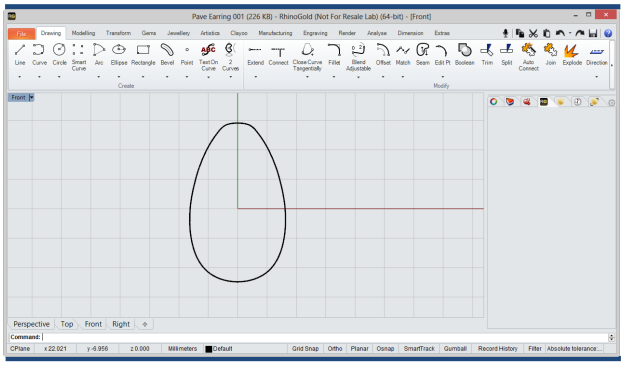
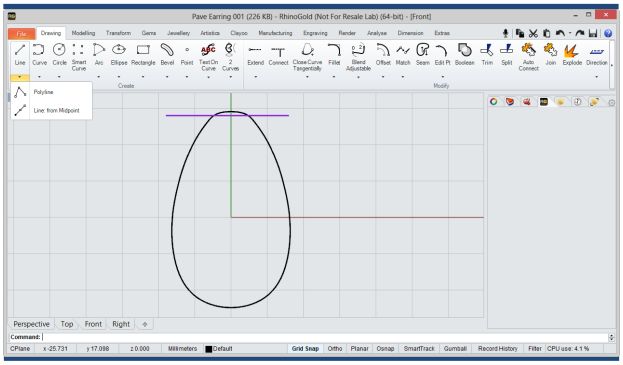
Pave Earrings

In this tutorial we will try out some of the most useful commands in RhinoGold. Powerful tools as Place Curves on 1 Rail, Boolean Operations, Pave Automatic and Cutter Studio.



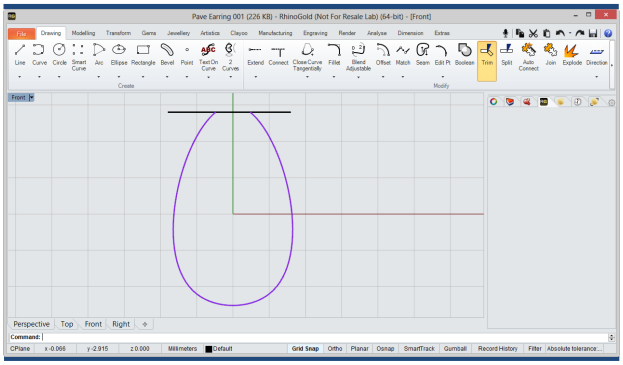
1 Smart Curve

Under the Drawing tab, with the Smart Curve tool in the front view, we can define a curve that will be the rail to define the earrings. It's important to activate the Vertical Symmetry option in the commands line.



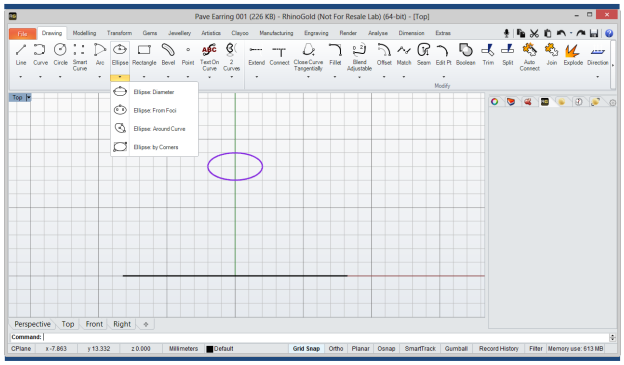
2 Line

Now, still in the front view, we can create a line. Under the Drawing tab with the line tool as the above image.



