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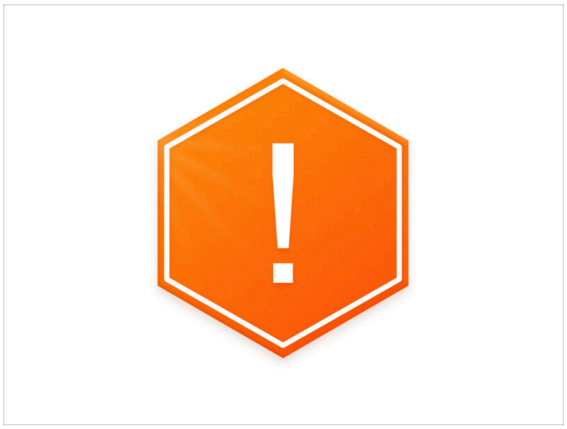
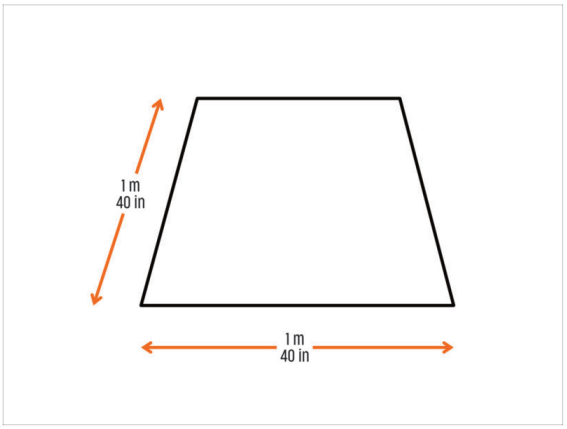
1. Introduction

STEP 1 General information

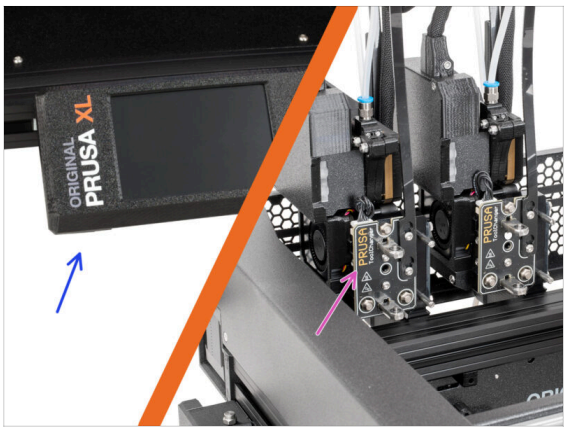


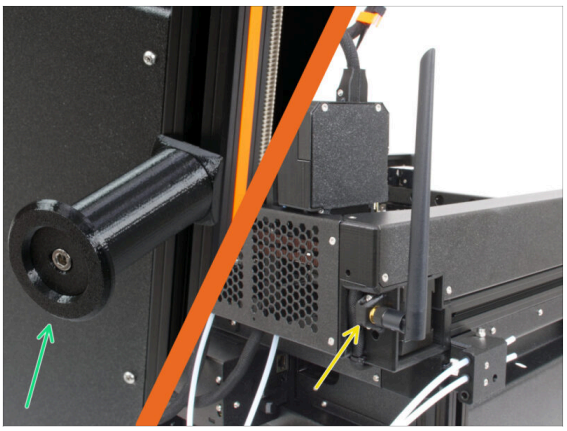


⚠ **The package with the printer is heavy!** Always ask another person for help with handling.

- For the assembly, **prepare a clean workbench with a space of at least 1 m x 1 m (40 in x 40 in)**.
- We're recommending a **bright light above your workbench**. Some parts of the printer are dark and inadequate light could make a very difficult procedure.

STEP 2 What awaits you during the unpacking

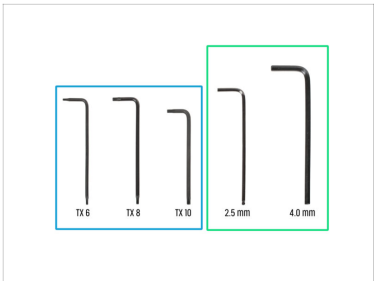


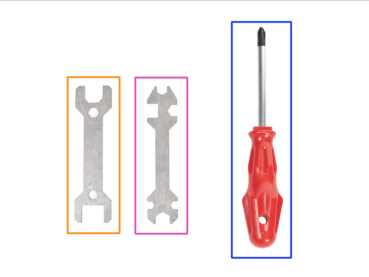


ⓘ Because of transportation, some of the fragile parts must be safely packed separately in the printer package. This manual will take you through the installation of these parts on the printer.

- **These parts will be installed:**
  - xLCD assembly
  - Multi-Tool extruder assembly
  - Spool holder
  - Wi-Fi antenna

STEP 3 Tools in the package





- **The package includes:**

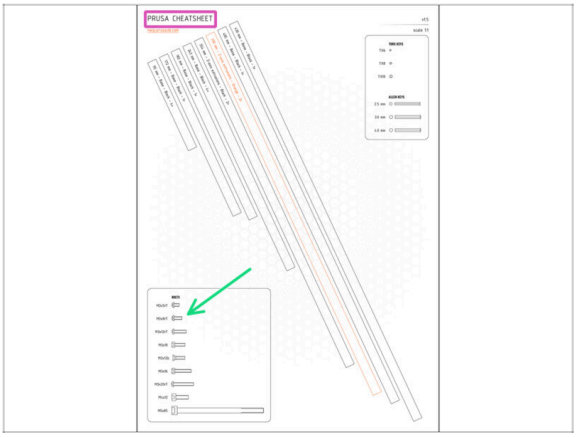
ⓘ Some of the tools are intended primarily for regular printer maintenance. You won't need them for this manual. At the beginning of the assembly chapter is a list of the necessary tools.

- Torx key TX6, TX8, TX10
- Allen key 2.5 mm, 4.0 mm
- Wrench 13-16
- Universal wrench
- Philips PH2 screwdriver
- **The printer's package contains a lubricant, which is intended for maintenance.** No need to apply it during the assembly. There is a dedicated online manual Regular printer maintenance.

STEP 4 Labels guide

- All the boxes and bags including parts for the build are labeled.
- The LCD Fasteners bag includes an extra spare of each part contained in the bag. The amount of spare parts is written on the label. This number is included in the total number of each type of part.

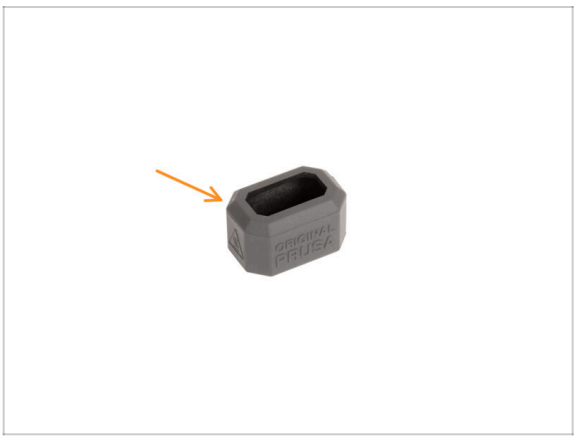
STEP 5 Cheatsheet



- Your package contains a letter, on the back of which is a Cheatsheet with drawings of all the necessary fasteners.
- The fasteners drawings are 1:1 scale, so you can compare the size by placing the fastener on the paper to make sure you are using the correct type.

ⓘ You can download it from our site prusa.io/cheatsheet-xl. Print it at 100 %, don't rescale it, otherwise, it won't work.

STEP 6 Silicone sock

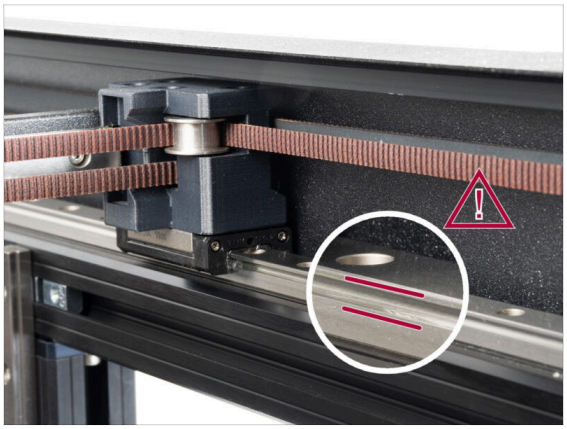


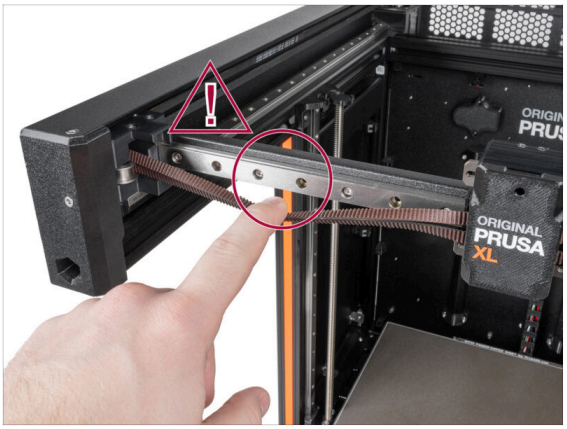
- A silicone sock is supplied with each Nextruder package.
- The main function of a silicone sock is to keep the temperature in the heater block stable, which improves the printer's performance.

