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How to install the Nextruder V6 Nozzle Adapter (MK4S/MK3.9S)



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STEP 1 Introduction



- ◆ This guide will take you through the installation of the **Nextruder V6 Nozzle Adapter** on the **Original Prusa MK4S** and **MK3.9S**.
- ⓘ The following instructions are compatible with all V6 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.

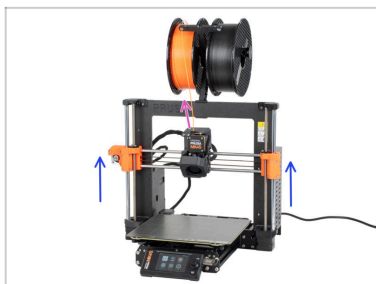
STEP 2 Tools necessary for this chapter



- **For this chapter, please prepare:**
- Wrench 13-16
- Universal wrench
- Cloth or piece of fabric 15x15 cm *to protect the heatbed*
- Small brass brush *for cleaning the nozzle*

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STEP 3 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 4 Cleaning the hotend




⚠ WARNING: The hotend and heated bed are very HOT. Do not touch these parts!!!

- ◆ For the following steps, it is necessary to have the heaterblock and the hotend clean from the remains of the filament. Otherwise, it can be difficult to release the nozzle.

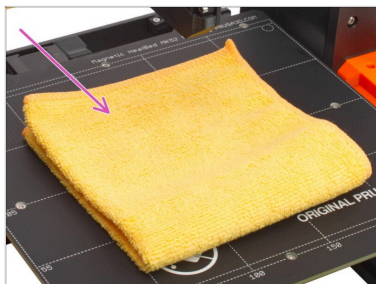
⚠ If you have a Prusa hotend sock on the hotend, remove it.

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- ◆ On the printer screen, go to *Control* -> *Temperature* -> *Nozzle Temperature* and using the knob set **250°C**.
 - ◆ Wait at least 5 minutes. The remains of the filament must be warmed up slightly so that they can be removed more easily.
 - ◆ Using the brass brush, carefully clean the heaterblock and the hotend from the filament residue. **Avoid contact of the brush with the hotend cables, as this could cause a short circuit.**
 - ◆ When the heaterblock and the hotend are perfectly clean, cool down the printer. On the screen, navigate to *Preheat* -> *Cooldown*.
-  **Wait until the hot parts are cooled down to ambient temperature. It takes approximately 10 minutes.**

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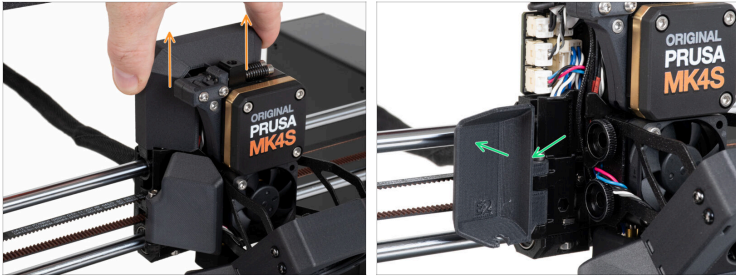
STEP 5 Protecting the heatbed



- 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.

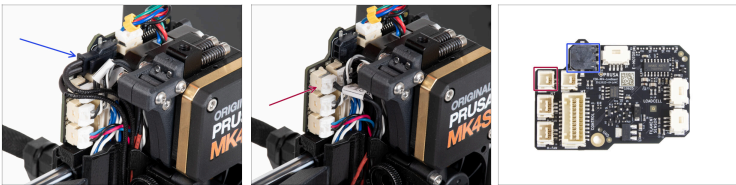
How to install the Nextruder V6 Nozzle Adapter (MK4S/MK3.9S)

STEP 6 Accessing the hotend cables



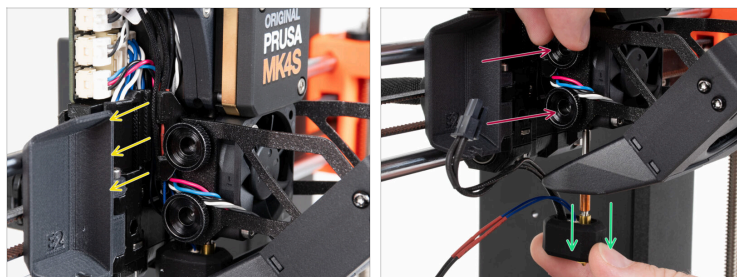
- Slide the Loveboard-cover up and remove it from the extruder.
- Open the fan-door-cover widely.