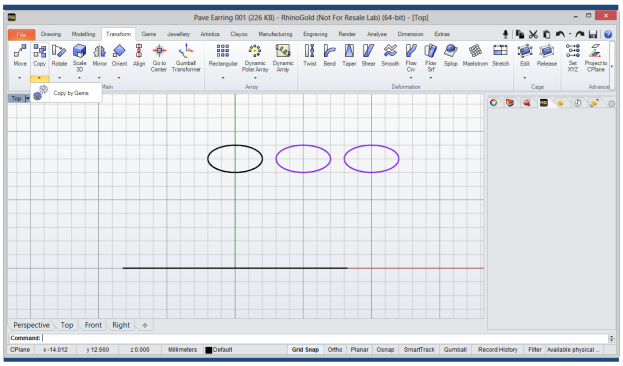
3 Trim

Then, still in the Drawing tab, with the Trim tool we can cut the top section of the rail.



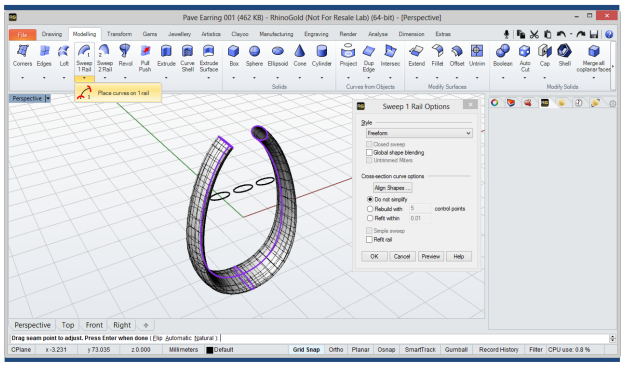
4 Ellipse

Now, in the top view, under the Drawing tab with the Ellipse tool we can create a ellipse that will be the section to apply on the rail created before.



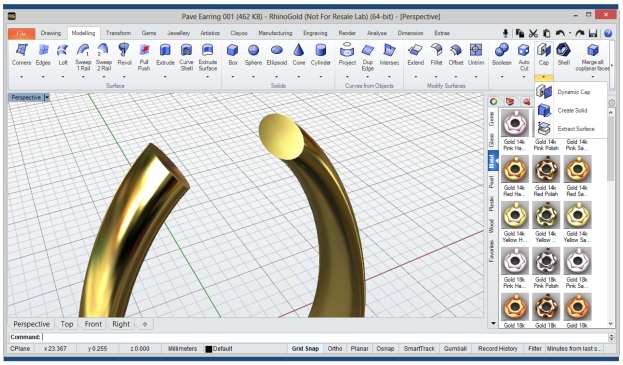
5 Copy

Now, still in the top view, under the Transform tab with the Copy tool to create two more profiles, as the above image.



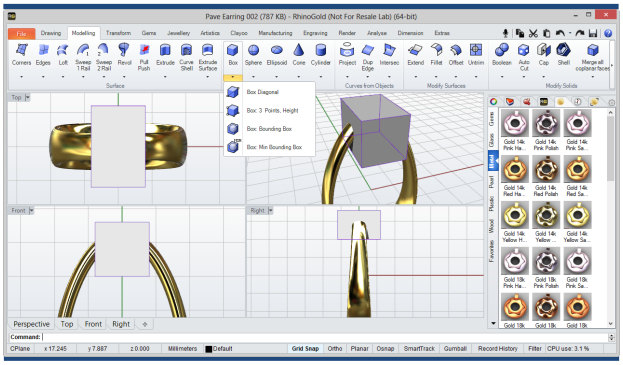
6 Place Curves on 1 Rail

Then, under the Modelling tab with the Place Curves on 1 Rail tool we can create our earring structure by defining the rail and the 3 profiles created previously. Just change the bottom profile lenght to 7mm.



