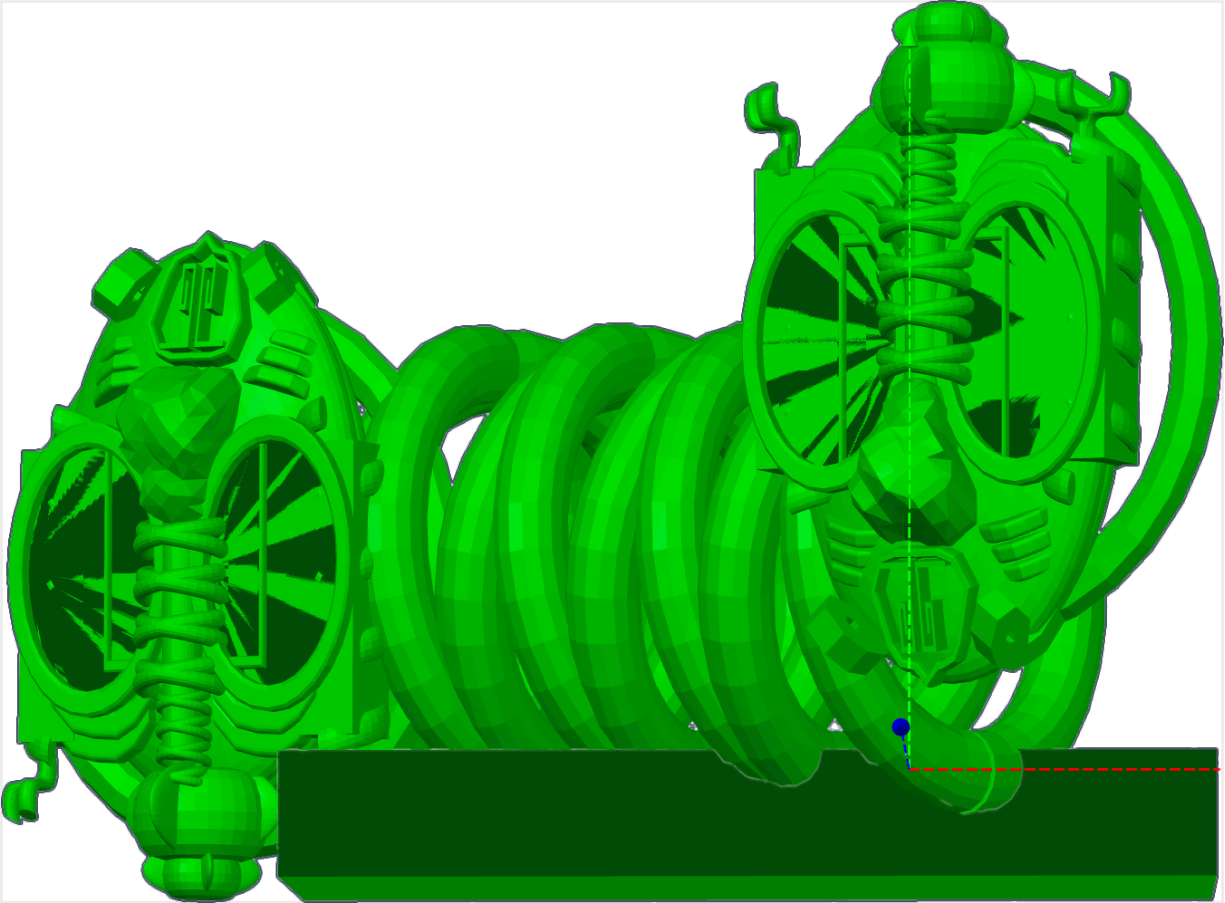


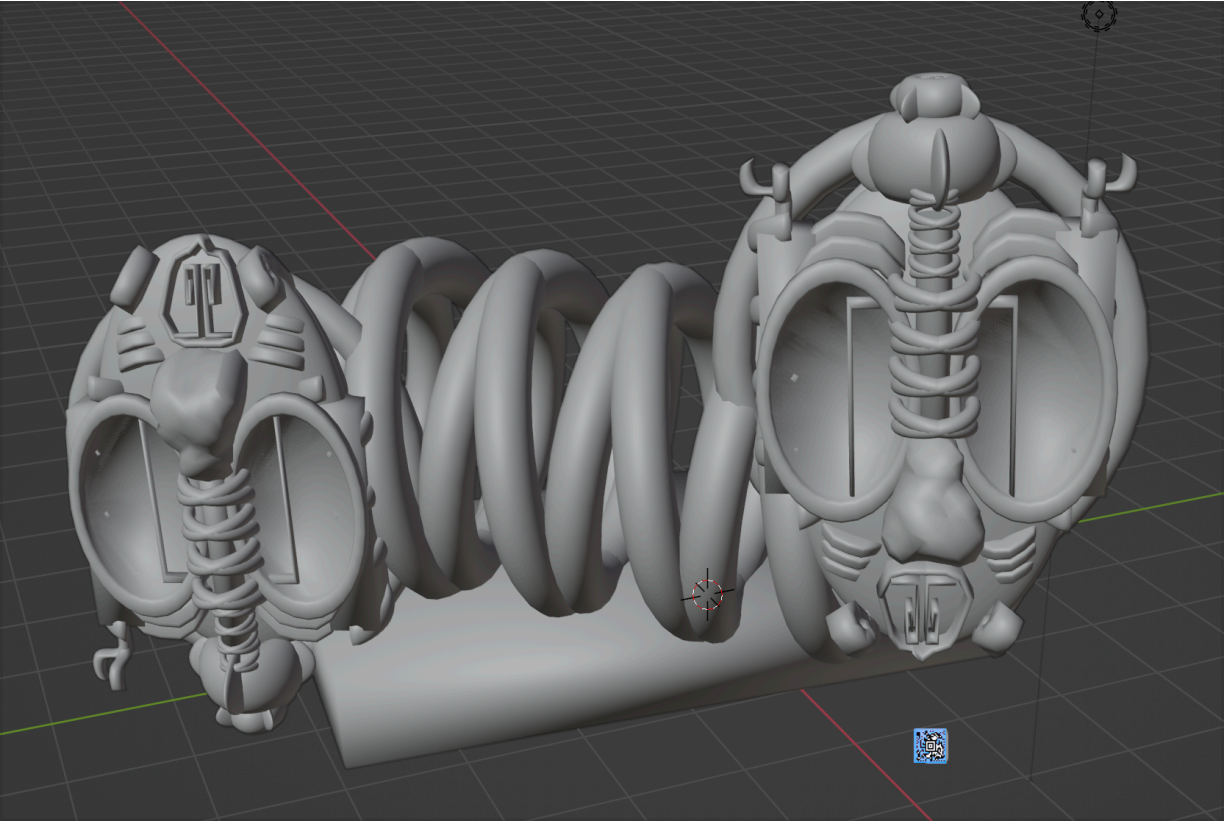
Blue Chromosome

By Fred Truck

