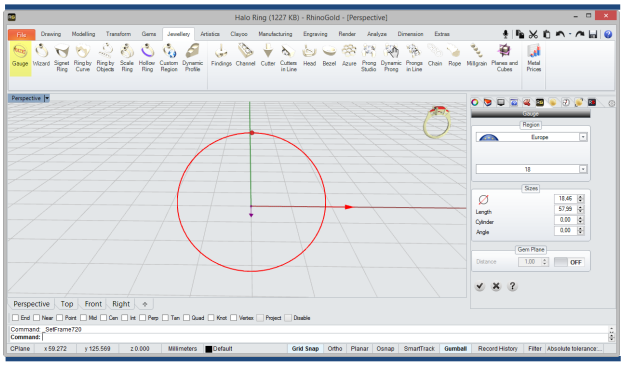
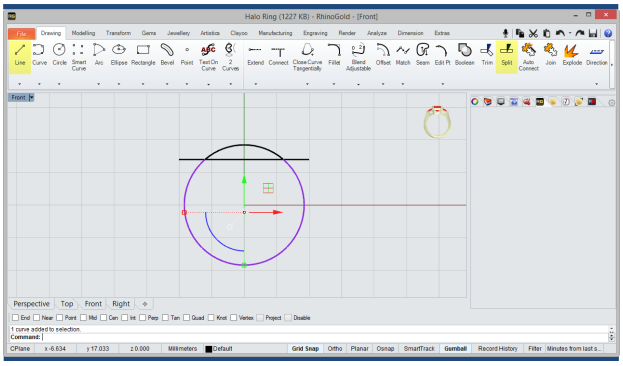
Halo Ring

In this tutorial we are going to try some of the most useful commands in RhinoGold. Tools such as Dynamic Profile, Extend Curve Smooth, Symmetry, Bend and Gems by Curve.



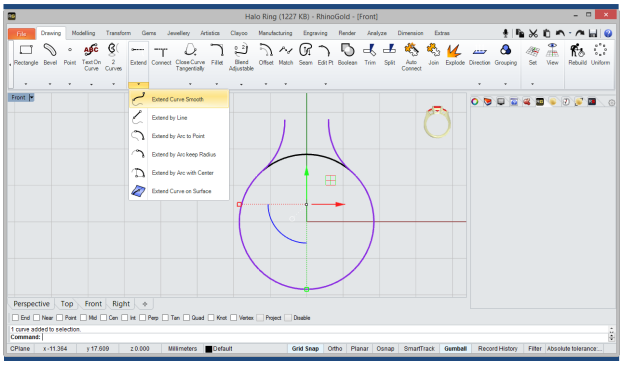
1 Gauge

First create a curve with the Gauge tool of 18 European style.



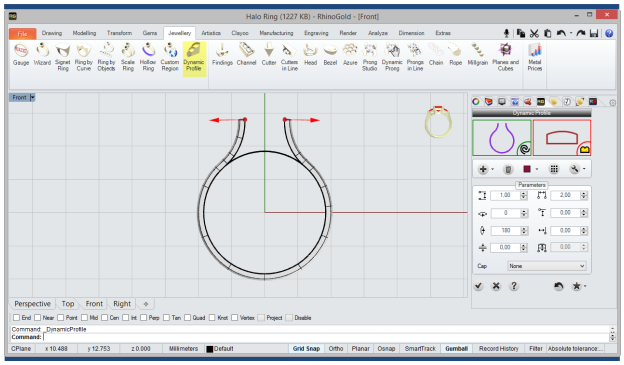
2 Line/Split

Then, we'll tace a curve with the Line tool and apply the Split tool between the two curves, sectioning the circular curve.