  ⓘ Also, it keeps your hotend clean from filament dirt and protects it in case the print detaches from the print surface.
- You will be asked to install the sock later in this guide.

  ⓘ How to install the sock - check the article.

STEP 7 CAUTION: Lubricant Handling

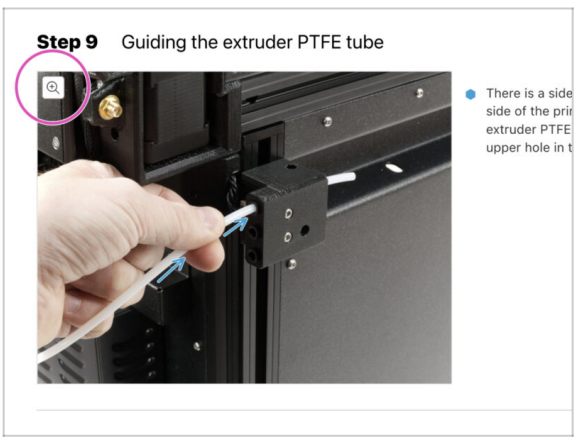




⚠ **CAUTION: Avoid direct skin contact with the lubricant used for the linear rails** in this printer. If a contact occurs, **wash your hands immediately. Especially before eating, drinking, or touching your face.**

- Lubricant accumulates in the printer's bearings, mainly in the linear rail channels.

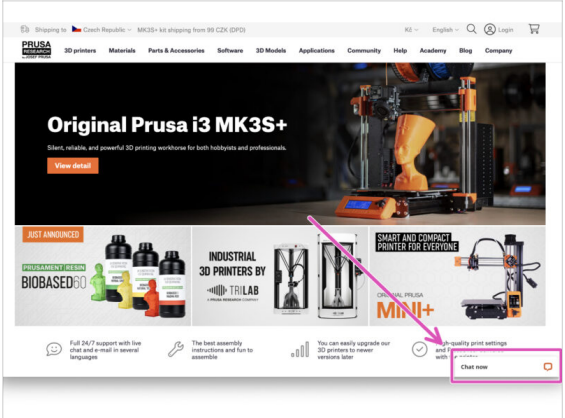
STEP 8 View high resolution images

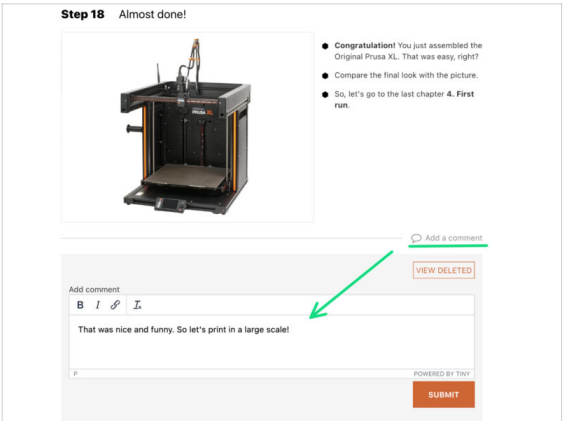


ⓘ When you browse the guide on help.prusa3d.com, you can view the original images in high resolution for clarity.

- Just hover your cursor over the image and click the Magnifier button ("View original") in the top left corner.

STEP 9 We are here for you!

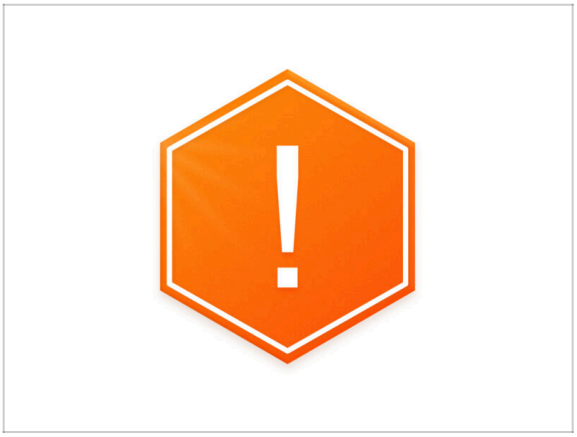




- Lost in the instructions? Missing screw or cracked printed part? **Let us know!**
- You can contact us using following channels:
  - Using comments under each step.
  - Using our 24/7 live chat at shop.prusa3d.com
  - Writing an email to info@prusa3d.com
- Are you ready to get started on the assembly? Let's move on to chapter **2. Printer unboxing**.

2. Printer unboxing

STEP 1 Introduction

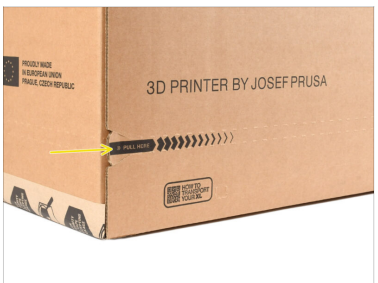


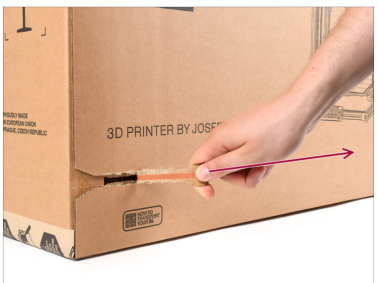
⚠ **The printer package is heavy!** Ask someone to help you out.

⚠ **If children are involved, always supervise them to avoid an injury.**

ⓘ **We recommend keeping all the packaging material** in case you decide to send the printer back for service.

STEP 2 Opening the package





- Place the package on a stable surface. **Make sure the package is oriented top side up**. See the transportation label.
- The package is equipped with a tear strip that splits the box in two parts.
- Peel off the entire tear strip to split the box.

STEP 3 Opening the package

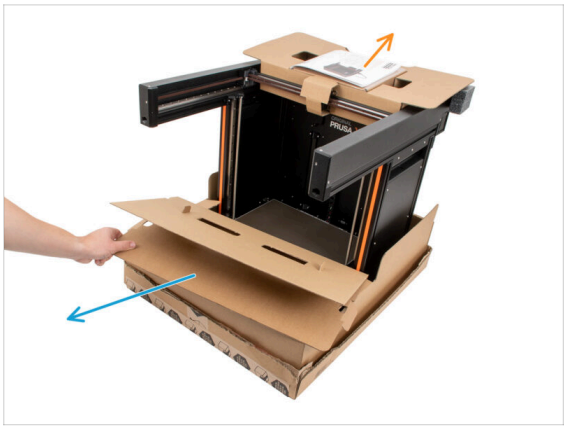
- Remove the top part of the box by lifting it up.

⚠ Inside, there are cardboard inserts that contain parts necessary for the assembly. **Do not throw them out!**

STEP 4 Removing the inserts

- Remove the top front cardboard insert. There are parts inside
- Remove the boxes on the side containing the Nextruder parts.
- Remove the cardboard insert with the Haribos inside.

STEP 5 Removing the inserts



- Remove the front inner insert.
- Remove the welcome letter.
- Remove the box with Prusament on top.

STEP 6 Removing the inserts

- There is a lever inside the top cardboard insert that locks it to the printer's frame. Pull the lever to unhook the insert.
- While pulling the lever, lift the whole insert and remove it.

⚠ **There are printer parts inside the top cardboard insert!** Make sure not to lose them!

STEP 7 Unpacking the printer

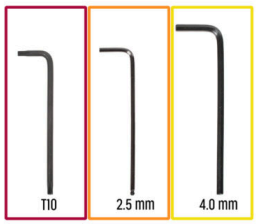
- **Use the side handles on the printer to lift it up.**
- ⚠ **Do not handle the printer by the top metal profiles!!!** Otherwise, you may warp the printer parts and damage the parts such as the LED lighting inside.
- ⚠ Handle the printer in two people by the sides.
- Hold the bottom of the box while you lift the printer up.

STEP 8 Printer is ready for setup

- Good job! The printer is ready for the next chapter.
- Visit chapter **3. Printer set up**.

