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1. Introduction

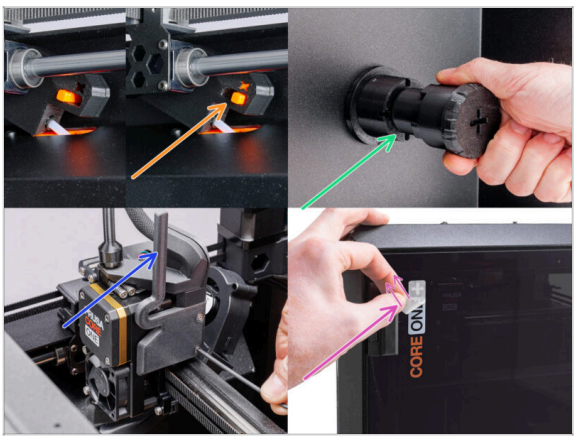
STEP 1 Preparing the upgrade kit

- This manual guides you through upgrading your **Prusa CORE One to CORE One+**.
- Please prepare the upgrade kit received from Prusa Research.

ⓘ All the required plastic parts are included in the kit.

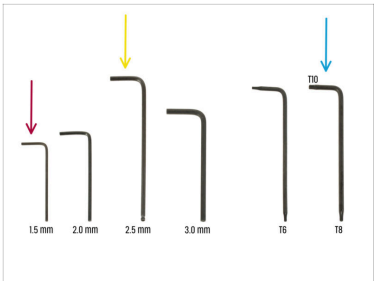
The printable parts are also available on Printables.

STEP 2 What will be upgraded?



- **CORE One to CORE One+ upgrade includes these changes:**
- New Filament sensor assembly
- New type of Spool Holder
- Automatic Vent control mechanism
- Finally, a new label and a serial number sticker.

STEP 3 Tools Required



The tools needed for this upgrade are **not included in the kit**. Please use the tools that came with your original CORE One printer.

- **For the following chapters, please prepare these tools:**
- 1.5mm Allen key
- 2.5mm Allen key
- T10 Torx key / Screwdriver
- Needle-nose pliers
- Unikey with the M3 nut-sized opening.
- Flush cutters are recommended as an optional tool.

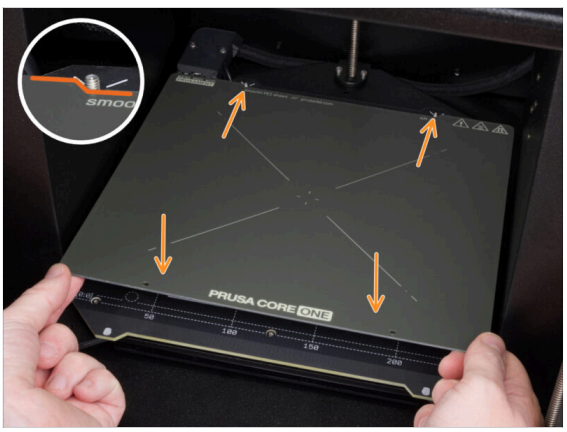
STEP 4 Printer Preparation 1

- Unload the filament. Visit the menu **Filament** and select **Unload filament**.
- Unload the filament from the printer.
- Remove the filament spool from the printer.

STEP 5 Printer Preparation 2

- Open the menu **Control > Move Axis > Move Z** and set it to 100mm or more.
- Wait until the heatbed moves down.

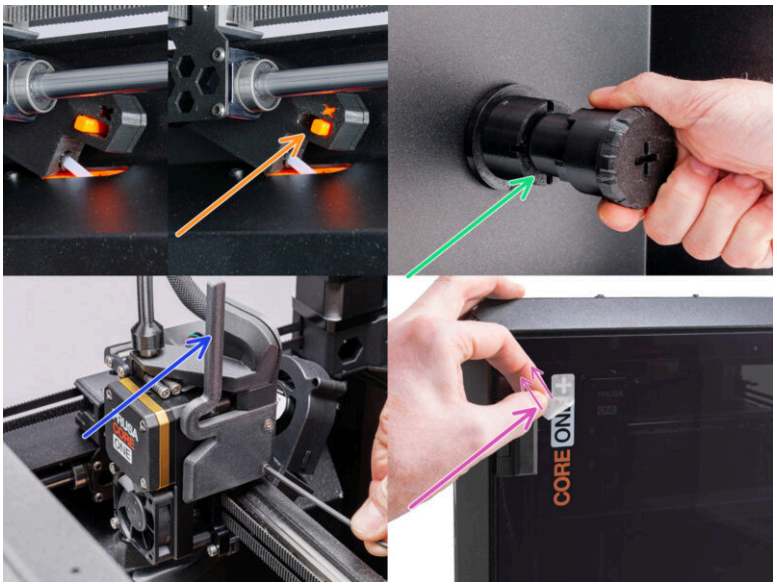
STEP 6 Printer Preparation 3



⚠ Before you begin, make sure the **printer has cooled down** to ambient temperature.