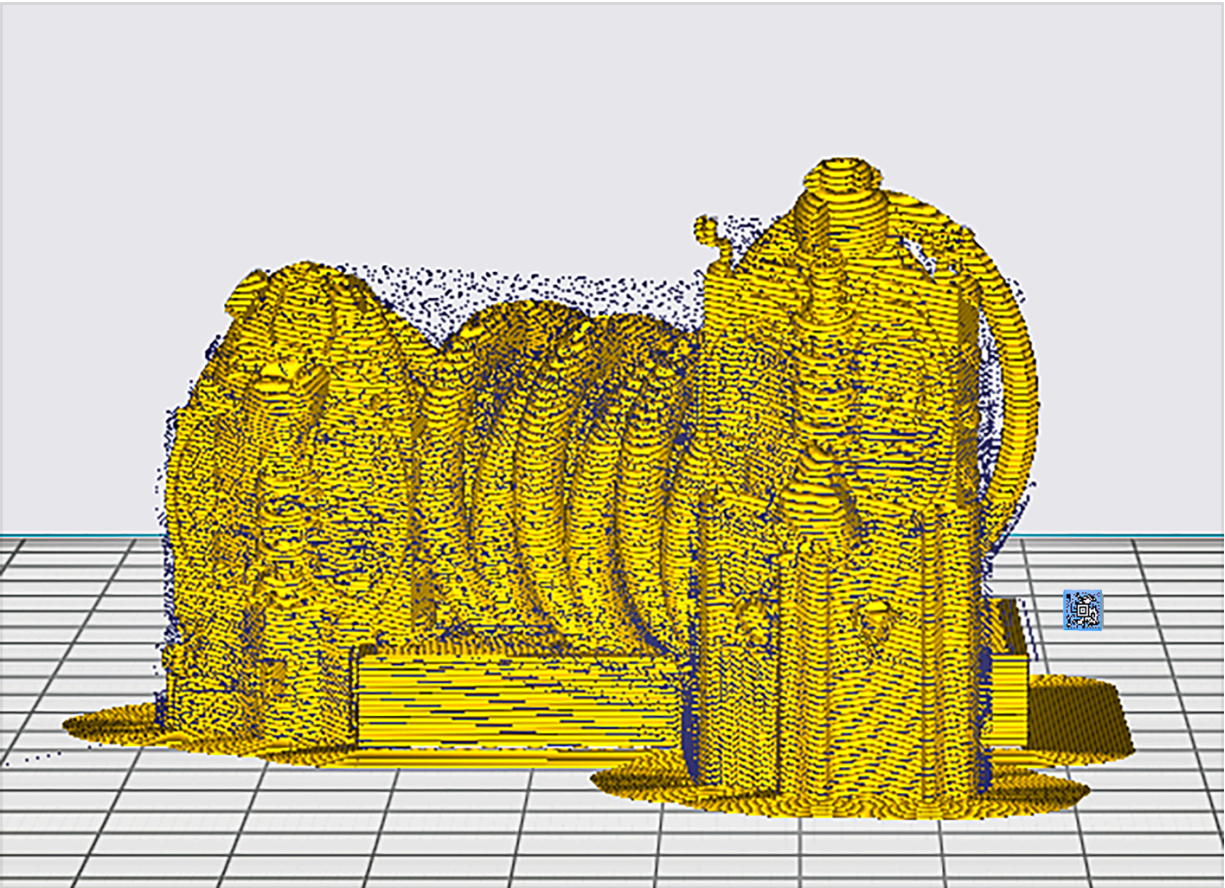


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But it's Yellow!
(Don't worry. That's just an illustration.)



Here is a screenshot from my original Blender 3D file I used to generate the Blue Chromosome.