3. Printer set up

STEP 1 Tools necessary for this chapter



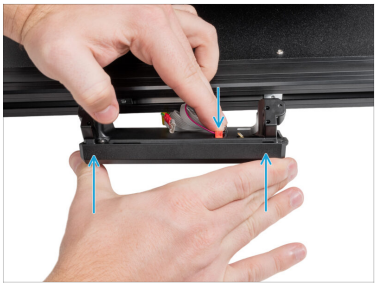
- **For this chapter, please prepare:**
- T10 Torx key
- 2.5 mm Allen key
- 4.0 mm Allen key
- A cardboard box is to be used as heatbed protection during the setup. *Hint: you can use the Nextruder box shipped with your printer.*

STEP 2 Injection molded xLCD: parts preparation

ⓘ Starting from September 2024, you may receive a new injection molded xLCD.

- **For the following steps, please prepare:**
- xLCD assembly (1x)
- M3x10 screw (2x)
- If you have an older version (printed) xLCD, continue to the step **xLCD: parts preparation**

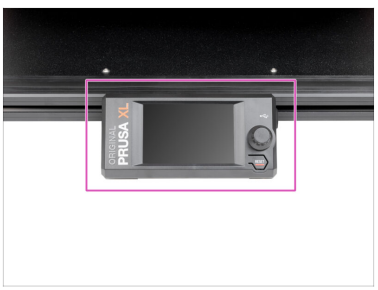
STEP 3 Injection molded xLCD: xLCD cables


- Connect the xLCD cable to the slot on the xLCD board.

  ⓘ There is a latch on the xLCD cable connector, which must be facing the triangle symbol on the board. See the picture.
- Push the xLCD cable connector to fully connect to the xLCD. Hold the xLCD cover.
- Push the earthing connector fully into the PE faston.

STEP 4 Injection molded xLCD: mounting the xLCD

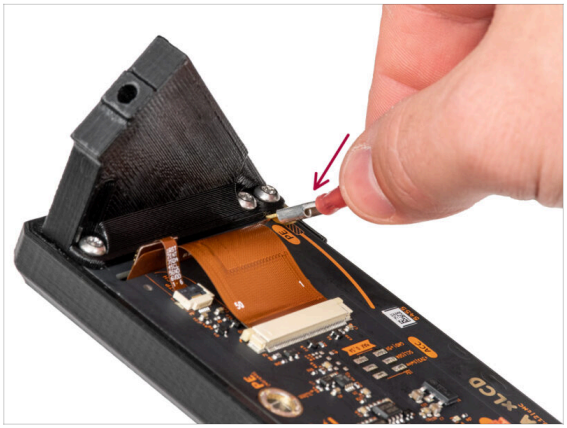



- Align the xLCD assembly with the nuts in the front aluminum extrusion.
- Insert and tighten the M3x10 screw from the left side of the xLCD.
- Insert and tighten the M3x10 screw from the left side of the xLCD.
- xLCD is ready.

STEP 5 xLCD: parts preparation

- **For the following steps, please prepare:**
  - xLCD assembly (1x)
  - M3x16 screw (2x)

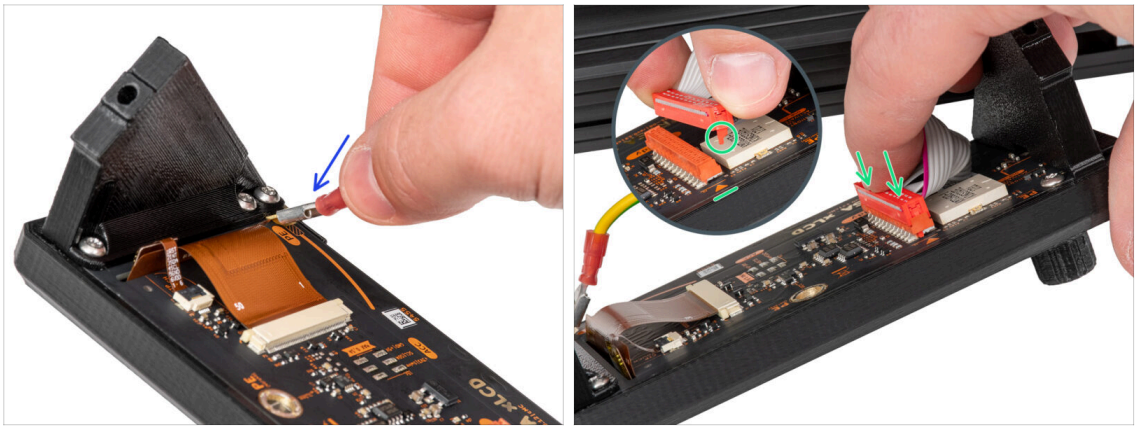
STEP 6 Older xLCD assembly versions



⚠ Take a look at the xLCD, there are two variants:

- Version A: faston on the bottom right
- Version B: faston on the top left

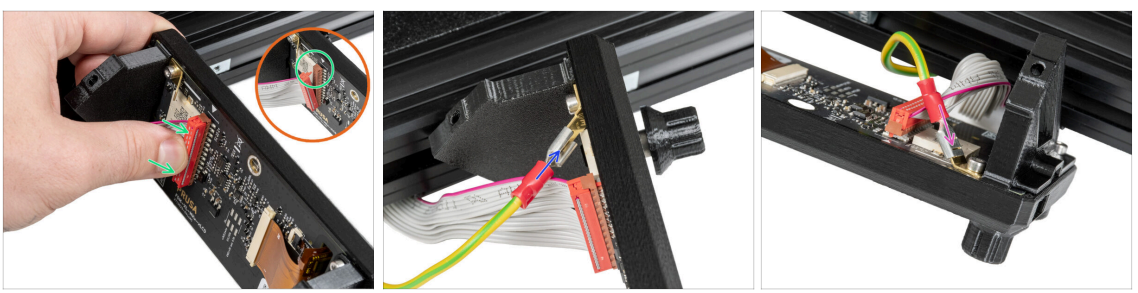
STEP 7 Version A: Mounting the xLCD



- Carefully turn the printer so that the front side is facing you.
- From the front of the printer, place the xLCD assembly close to the lower front aluminum extrusion where are the xLCD cables.
- Grab the earthing cable and connect it to the PE connector on the xLCD.
- Connect the xLCD cable to the slot on the xLCD board.

  ⓘ There is a latch on the xLCD cable connector, which must be facing the triangle symbol on the board. See the detail.

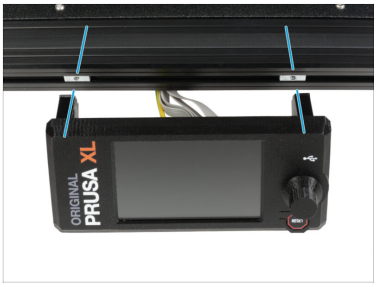
STEP 8 Version B: mounting the xLCD



- Carefully turn the printer so that the front side is facing you.
- From the front of the printer, place the xLCD assembly close to the lower front aluminum extrusion where are the xLCD cables.
- Connect the xLCD cable to the slot on the xLCD board.

  ⓘ There is a latch on the xLCD cable connector, which must be facing the triangle symbol on the board. See the detail.
- Connect the earthing cable and connect it to the PE connector on the xLCD.
- Push the earthing connector fully into the PE faston.

STEP 9 Mounting the xLCD



- Align the xLCD assembly with the nuts in the front aluminum extrusion.
- Insert and tighten the M3x16 screw from the left side of the xLCD.
- Insert and tighten the M3x16 screw from the right side of the xLCD.

STEP 10 Preparing the printer


⚠ Reminder: To handle the printer, **always grab the handles on both sides of the printer**. Do not lift the printer by the aluminum extrusions or the metal sheet profiles on top.

ⓘ In the following steps, we will work with tools and install extruder above the heatbed, it is recommended to protect it against any possible damage. An empty Nextruder box can serve this purpose.

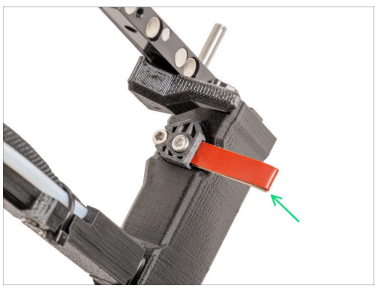
- Place the empty cardboard box approximately to the front center part of the heatbed.
- Move the X-axis assembly all the way to the front side of the printer.
- Move the X-carriage approximately to the center of the X-axis.

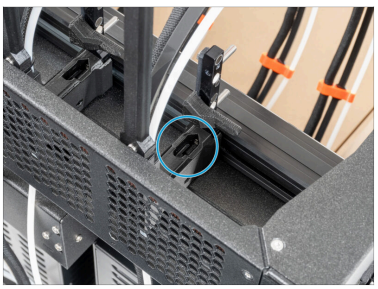
STEP 11 Nextruder assembly: parts preparation

ⓘ Starting in April 2025, you may receive a new cable bundle. The difference is described before the cable bundle is connected to the Nextruder.

