

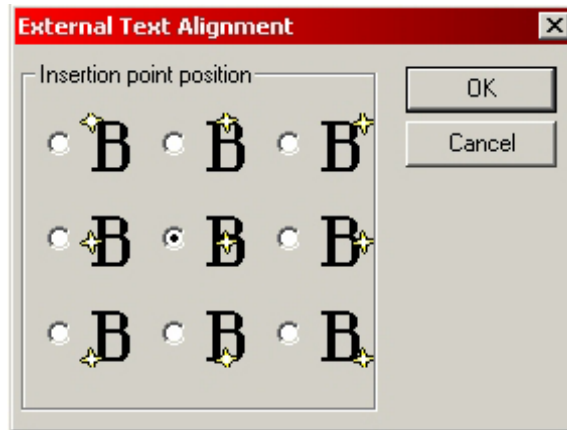
3D Text on a Curved 3D Surface



One dilemma that seems to affect many TurboCAD users is the problem of placing text on a curved 3D object such as a cylinder or extruded arc. Below is an example of how this can be done. Each occasion needing curved text may differ but this should give you an idea of how it can be done.

Example:

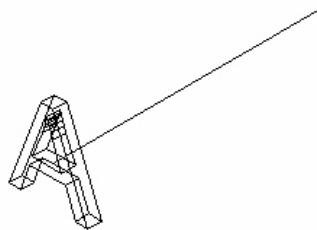
1. Start a new page from scratch.
2. In World Plan view draw a single vertical line that is 2" long.
3. At the bottom end of the line insert the letter "A" using the Text tool. Make sure the Alignment is set at Center/Middle. In the Properties dialog make sure Text height is (1"), font is Ariel, Mode is Flexible on Text tab and Thickness is (0.1) on the 3D tab.



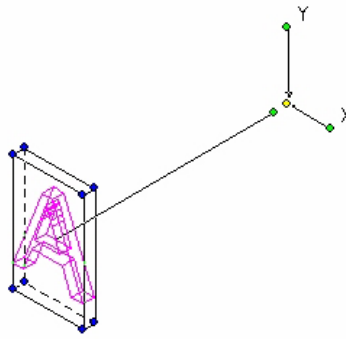
4. Tab to the Inspector Bar and input (90) into the Rot X field. The text will rotate 90° up.

At this time when selecting the text you will notice that the Reference Point is not on the end point of the line.

5. Select the Text and using the Vertex snap mode move the Reference Point (entire Text) to the end of the line.
6. Change standard view to Isometric SE. Zoom Extents. Zoom Out once.



7. Select the Text. Using the "D" SEKE reposition the Reference point to the far end of the line.

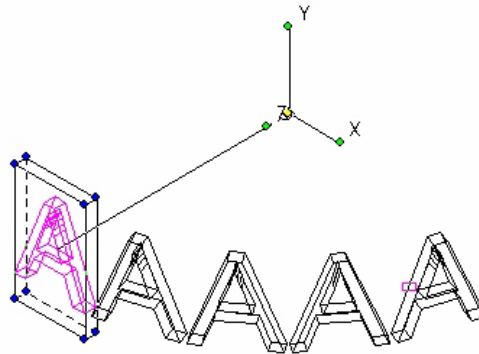


8. Select Radial Copy command from the Copy fly-out toolbar or from Edit/Copy Entities/Radial on the Menu Bar.
9. Snap the center of the Radial Copy to the same end of the line which the Reference Point is located.
10. TAB to the Inspector Bar and input (5) into the Sets field and (18) into the Angle field.



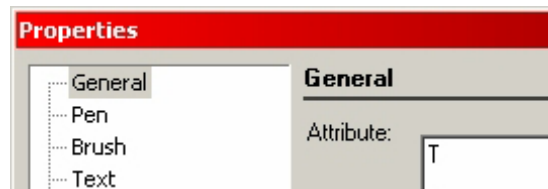
11. Enter.

Five copies of the text will be created at 18° intervals. The copy interval may change to suit your needs.

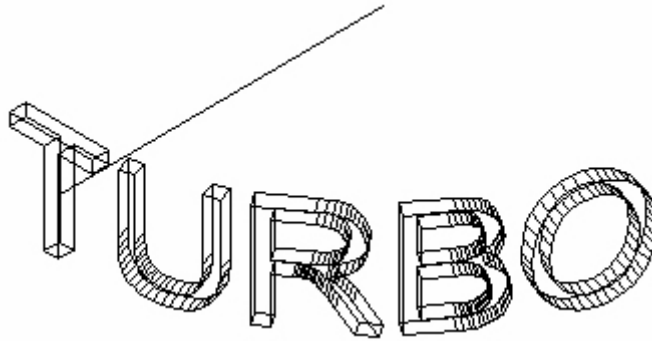


Note: While the Radial Copy tool was used to copy all letters at once you may have to copy each letter one at a time to produce the desired affect to correct spacing between letters.