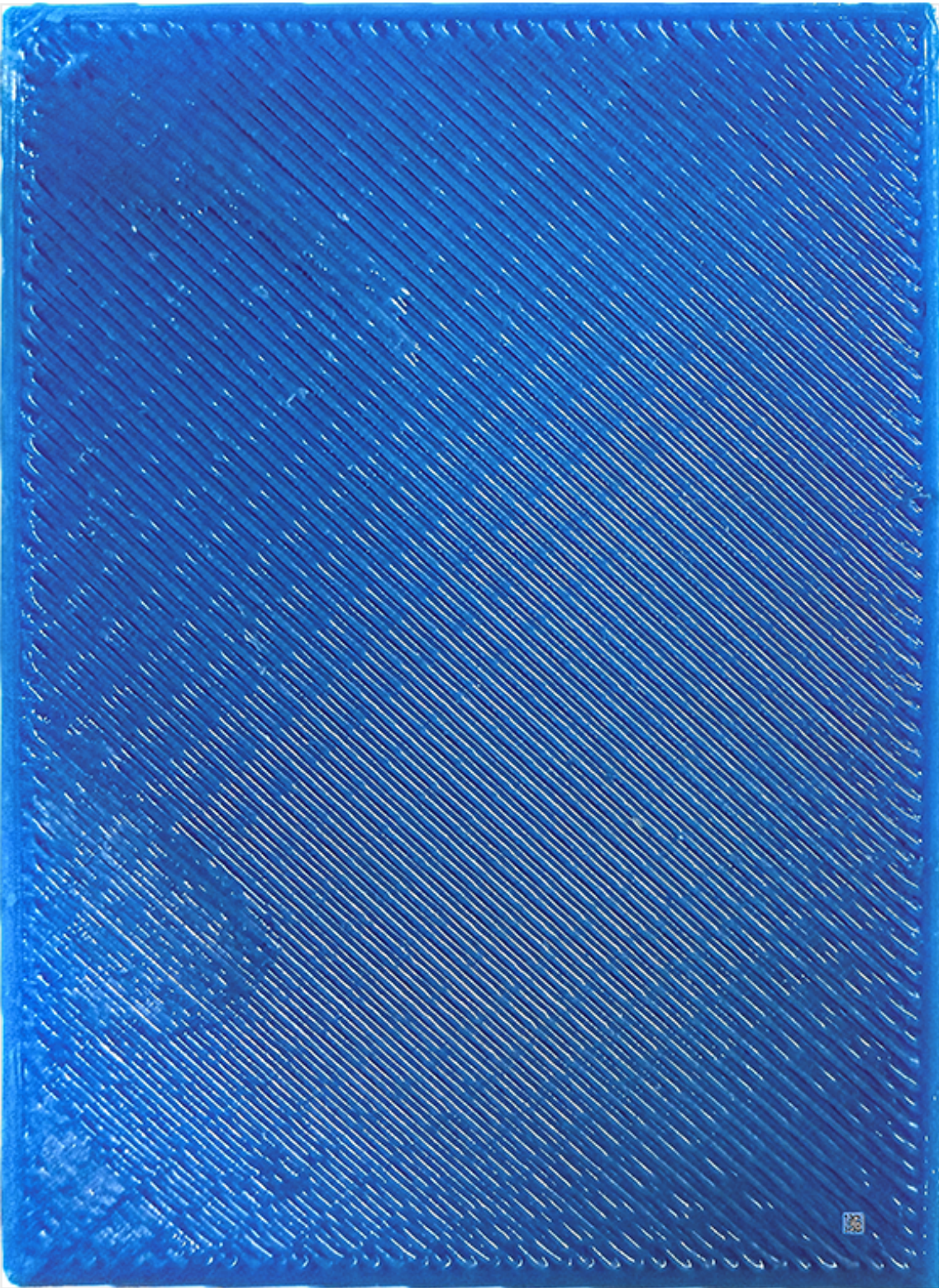


This Screenshot shows the Blue Chromosome after slicing. Slicer software cuts the image into very thin slices. During extrusion in the printing process the filament diameter is squeezed down from 1.75 mm to .4 mm. To extrude the plastic, the nozzle is heated to 220 C and the PLA is fed through the hot end.

