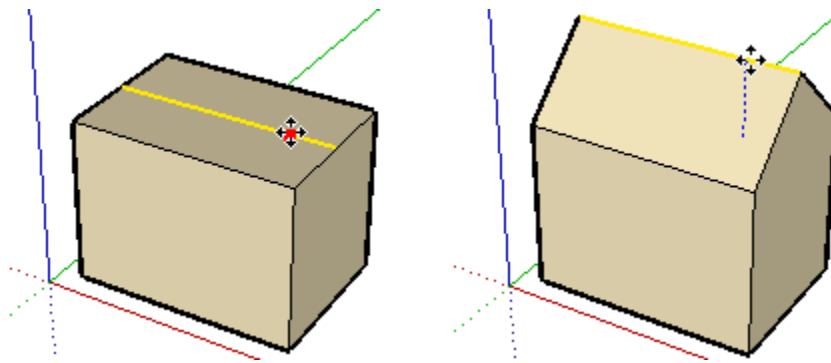
## Moving/Stretching With Autofold

SketchUp will Autofold faces automatically when a move or stretch operation will create non-planar faces. For example, clicking on the corner of a box with the Move Tool and move down in the blue direction causes SketchUp to create a fold line along the box's top face.
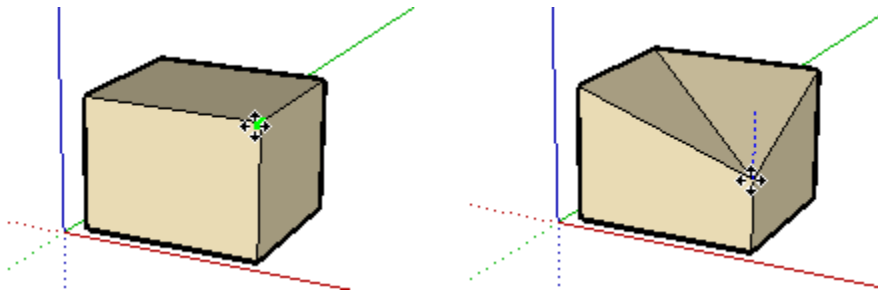
Forcing Autofold Behavior

There are times when SketchUp constrains an operation in favor of keeping all faces planar and not creating additional fold lines. For example, clicking on the edge of a box with the Move Tool only allows you to move the edge in a horizontal direction (red and green), but not vertically (blue).

You can override this behavior by pressing and releasing the Alt key before performing the move operation. This key sequence enables Autofold allowing geometry to move freely in any direction.
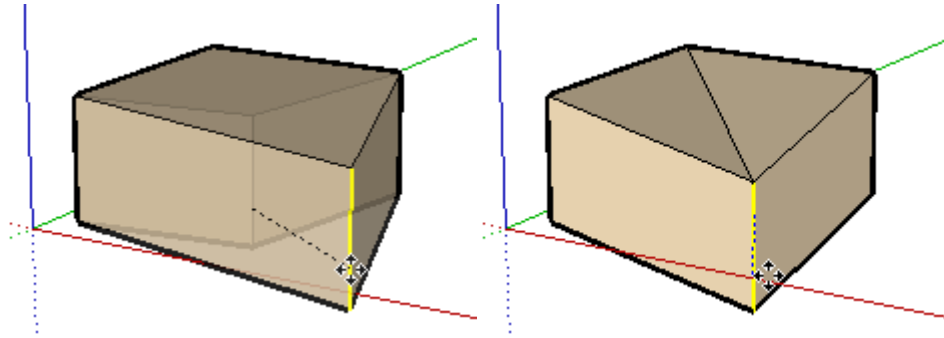
Making Copies

As mentioned previously, the Move Tool can be used to make copies of entities within your model. To make copies of an entity using the Move Tool:

1.   Select the <u>Select Tool</u>. The cursor will change to an arrow.

2.   Select the entities to be copied.

3.   Select the Move Tool. The cursor will change to a four-way arrow.

4.   Press and release the Ctrl key on your keyboard. The cursor will change to a four-way arrow with a plus sign. This action informs Sketchup that you want to duplicate the selected entities.

5.   Click on the selected entities to copy.

6.   Move the cursor to copy the entities. A copy of the selected entities will follow as you move your mouse.

7.   Click at the destination point to finish your copy operation. The copied entities are now selected and the original entities are deselected.

 Note - You can press and release the Ctrl key on your keyboard at any time during a move operation to perform a copy (not just at the start).

## Creating Multiple Copies (Linear Arrays)

The Move Tool can also be used to create arrays, or a series of copies of geometry. To create multiple copies of one or more entities:

1.   Select the <u>Select Tool</u>. The cursor will change to an arrow.

2.   Select the entities to be copied.

3.   Select the Move Tool.

4.   Press and release the Ctrl key on your keyboard. The cursor will change to an arrow with a plus sign. This action informs SketchUp that you want to duplicate the selected entities.