- For the Nextruder cable bundle assembly please prepare:
  - Cable bunde (2x)

STEP 12 Nozzle seal versions

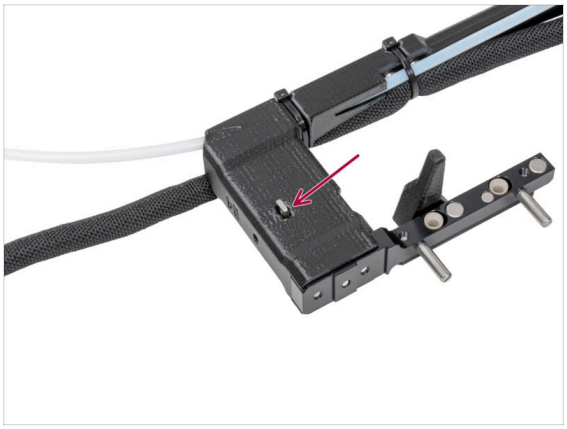


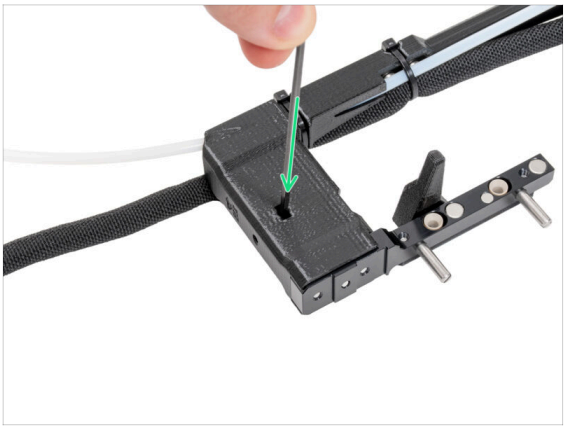


ⓘ The latest assemblies come with the nozzle seal pre-installed on the extruder dock.

- To confirm this, examine one of the extruder docks closely and compare it to the picture to see if the nozzle seal is already in place with the square nut.
- Version A: grey nozzle seal - continue to the **Guiding the Nextruder cable**
- Version B: red nozzle seal - continue to the **Guiding the Nextruder cable**
- Version C: dock without the nozzle seal - **continue to the next step**

STEP 13 Version C: Nextruder dock preparing





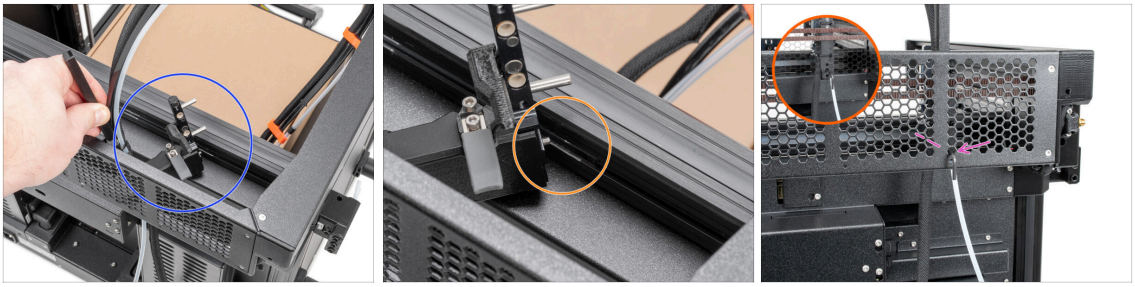
- **Repeat this step for both tool heads:**
  - Check that the M3nS nut is inserted in the Nextruder dock.
  - Make sure the nut is pushed into the dock all the way. If not use the Allen key to push the nut into the Nextruder dock.

ⓘ The fallen nut may be in the Nextruder box. If not, use a spare nut in the Nozzle Seal bag.

STEP 14 Guiding the Nextruder cable

- Carefully turn the printer 180° so that the PSU (Power Supply Unit) side is towards facing you.
- Locate the long metal profile with five M3 holes inside the rear aluminum extrusion and slide it all the way to the left side.
- We'll use the first two M3 holes in the metal profile.

STEP 15 Attaching the first and second nextruder dock

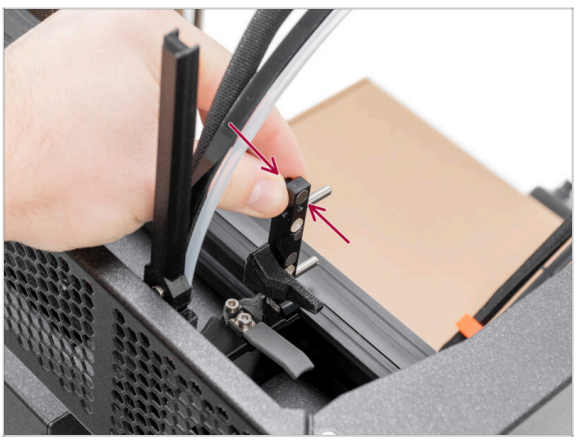


- Place the xl-dock-cable-router on the bottom metal sheet below the aluminum extrusion.
- There is a protruding screw from the xl-dock-cable-router. Attach the screw to the first screw hole on the long metal profile. Through the hole in the rear metal sheet, check if the cable holder is lined up with the hole.
- Push the 2.5 mm Allen key all the way through the hole in the rear metal sheet until you reach the **middle** screw in the xl-dock-cable-router and tighten the screw.

ⓘ **The dock is a press fit, so the screw needs to be tightened very hard.**

- **Repeat this step for the second tool head.**

STEP 16 Dock inspection



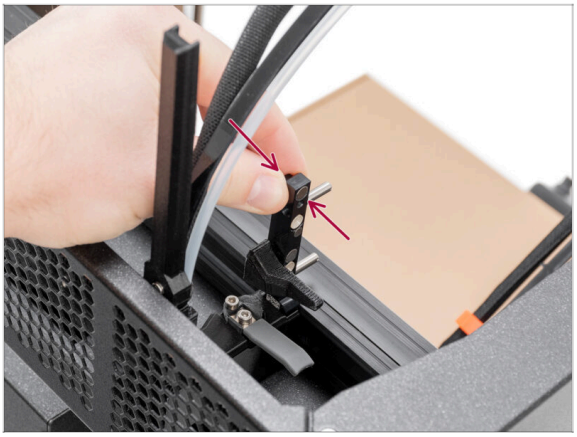
ⓘ This step is the same for all versions of the dock assembly.

⚠ Check that the docks are properly tightened. **The dock must not move.**

⚠ The dock is a press fit, so the screw needs to be tightened very hard.

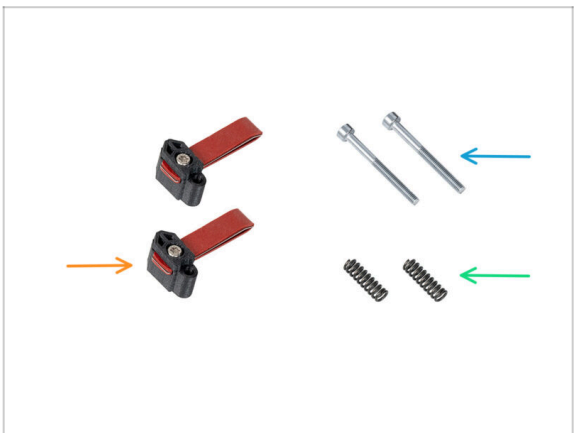
- Please watch the video in the next step for a better understanding.

STEP 17 Dock inspection: video



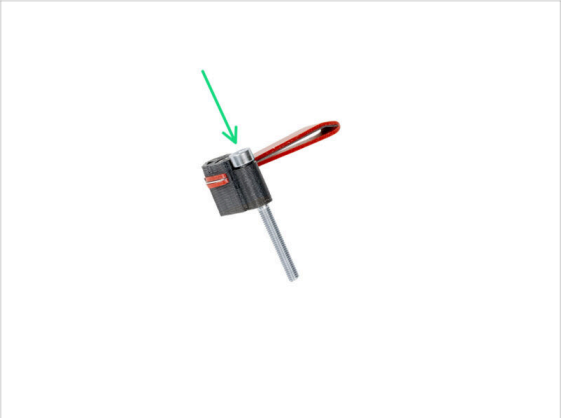
- The following instructions need to be done correctly and carefully. Achieve better understanding and successful assembly by watching the video alongside the guide.

