

Table of Contents

How to replace a hotend assembly (MK4S / MK3.9S)	3
Step 1 - Introduction	4
Step 2 - Preparing the printer	5
Step 3 - Protecting the heatbed	6
Step 4 - Accessing the hotend cables	7
Step 5 - Disconnecting the hotend cables	7
Step 6 - Removing the hotend	8
Step 7 - Hotend assembly parts preparation	9
Step 8 - Inserting the hotend	10
Step 9 - Nozzle insertion check	11
Step 10 - Guiding the hotend cables	12
Step 11 - Connecting the hotend	12
Step 12 - Arranging the cables	13
Step 13 - Setting up the nozzle diameter	14
Step 14 - Final check	15
Step 15 - That's it!	15

How to replace a hotend assembly (MK4S / MK3.9S)



help.prusa3d.com/g765342

Scan the QR code to
display the latest
version of this
chapter.

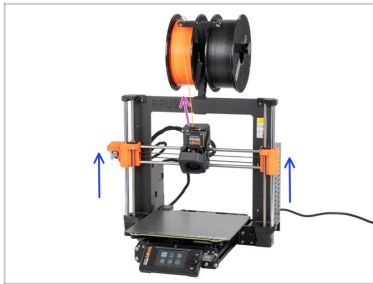


STEP 1 Introduction



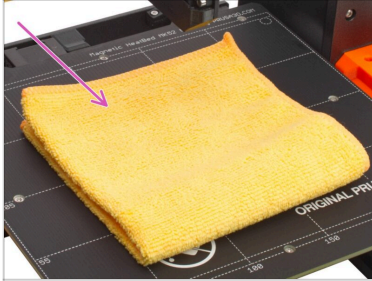
- ◆ This guide will take you through the **Hotend assembly replacement** on your **Original Prusa MK4S** or **MK3.9S**.
- ⓘ The following instructions are compatible with all Prusa Nozzle diameters.
- ◆ All necessary parts are available in our eshop prusa3d.com.
- ⓘ Note that you have to be logged in to have access to the spare parts section.

STEP 2 Preparing the printer



- ◆ Unload the filament from the printer.
 - ⓘ It's recommended to take off the spool holder from the printer.
- ◆ Move the Z-axis to the center position to easily access the extruder from the top and bottom.

STEP 3 Protecting the heatbed



- Turn the printer OFF and unplug the power cable from the PSU (Power Supply Unit).

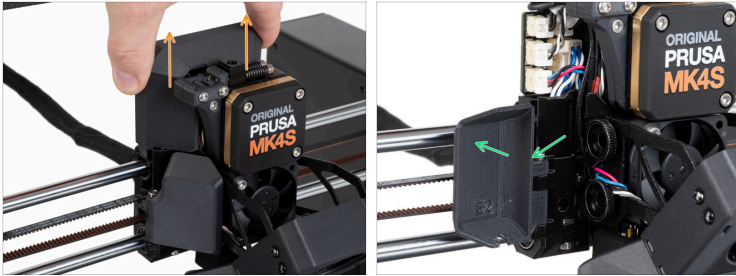
- ⚠ **Make sure the printer parts - print head and heatbed are cooled down at room temperature.**

- ⚠ **Before proceeding any further, it is recommended to protect the heatbed first!**

- Take off the print sheet.

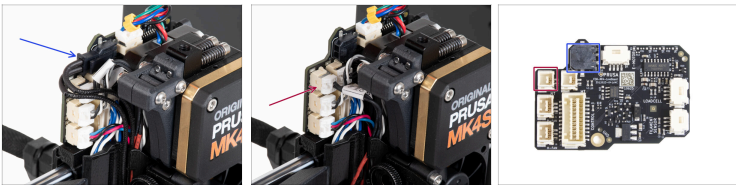
- Use any cloth or piece of fabric, which is thick enough and cover the heatbed. This will ensure you won't damage (scratch) the surface during the disassembly.


STEP 4 Accessing the hotend cables



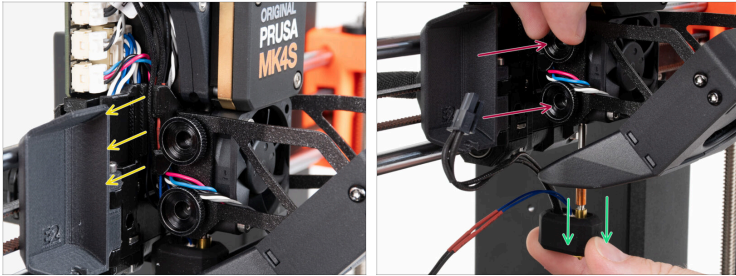
- Slide the Loveboard-cover up and remove it from the extruder.
- Open the fan-door-cover widely.

STEP 5 Disconnecting the hotend cables



-  Each connector has a safety latch. **It is necessary to press the latch before disconnecting.** Otherwise, the connector may get damaged.
- Disconnect the hotend heater cable.
- Disconnect the hotend thermistor cable.

STEP 6 Removing the hotend



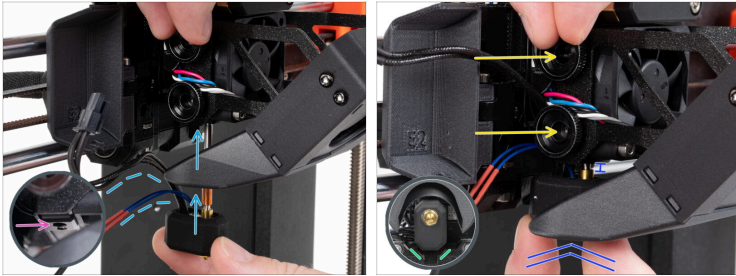
- Remove the hotend cables from the cable channel.
- Grasp the hotend with your hand.
- Use your other hand to loosen the two thumb screws. **There is no need to remove them completely**, a few turns are enough.
- Slide out the hotend assembly from the heatsink.

