



Hobby Locking Forceps - Single Piece with Compliant Joints

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Summary

FDM optimized locking forceps with compliant joints.

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After searching online I came across some poly resin forceps that I wanted to print and was surprised to find that there weren't any that were properly modeled.

I have this optimized for a .6mm nozzle and prints under 20mins on my P1P. It works better with PETG than PLA, but PLA will still work. This is a consumable because the joints will eventually fail but I've opened and closed one of them over 150 times and it's still going strong. The bottom is completely flat for optimal printing and should use less than 10grams of filament.

Printing Suggestions:

- Optimal filament is PETG or 100A+ TPU. PLA will fatigue quickly but it does still work!
- Layer height should not matter (.3mm works great for me)

- Print with flat side on print bed (should be obvious)
- No supports
- IMPORTANT: Make sure the layer seams don't end up on any of the four (4) joints (see picture)
 - Most slicers include a “seam painter” to block the seam in certain areas

Model files



locking_forceps_straight.stl

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