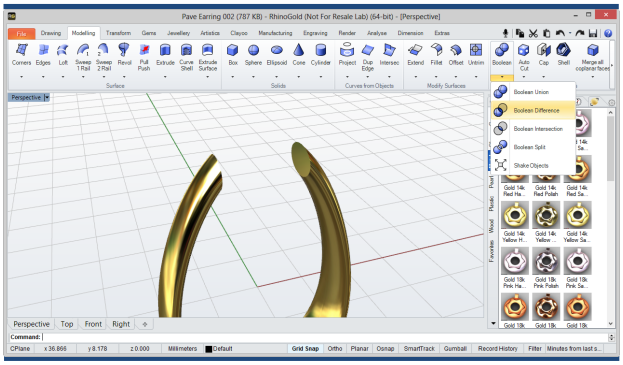
7 Cap

Now, still under the Modelling tab with the Cap tool we can close the shape created previously as a solid object.



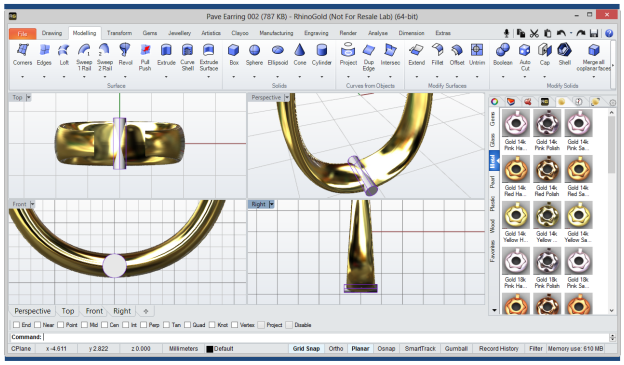
8 Box

Now we can define a box to use as cutting object to define the top section of the earrings, for this, under the Modelling tab with the Box tool.



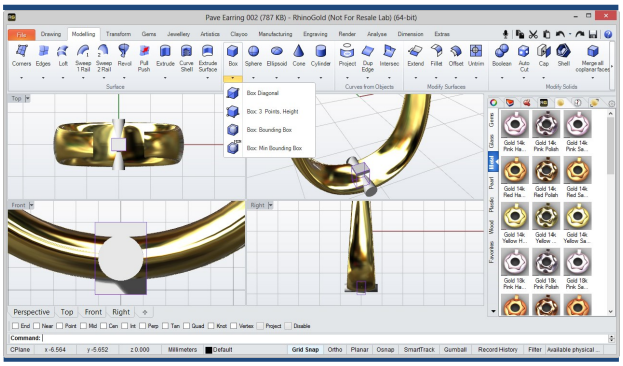
9 Boolean Difference

Then, we can make a Boolean Difference to remove the box from the earring under the Modelling tab.



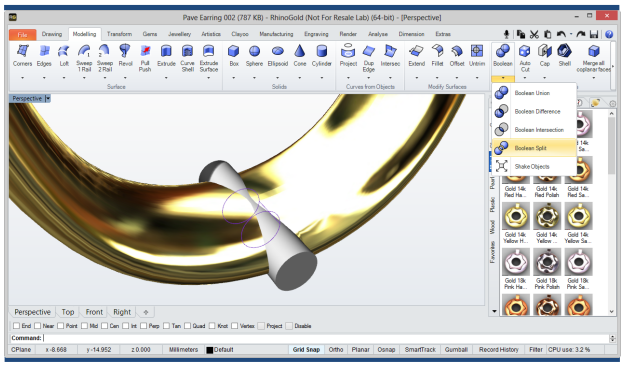
10 Cylinder

Now, we can create a Cylinder to define the earrings articulation. Under the Modelling tab with the Cylinder tool as the above image.



