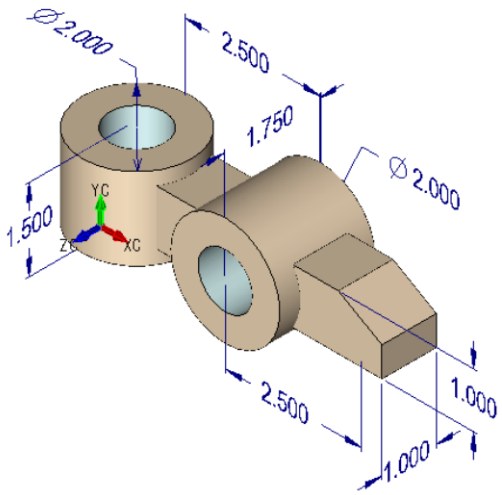
KeyCreator Lesson KC3707

Dynamite Dynamic Modeling!



In this lesson we're going to create the rocker illustrated to the right.

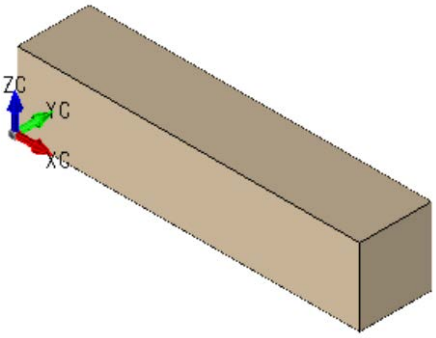
Start with a new file in the Isometric View (View 7.) with a construction plane assigned to the Top View. (View 1.)

Click on the BLOCK Icon.
A Dialog Box appears.

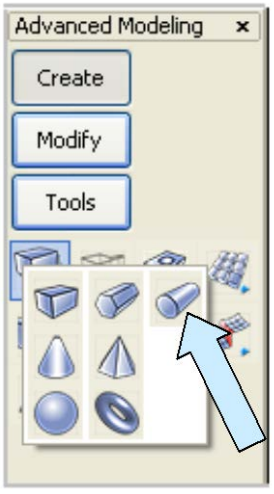
Click on the Sketch Option and use the current Cplane Axis. Hit the ENTER Key.

Click near the origin and then move the cursor to the right and up. A dynamic face grows on the screen. With the X value around 5 inches and the Y value around 1 inch, click to set the opposite corner.

Move the cursor upward and click when the Z value is about 1 inch.



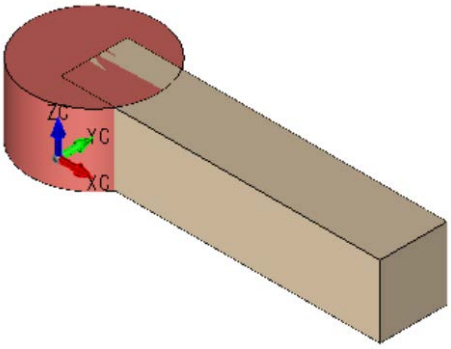
Your screen should look like this:



Click on the CYLINDER Icon. Click on the Sketch Option and use the current Cplane Axis. Hit the ENTER Key.

Using the CtrMid Option, click on the bottom, left edge of the block. Move the cursor outward so a circle grows to about 2 inches diameter and click using the Cursor Option.

Now, move the cursor upward and using the CtrMid Option, click on the top, left edge of the block.



Your screen should look like this:

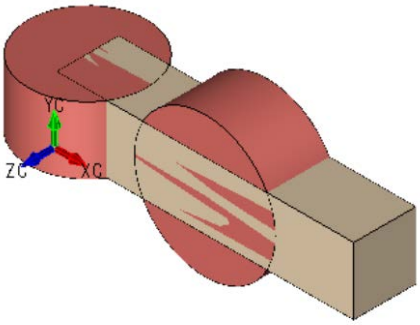
Click on the CONSTRUCTION PLANE Icon and type 2 for the Cplane Number.

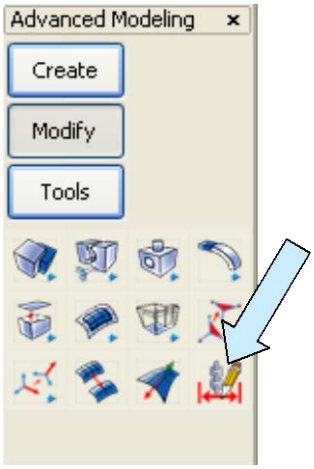
Still using the CYLINDER Tool, click on the TwoPos Option on the Conversation Bar. Using the CtrMid Option, click on the top, front edge of the block and then on the bottom, front edge.

Move the cursor and a circle grows. Click on the BACKUP Button.
Using the Cursor Option, click when the circle is about 2 inches in diameter.
Then, move the cursor to the right and up and a cylinder grows.

Click on the TwoPos Option on the Conversation Bar. Using the CtrMid Option, click on the top, rear edge of the block and then on the bottom, rear edge.