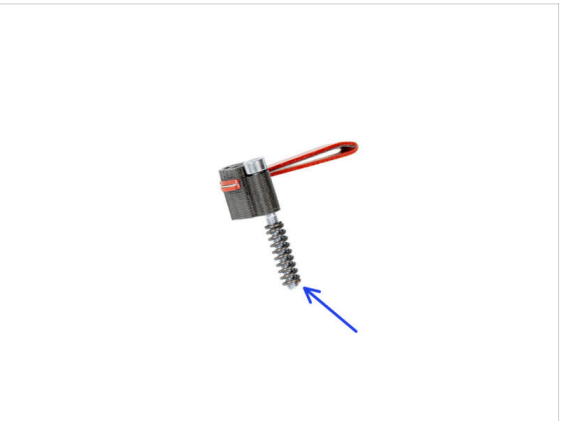
STEP 18 Version C: Nozzle seal: parts preparation



- The following instructions are intended only for printers without pre-installed nozzle seals. If you have already installed the nozzle seals on the Nextuder docks, go to Guiding the Nextruder PTFE tube.
- **For the following steps, please prepare:**
- Nozzle seal (2x)
- M3x30 screw (2x)
- Spring 15x5 (2x)

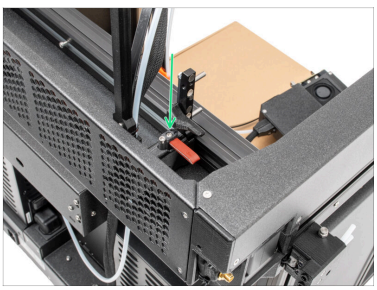
STEP 19 Version C: Assembling the Nozzle seal

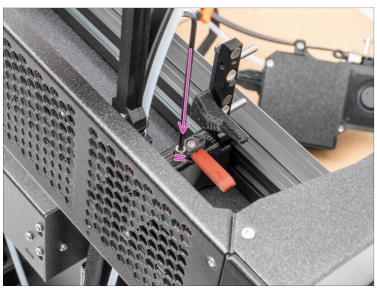


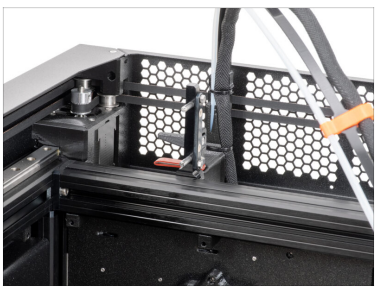


- Insert the M3x30 screw into each nozzle seal.
- Slide the spring on each nozzle seal.
- Do this for both nozzle seals.

STEP 20 Version C: Nextruder nozzle seal



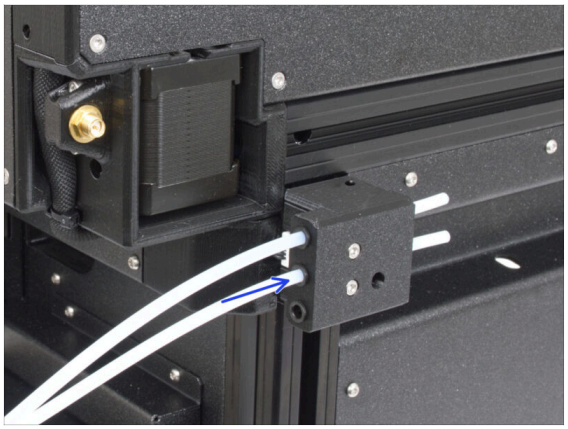




The current nozzle seal position is temporary, the exact height will be **set in the next chapter** once all the Nextruder parts are mounted.

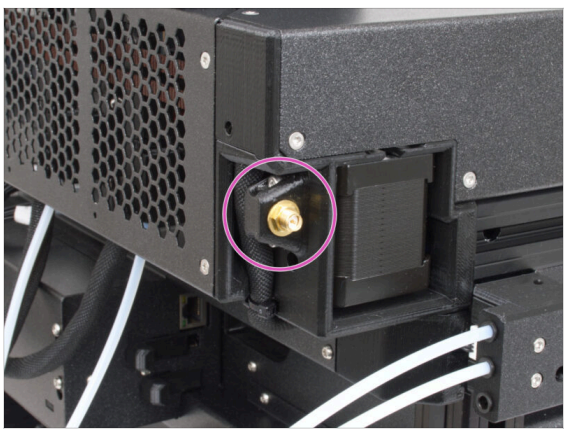
- Insert the nozzle seal (with the spring) into the dock.
- Using a 2.5 mm Allen key, tighten the screw so that the head of the screw is 1 mm above the dock.
- Good! The first dock is ready.

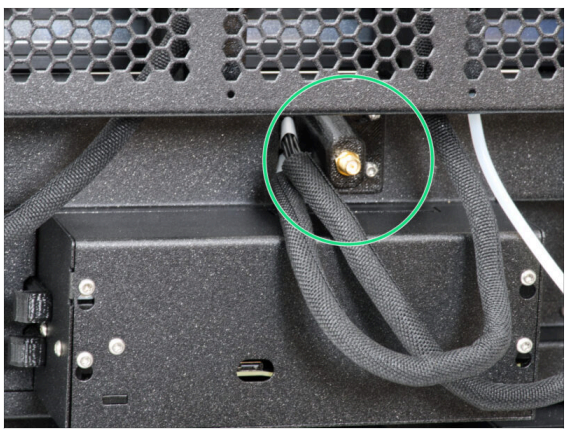
STEP 21 Guiding the Nextruder PTFE tube



- There is a side filament sensor on the side of the printer. Insert the first Nextruder PTFE tube all the way into the upper hole in the part.
- Gently pull the PTFE tube back, this will push out the black collet in the side filament sensor and lock the tube.
- Repeat this process for the second Nextruder PTFE tube.

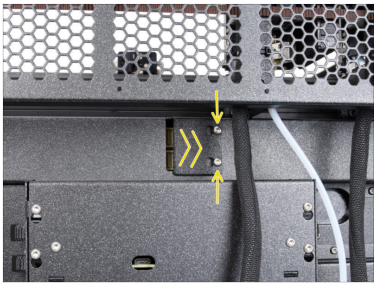
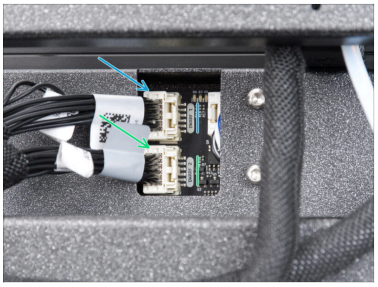
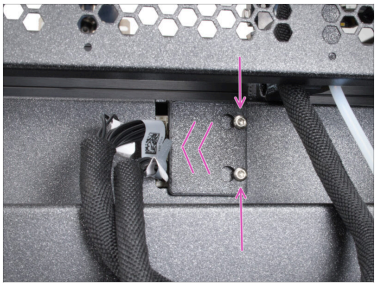
STEP 22 Wi-fi antenna holder versions





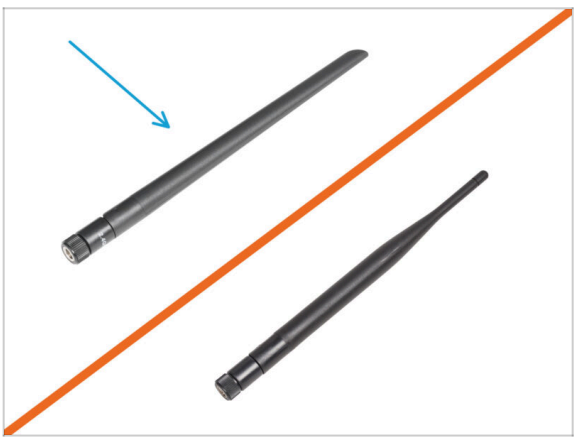
- The antenna connector is prepared by the manufacturer:
  - Version A: The Wi-fi antenna holder is on the side. **Continue to the next step.**
- The antenna connector has to be assembled by you:
  - Version B: The Wi-fi antenna is in the middle. Please skip to **Version B: Connecting the Nextruders cables.**

STEP 23 Version A: Connecting the Nextruder cables

- Locate the xl-rear-cable-management-plug (cover) on the rear of the printer.
- Loosen two screws on the cover slightly. No need to remove them completely. Push the cover to the right and remove it from the printer.
- Connect the second Nextruder cable to the lower slot labeled DWARF 2.
- Connect the first Nextruder cable to the upper slot labeled DWARF 1.
- Attach the connectors cover to the screws. Push it all the way to the right and tighten the screws.

