

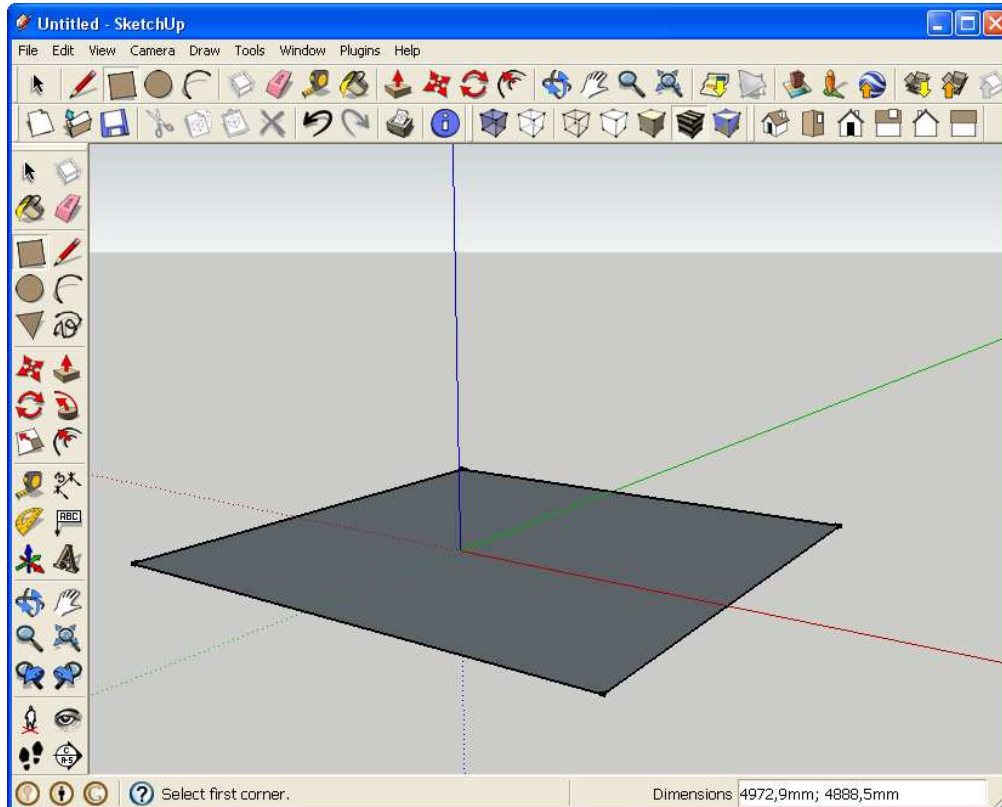
Introduction

Open SketchUp, and an empty file appears. You are looking at the red-green plane, and the blue axis (vertical) is pointing toward you. By default, you are in the Line tool, as indicated by the pencil-shaped cursor.

Make a plan with tool Rectangle

Draw a rectangle by clicking the two opposite points, or by clicking and dragging from the first point to the second.

(<http://sketchup.google.com/support/bin/answer.py?answer=94835>)



A rectangle's dimensions dynamically appear in the **Measurements Toolbar** as you draw. Specify exact length and width dimensions by typing them in the Measurements Toolbar, and pressing **Enter** (Microsoft Windows) or **Return** (Mac OS X) either after the first corner is clicked or immediately after the rectangle is drawn.

