Original Prusa Mini Tool Holder

Dario Cairoli

VIEW IN BROWSER

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Summary

This tool holder lets you store the included tweezers, hexkey, wrench and a printed scalpel on the printer itself.

6.52 hrs	5 pcs	0.10 mm	0.40 mm	PLA	39 g	Prusa MINI / MINI+

3D Printers > 3D Printers - Upgrades

Tags: hexkey hexkeyholder originalprusamini prusamini prusaminimod prusaminiupgrade scalpel scalpelhandle scalpelstorage toolholder toolstorage tweezerholder tweezers wrench wrenchholder

Print this toolholder for the Original Prusa Mini to store the included tweezers, hexkey and wrench in the printer itself. As a bonus the toolholder has space for an additional 3D printed scalpel.

The tools are hold in with magnets and are bolted to the Z-axis.

Ready to print files for Original Prusa Mini /Mini+ in PLA and with 0.1mm layer height are provided.

Additional materials needed

- 4 x 5x2mm disc magnets
- 2 x M3 insert or M3 nut (DESON Threaded Insert M3 Insert Nut Embedded Knurled Nut Brass Embedded Nuts Round Nuts for Plastic Parts 3D Printed Parts by Ultrasonic Warm Embedding (M3) Pack of 50 : Amazon.de: DIY & Tools)
- 2 x M3 bolt (6 to 8mm long if inserts used and 10mm long if embedded nuts are used)
- 2 x 9mm washer
- 1 x 8x8x0.5mm magnetic plate (can be cut from a can lid or any other scrap sheet metal)
- 1 x scalpel blade (the scalpel handle works with 3 different brands of blades that I tried) (Filzada ® 120 x Ultra Sharp Skallpel Blades - Replacement Blades for Scalpels, Hobby Knives, Craft Knives - Includes Storage Box : Amazon.de: Home & Kitchen)