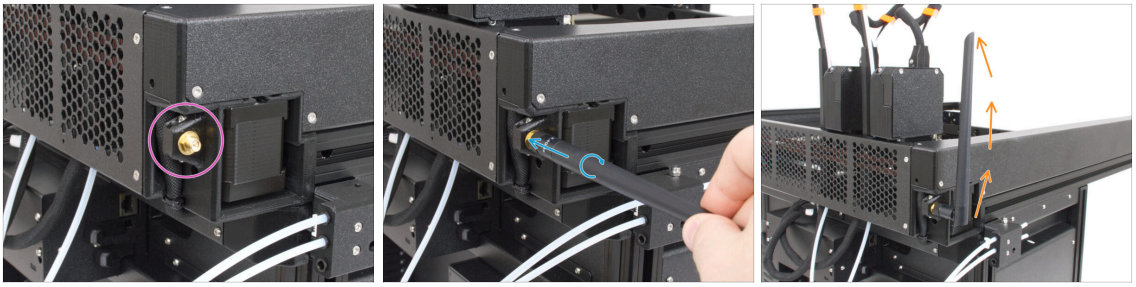
STEP 24 Version A: Installing the Wi-Fi antenna: parts preparation



- **For the following steps, please prepare:**
- Wi-Fi antenna (1x)

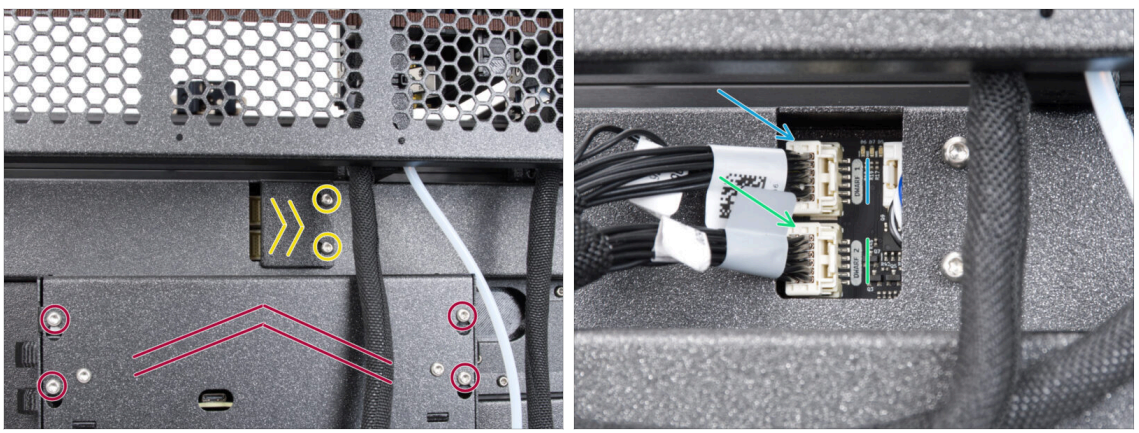
  The Original Prusa XL is shipped with two versions of the Wi-Fi antenna, each with a different shape. The functionality is the same.

STEP 25 Version A: Installing the Wi-Fi antenna



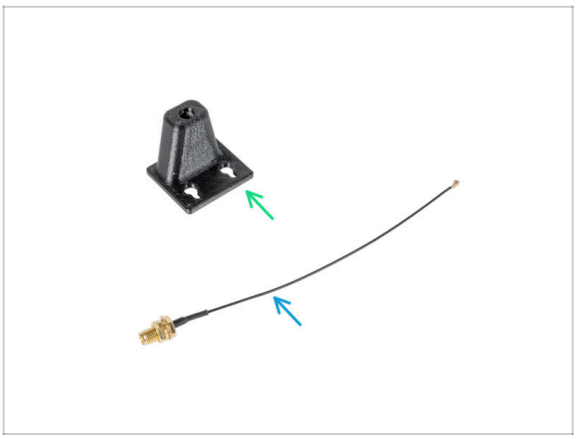
- Locate the Wi-Fi antenna connector on the right rear corner of the printer.
- The antenna can be rotated around and bent in two directions.
- We recommend pointing the antenna straight upwards.

STEP 26 Version B: Connecting the Nextruder cables



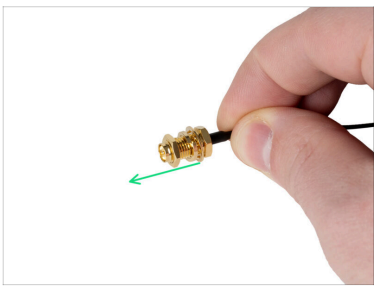
- Locate the xl-rear-cable-management-plug (cover) on the rear of the printer.
- Loosen two screws on the cover slightly. No need to remove them completely. Push the cover to the right and remove it from the printer.
- Loosen four screws securing the electronics cover. Remove the cover.
- Connect the second Nextruder cable to the lower slot labeled DWARF 2.
- Connect the first Nextruder cable to the upper slot labeled DWARF 1.

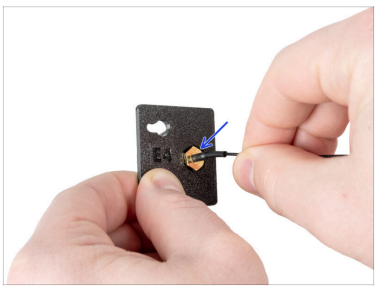
STEP 27 Version B: Wi-Fi antenna holder: parts preparation



- **For the following steps, please prepare:**
- Wi-Fi-antenna-holder version E3/E4 (1x)
- Antenna cable (1x)

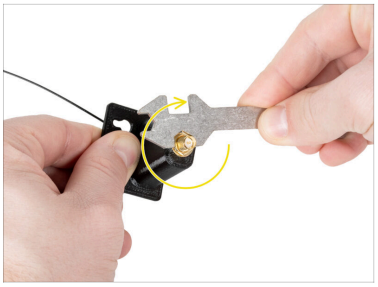
STEP 28 Version B: Installing the Wi-Fi antenna: antenna preparing





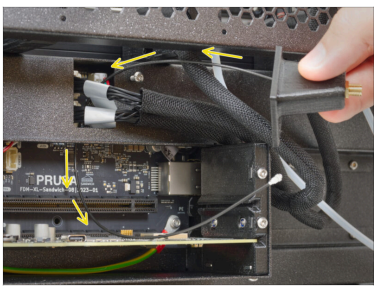
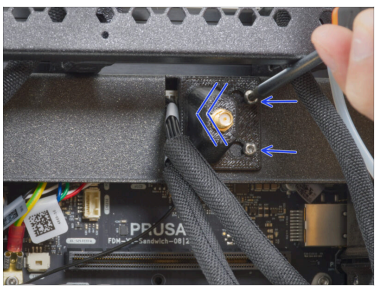
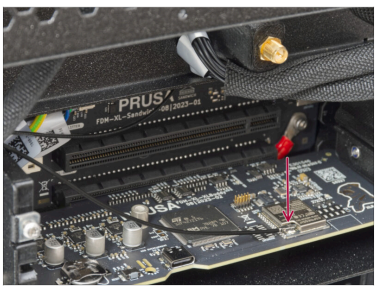
- Remove the nut with the washers from the antenna connector.
- The antenna connector is prepared.
- The latest version of the connector has a thicker washer. We don't need it anymore. You can throw it away.
- Insert the antenna connector into the same-shaped hole in the Wi-Fi-antenna-holder .

STEP 29 Version B: Installing the Wi-Fi antenna: antenna preparing

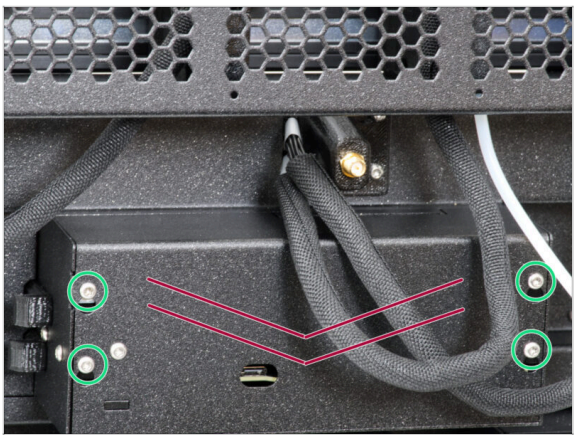

- Push the antenna connector through the Wi-Fi-antenna-holder.
- Insert the thinner washer back onto the connector.
- Using the universal wrench, tighten the nut on an antenna connector.
- Good job! The Wi-Fi antenna is prepared.

STEP 30 Version B: Installing the Wi-Fi antena holder

- Push the antenna cable through the opening in the cable cover (metal sheet) and guide it behind the cover to the electronics box.
- Attach the antenna-holder on the screws and push the cover to the left and tighten the screws.
- Connect the antenna cable with the antenna connector on the XL buddy board. Support the Wifi board with your finger while attaching the cable.

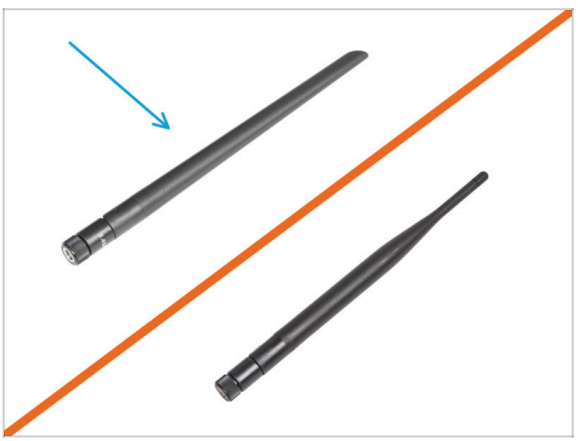
STEP 31 Version B: XL buddy box covering



⚠ Be carefull, do not pinch any cables!

