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How to replace the Prusa Nozzle (CORE One)

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STEP 1 Introduction

- This guide will take you through the **Prusa Nozzle replacement** on your **Prusa CORE One**.

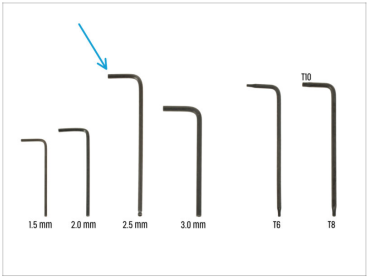
  If you can print additional parts, there is also a **faster alternative** method that uses a printed jig for the nozzle swap. Follow the instructions on Printables.com.

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 Tools necessary for this chapter



- **Please prepare tools for this chapter:**
  - 2.5mm Allen key
  - Wrench 13-16
  - Universal wrench

STEP 3 Printer Preparation (Part 1)



- Close the printer's door.
- Unload the filament. Visit the menu **Filament** and select **Unload filament.**
- Unload the filament from the printer.
- Remove the filament spool from the printer.

⚠ Ensure the printer has completely cooled down.

- On the printer screen, navigate to *Preheat -> COOLDOWN* and wait for the temperatures to drop to ambient levels. This may take several minutes.

STEP 4 Printer Preparation (Part 2)



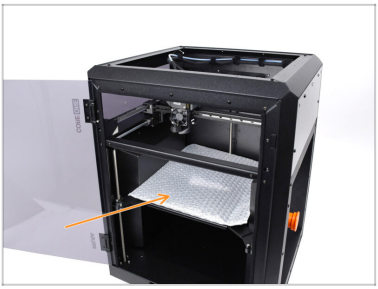
- Open the menu **Control > Move Axis > Move Z** and set it to 100 mm or more.
- Wait until the heatbed moves down.
- Turn the printer off using the switch on the back.
- Disconnect the printer from power.

STEP 5 Top Cover Removal



- Open the printer. From the inside, reach for the nylon rivets on the front right of the top cover. Push it out to unlock it.
- Then, remove the rivet from the outside.
- Remove the remaining nylon rivets on the top cover using the same technique.
- Remove the top cover.

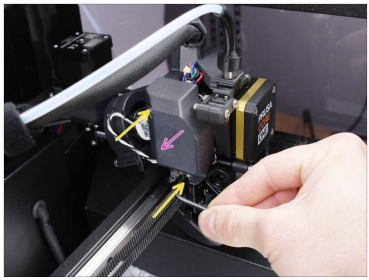
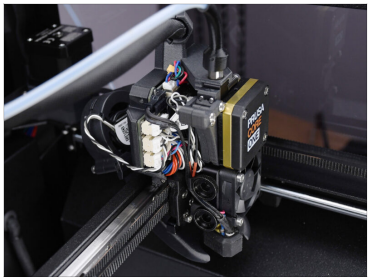
STEP 6 Heatbed Protection



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

- Use a piece of fabric or other material thick enough to cover the heatbed. This will ensure you won't damage (scratch) the surface during the process.

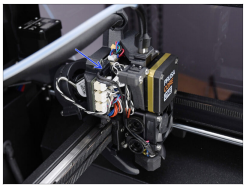
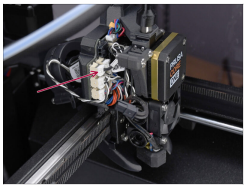
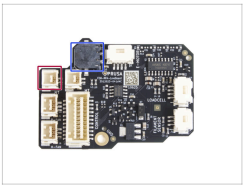
STEP 7 Nextruder Uncovering

- Let's move onto the left side of the Nextruder.
- Using the 2.5mm Allen key, remove the M3x10 screw at the top, holding the side cover.

  Some of the earliest CORE One printers might have two M3x10bT screws instead. In this case, use the T10 screwdriver instead.
- Remove the cover.