- Turn the printer off using the switch on the back.
- Disconnect the printer from power.
- Remove the steel sheet (optional).

2. Printer Upgrade

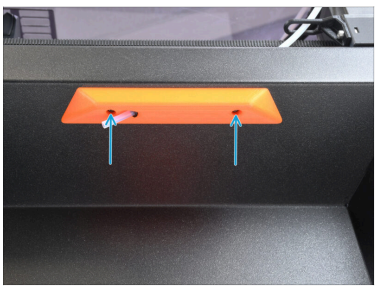
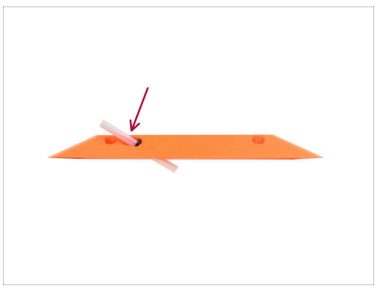


STEP 1 Top Cover Removal



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

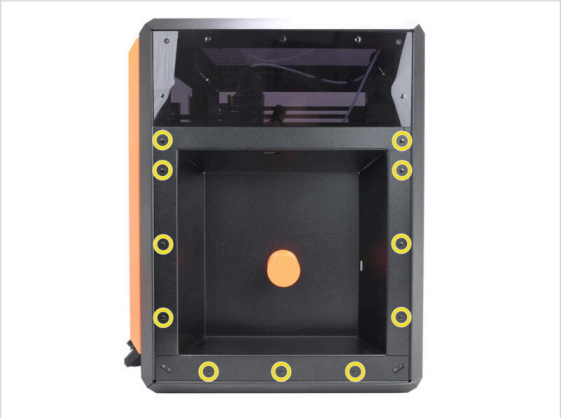
STEP 2 Handle Removal

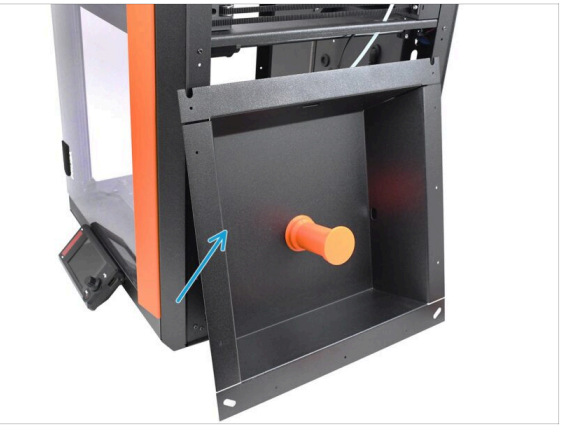




- To start, let's move onto the right side of the printer.
- Using the T10 Torx key, remove both screws from the handle.
- Remove the handle together with the short PTFE tube. Leave the tube inserted, for now.

  ⓘ If the PTFE tube remained attached on the printer side, remove it and set it aside for later use.

STEP 3 Side Panel Removal





- Remove 11 Nylon rivets holding the sheet metal side panel.

  Proceed carefully to avoid cutting the rivet into pieces.

- Remove the side panel from the printer.

STEP 4 Spool Holder Removal

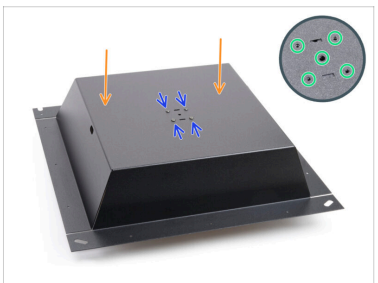
- On the inner side of the side panel, remove the four M3x8rT screws.
- Remove the spool holder.

  You can dispose of this spoolholder, as you will install an upgraded version soon.

STEP 5 Spool Holder Preparation

- **For the following steps:**
- CORE Spool holder (1x)
- Puck-universal (1x)
- O-ring 25x3,5mm (1x)

STEP 6 Puck Installation

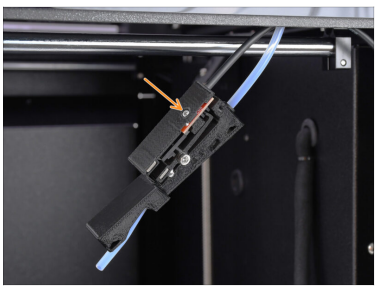


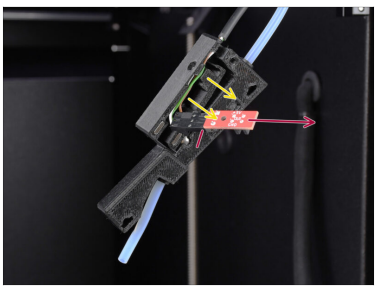
- Place the Puck-universal on a cardboard box so that the screw holes face upward.
- Carefully place the right panel onto the Puck-universal , positioning it at the center of the box.
- Align the holes in the puck with the holes in the right panel.
- Fix the puck in place using four M3x8rT screws.