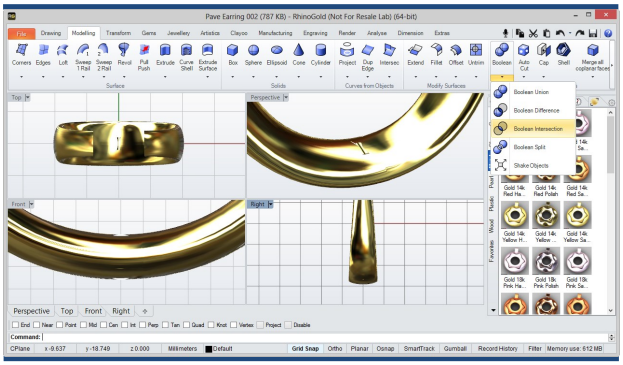
11 Box

Now, under the Modelling Tab with the Box tool we can define the cut section to be applied on the cylinder created on the previous step.



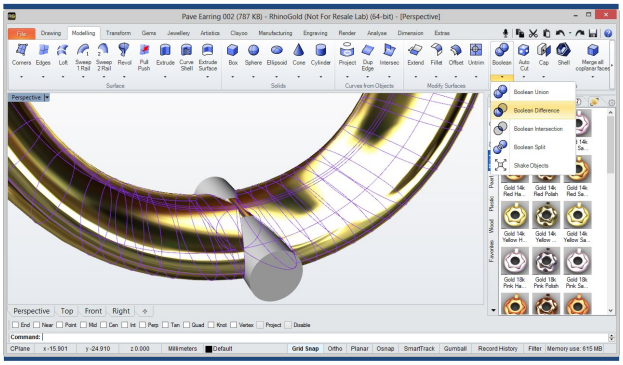
12 Boolean Split

Then, with the Boolean Split tool under the Modelling tab we can divide the cylinder in three parts.



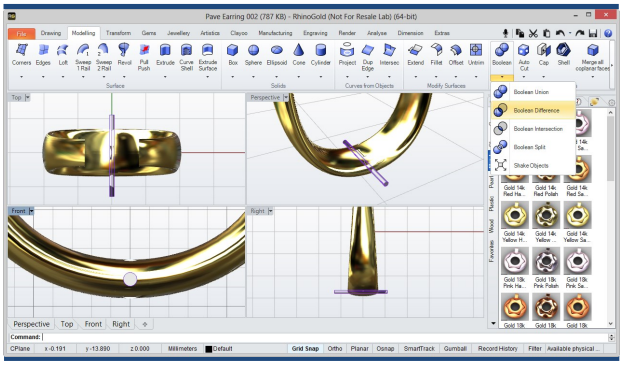
13 Boolean Intersection

Now, still under the Modelling tab with the Boolean Intersection tool we can define the shape of the articulation exactly as needed, it's important to use the option keep original in the command line.



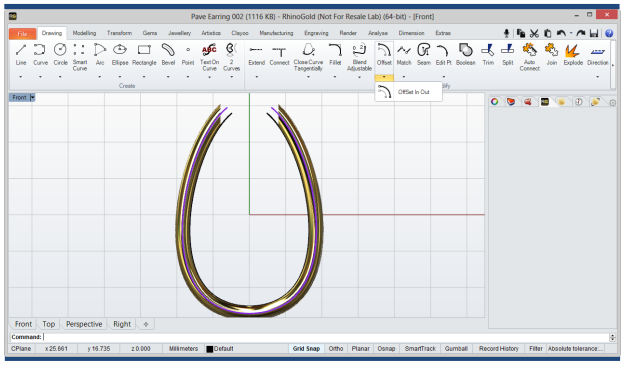
14 Cylinder / Boolean Difference

Now we can define another Cylinder to use as cutting object to define the bottom section of the earrings, for this, under the Modelling tab with the Cylinder tool, then, we can remove it from the earring with the Boolean Difference tool under the Modelling tab.