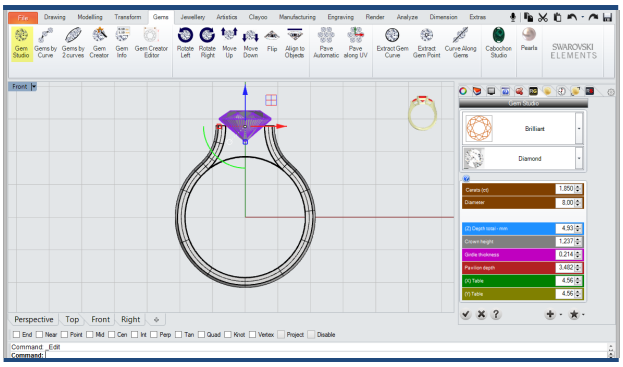
3 Extend Curve Smooth

Now, we'll select the Extend Curve Smooth tool and apply it at the ends of the sectioned curve, as shown in the picture.



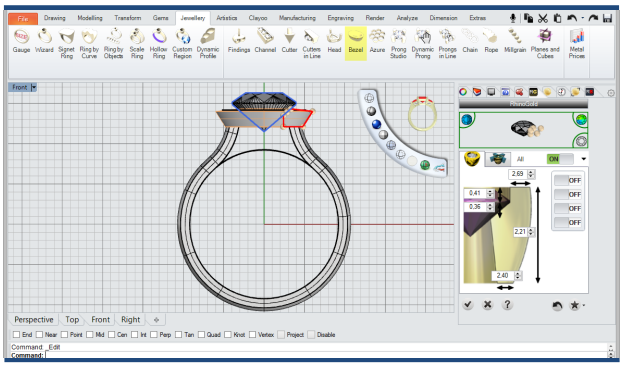
4 Dynamic Profile

In this step, we'll select the Dynamic Profile tool and apply it in the extended curve. We define a profile of 2mm high, 2mm wide, with the option Flat Caps activated .



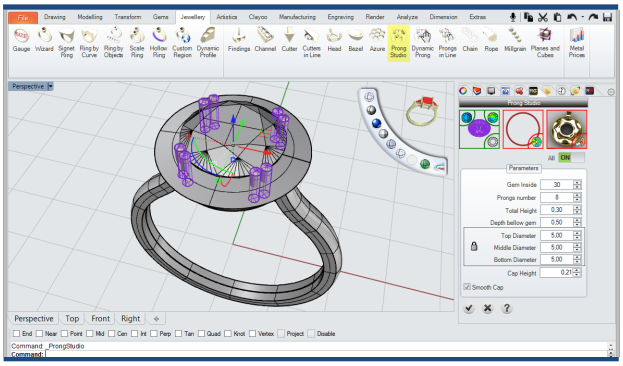
5 Gem Studio

Then we'll select the Gem Studio tool and define a Gem of 8mm diameter.



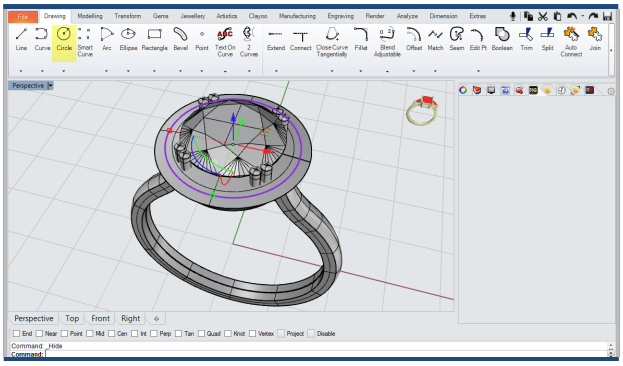
6 Bezel

Now, select the Bezel tool and apply it to the Gem, we'll define a bezel respecting the parameters of the image.



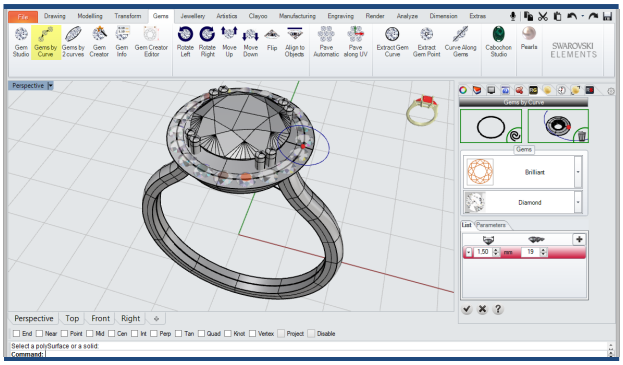
7 Prong Studio

In this step, we'll define the prongs to the Gem with the Prong Studio, respect the parameters shown in the image.