STEP 7 Spool Holder Installation

- Attach the O-ring on the spoolholder.
- Push the spoolholder into the puck part and rotate it clockwise to lock it in place.

STEP 8 Filament Sensor Removal

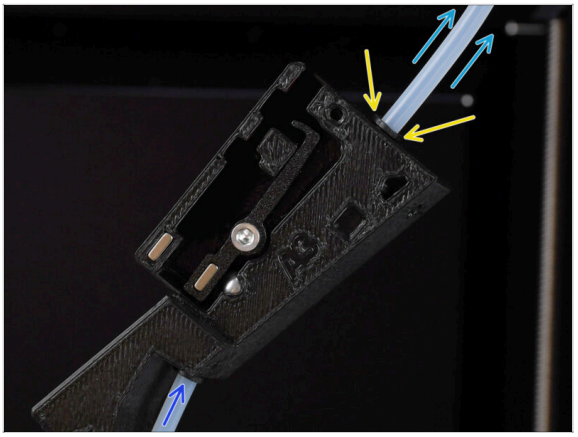




- Let's move onto the side filament sensor assembly.
  - Using the 2.5mm Allen key, remove the marked M3x10 screws.
  - If you have the older version of the sensor, remove just the M3x10 screw on the side.
- Using the 1.5mm Allen key, remove the M2x8 screw holding the filament sensor.

  ⚠ Handle the IR sensor board by its sides only, as it is an ESD-sensitive component.
- Remove the filament sensor PCB by moving it to a side.
- Remove the IR sensor with the cable still connected, away from the assembly.

STEP 9 Sensor Disassembly



- Push the collet around the PTFE tube.
  - While keeping the collet pushed in, pull by the PTFE tube in order to remove the assembly off the tube.
  - Remove the collet and save it for later use.
- On some early versions of the assembly, there may also be a short input PTFE tube secured by a collet. In that case, remove both the short tube and the collet.

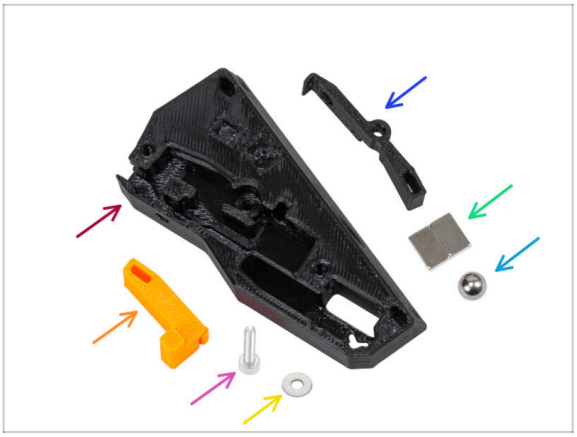
STEP 10 Sensor Disassembly 2

- On the filament sensor assembly, remove the magnet from the plastic housing.
  - ⚠ The magnet is embedded in the plastic. Use the needle-nose pliers to carefully remove it.
- Save the magnet for later use.

STEP 11 Sensor Disassembly 3

- Remove the M3x10 screw holding the lever.
- Remove the lever from the asembly.
- Remove the ball and save it for later use.
- Remove the magnet from the lever and save it for later use.

STEP 12 Sensor Preparation



- **For the following steps, prepare:**
- Filament-sensor-body (1x)
- Filament-sensor-lever (1x)
- Filament-sensor-switch (1x)
- M3x10 Screw (1x) *harvested from the printer*
- 10x6x2mm magnet (2x) *harvested from the printer*
- 7mm Ball (1x) *harvested from the printer*
- M3w washer (1x)

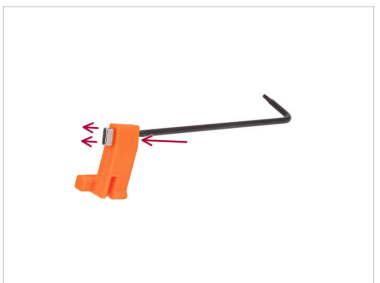
STEP 13 Sensor Base Assembly

- Insert one of the magnets into the dedicated opening in the Lever.
- Insert the ball into the corresponding opening on the inside of the sensor base.
- Insert the lever with the magnet into the Base.
  - ⓘ The part with the magnet should be positioned next to the ball.
- Fix the lever in place using the M3x10 screw with the washer on top.

STEP 14 Lever Test

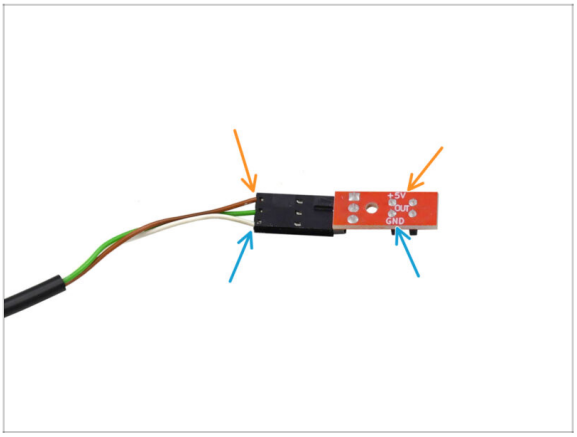
- Verify the lever is able to move freely.
  - ⚠ If the lever does not move freely or cannot move at all, loosen the screw by a quarter turn and test the movement again.