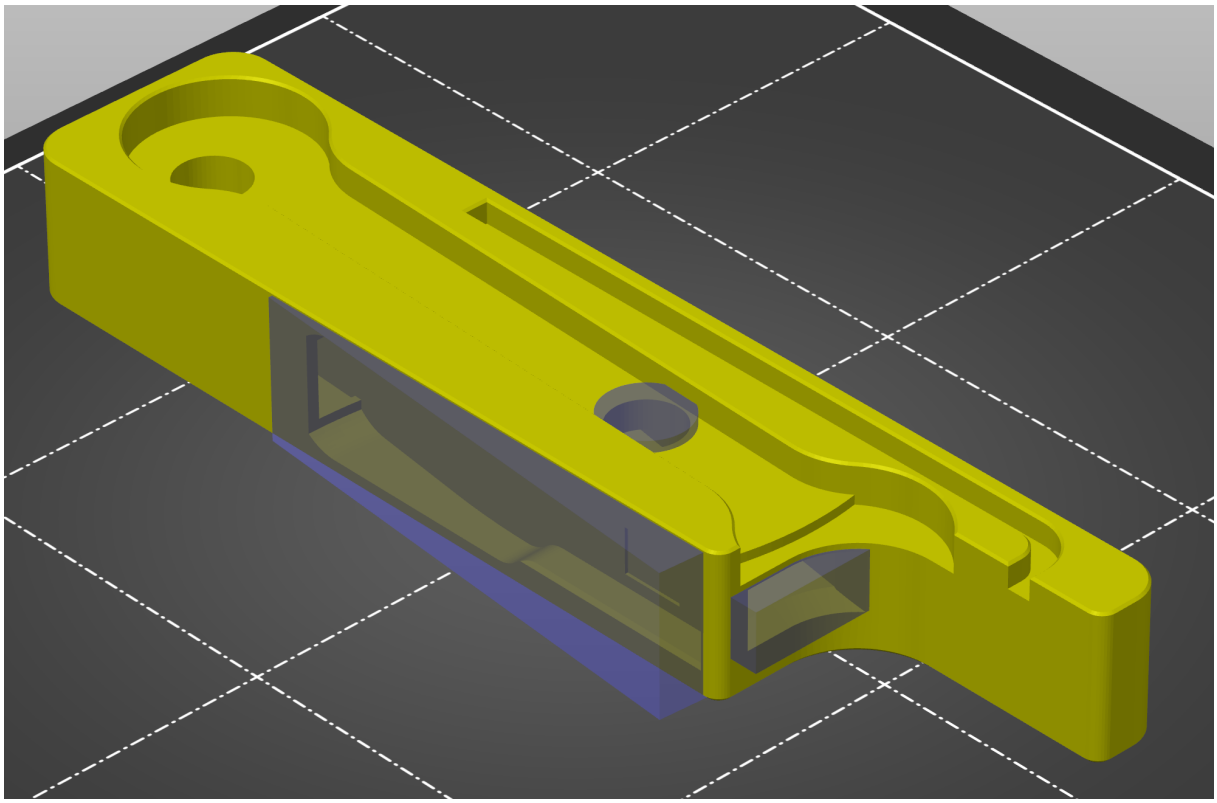
Printing tips

Ready to print files for Original Prusa Mini /Mini+ in PLA and with 0.1mm layer height are provided.

You only need to print one T-Slot Fastener. Choose whether you want to use threaded inserts or embedded nuts.

Tool holder

The tool holder uses embedded magnets to secure the wrench and hexkey. Therefore, it is not advised to use global supports. Instead use support enforcers on the three openings (opening and overhang for the scalpel handle, opening for the tweezers, through hole for the top bolt) as shown in the picture below.



To embed the magnets, use a material change on the layer height 14.2mm to insert the first two magnets and at 15.0mm to insert the last two magnets. The material change pauses the print while keeping the heated bead warm, which allows you to insert the magnets with no hurry. Use a material change instead of a pause, so that the printer primes the nozzle before it returns to the print. Make sure you remove the excess material with tweezers! To ensure the magnets don’t get pulled out by the hotend as it prints the next layer, glue the magnets into the designated recess with a glue stick or anything similar.

T-Slot Fastener with embedded Nuts

To embed the nuts, use a material change at layer height 5.1mm to insert the two nuts.

Scalpel Handle

Use a material change at layer height 3.3mm to insert the magnet.

