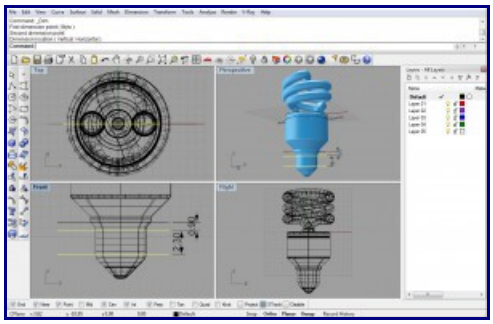
STEP 3

Ok, in this step it is time to model the actual threads. So, for this, we need couple of lines. Just make one below the chamfered part and offset it by 0.9cm down, and that offset curve need to be offset by another 2.3cm.



Now you need to Project those two selected lines onto a surface. Do that from front or right viewport.

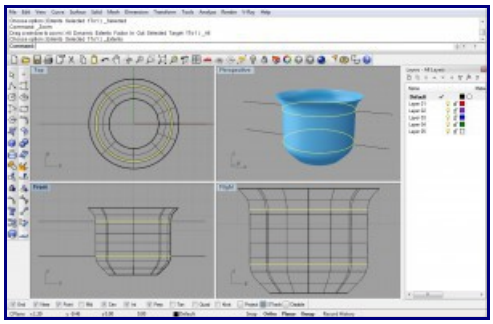


image 38

Once you got those circles, you can again hide everything except them. Now, we will make another Spiral with Spiral command and using OSnap Cen option we will easily set the start and end axis of spiral on both centers of two circles (make sure the Turns is set to 5):

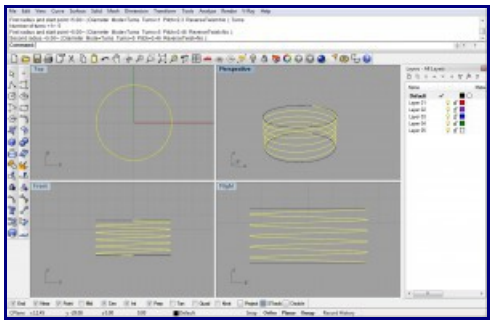


image 39

Again, with Extend set to smooth extend both end and start of the spiral so it matches the image 40 below. You might want to use Snap here:

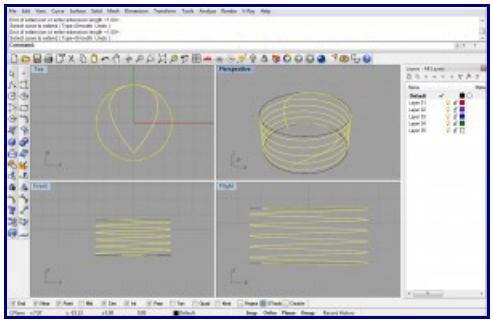


image 40

Now, we will edit this spiral, so either with F9 or with command PointsOn show the control points, and then move the upper one up just a bit so it snaps to first grid intersection. Do the same for the lower one, just move the control point down:

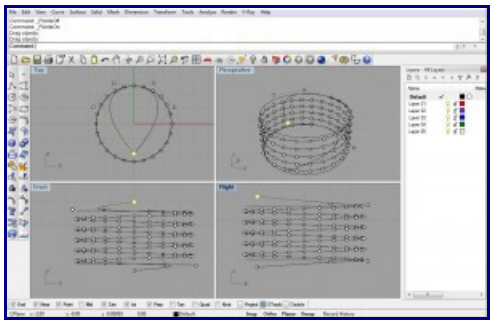


image 41

From right viewport, create one polyline like on the image 43. Again, it is up to you how big or small you make it. It will be a section for the threads. And fillet the corners with 0.08cm as radius.

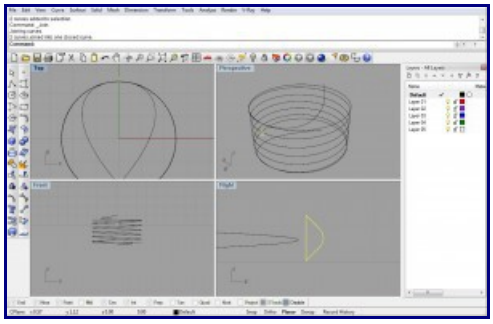


image 43

Now, move the little triangle on the start of the spiral. And rotate it so it is somewhat perpendicular to the spiral line:

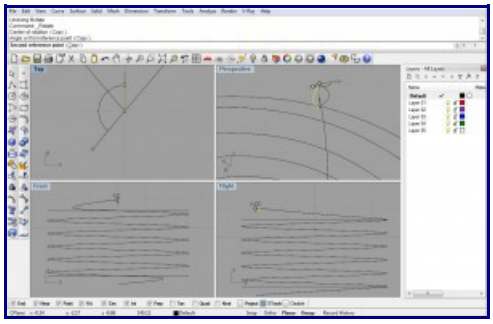
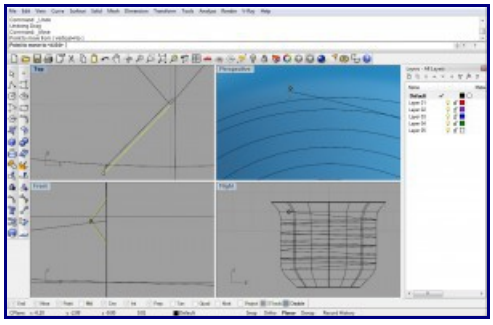


image 44

Now, explode the triangle, and use only the two angled lines. Join them.And move them like on the image below: (it is to ensure the surface will go through the thread surface)



move

The problem with moving the section curve is that when you do that, the section gets smaller, maybe the better idea would be to extend the lines. But then again, there will be another problem which is the surface would overlap. So, be careful when extending lines.

And with sweep1 command using Style:Roadlike Top create a surface:

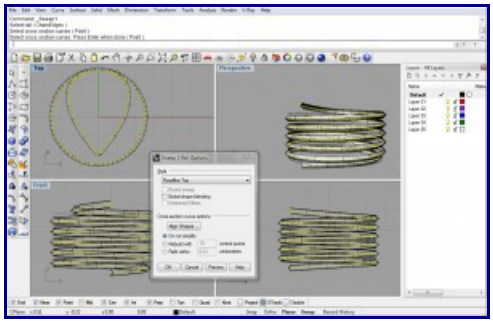


image 45

After sweep1, unhide the surface and BooleanUnion the two. You should get something like on the image 46 below:

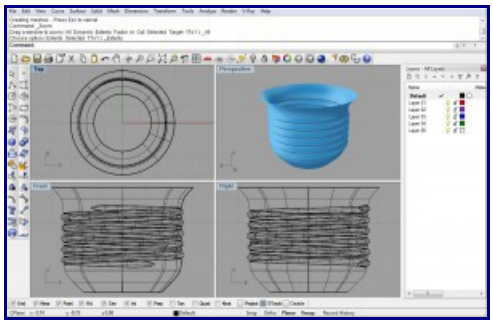


image 46

Now, using FilletEdge you should be able to fillet the edges with 0.1cm as radius and get this:

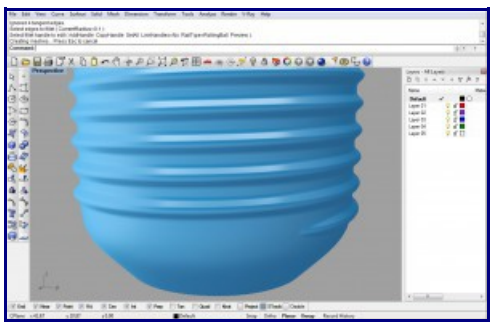


image 47

Now, we only need to do one small detail. Add little round holes. Create a Sphere radius 0.15cm and position it like so:

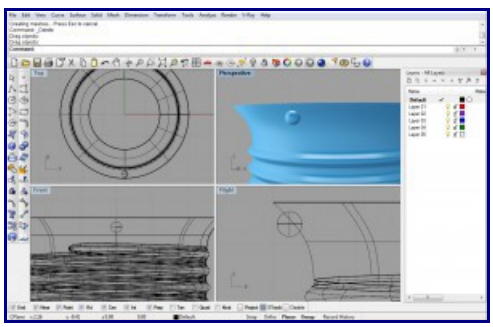


image 48

Now, you need to copy that sphere 12 times around. So, using ArrayPolar command and input for the center 0 (zero) and type in 12 copies, and using BooleanDifference make holes:

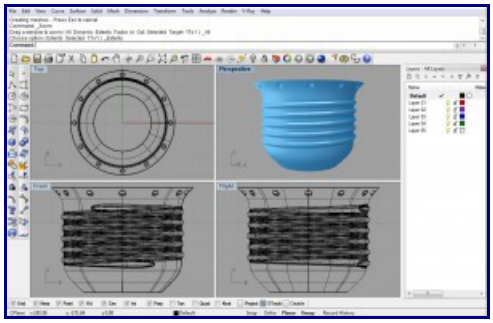


image 49

Ok, now you may use FilletEdge to fillet the edges with 0.05cm as radius. And your bulb is finished.

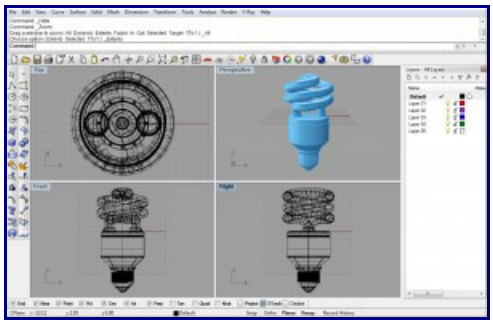


image 50