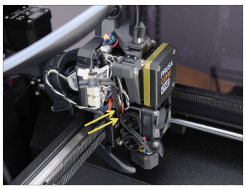
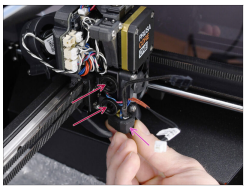
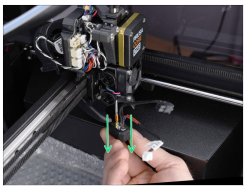
STEP 8 Cables Disconnecting

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.

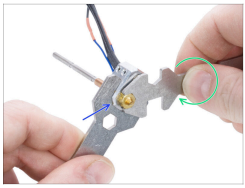
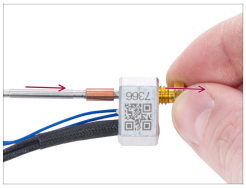
STEP 9 Hotend Assembly Removal

- Remove the hotend cables from the cable guide.
- 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.

  ⚠ Watch out, the hotend assembly may fall out!
- Slide out the hotend assembly from the heatsink.

STEP 10 Prusa Nozzle Removal

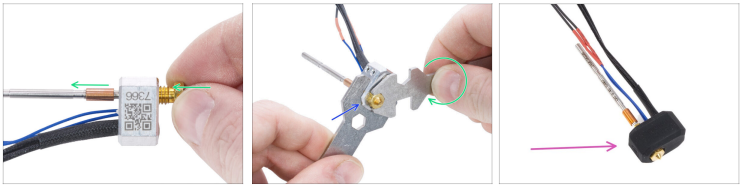




- Remove the silicone sock from the heater block.
- Use the 13-16 wrench to hold the heater block securely.
- Use the 7mm cutout in the universal wrench to grasp and loosen the nozzle.
- Manually unscrew and remove the Prusa nozzle from the hotend assembly.

STEP 11 Prusa Nozzle Parts Preparation

- **For the following steps, please prepare:**
- New Prusa Nozzle (1x)
  - ⓘ See the Different Nozzle Types article for more info on the available options.

STEP 12 Prusa Nozzle Installation

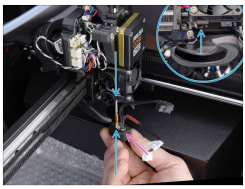
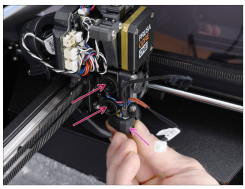
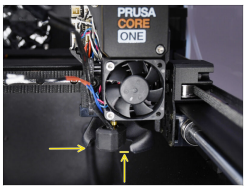


- Screw the new nozzle fully into the heater block until it touches the heater block surface.
- Hold the heater block securely using the 13-16 wrench.
- Use the 7mm cutout in the universal wrench to tighten the nozzle against the heater block. **Avoid applying excessive force!**
  - ⓘ The specified torque value is 1.5 Nm (13.3 lb-in). The use of a torque wrench is recommended.
- Optionally, install the silicone sock.

STEP 13 Hotend Assembly Parts Preparation

- **For the following steps, please prepare:**
- Hotend assembly (1x)
  - The CORE One 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.
  - The default nozzle on the CORE One is the 0.4mm HF, (High Flow version) labeled CHT

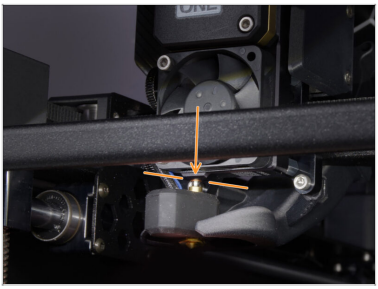
STEP 14 Hotend Insertion

- Locate the corresponding opening on the bottom of the extruder heatsink and fully insert the hotend into the heatsink.
- At the same time, keep the hotend cables pointing to the front, at a slight angle.