5.   Click on the selected entities to copy.

6.   Move your mouse to copy the entities. A copy of the selected entities will follow as you move your mouse.

7.   Click at the destination point to finish your copy operation. The copied entities are now selected and the original entities are deselected.

8. Type a multiplier value to create additional multiple copies. For example, typing in 2x (or *2) will create one additional copy (or 2 copies total, the one you manually copied plus one you automatically copied using this step) instead of just one.

Creating Copies at an Equal Distance Apart

You can divide the distance between the copy and the original by typing in a divisor value. For example, typing 5/ (or /5) will create five copies evenly distributed between the original and the first copy. You can keep typing in distances and multipliers until you perform another operation.
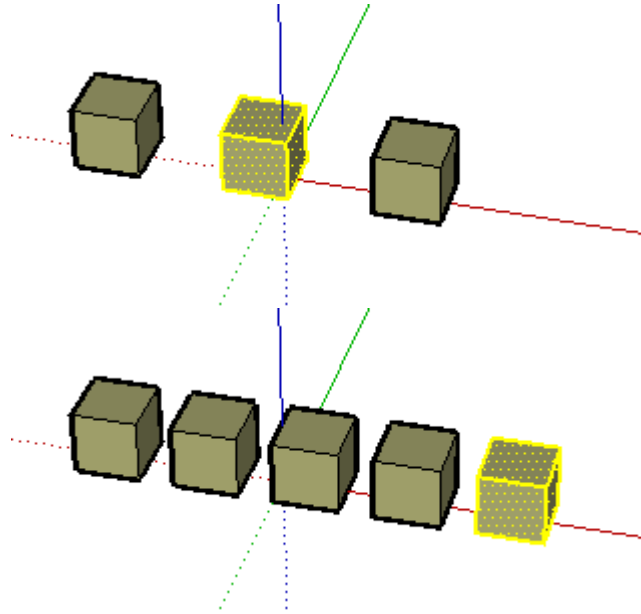
Tip - This feature is particularly useful in creating models of items such as fences, bridges, and decks, where you might want several posts or beams an equal distance apart.

Specifying Precise Move Values

The VCB at the bottom right corner of the SketchUp window displays the length of the move operation (displacement) in the default units, as specified under the Units panel of the Model Info dialog box, while moving, copying, or stretching entities. In addition to creating arrays, you can also specify an exact displacement or a relative or absolute 3D coordinate for the finishing point during, or immediately after, a move operation.

Entering a Displacement Value

You can specify a new displacement length during or directly following a move operation. To enter a displacement value during a move operation:

1. Select the Select Tool. The cursor will change to an arrow.

2. Select the entities to be moved.

3. Select the Move Tool. The cursor will change to a four-way arrow.

4. Click once to select the start point of the move operation.

5. Move your mouse to begin moving the entities in the correct direction. The selected entities will follow as you move your mouse. Also, an inference line will appear between

the start and ending points of the move, and the distance of the move is displayed dynamically in the VCB.

6. Type the positive or negative displacement value (such as 20' or -35mm) in the VCB and press Enter or Return.

Note - You can type values in the VCB using an alternate measuring system than the default system. SketchUp will convert the value to the default system. For example, you can type in 3' 6" even if you are using metric system as your default.
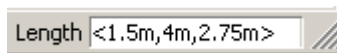
Entering a 3D Coordinate

SketchUp can move your entities to exact (using []) or relative (using <>) coordinates in 3D space. To enter a 3D coordinate during a move operation:

1. Select the <u>Select Tool</u>. The cursor will change to an arrow.

2. Select the entities to be moved.

3. Select the Move Tool. The cursor will change to a four-way arrow.

4. Click once to select the start point of the move operation.

5. Move your mouse to begin moving the entities in the correct direction. The selected entities will follow as you move your mouse. Also, an inference line will appear between the start and ending points of the move, and the distance of the move is displayed dynamically in the Value Control Box (VCB).

6. Type the exact or relative coordinate.

    Global Coordinates: [x, y, z] of the current Sketch Axes:

    Length [3',5',7']
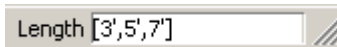
    Relative Coordinates: <x, y, z> relative to the start point:

    Length <1.5m,4m,2.75m>

    Note - You can define only one or two values as part of your 3D coordinate. For example, to move geometry to 2 feet in the z or blue direction enter the following in the VCB: [,,2']

    Note - The exact format for values typed in the VCB will vary depending on your computer's regional settings. For some European users, the list separator symbol is a semi-colon instead of a comma. For example, [x; y; z]