STEP 7 Hotend assembly parts preparation



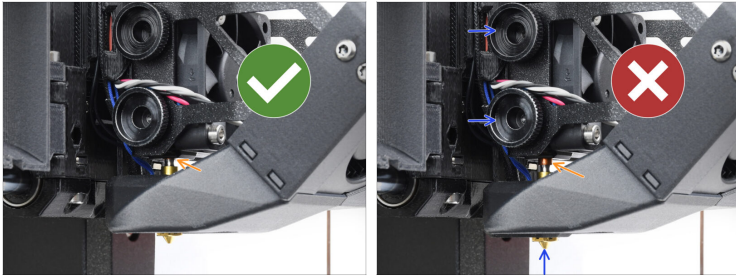
- ◆ **For the following steps, please prepare:**
- ◆ MK4S Hotend assembly (1x)
- ⓘ The MK4S hotend assembly has a Nextruder Silicone Sock installed by default. It is optional, and you can remove it at any time.
- ◆ For more information, read the article [Nextruder Silicone Sock](#).

STEP 8 Inserting the hotend



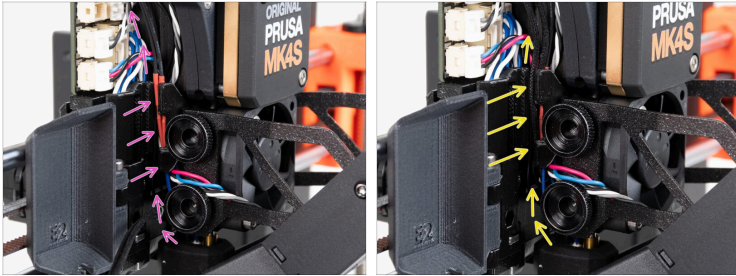
- Locate the corresponding opening on the bottom of the extruder heatsink and insert the hotend into the heatsink.
- At the same time, push the hotend cables behind the heatsink fan up towards the electronics.
- Push the hotend assembly all the way into the heatsink. There should be approximately a 2 mm gap between the heatsink and the brass part of the nozzle.
- While pushing the hotend assembly in, firmly tighten the lower thumb screw and the upper thumb screw.
- ⚠ **Avoid pinching any cable between the screws and the heatsink!**
- From the underside, check that the hotend is oriented correctly. It must fit between the cutouts in the X-carriage.

STEP 9 Nozzle insertion check



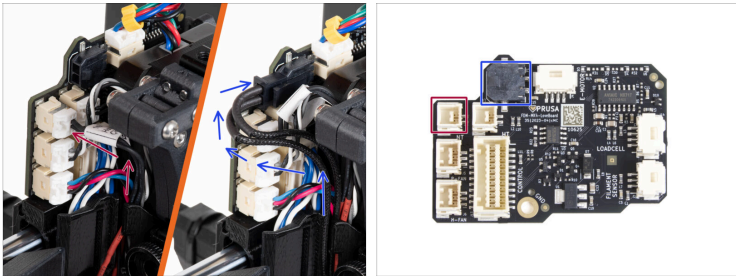
- Verify that the nozzle is fully inserted. The copper ring on the nozzle should not be visible if it's properly seated.
- ⓘ If not fully inserted, poor heat transfer may occur, potentially leading to issues like nozzle clogs.
- To adjust the nozzle position, loosen the thumbscrews, reposition the nozzle, and then retighten the screws, while pushing the hotend assembly up.

STEP 10 Guiding the hotend cables



- ◆ Locate the cable channel behind the thumb screws. Guide the hotend thermistor cable through the channel first. Then insert the hotend heater cable.
- ◆ Guide the hotend fan cable as seen in the picture. Push it in the cable channel.

STEP 11 Connecting the hotend



- ◆ Connect the hotend thermistor to the top left slot on the LoveBoard.
- ◆ Connect the hotend heater to the black slot on the upper part of the LoveBoard.







STEP 12 Arranging the cables



- ◆ Arrange all the cables according to the picture (view from above). All cables must be squeezed as close to the extruder body as possible.
- ◆ Close the Fan-door-cover.
- ◆ Slide the Loveboard-cover on the extruder. And push it down.
- ⚠ **Be careful not to pinch any cables!**
- ◆ When the cover is properly and completely inserted, you will feel a slight "click" of the rear latch.

STEP 13 Setting up the nozzle diameter



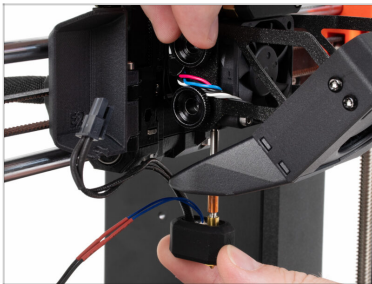
-  This step is important only if you changed your nozzle diameter or type.
-  Visit the **Settings > Hardware** menu
 -  Select the **Nozzle diameter** you are using (e.g. 0.25 / 0.3 / 0.4 / 0.5 / 0.6 / 0.8)
 -  On MK4S, the 0.40mm is the stock nozzle size.
 -  Turn on the **silicone sock** option if you are using one.
 -  Select a Nozzle type, if you switched between the Normal nozzle and a high flow version.

STEP 14 Final check



- ◆ To check if everything is connected correctly go to **Control > Temperature > Nozzle Temperature** and set it to a temperature above 200°C.
- ◆ Go back to the main screen and check the bottom bar to see if the temperature rises.

STEP 15 That's it!



- ◆ **Great job!** You just successfully replaced the Hotend assembly on your Original Prusa MK4S.