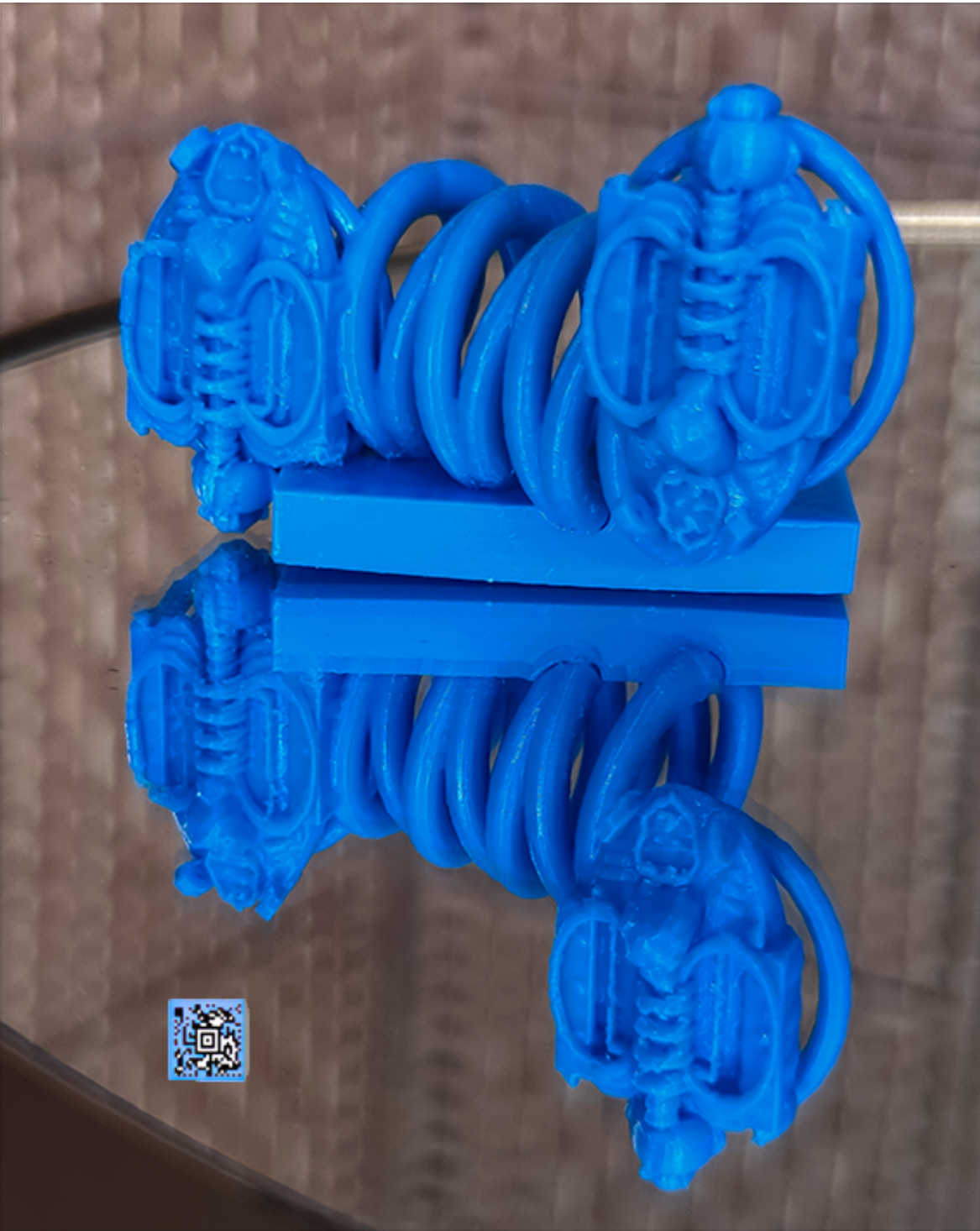
The slices are the information the printer needs to fabricate the image in 3D. Also visible in this view are the many supports needed to keep the plastic from collapsing in on itself when the design calls for overhangs. Additionally the very bottom layer is called the "brim." The brim doesn't figure in the final sculpture but is important because it helps adhesion to the build plate. When the printer is done the brim is removed.



The Blue Chromosome has been printed but is in a rough state. It needs to be cleaned up using tools made for working PLA plastic. The large supports have been removed, but the hair-fine supports have not.



This picture shows the weave the printer made executing the Blue Chromosome. The image is from the bottom of the piece. The brim is not shown.