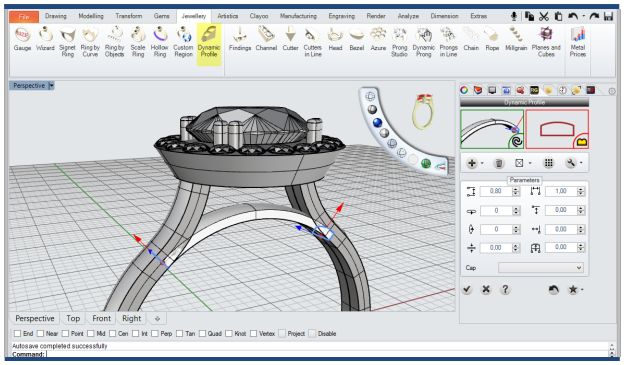
8 Circle

Then, select the Circle tool and we'll trace a curve over the bezel, similar to the image.



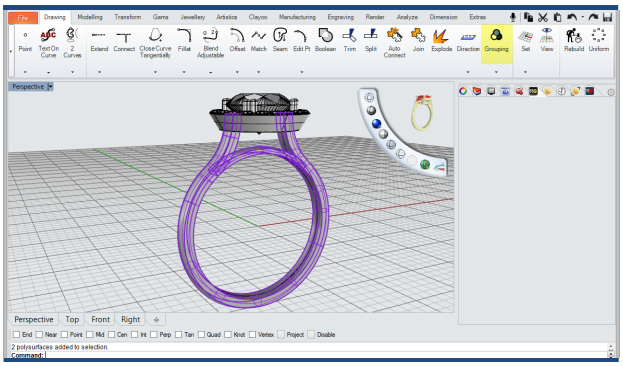
9 Gems by Curve

Then, we'll apply a few gems from 1.50mm to the curve created in the previous step with Gems Curve tool.



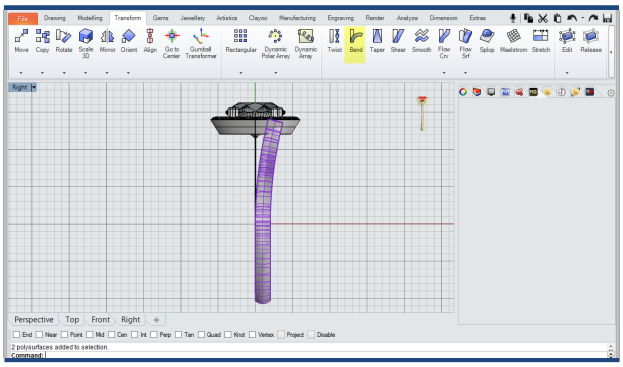
10 Dynamic Profile

Now, with the Dynamic Profile tool will define a profile to the remaining sectioned curve with 2mm wide and 0.80mm high.



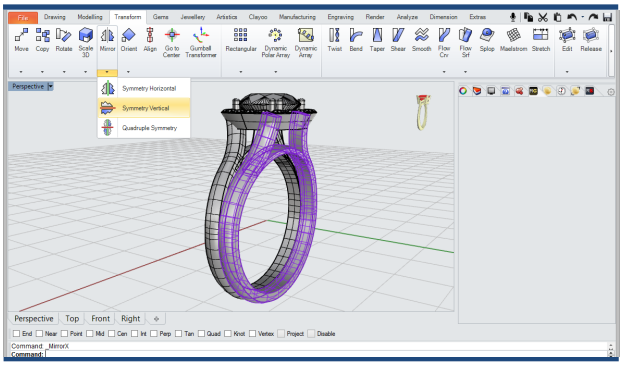
11 Grouping

In this step, select the Grouping tool and put together the two dynamic profiles.