STEP 7 Disconnecting the hotend cables



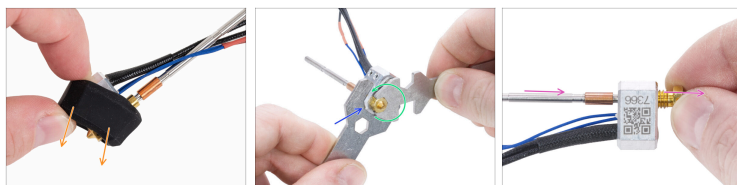
- !** Each connector has a safety latch. **It is necessary to press the latch before disconnecting.** Otherwise, the connector may get damaged.
- Disconnect the hotend heater cable.
- Disconnect the hotend thermistor cable.

STEP 8 Removing the hotend



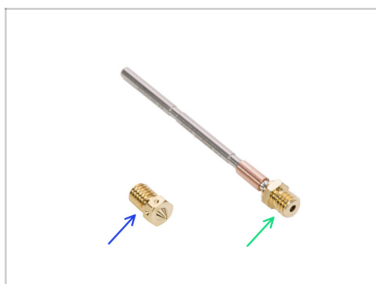
- ◆ Remove the hotend cables from the cable channel.
- ◆ Grasp the hotend with your hand.
- ◆ Use your other hand to loosen the two thumb screws. **There is no need to remove them completely**, a few turns are enough.
- ◆ Slide out the hotend assembly from the heatsink.

STEP 9 Removing the Prusa Nozzle



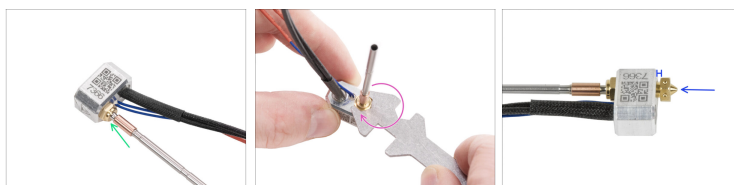
- ◆ If you have the silicone sock on the heaterblock, remove it.
- ◆ Using the wrench 13-16 grasp the heaterblock.
- ◆ Using the 7mm cutout in the universal wrench, grasp the nozzle and loosen it.
- ◆ Manually release and remove the Prusa nozzle from the hotend assembly.

STEP 10 Installing the V6 nozzle: parts preparation



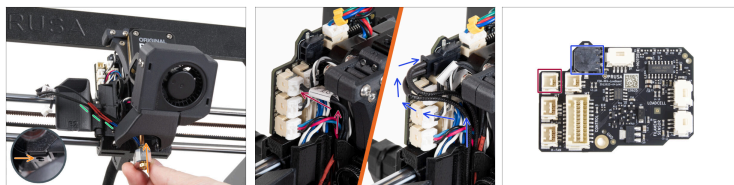
- For the following steps, please prepare:
- Nextruder V6 Nozzle Adapter (1x)
- V6 Nozzle (1x)

STEP 11 Installing the Nextruder V6 Nozzle Adapter



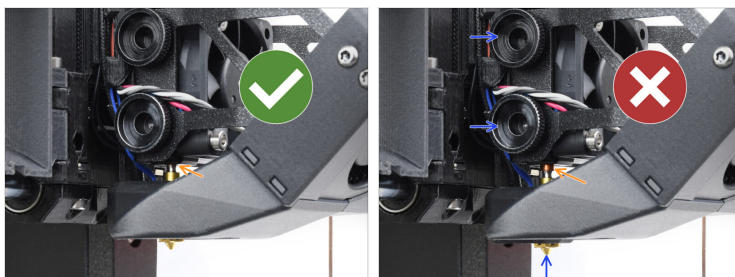
- From the side with cables, screw the Nextruder V6 Nozzle Adapter to the heaterblock.
- Hold the heaterblock in your hand and tighten the Nextruder V6 Nozzle Adapter by the universal wrench.
- From the opposite side of the heaterblock, screw in the V6 nozzle. **Tighten the nozzle gently but firmly.**
- ① A gap of approximately two millimeters is left between the nozzle and the heaterblock, which is correct.