Assembly tips

Tool Holder

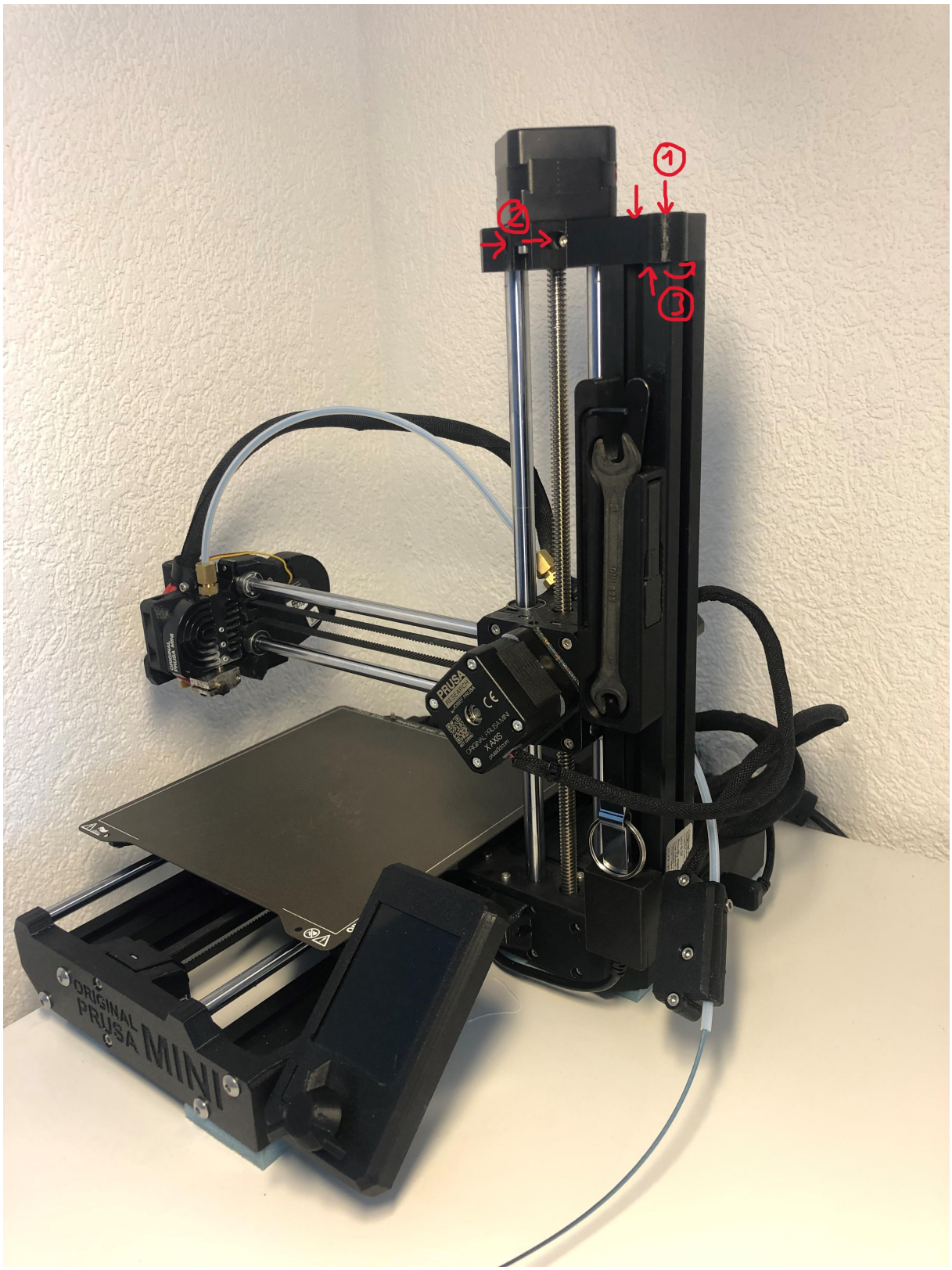
Glue the 8x8mm magnetic plate into the designated recess on the side of the toolholder. This allows the scalpel handle to be held in place by magnetic attraction.

T-Slot Fastener with Inserts

After a successful print, use a soldering iron to heat up the insert and push it into the designated hole of the T-Slot Fastener.

Mounting to the printer

1. Undo the two bolts securing the Z-axis motor assembly to the aluminium extrusion.
2. Undo the two bolts securing the two guiding rods to the motor bracket.
3. Lift the motor bracket off the guiding rods and rotate it out of the way, so the T-Slot Fasteners can be inserted into the aluminium profile. Be carefull to not stress the motor cables on the back of the Z-axis.
4. Redo all the bolts and mount the Tool Holder to the T-Slot Fasteners.


1
2
3
ORIGINAL PRUSA MINI
PRUSA RESEARCH
X AXIS

Model files

tool-holder.stl

scalpel-fixture.stl

scalpel-handle.stl

t-slot-fastener-with-inserts.stl

t-slot-fastener-with-embedded-nuts.stl

Print files

tool-holder_01mm_pla_mini_5h23m.gcode

PLA | 0.40 mm | 0.10 mm | 5.38 hrs | 35 g | Prusa MINI / MINI+

scalpel-handle_01mm_pla_mini_20m.gcode

PLA | 0.40 mm | 0.10 mm | 0.34 hrs | 1 g | Prusa MINI / MINI+

scalpel-fixture_01mm_pla_mini_11m.gcode

PLA | 0.40 mm | 0.10 mm | 0.19 hrs | 1 g | Prusa MINI / MINI+

t-slot-fastener-with-inserts_01mm_pla_mini_37m.gcode

PLA 0.40 mm 0.10 mm 0.61 hrs 2 g Prusa MINI / MINI+

t-slot-fastener-with-embedded-nuts_01mm_pla_min.gcode

PLA 0.40 mm 0.10 mm 0.68 hrs 2 g Prusa MINI / MINI+

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