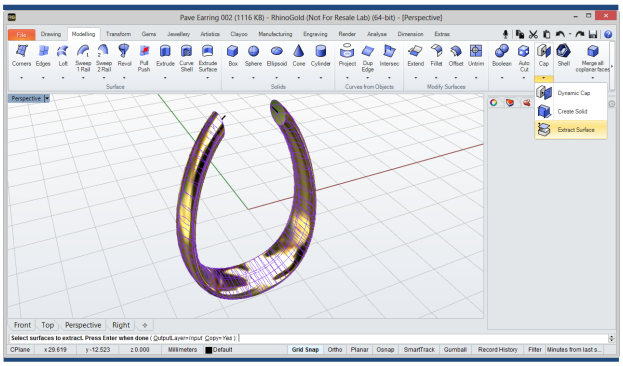
15 Cylinder / Boolean Difference

Then, we can create a smaller cylinder and make a Boolean Difference to remove it from the ones created before and the articulation is completed.



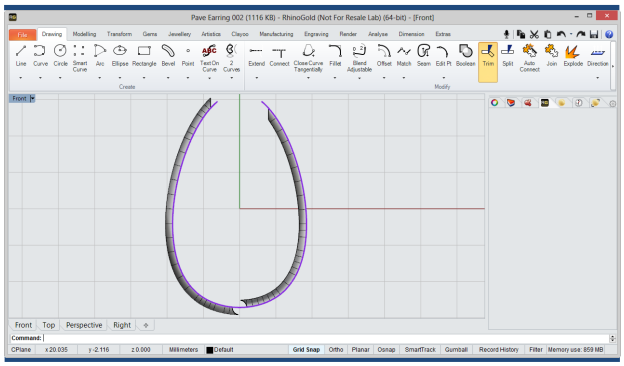
16 Offset

Now, we can create another curve to the outside direction, for this, with the Offset tool under the Drawing tab. It's important that this new curve stay in the middle of the earring section as the above image.



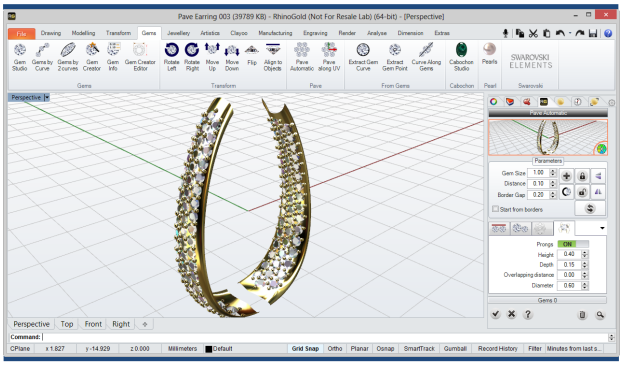
17 Extract Surface

Under the Modelling Tab with the Extract Surface tool and the copy option activated we can duplicate the surface of both parts of the earring.



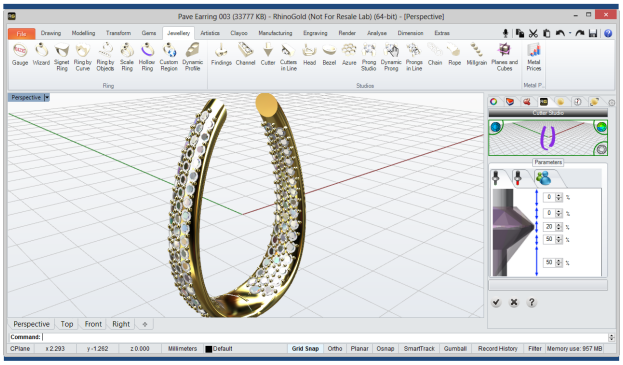
18 Trim

Then, with the Trim tool under the Drawing tab we can divide the surfaces created in the previous step and remove the parts we don't need using the curve created in the step number 17. These will be the support surfaces to apply the pave.