STEP 15 Switch Assembly



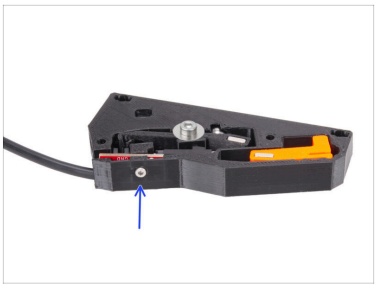
- Insert the second 10x6x2 magnet into the filament-sensor-switch.
- Install the filament-sensor-switch into the filament-sensor-body.
  - Move the filament-sensor-switch to the left end position so that the magnets face each other.
- Make sure the magnets **repel** - they should push away one from each other.
  - If the magnets attract - pull toward each other, remove the magnet from the filament-sensor switch, flip its polarity, and check again.
  - ⓘ Pro tip: Use one of the thin hex keys to remove the magnet.

STEP 16 Sensor Connection Check



- On the inside of the printer, make sure the IR filament sensor is connected to the cable.
  - ⚠ The cable color coding is somewhat non-standard on this printer model.
    Ensure the connector is plugged in correctly:
  - The **brown** cable must connect to the **+5V** pin.
  - The **white** cable connects to the **GND** pin.

STEP 17 IR Sensor Installation



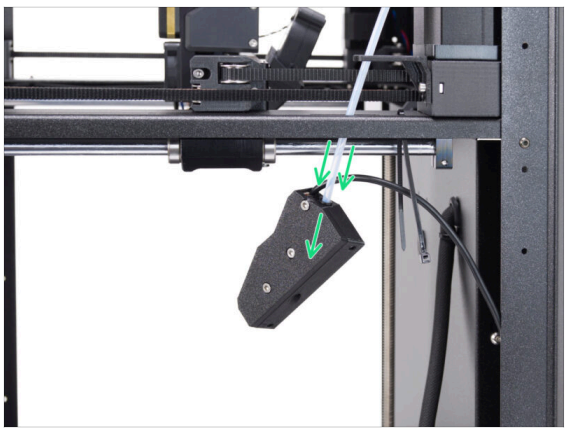
- First, insert the cable into the groove in the assembly. The connector should be approximately in the middle of the sensor base.
- Insert the IR sensor itself into the dedicated groove.
  - The lever must fit into the optical gate part.
- Make sure neither the connector nor the cables touch the lever, as this may prevent the sensor from functioning correctly.
- Using the 1.5mm Allen key, fix the sensor in place with the M2x8 screw.

STEP 18 Sensor Cover Installation

- Insert the two M3nS nuts into the designated openings. Use a 1.5mm Allen key to push them all the way in.
  - View the part from side to ensure the nuts align with the openings.
- Add the cover part onto the assembly and fix it in place using two M3x8 screws.

⚠ Do not tighten the middle screw, as this may prevent the sensor from working.

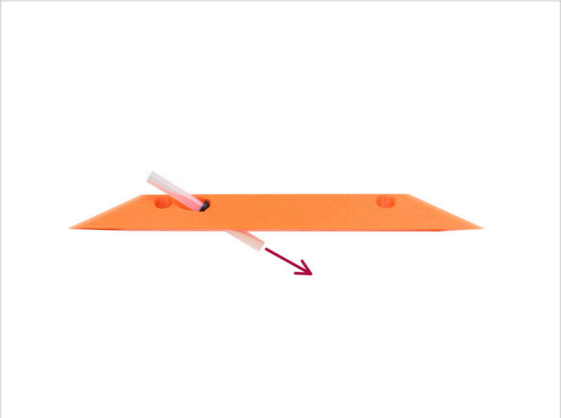
STEP 19 Sensor Installation

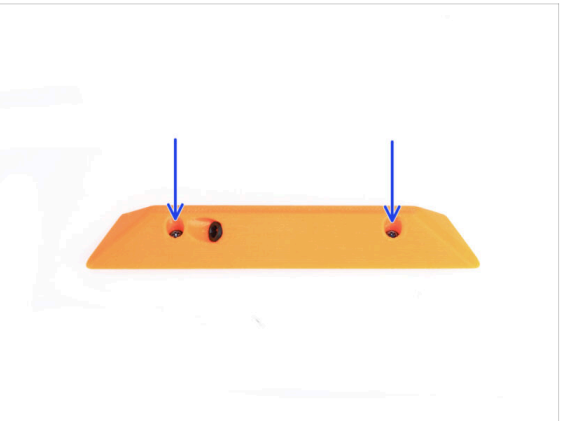


- Insert the collet into the marked opening on the sensor assembly.
- Attach the sensor assembly onto the PTFE tube in the printer.