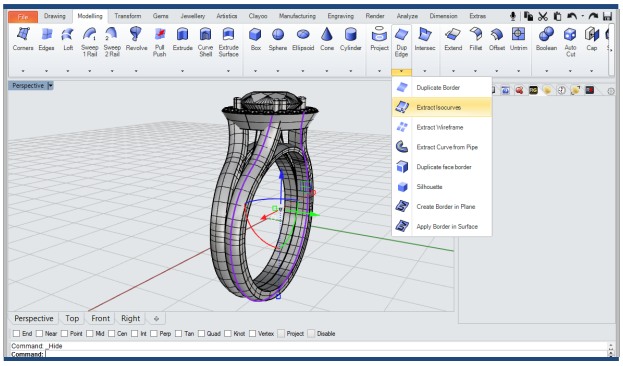
12 Bend

Then, apply the Bend tool to grouped set, we'll define the curvature from the central point, getting a similar image curvature.



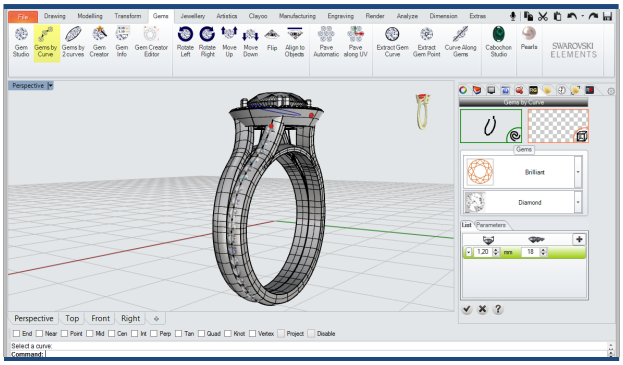
13 Symmetry Vertical

Then, with the Symmetry Vertical tool we'll apply a symmetry to the grouped set.



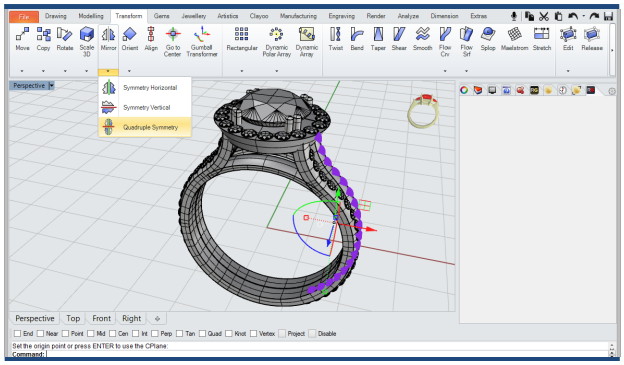
14 Extract Isocurves

Now, we'll select the Extract Isocurves tool and extract the central curve of one of the extended profiles.



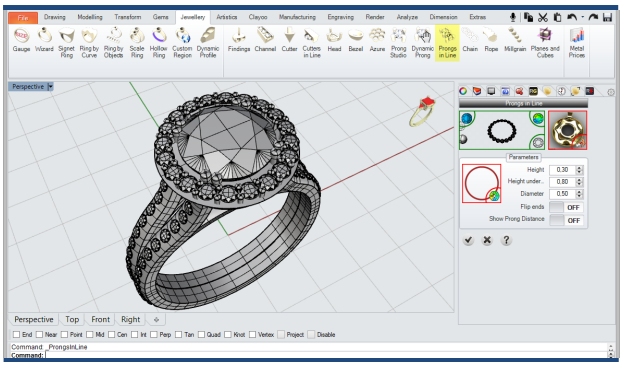
15 Gems by Curve

In this step, we'll apply the Gems by Curve tool in the curve extracted in previous step and define a 1.20mm gems, defining the gems before they reach in the middle of the ring.