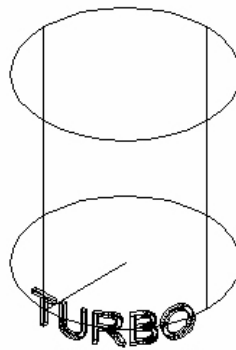
12. Select the first "A" and in the Attributes window found on the General tab of the Properties dialog for that text input "T".



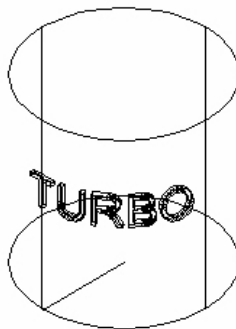
13. Select the second "A" and change it to "U" using the Attributes window of it's properties dialog. Change the third "A" to "R", the fourth "A" to "B" and the fifth "A" to "O".



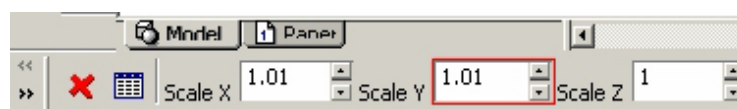
14. Zoom Extents then Zoom Out twice.
15. Select Cylinder Tool from 3D Tool fly-out toolbar.
16. Start the cylinder at the end of the line furthest away from the text. Next snap a point on its radius at the other end of the line (near text).
17. TAB to the Inspector Bar and Input (4) into the Height field. A cylinder will be created on screen.



18. Using the Selection tool, select all the Text (only text).
19. TAB to the Inspector Bar and input (2.5) into the Pos Z field.



20. Change the standard view back to World Plan view.
21. Select the Cylinder, which will look like a circle in this view.
22. Right-click and activate the "Make Copy" option on the Local Menu.
23. TAB to the Inspector Bar and input (1.01) into both the Scale X and Scale Y fields.



A second cylinder will be created. Make sure you go back to the Local Menu and turn OFF the "Make Copy" tool. (It is important that the edges of BOTH cylinders are entirely within every letter of text).

24. Next select the 3D Add tool and add each letter of Text to the inside cylinder.

Now the text and the interior cylinder will be one object.

25. Select the 3D Intersect tool from the Boolean fly-out toolbar.

26. Select the outside cylinder and then the inside cylinder (with text attached).

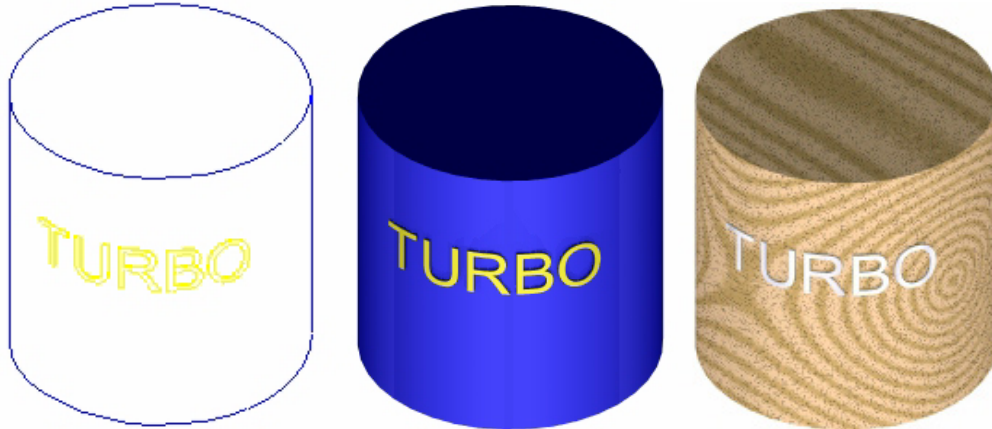
A cylinder with the Text attached will be the resultant object.

To make the text and the cylinder separate objects you must:

27. Create one more cylinder using the same procedure you did to make the first one.

28. Select the 3D Subtract tool and select the Cylinder with the text attached, then select the new cylinder. The only thing left will be the Text.

29. Simply create one last cylinder to get results as shown below.



The final result is a curved 3D text on the surface of a curved 3D object (cylinder). The same procedure can be done for various 3D objects.