- Put the XL-buddy-box-cover back on the printer.
- With a T10 key tighten the four screws.

STEP 32 Version B: Installing the Wi-Fi antenna: parts preparation



- **For the following steps, please prepare:**
- Wi-Fi antenna (1x)

ⓘ The Original Prusa XL is shipped with two versions of the Wi-Fi antenna, each with a different shape. The functionality is the same.

STEP 33 Version B: Installing the Wi-Fi antenna

- Locate the Wi-Fi antenna connector in the middle of the printer.
- Screw the Wi-Fi antenna on the antenna connector. The antenna can be rotated around and bent in two directions.
- We recommend pointing the antenna straight upwards.

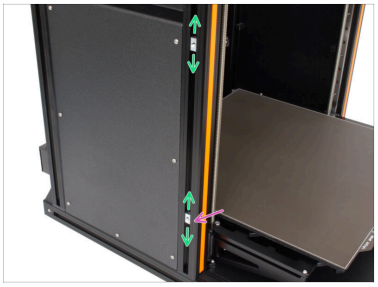
STEP 34 Spoolholder assembly versions

- **Original Prusa XL comes with two versions of the spool holder.** Each version has slightly different parts and different procedures.
- **Refer to the pictures to compare which parts you have, and then choose the instructions that match:**
  - **Printed spool holder** (Version A): Set of three printed parts. If you have this version, continue to the **Version A: Assembling the spool holder: parts preparation**
  - **Injection molded spool holder** (Version B): Set of two injection molded parts. If you have this version, continue to **Version B: Assembling the spool holder: parts preparation**

STEP 35 Version A: Assembling the spool holder: parts preparation

- **For the following steps, please prepare:**
- Spool-holder-slider (2x)
- Spool-holder-base (2x)
- Spool-holder-mount (2x)
- M5x85 screw (2x)
- M5nEs nut (2x)

STEP 36 Version A: Assembling the spool holder: adjusting the nut

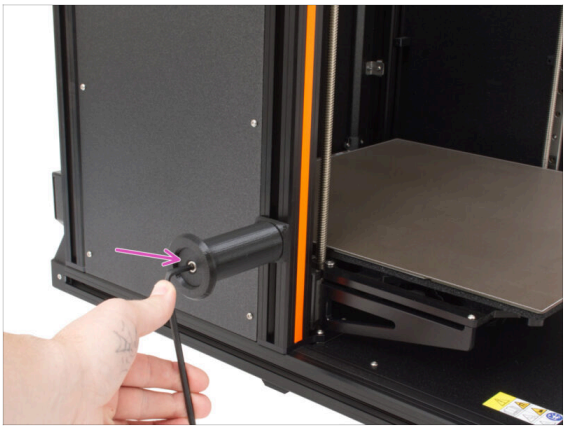

- Carefully turn the printer so that the side with the Wi-Fi antenna and side filament sensor faces you.
- Insert the M5nEs nut into the front support extrusion (with the orange plastic cover). Insert the side with the spring (metal plate) first, then push the nut inside.
- The M5nEs nut is free to move, you can adjust the position as you want. But remember, the nut must be slightly pushed in to smoothly move. Anyway, we recommend approximately the same position as you can see in the picture.
- Insert the second M5nEs nut in the extrusion approximately to the same position as shown.

STEP 37 Version A: Assembling the spool holder



- **Repeat this step for both spool holders:**
  - Insert the spool-holder-base into the spool-holder-slider and push it through a little through the part.
  - Attach the spool-holder to the spool-holder-mount.
  - Insert the M5x85 screw into the spool-holder-assembly.

STEP 38 Version A: Mounting the spool holder assembly



- Attach the first spool holder assembly to the M5nEs nut in the extrusion. Note that there is a protrusion on the spool-holder-mount, which must fit into the groove in the extrusion.
- Attach and tighten the second spool holder assembly.

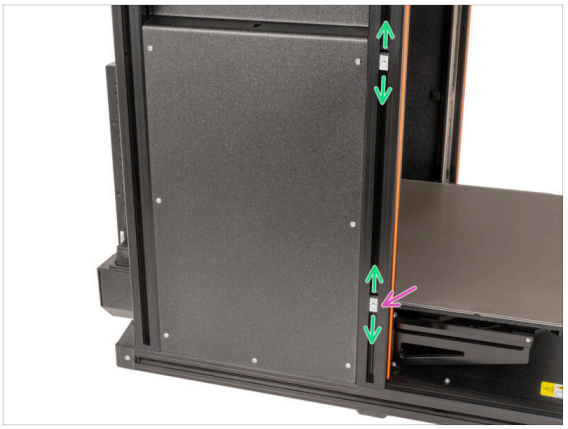
⚠ **Do not use the spool holder as a handle!**

ⓘ Keep in mind that if you mount the Spool holder too high or too low, it may not fit the filament spool on it. There has to be enough space around it.

STEP 39 Version B: Assembling the spool holder: parts preparation

- For the following steps, please prepare:
- Spool-holder-slider (2x)
- Spool-holder-base (2x)
- M4x12 screw (2x)
- M4nEs nut (2x)

STEP 40 Version B: Assembling the spool holder: adjusting the nut



- Carefully turn the printer so that the side with the side filament sensor is facing you.
- Insert the first M4nEs nut into the front support extrusion (with the orange plastic cover). Insert the side with the spring (metal plate) first, then push the nut inside.
- Insert the second M4nEs nut into the extrusion.
- The M4nEs nuts are free to move, you can adjust the position as you want. But remember, the nut must be slightly pushed in to smoothly move. Anyway, we recommend approximately the same position as you can see in the picture.

ⓘ Keep in mind that if you mount the Spool holder too high or too low, it may not fit the filament spool on it. There has to be enough space around it.

STEP 41 Version B: Assembling the spool holder

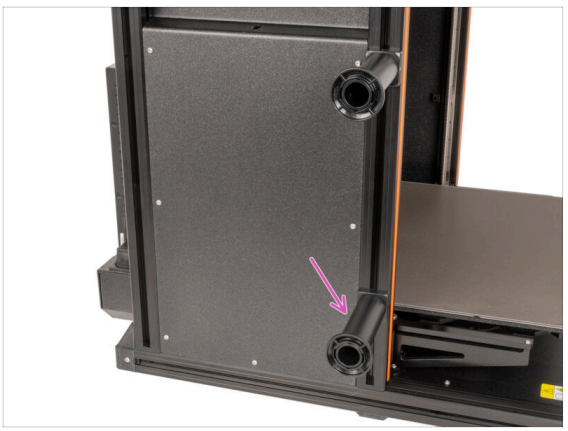
- Locate pins two pins on the spool-holder-base and line them with the rails in the spool-holder-slider.
- Insert the spool-holder-base into the spool-holder-slider and push it through a little through the part.

STEP 42 Version B: Preparing the spool holder



- Insert the M4x12 screw on the longer side of the 3mm Allen key.
- Insert the 3mm Allen key with the M4x12 screw through the assembled spool holder to the prepared hole in the spool-holder-base.
- The M4x12 screw has to protrude through the spool-holder-base.

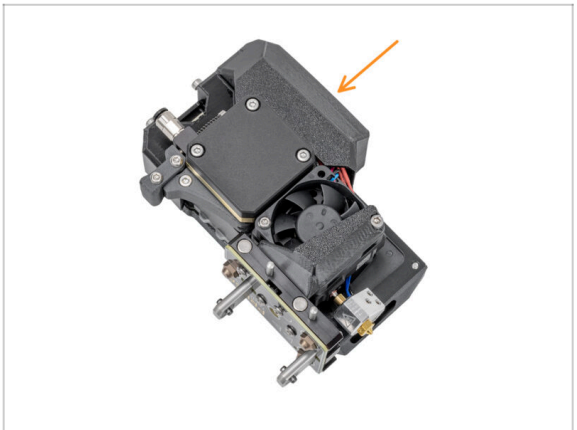
STEP 43 Version B: Mounting the spool holder assembly

- Attach the spool holder assembly to the M4nEs nut in the extrusion. Note that there is a protrusion on the spool-holder-mount, which must fit into the groove in the extrusion.
- Tighten the spool holder assembly.
- Assemble the second spoolholder and attach it to the lower M4nEs nut with an M4x12 screw.