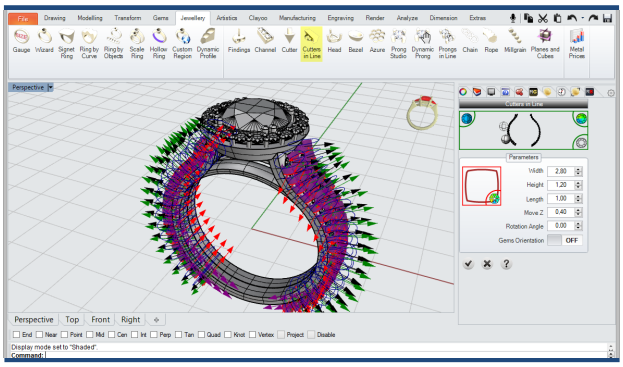
16 Quadruple Symmetry

Then, we'll select the Quadruple Symmetry tool and apply it to the gems set.



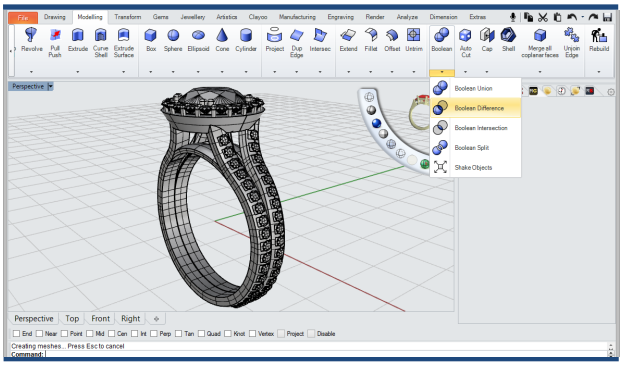
17 Prongs in Line

In this step, we'll define the prongs to the small gems of Bezel with Prongs in Line tool, will respect the parameters of the image.



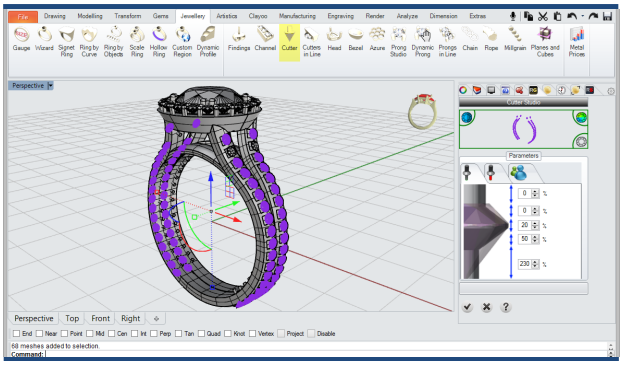
18 Cutters in Line

Then, with the Cutters in Line tool we'll define the Cutters with square profile to the shank Gems.



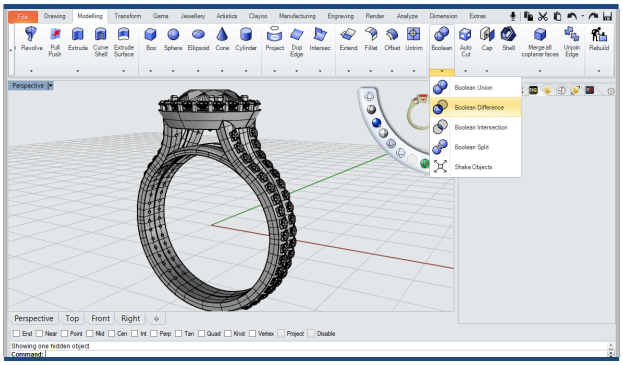
19 Boolean Difference

Then, we'll apply a Boolean Difference to subtract the holes from surface of the shanks.



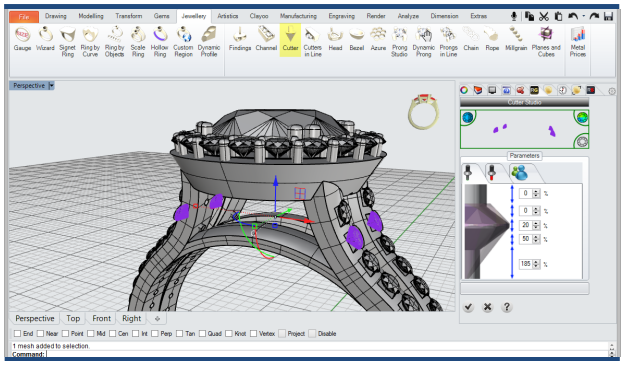
20 Cutter Studio

Now, with the Cutter tool we'll apply it to the shank gems, just select the gems that are shown in the image, leaving without selecting the four gems second upper.



