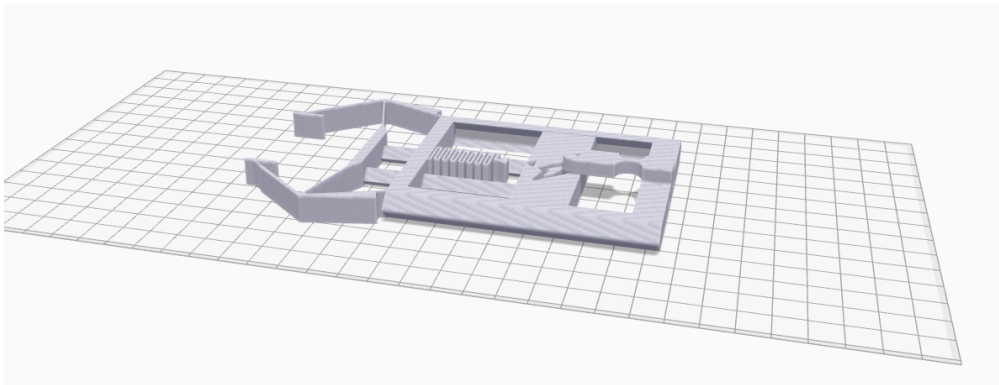


Necessary premise

We developed the PLG by adopting Fused Filament Fabrication (FFF) technology. Furthermore, the MarkForged® Onyx has been adopted as material. The functionality of the gripper depends on the material and the technology adopted. Changing the material and the process without modifying the design could lead to bad results. By adopting a nylon-based material, acceptable results could be obtained.

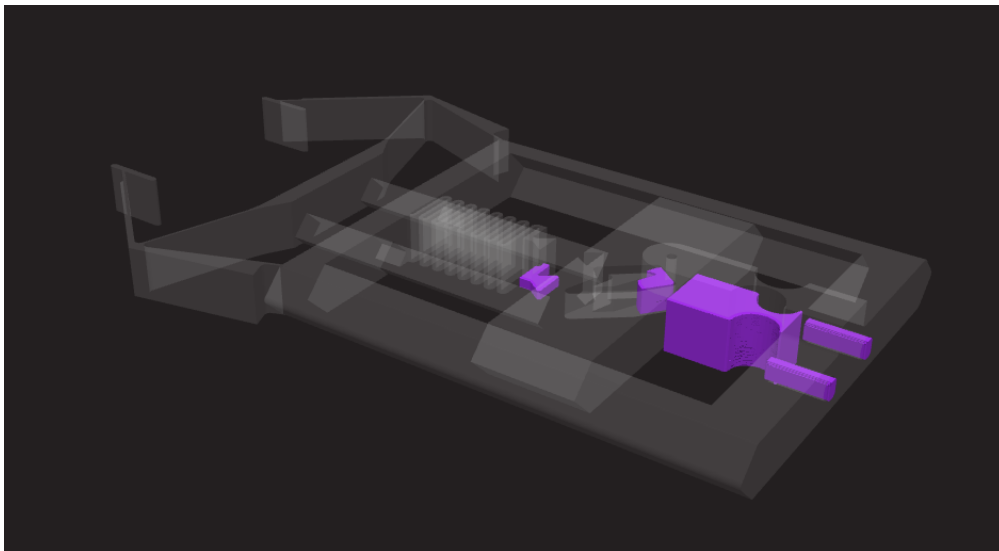
Printing phase

Inside the selected slicer (in this case, the proprietary MarkForged slicer has been adopted), the gripper must be positioned as shown in the figure below.



Positioning of the PLG inside the slicer.

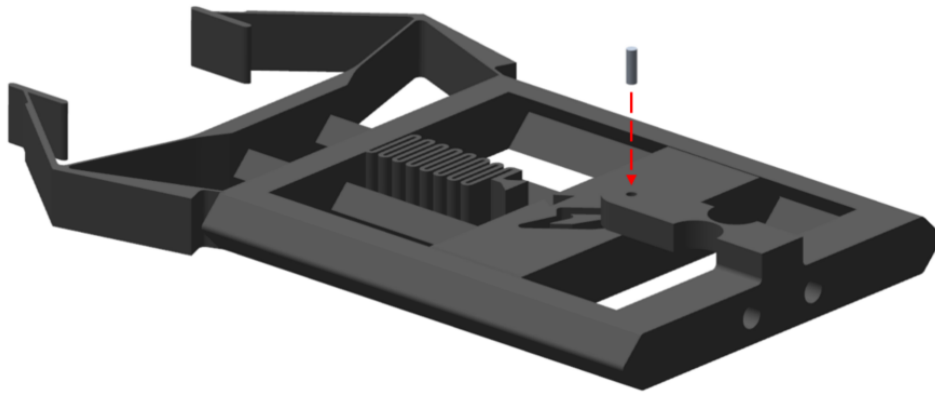
Once printed, necessary supports need to be removed. In the following figure, supports are coloured violet.



In violet, supports are represented.

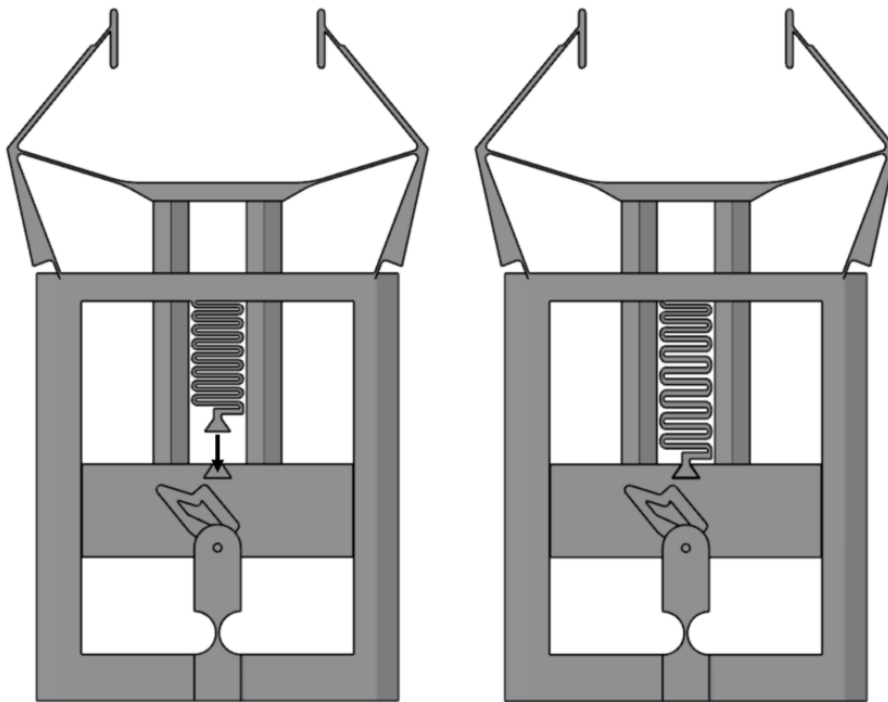
Assembling phase

Next, a pin must be inserted in the hole of the flexible hinge to make the cam path work (picture below). For the current design, a pin of 2 mm in diameter fits the hole (with 0.2 mm of interference). The minimum height of the pin to make contact with the cam path is 6 mm.



The figure shows where to put the pin.

The final step is to activate the spring pre-tensioning system. The free extremity of the spring must be moved to his special seat, as shown in the following figure.



The figure shows how to activate the pre-tensioning system.

At this point, the PLG is ready to be implemented.