Your screen should look like this:





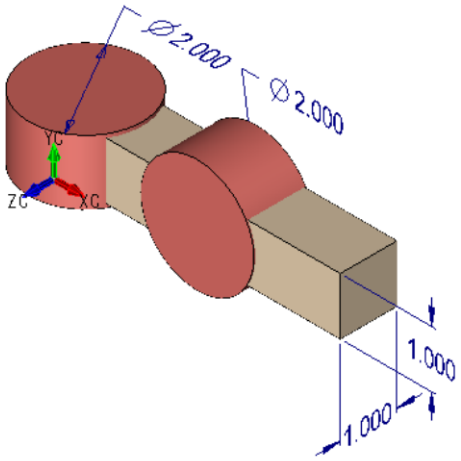
Click on the DIMENSION DRIVEN EDITING Icon.

Click on the top, circular edge of the left cylinder and edit it to be 2 inches in diameter.

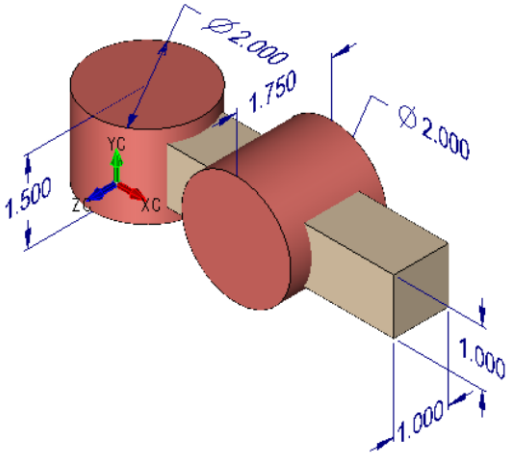
Click on the rear, circular edge of the other cylinder and edit it to be 2 inches in diameter.

Click on the right, front, edge of the block and the right, rear, edge of the block and place the dimension below the block. Click on the text of this dimension and edit it to make the block 1 inch wide.

Then, click on the top, front, edge of the block and bottom, front edge of the block and place this dimension to the right of the block. Click on the text of this dimension and edit it to make the block 1 inch wide.



Your screen should look like this:

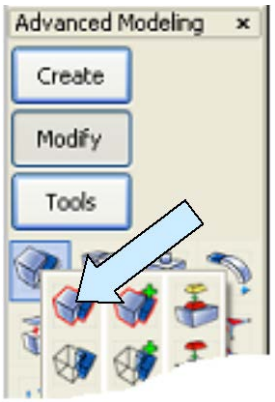


Still using the Dimension Driven Editing Tool, dimension the length of both cylinders. **Note: You can Right Mouse Click and select the proper dimension orientation (Horiz vs Vert) while placing the dimension.**

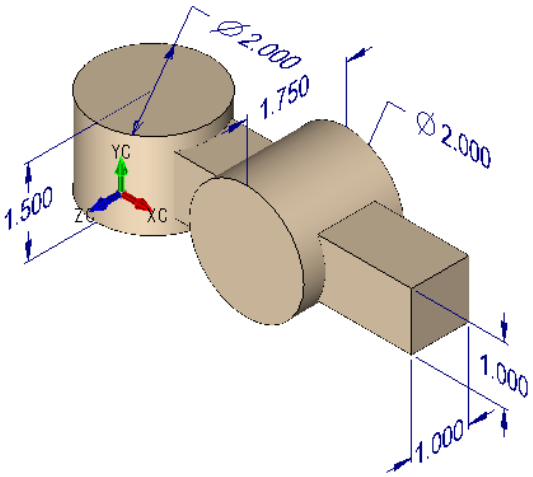
Edit each dimension by clicking on the text and make the left cylinder 1.5 inches long and the other cylinder 1.75 inches long.

Your screen should now look like this:

Click on the BOOLEAN UNION Icon.



Select the block and two cylinders and hit the ENTER Key.



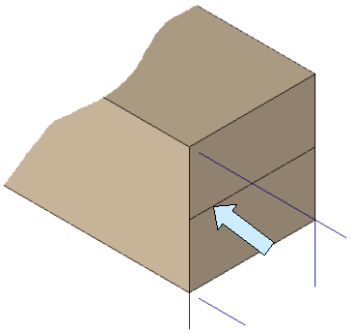
You now have one solid.

To create the sloped right end, we're going to use a neat trick.

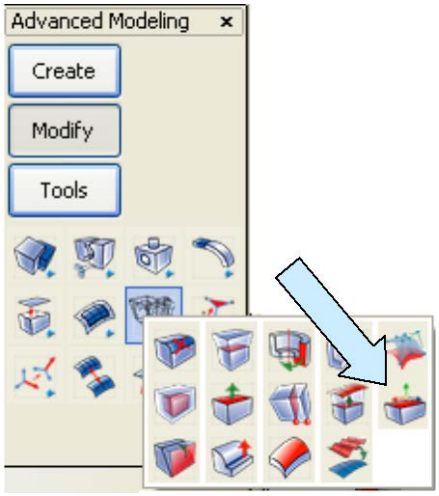
Click on the SCRIBE FACE Icon.