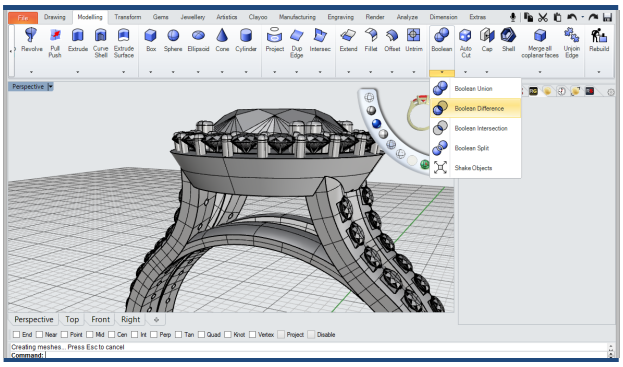
21 Boolean Difference

In this step repeat the Boolean Difference operation to subtract the holes from surface of the shanks.



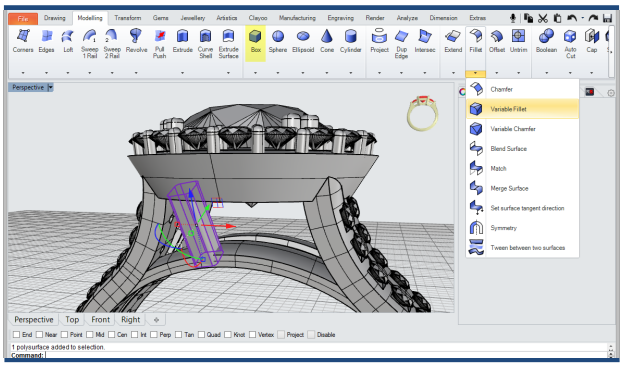
22 Cutter Studio

Then, we'll define the cutters to the remaining four gems.



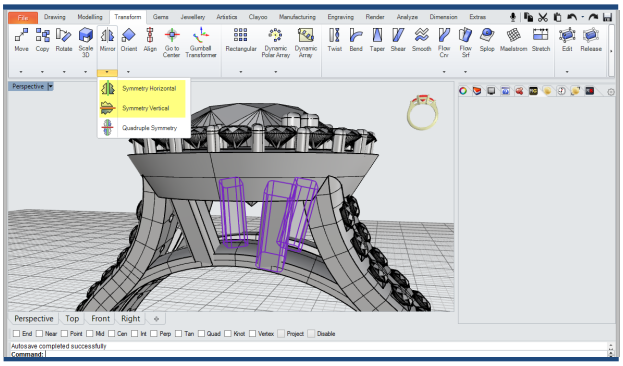
23 Boolean Difference

Then, we'll apply a Boolean difference to subtract the four holes from the shank surface.



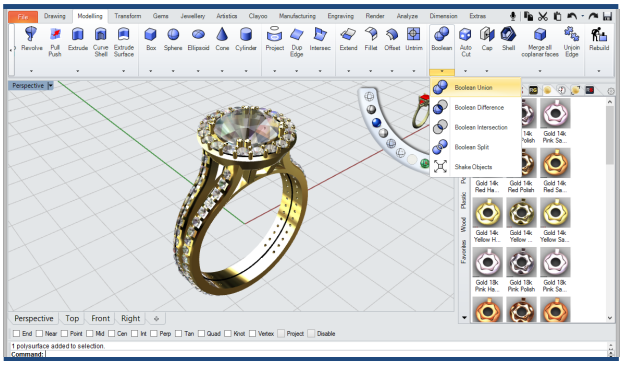
24 Box/Variable Fillet

Then, with the Box tool we'll define a solid similar to the picture and then we'll apply the Variable Fillet tool.



25 Symmetry Horizontal/Vertical

Now, we'll apply a Horizontal and Vertical Symmetry to the solid created in the previous step, obtaining a result similar to the image.



26 Boolean Union

Finally apply a Boolean Union between all solids to unify the ring.