This is the Blue Chromosome finished. It is an apparently simple object, but that is an illusion because if you put it on a mirror, you can see it has no up or down. It is a reality all its own, similar to a Mobius strip.

Comparing the 3D print to the original Blender image it is clear that the print suffers some loss of detail . Nevertheless the print holds its own because it occupies real space, whereas the Blender image, though it can be rotated, is

essentially a 2-space occupant.

Stats

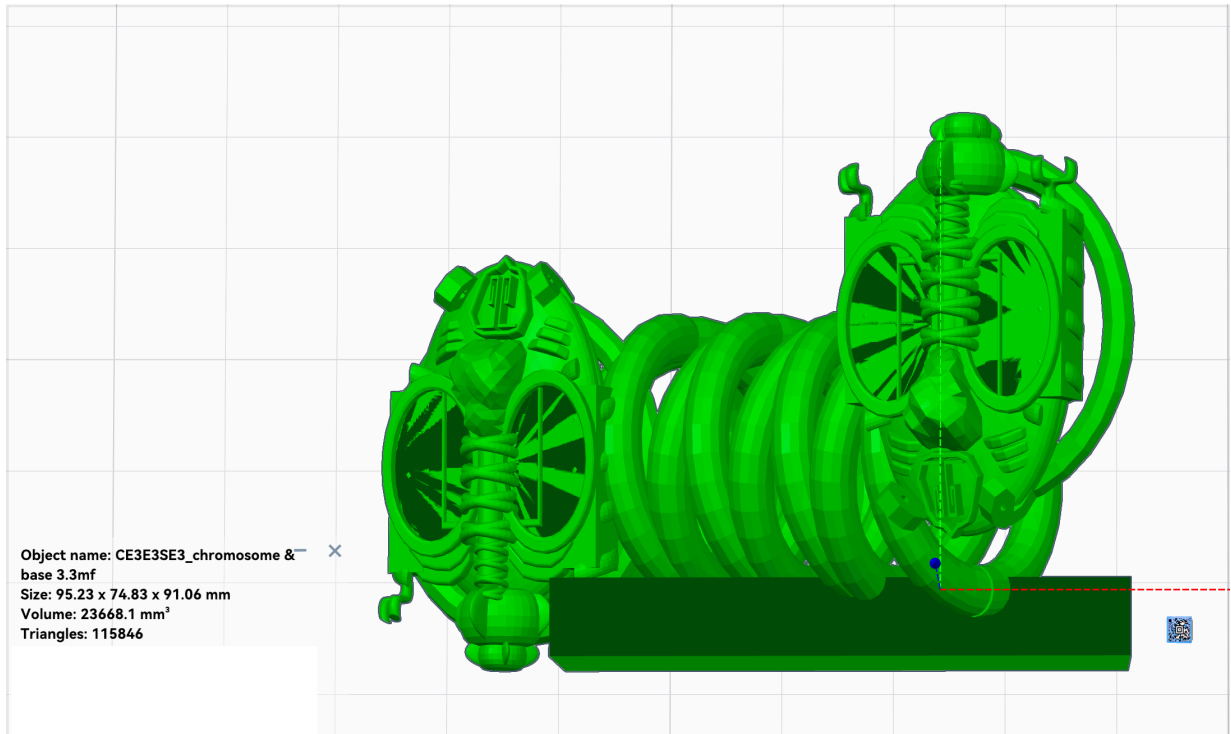
Size: 5.22" x 4.315" x 3.57"

Printer: Creality Ender-3 S1 Pro 0.4

Print Time: 6 hrs. 13 minutes

Filament: Overture Easy Digital Blue

Another Sliced Image Before the Slicing



What is it?

This 3D print represents the 2 coils of a human chromosome. I personified each strand with heads based very loosely on the Mayan Sun God, Kinich Ahau. The front head (on the right above) is Life. The back head is a Death Head. Putting the print on a mirror shows that the front head and the back head are exactly the same. This is the nature of chromosomes. They bear both life and death as one.