⚠ Make sure the tube is pushed all the way in.

STEP 20 Side Handle Preparation

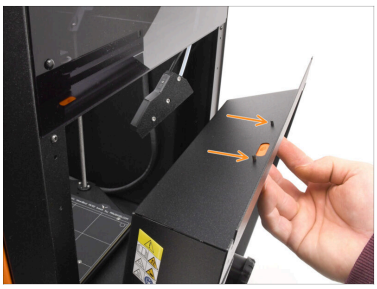




- Take the handle with the PTFE tube.
- Push the PTFE tube all the way through the handle and the collet, in order to remove it.

  In the unlikely case you have the earliest version of the printer without the collet in the handle, you need to print the latest revision of the part.
- Reinstall the two M3x10rT screws into the handle.

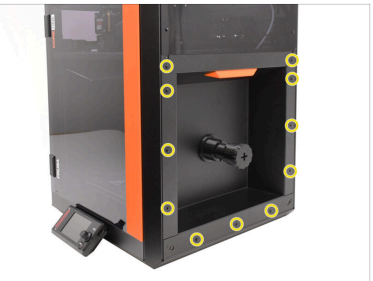
STEP 21 Sensor / Handle Attachment



- Move the side panel next to the printer, as shown.
- Align the handle with the side panel so that the screws pass through.
  Make sure the PTFE opening is aligned with the larger hole in the panel.
- From the inside of the printer, align the nuts in the sensor assembly with the screws and tighten both screws to secure the assembly.

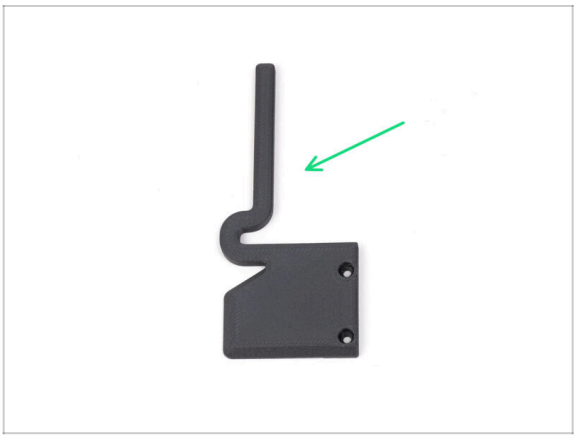
  This part is tricky. Make sure the threads are perpendicular to the screws. Space is limited inside the printer and visibility is poor, so be prepared to fiddle with the parts a bit to get everything aligned correctly.

STEP 22 Side Panel Attachment



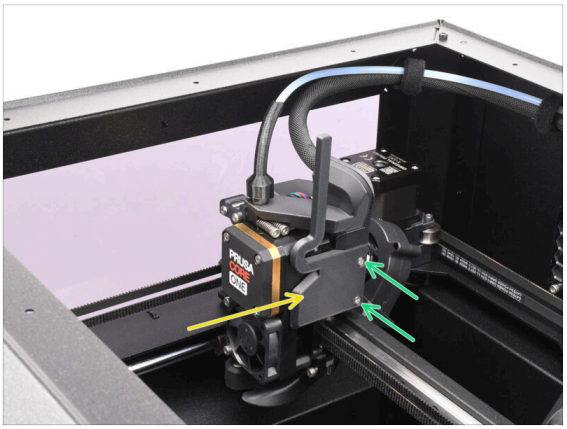
- Push the side panel to the inside of the printer. Be careful to prevent damaging the sensor assembly and the tube leading to it, on the inside.
- Fix it in place using the 11 Nylon rivets.
- Reinstall the short PTFE tube into the handle. Push it through the collet and make sure it is inserted all the way in.

STEP 23 Vent Lever Preparation



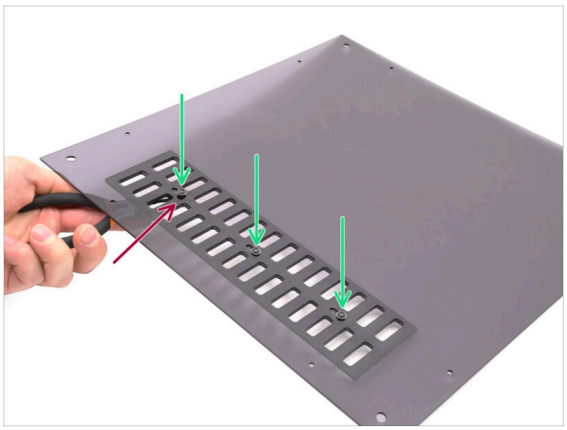
- **For the following steps, prepare:**
- Cover Right Lever (1x)

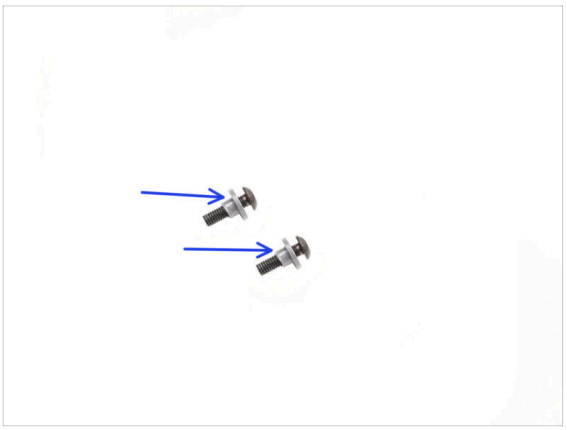
STEP 24 Vent Lever Installation



- Let's move to the inside of the printer.
- Undo the two M3x6 screws on the side of the print head and remove the cover on the right.
- Install the updated Cover-Right-Lever part instead.
  - Fix it in place using the same two M3x6 screws.

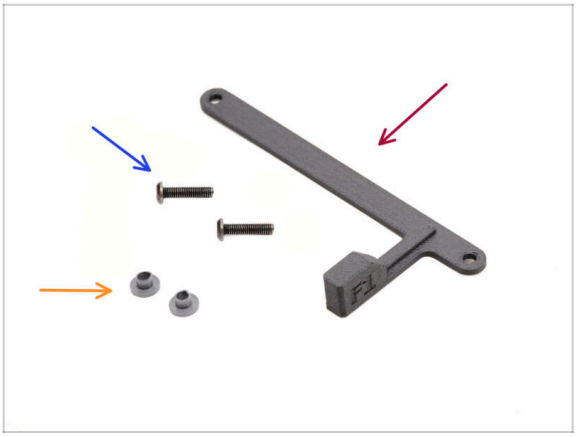
STEP 25 Top Cover Disassembly





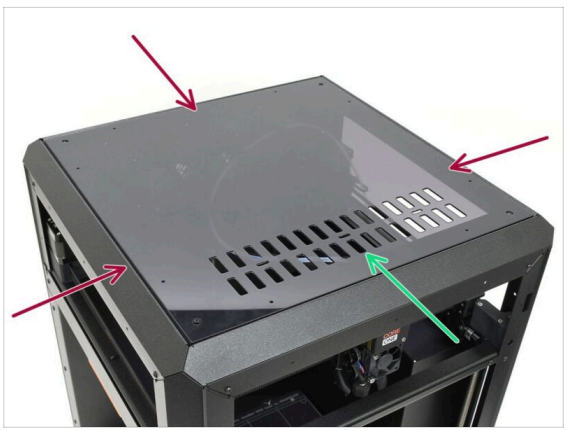
- Take the top cover you have removed earlier.
- Using the needle-nose pliers, reach for the M3nN nuts on the bottom of the cover.
- While holding the nuts, remove the three M3x10rT screws on top.
- Remove the plastic insulating inserts from **two** of the screws.

STEP 26 Vent Block Preparation



- **For the following steps, prepare:**
- Upg-vent-block
- M3x12rT screw (2x)
- Insulating insert (2x) *previously removed*

STEP 27 Top Cover Test Fit

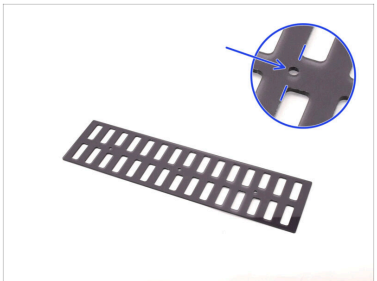


⚠ The cover isn't symmetrical. Make sure it is oriented the same way as when installed in the printer.

- Maintain the cover in this orientation.
- If oriented correctly, the cover must align with the recess, and the bolt heads in the corners will fit into the cutouts.

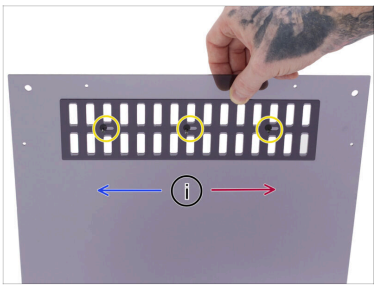
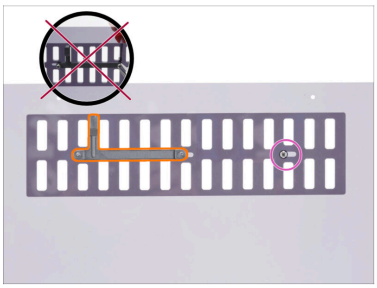
STEP 28 Top Cover Assembly





- Run two of the longer M3x12rT screws through the insulating inserts.
  - Make sure the flanged part of the insert is oriented toward the screw head.
- Insert the longer M3x12rT screws with the inserts through the center and left slot openings in the vent.
- Insert the previously removed M3x10rT screw into the right slot.
- Orient the vent cover so that the screw holes align with the left side of the rectangular openings.

STEP 29 Top Cover Assembly 2


- Align the vent cover.

ⓘ Note that the vent cover is not symmetrical; **ensure that it is positioned as shown in the photos.**

  - Sliding the vent cover to the left will open it.
  - Sliding the vent cover to the right will close it.

- Hand-tighten the rightmost M3nN nut onto the M3x12rT screw to fix the cover in place. Do not tighten it fully.
- Attach the Upg-vent-block to the ventilation cover. Make sure that it is positioned correctly. **Ensure that the vent block never overlaps with the opened vent.**

ⓘ The Upg-vent-block **lever will face inside the printer** so that the printhead can open and close the vent cover.

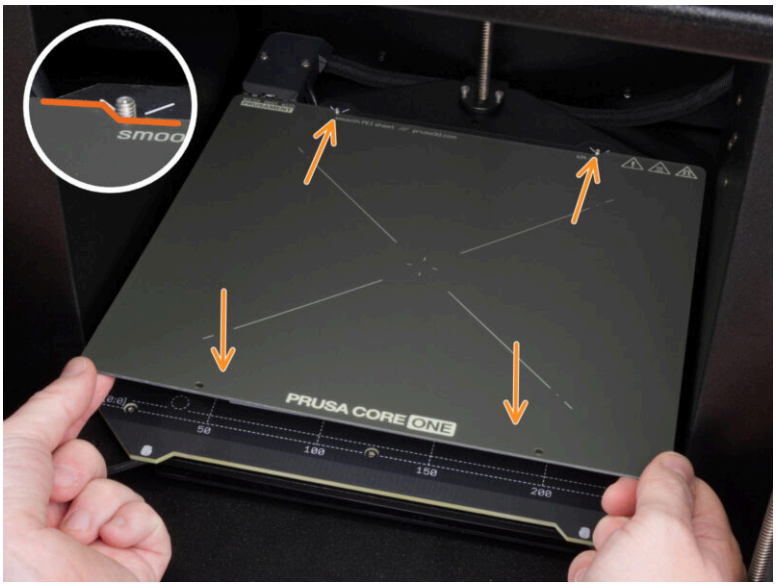
- Secure the Upg-vent-block on the ventilation cover with M3nN nuts. Use the needle-nose pliers or universal wrench to hold the nuts while tightening the screws.

⚠ The screw must be tight enough just to remove the slack. It must remain loose, or the ventilation cover can not open and close properly.

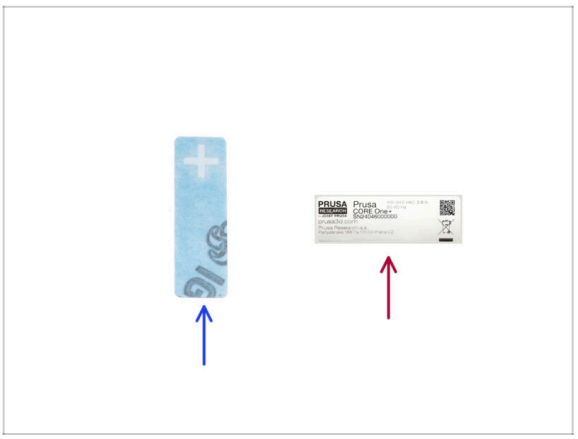
STEP 30 Top Cover Installation

- Try moving one of the three screws with your hand.
  - ⓘ The vent openings should open and close smoothly without any effort.
- ⚠ If the movement is difficult, loosen the screw that is causing the restriction.
- Align the cover with the recess on the printer, making sure the vent faces forward.
- Secure the cover to the frame using four nylon rivets in the marked openings.
  - There are eight openings, but four rivets should be sufficient.

3. Final Setup

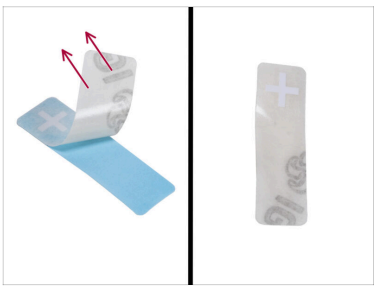


STEP 1 Stickers Preparation



- **For the following steps, prepare:**
- CORE One+ plexi sticker (1x)
- CORE One+ S/N sticker (1x)

STEP 2 Plus Sticker Installation



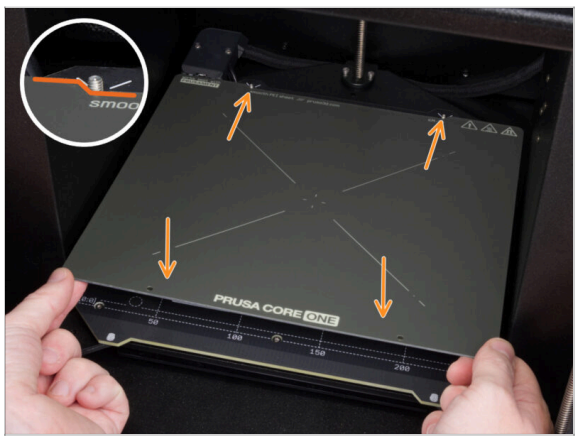
- Peel off the sticker from the backing layer.
- Align the sticker with the **ONE sign** on the printer's front door. Press firmly to secure the sticker in place.
- Carefully peel off the transparent layer, making sure the + symbol stays adhered and does not lift off.

STEP 3 S/N Sticker

⚠ This step is required in order to provide a warranty! Don't throw the label away!

- Peel off the old SN label on the back of the printer and replace is with the new CORE One+ sticker.

STEP 4 Print Sheet

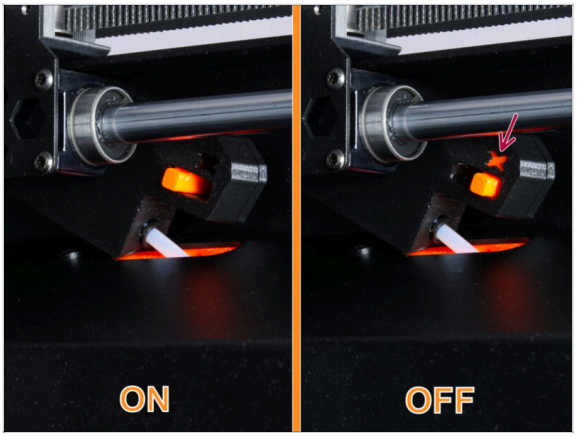


- Reinstall the print sheet.

⚠ **Make sure there is nothing on the heatbed.** The heatbed must be clean. Any dirt can damage the surface of both the heatbed and the print sheet.

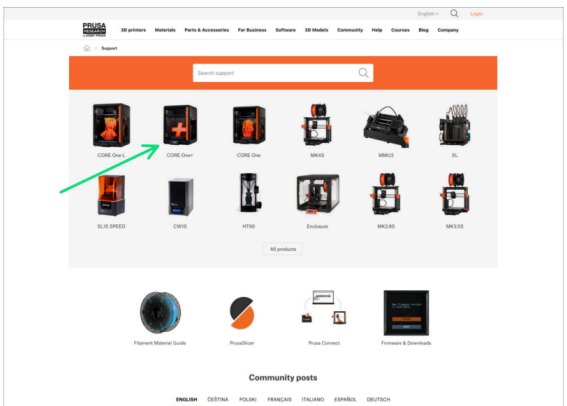
- **Attach the sheet by first aligning the rear cutout with the locking pins on the back of the heated bed.** Hold the sheet by the front two corners and slowly lay it down onto the heated bed - **watch your fingers!**
  - Keep the print sheet clean for optimum performance.
  - #1 cause of prints detaching from the print surface is a greasy print sheet. Use IPA (Isopropyl alcohol) to degrease it if you have touched its surface before.

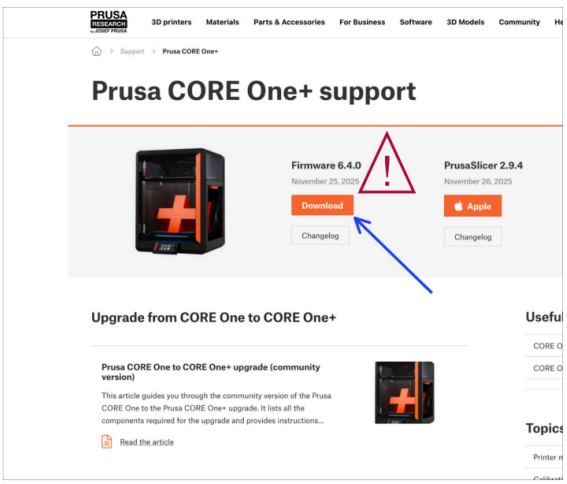
STEP 5 Filament Sensor Switch



- Check that the filament sensor switch is set to the **ON position**.
  - The OFF position can be identified by the orange part of the sliding switch visible through the “X” symbol on the switch.

STEP 6 Firmware Download





- We will have to upgrade the firmware.
  - ⓘ The CORE One+ requires firmware version 6.4.0 or newer.
- Visit the CORE One+ support page on help.prusa3d.com.
- Download the latest firmware file (.bbf).
  Save the file onto a USB drive.

STEP 7 Firmware Flash

- Insert the USB drive with the firmware file into the printer.
- Connect the power cable.
- Turn the printer on using the switch on the back.
- Once the "New firmware available" screen appears, select the **FLASH** option.

STEP 8 Selftest

- After finishing the upgrade, we recommend visiting the menu ***Control -> Calibrations & Tests*** and run the Selftest from the start.

STEP 9 Chamber Vent Settings

- To enable automatic opening of the top grille, go to ***Settings -> Hardware -> Chamber Vent Control*** and set it to **Auto**.

STEP 10 Finish

Congratulations! Your upgraded CORE One+ is ready to roll!

- **Happy printing!**

Manual changelog

STEP 1 Version history

- **Versions of the Prusa CORE One to CORE One+ upgrade manual:**
- 12/2025 - Initial version 1.00

Notes:

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