  ⓘ The assembly must fit into the recess in the fan shroud with appropriate clearance
- Keep pushing the hotend assembly upward and tighten both thumbscrews to secure it in place.
- Ensure the hotend is fully inserted into the heatsink. It should align as shown in the picture and must not protrude below the fan shroud.

STEP 15 Nozzle Insertion Check

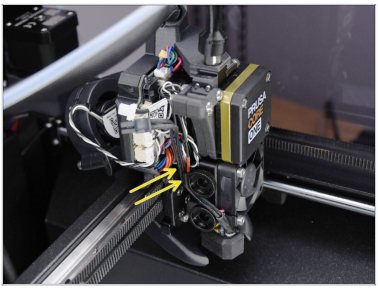


- Verify that the nozzle is **fully inserted** into the heatsink. The copper ring on the nozzle should not be visible if properly seated.

  ⚠ If not fully inserted, it can cause poor heat transfer, potentially leading to nozzle clogs.

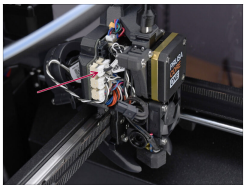
  ⓘ To adjust the nozzle position, loosen the thumbscrews, reposition the nozzle, and then retighten the screws, while pushing the hotend assembly up.

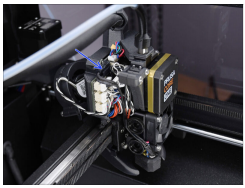
STEP 16 Hotend Cables Guidance

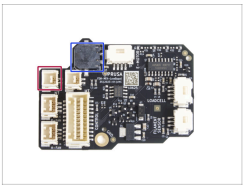


- Locate the cable guide (plastic hook) behind the thumb screws. Guide the thermistor cable through the channel first. Then insert the hotend heater cable.

STEP 17 Cables Connection

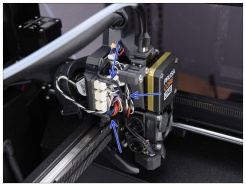
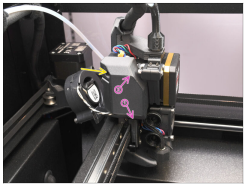
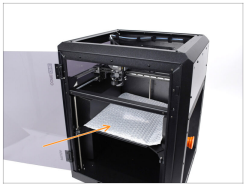






- Connect the hotend thermistor to the top left slot on the LoveBoard.
- Connect the hotend heater to the black slot on the upper part of the LoveBoard.

STEP 18 Nextruder Cover

- Organize the cables to ensure they do not protrude.
- Attach the cover to the left side of the Nextruder assembly.
  - Hook it at the bottom first.
  - Push it towards the Nextruder.
- Fix the cover in place using the M3x10 screw.
- Remove the protective material from the heatbed.

STEP 19 Top Cover

- Now, we can reinstall the top cover.
- Align the cover with the metal frame in the far-right corner.
- Align the cover with the recess in the front part as well
- Secure the cover in place using two nylon rivets in the marked openings.

STEP 20 Turning the Printer On

- Close the door.
- Connect the printer to electricity.
- Turn the printer on.

STEP 21 Nozzle Set Up

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

- Visit the **Settings > Hardware > Printhead** menu
- Select the **Nozzle diameter** you are using (e.g. 0.25 / 0.3 / 0.4 / 0.5 / 0.6 / 0.8)

  ⓘ On CORE One, the 0.40 mm nozzle is the stock size.
- Turn on the S**ilicone sock** option if you are using one.
- Select a nozzle type.

  ⓘ On CORE One, the High Flow nozzle is a default.

STEP 22 Final check

- To verify the connections, navigate to **Control > Temperature > Nozzle Temperature** and set it to above 200°C.
- Return to the main screen and check the bottom bar to ensure the temperature is rising as expected.

Great job! You can now resume using your printer.

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