Click on the right face of the part.

Then, using the CtrMid Option, click on the right front edge and the right rear edge and hit the ENTER Key.



This breaks the face into two faces. (You'll see a horizontal line across the middle separating the faces.)



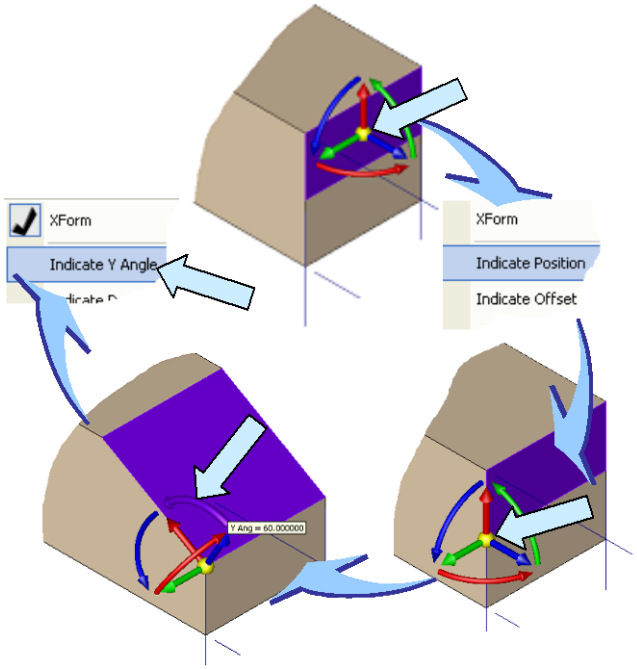
A DynaHandle appears on the face.

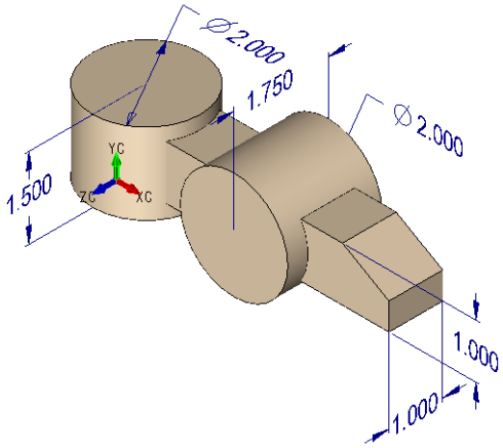
Right Mouse Click on the yellow sphere in the DynaHandle and click on the Indicate Position Option.

Using the EndEnt Option, click on the bottom, front corner of the face.

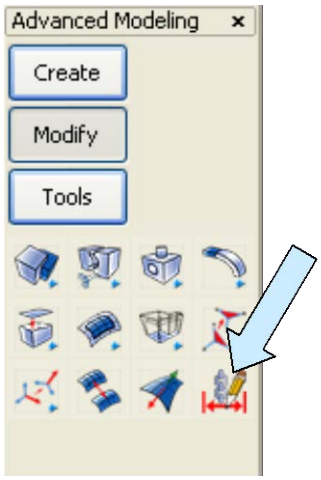
Now, drag the Green Rotation vector and Right Mouse Click. Using the Indicate Y Angle Option, type 360 and hit the ENTER Key.

Now, click on the DYNAMIC FACE Icon. Click on the top, right-side face of the part and hit the ENTER Key.





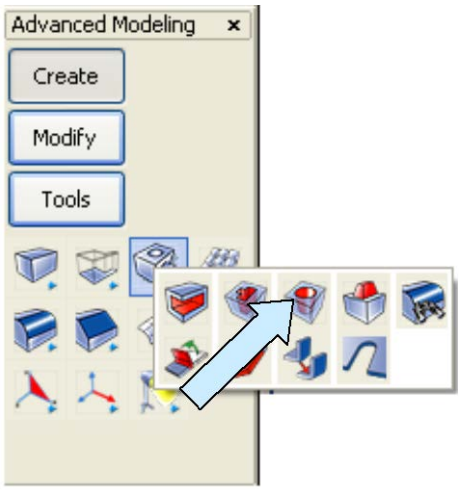
Your part should now look like this:



Click on the DIMENSION DRIVEN EDITING Icon.

Click on the top, circular edge of the left cylinder and the rear, circular edge of the other cylinder and place a dimension above the part.

Click on the left arrow of this dimension and edit it to be 2.5 inches. Then, click on the front, circular edge of the right cylinder and the right, front, vertical edge of the part and place this dimension below the part. Click on the right arrow of this dimension and edit it to be 2.5 inches.



Finally, click on the DRILL Icon.

Create 1 inch diameter through holes in the cylinders.

Your completed part should look like this: