

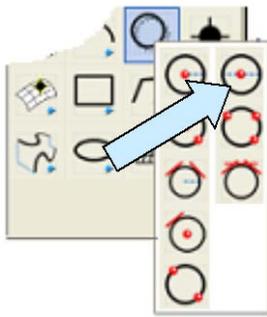
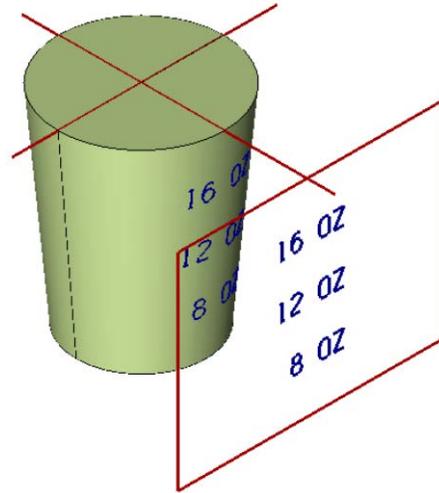
KEYCREATOR 3D Direct Modeling Software

KeyCreator Lesson KC4633

Projecting Text onto a Surface

In this exercise we'll convert a block of text into geometry and then project it onto a conical surface.

This is a common task for users who are designing containers. (For the example we'll use three lines labeled 16 OZ, 12 OZ, and 8 OZ. There could be any text in the note and you could also include geometry such as level lines if you so desired.)



We'll start with a new file in View 1. (The Top View.)

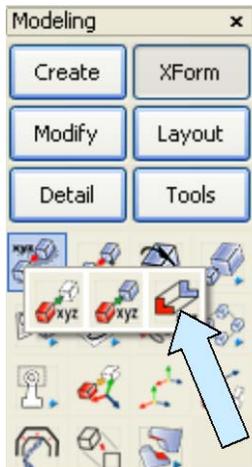
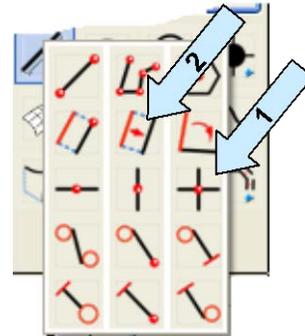
Click on the CREATE CIRCLE BY DIAMETER Icon.

Type 4 for the diameter and using the KeyIn Option, hit the ENTER Key three times to place the circle at the origin of the file.

Next, click on the CREATE HORIZONTAL/ VERTICAL LINE Icon. Using the Ctr/Mid Option, click on the circle.

Then, click on the CREATE LINE PARALLEL AT A DISTANCE Icon.

Type 4 for the distance. Click on the vertical line and then to the right of it.

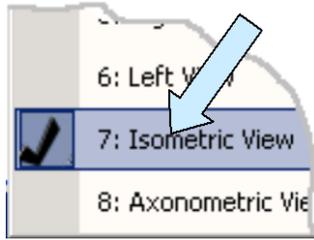


Now, click on the XFORM DELTA JOIN Icon. Select the right, vertical line and hit the ENTER Key.

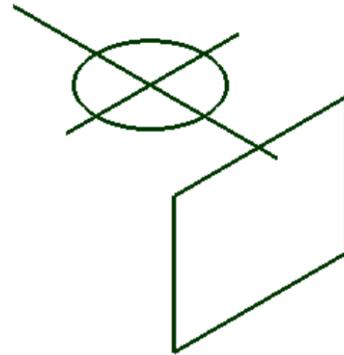
Type 1 for the Number of Copies.

Hit the ENTER Key twice, type -5 for the Z value, and hit the ENTER Key.

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Now, switch to the Isometric View. (View 7.)



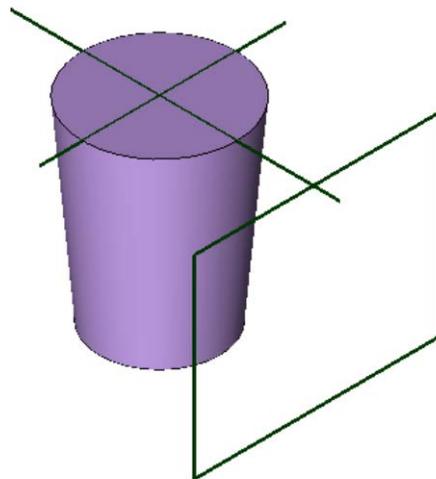
Your screen should look like this:



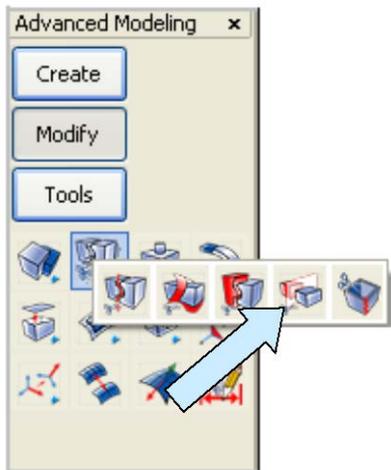
Click on the EXTRUDE Icon.
A Dialog Box appears.

Type 5 for the Length, type 5 for the Draft and select the Inward Draft Option. Hit the ENTER Key.

Click on the circle, hit the ENTER Key, and select the downward-facing vector.



Your screen should look like this: (I've changed the color of the extruded solid for communication purposes.)



Next, let's split the solid into two halves. (This will make it easier to select the surface during the projection step.)