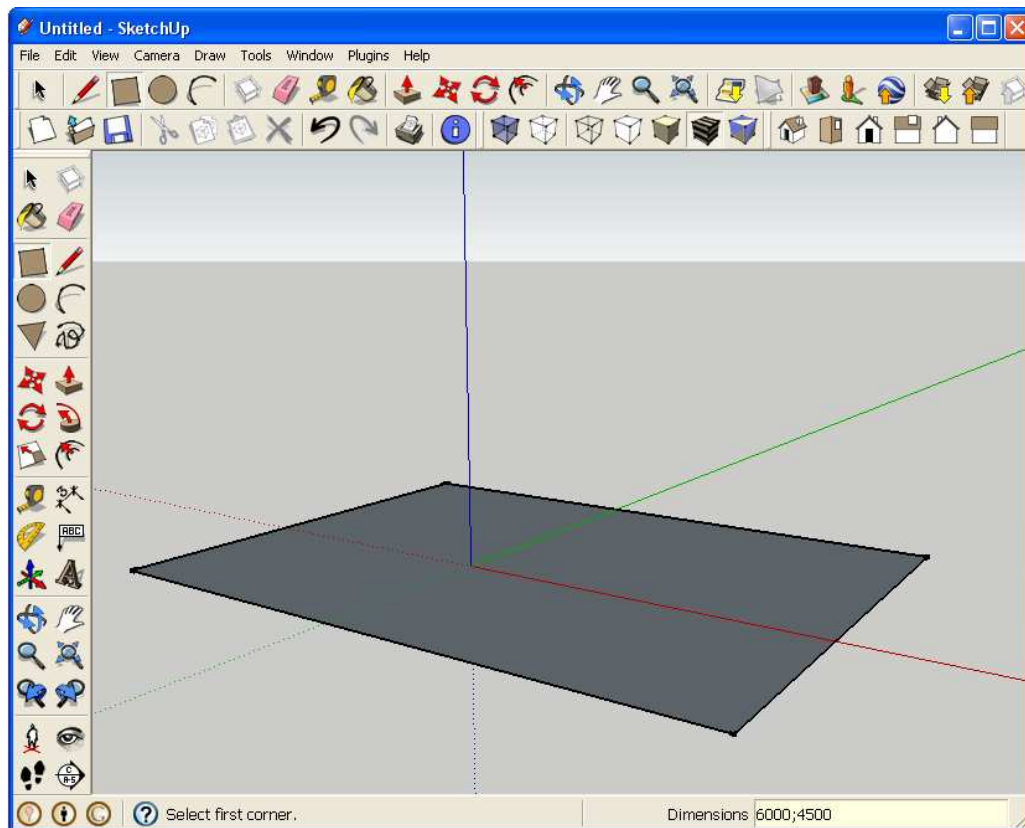
Measurements Toolbar

Measurements

This toolbar is used either to enter values or to display numerical information. If you are using a tool that can take numerical input (usually optional), such as line length or number of copies, all you have to do is type the number and press Enter, and the value appears in the VCB. If you are using a tool such as **Measure** or **Protractor**, the length or angle being measured appears in the VCB.


(<http://sketchup.google.com/support/bin/answer.py?answer=94837>)

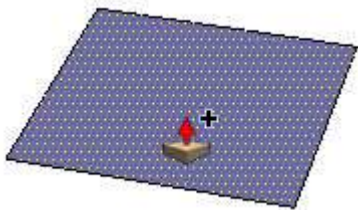
Enter desired dimensions for your plan, for example 6000mm;4500mm



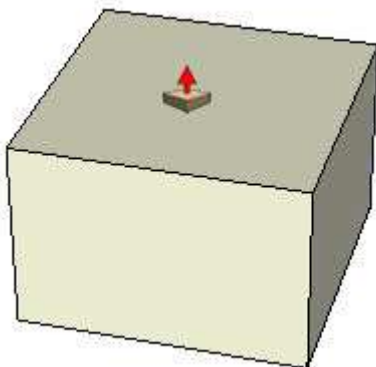
Select **Tools / Push/Pull**  and make a box.

Push/Pull tool is used to expand or decrease the volume of geometry in your models. To push or pull faces:

1. Select the **Push/Pull** tool (). The cursor will change to a 3D rectangle with an up arrow.
2. Click on the face that you want to expand or decrease.



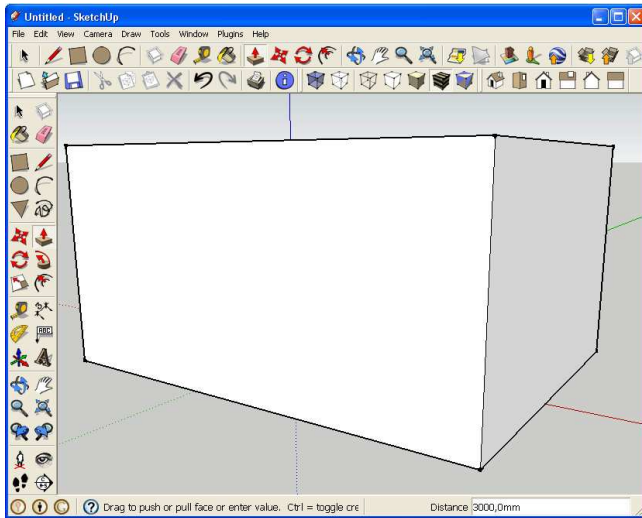
3. Move the cursor to create (or decrease) volume.



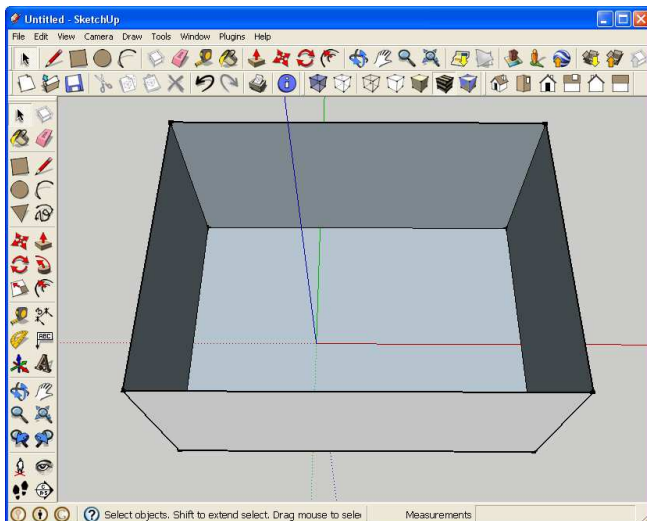
4. Click when the volume has reached the desired size.

(<http://sketchup.google.com/support/bin/answer.py?answer=94888>)

The displacement of a push/pull operation is displayed in the Measurements Toolbar. You can specify an exact push/pull value either during or immediately after your push/pull operation. Negative values will perform the push/pull in the opposite direction.

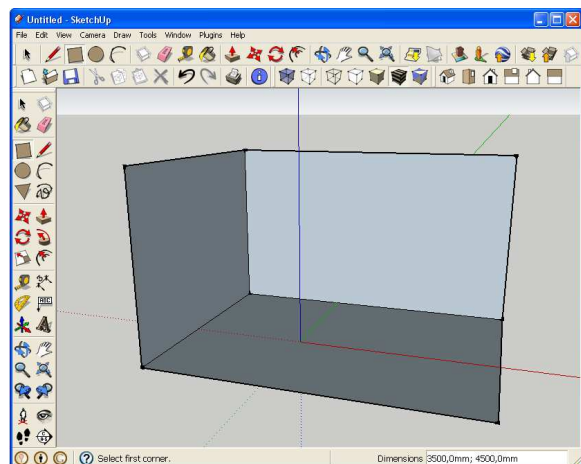
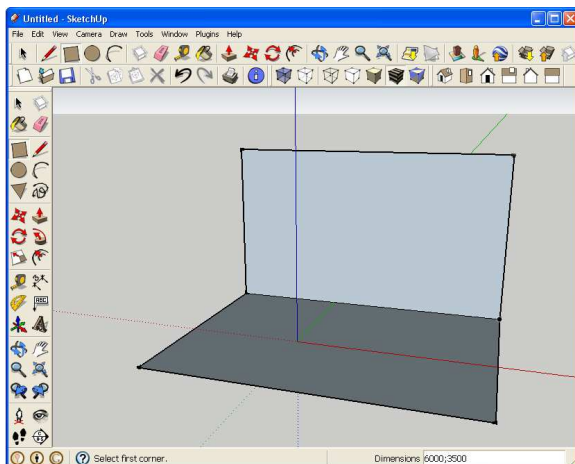


If erase the top plan of the box, you will get a space. (a empty box)



Now we've created a box that can represent your space for wine tanks.


At this plan we'll construct 2 perpendicular plans with tool Rectangle .