STEP 12 Inserting the hotend



- 🟡 Locate the hole in the heatsink from the bottom of the extruder and insert the hotend into the heatsink.
- 🟢 At the same time, push the hotend cable behind the heatsink fan up to the electronics.
- ⚠️ **Do not tighten the thumb screws to secure the hotend yet! Wait for the instruction.**
- 🟠 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.
- ⚠️ **Keep the hotend assembly hanging on cables. Avoid pulling on the hotend.**

STEP 13 Hotend insertion check



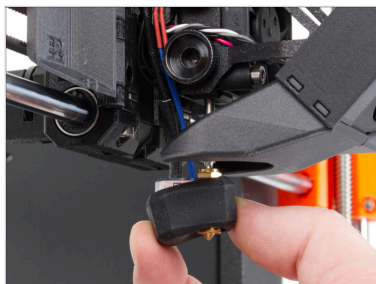
- Verify that the nozzle is fully inserted. The copper ring on the nozzle should not be visible if it's properly seated.
- ⓘ If not fully inserted, poor heat transfer may occur, potentially leading to issues like nozzle clogs.
- To adjust the nozzle position, loosen the thumbscrews, reposition the nozzle,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

STEP 14 Tightening the nozzle



- ⚠ In the following steps, we will need to heat up the nozzle. **Avoid touching the HOT parts on the hotend.**
- ⚠ **Remove the cloth from the heatbed!**
- ⬛ Plug the power cord to the printer and turn it ON.
- 🟢 Now, you will need to set the nozzle temperature to 250°C. On the printer screen, navigate to *Control* -> *Temperature* -> *Nozzle Temperature* and using the knob set 250°C.
- ⚠ **WARNING: From now, the hotend is very HOT. Do not touch it!!!**
- 🟠 Grasp the heaterblock with the wrench 13-16. **Avoid pulling on the hotend!**
- 🟡 Tighten the nozzle using the universal wrench. **Do not overtighten it, you can damage the thread.** Use the sufficient force. The prescribed tightening torque is 1.5 Nm.
- ⚠ **NOTE: Avoid bending the hotend assembly while tightening!** After that, there will be a gap of approximately 1 mm between the nozzle and the heater block.

STEP 15 Assembling the silicone sock (optional)



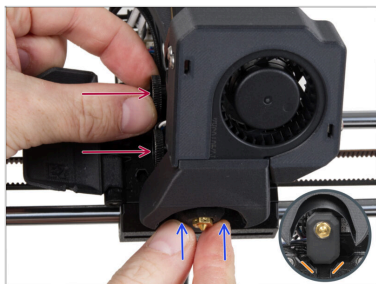
⚠ CAUTION!!!
COOLDOWN THE
PRINTER before
proceeding with
this step. Wait until
the hot parts are
cooled down to
ambient
temperature. It
takes approximately
10 minutes.

i Putting the
Nextrunder silicone
sock on the hotend
is optional, although
recommended.
More about
Nextrunder silicone
sock.

◆ Put the silicone sock
back on the
heaterblock. This is
optional.

⚠ Avoid pulling on
the hotend.

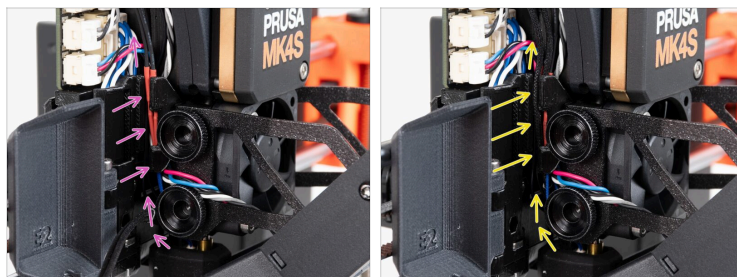
STEP 16 Securing the hotend assembly



⚠ CAUTION!!!
COOLDOWN THE
PRINTER before
proceeding with
this step. Wait until
the hot parts are
cooled down to
ambient
temperature. It
takes approximately
10 minutes.

- Push the hotend assembly all the way into the heatsink.
- While pushing the hotend assembly in, **firmly tighten both thumb screws.**
- ⚠ **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 17 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 18 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.

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STEP 19 Setting up the nozzle diameter





 This step is important only if you changed your nozzle diameter or type.

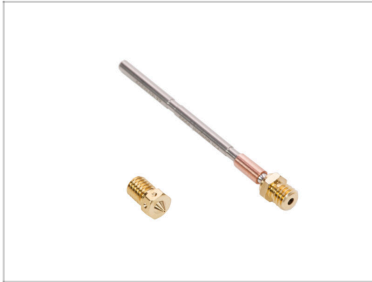
-  Visit the **Settings > Hardware** menu
-  Select the **Nozzle diameter** you are using (e.g. 0.25 / 0.3 / 0.4 / 0.5 / 0.6 / 0.8)
-  On MK4S, the 0.40mm is the stock nozzle diameter.
-  Turn on the **silicone sock** option if you are using one.

STEP 20 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 21 That's it!



- ◆ **Congratulations!**
You just successfully replaced the NextruderV6 Nozzle Adapter on your printer.