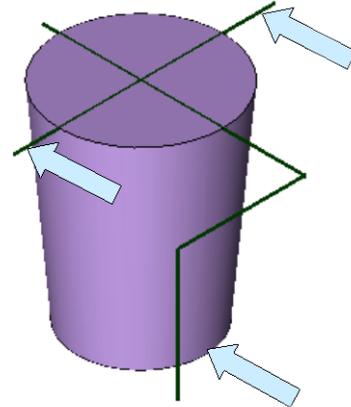
Click on the SPLIT Icon.

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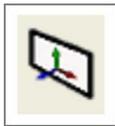


A Dialog Box appears.
Select the Break Option and hit the ENTER Key.

Using the EndEnt Option, click on the two ends of the line indicated by arrows in the illustration to the right and then, using the CtrMid Option, click on the bottom, circular edge of the conical solid.



This breaks the conical solid into two, symmetrical halves.

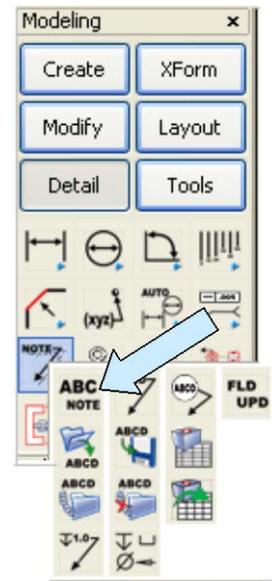
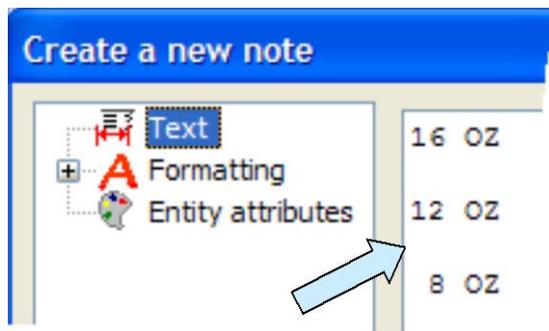


Next, click on the CONSTRUCTION PLANE Icon.
Type "5" for the Cplane and hit the ENTER Key.

Now, click on the CREATE NOTE BY TYPING Icon.

A Dialog Box appears.
Use the Smooth Font and set the Text Height at 0.4

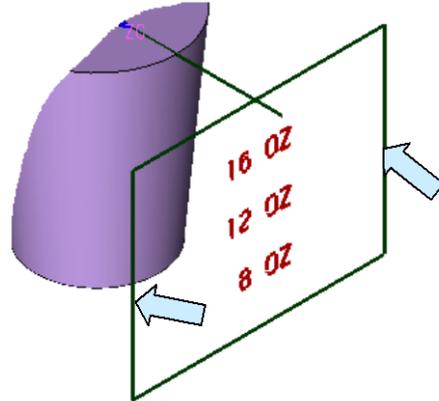
Type the following note. (Notice that there is a blank line between each line of text.)



You'll notice at the bottom of the Dialog Box an option to create the note as geometry. You can check this if you want. However, this will not create text that you can successfully project to a surface since some of the text will be represented as polylines. (This would work for most engraving operations but not here.) We'll use another approach to convert the note as you'll see in a moment.

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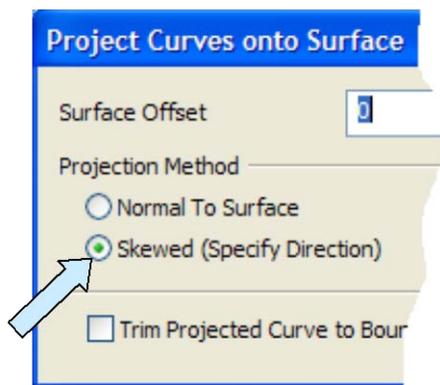
To position the note, click on the Two Pos Option on the Conversation Bar. Then, using the CtrMid Option, click on the two vertical lines indicated by arrows in the illustration to the right.



To convert the text to geometry that has no polylines, click on the GENERIC BURST Icon.

1. If you previously created the note with the Create As Geometry Option selected, select the entire note text once and hit the ENTER Key. (This reconverts the text from a mixture of entities including polylines to geometry that has no polylines.)
2. If the note text was created as actual text, you need to burst it twice. This steps it down to a collection of geometry that contains no polylines.

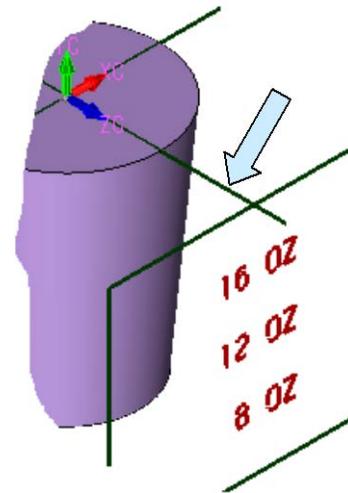
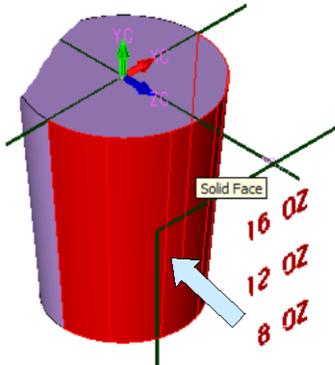
Now, we're ready to Rock & Roll! Click on the PROJECT CURVE ONTO SURFACE Icon.



A small Dialog Box appears. Select the Skewed Option and hit the ENTER Key.

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You are prompted to select the direction vector.
Click on the right end of the line indicated by the arrow
in the illustration to the right.



Select the surface of the part that faces to the right.

Finally, select all of the text that you converted into geometry.

You will now have all of the converted text mapped accurately onto the curved surface of the part.