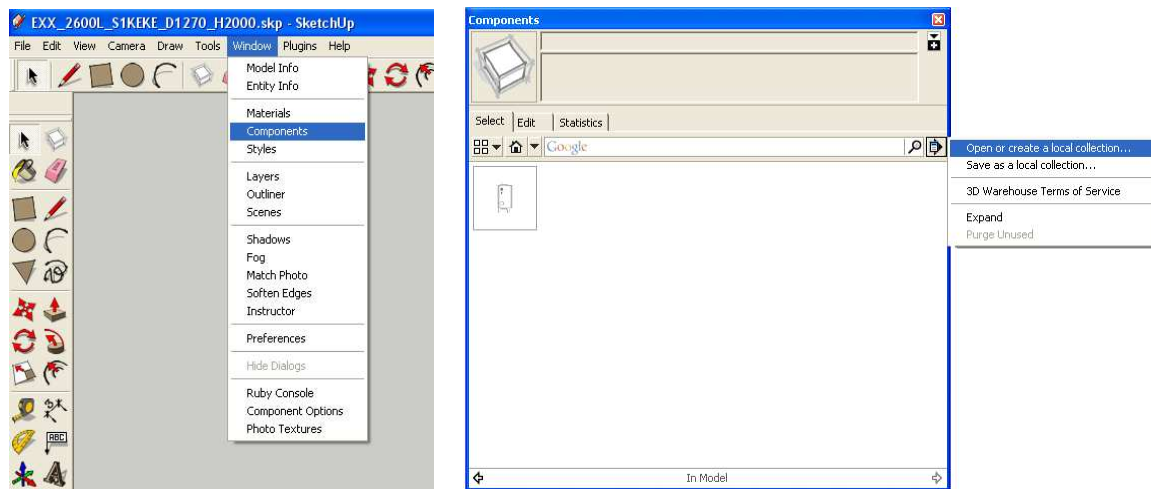


Now we've created a figure that can represent your space for tanks.

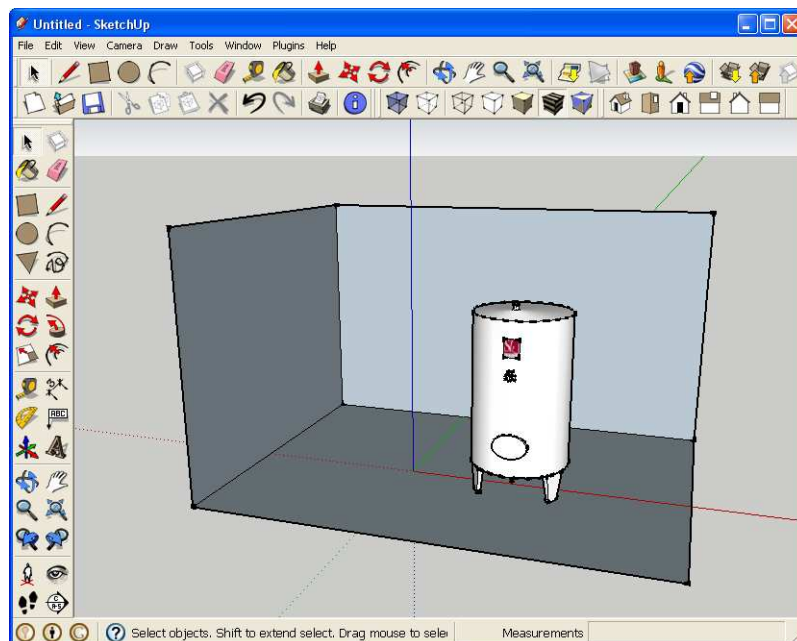
You can get the wine tanks on the official site of SK-GROUP (link) or on the Google 3D Warehouse Web site (<http://sketchup.google.com/3dwarehouse/>). The Google 3D Warehouse is a free, online repository where you can find 3D models.

You can get 3D models in two different ways:

1. Choose File → 3D Warehouse → Get Models or click Get Models...  from **Getting Started Toolbar**; when you do, a mini Web browser opens right in front of your modeling window.
2. Choose Window → Components. This window displays the components in the currently selected component library. Then you should find **Details flyout menu**. Here's where you manage the component libraries on your computer system. Choose the option **Open or create a local collection...**, which lets you choose a folder on your computer system to use as a component library. Any SketchUp models in that folder can be used as components in your current model.

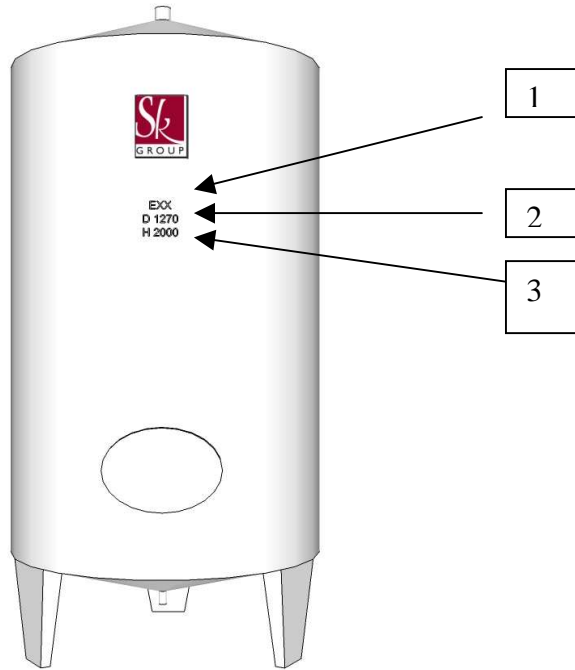


Place wine tanks model in your workspace.



On each model you will find next informations:

- 1 → type of wine tanks
- 2 → diameter of wine tanks
- 3 → height of wine tanks




Below you'll find several tool that would help you to arrange tanks.