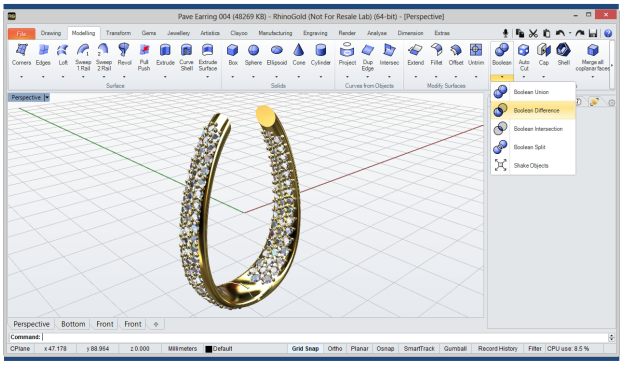
19 Pave Automatic

Now, under the Gems tab with the Pave Dynamic tool we can apply the gems in the surfaces as the above image. We can also apply the prongs to support the gems inside this tool, it's just to define the parameters according the desired results



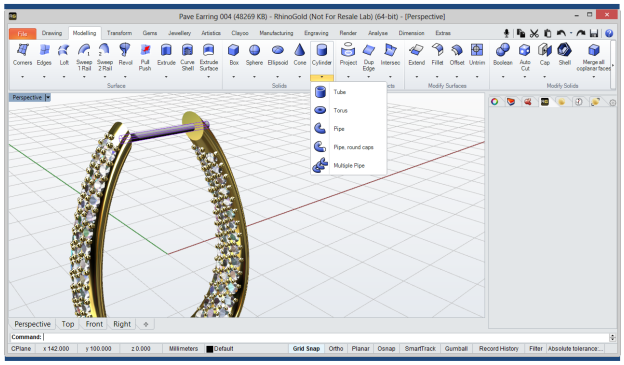
20 Cutter Studio

Now with the Cutter Studio tool under the Jewellery tab we can define the Cutters to apply on the gems.



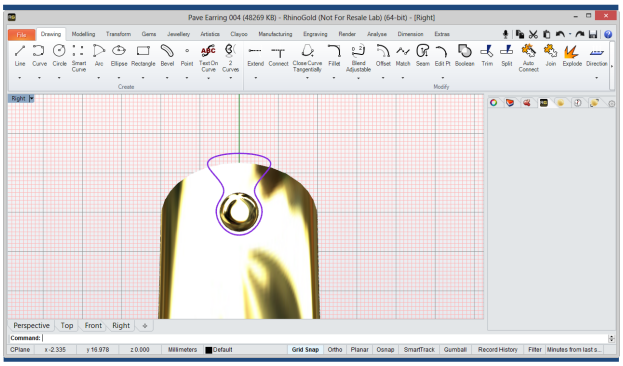
21 Boolean Difference

Now, we just need to remove the cutters from the earring, for this, under the Modelling tab with the Boolean Difference tool.



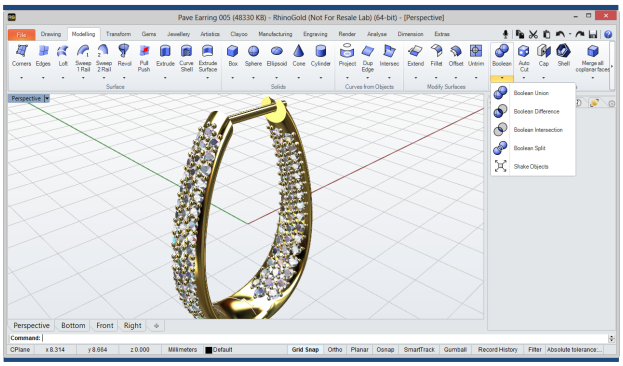
22 Cylinder

Under the Modelling Tab with the Cylinder tool we can define the ear wire as pretended, in this case with 1X10mm.



23 Smart Curve

Then, in the right view with the Smart Curve tool under the Drawing tab and with the vertical symmetry option activated in the command line we can create the section to the ear wire in the back side of the earring.



24 Auto Cut / Boolean Union

Now, under the Modelling tab with the Auto Cut tool we can define the ear wire section and then with the Boolean Union to unite the different parts, in this case should be two, the front and the back.