Use the Move tool to move, stretch and copy geometry. This tool can also be used to rotate components and groups.

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.

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 **Select** tool (). 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** (Microsoft Windows) or **Option** (Mac OS X) 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.

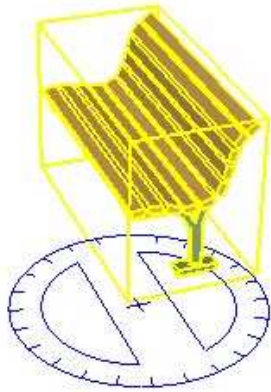
<http://sketchup.google.com/support/bin/answer.py?answer=94859>



Use the Rotate tool to rotate, stretch, distort, or copy entities along a rounded path.

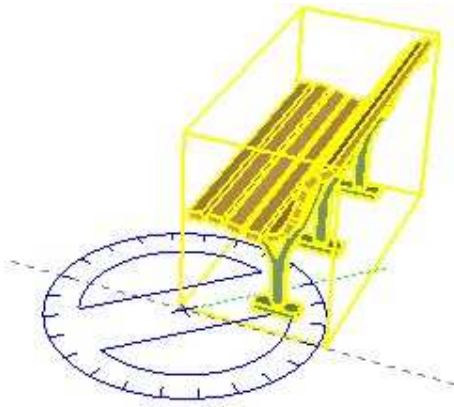
You can rotate geometry in three different planes in a 3D environment. To rotate geometry using the Rotate Tool:

1. Select the **Rotate** tool (). The cursor will change to a protractor with a circular arrow.
2. Click on the entity to rotate.
3. Move the cursor in a circle until it is at the starting point of the rotation.



4. Click to set the starting point of the rotation. Use the inference tool tips to help you to find the center of the rotation.
5. Move the cursor until it is at the ending point of the rotation. If the 'Enable angle snapping' checkbox is checked in the Units Panel of the Model Info dialog box, movements close to the protractor result in angle snaps, while those further away from the protractor allow free rotation.

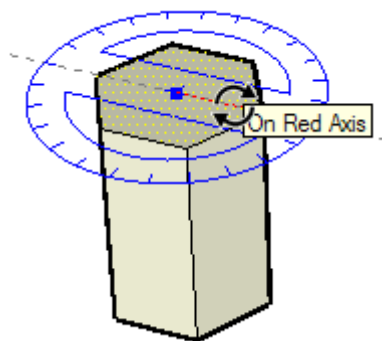
Note: Press the **Esc** key at any point during the operation to start over.




6. Click to complete the rotation.

Rotational stretching with Autofold

The Rotate tool can also be used to stretch geometry by selecting and rotating a portion of the geometry. Any rotational movement that would cause a face to twist in on itself or otherwise become non-planar will activate SketchUp's Auto-Fold feature.




The Rotate tool can be used to make rotated copies of entities within your model. To make copies of an entity using the Rotate Tool:

1. Select the **Rotate** tool (). The cursor will change to a protractor with a circular arrow.
2. Click on the entity to rotate.
3. Press and release the **Ctrl** (Microsoft Windows) or **Option** (Mac OS X) key on your keyboard. The cursor will change to a protractor with a plus sign. This action informs SketchUp that you want to duplicate the entity.
4. Move the cursor in a circle until it is at the starting point of the rotation.
5. Click to set the starting point of the rotation. Use the inference tool tips to help you to find the center of the rotation.
6. Move the cursor until it is at the ending point of the rotation. A copy of the entity appears and is rotated about the starting point. If the 'Enable angle snapping' checkbox is checked in the Units Panel of the Model Info dialog box, movements close to the protractor result in angle snaps, while those further away from the protractor allow free rotation.
7. Click to complete the rotation.



The Tape Measure tool is primarily used to measure distances between two points. To measure a distance between two points:

1. Select the **Tape Measure** tool (). The cursor changes to a tape measure.
2. Click at the starting point of your measurement. Use the inference tool tip to make sure you click on the exact point.
3. Move the cursor in the direction you want to measure. A temporary measuring tape line, with arrows at each end, will stretch out from your starting point as you move the mouse. The Tape Measure tool's measuring tape line functions like an inference line and will change color to match axes colors when it is parallel to any axes. The Measurements toolbar dynamically displays the length of your measuring tape as you move the mouse around your model.



Note: Press the **ESC** key at any point during the operation to start over.

4. Click at the ending point of your measurement. The final distance is displayed.