⚠ **Do not use the spool holder as a handle!**

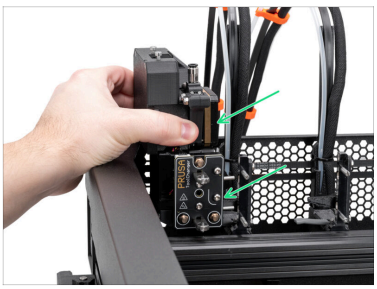
STEP 44 Nextruder assembly: parts preparation

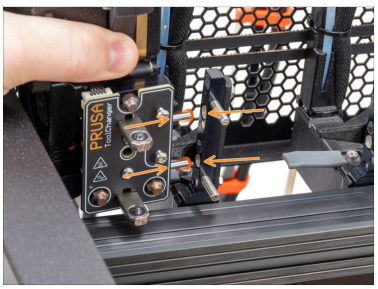


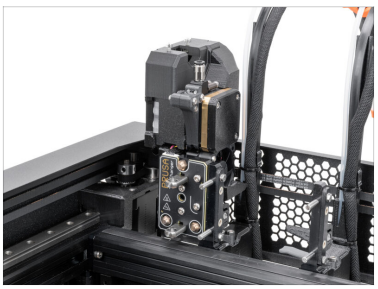
ⓘ Starting in April 2025, you may receive a new Nextruder. The difference is described before the cable bundle is connected to the Nextruder.

- For the next steps, please prepare:
  - Nextruder (2x)

STEP 45 Docking the Nextruder

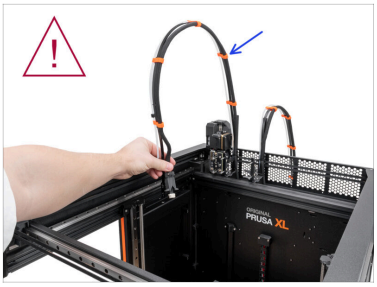
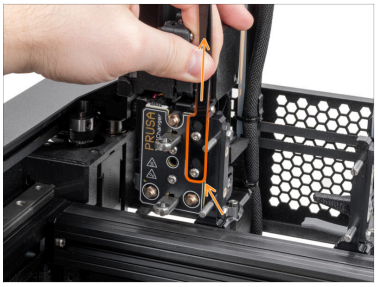
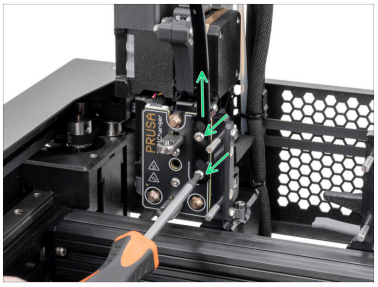






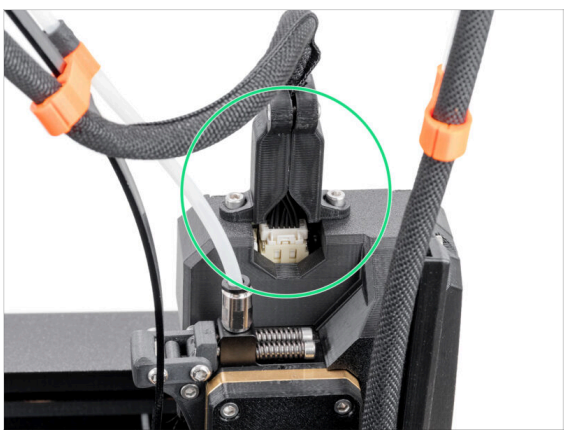
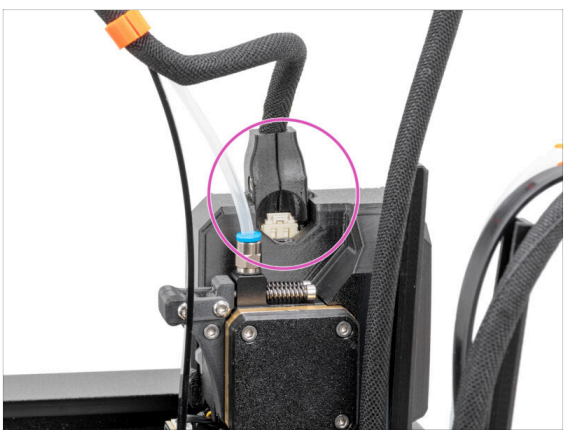
- Take the Nextruder and place it carefully next to the dock.
- Place the two metal inserts through the white holes in the dock. The magnets will help you dock the Nextruder.
- Well done, the first Nextruder is ready!
- Connect the second Nextruder in the same way as the first.

STEP 46 Nextruder cable bundle assembly

- **Repeat this step for all tool heads:**
  - Take the first Nextruder cable bundle.
  - ⚠ Check that the cable bundle is not twisted!
  - Hook up the keyhole openings in the flexible plate of the cable bundle onto the screw heads and push it up to correct the position.
  - Hold the Nextruder and using a T10 Torx screwdriver tighten the marked two screws.

STEP 47 Nextruder cable bundle assembly versions

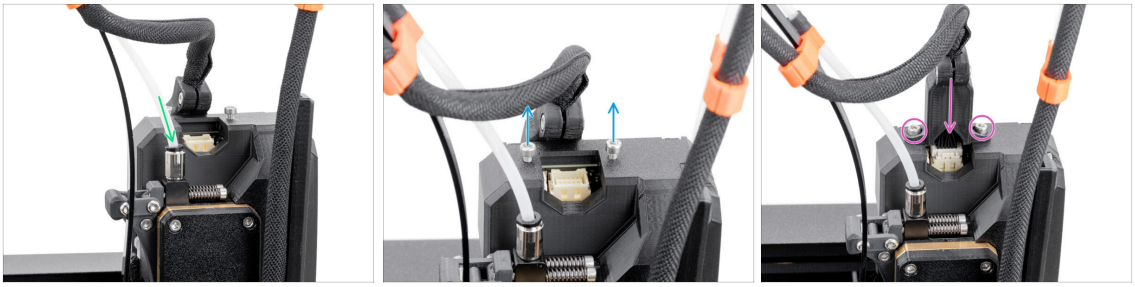
ⓘ Starting from April 2025, you may receive a new cable bundle.

- **Version A:** The **cable bundle connector is secured with two screws.** Continue to the next step.

⚠ **Older version:**

- **Version B:** The **cable bundle connector is secured without any screws.** Continue to **Version B: Nextruder cable bundle assembly**

STEP 48 Version A: Nextruder cable bundle assembly



- **Repeat this step for all tool heads:**
  - Insert the semi-transparent PTFE tube into the fitting on the Nextruder. Push it all the way in.
  - Remove two M3x10 screws.
  - Attach the cable connector to the top of the Nextruder. Secure the connector with two M3x10 screws.
- Assemble and connect all Nextruders.
- Good job, now proceed to **Almost done!**

STEP 49 Version B: Nextruder cable bundle assembly

- **Repeat this step for all tool heads:**
  - Insert the semi-transparent PTFE tube into the fitting on the Nextruder. Push it all the way in.
  - Attach the cable connector into the top of the Nextruder.

ⓘ Starting from September 2024, you may receive a new black Fitting M5-4. The assembly and functionality remain identical to the blue one.

- Assemble and connect all Nextruders.
- Good job!

STEP 50 Almost done!

- **Congratulation!** Your Original Prusa XL is ready to be fired up!
- Compare the final look with the picture.
- Now, let's go to the last chapter **4. First run**.

4. First run


ORIGINAL PRUSA XL
SELFTEST
08:17
Filament sensor test
Great! We need to start without the filament. Please make sure there is no filament in the tool and side filament sensors.
UNLOAD
CONTINUE
N/A
N/A
RESET
ORIGINAL PRUSA XL
SELFTEST
08:12
Loadcell Test
Tap nozzle in 1s
24°C
23°C
370.0
RESET

STEP 1 Before you start with Multi-Tool

ⓘ This chapter shows a brief description of the wizard. Please note that the screenshots are illustrative and might differ from those in the firmware.

ⓘ Make sure you are running **Firmware 5.1.2 or newer**

ⓘ You can download firmware updates HERE. Guide for updating the firmware is HERE

ⓘ Some parts of the wizard must be done multiple times, this depends on the number of tool-heads. For example:

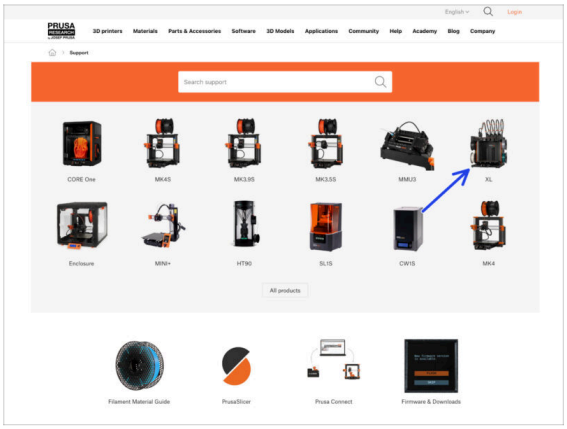
- Dock Calibration
- Loadcell calibration
- Filament sensor calibration

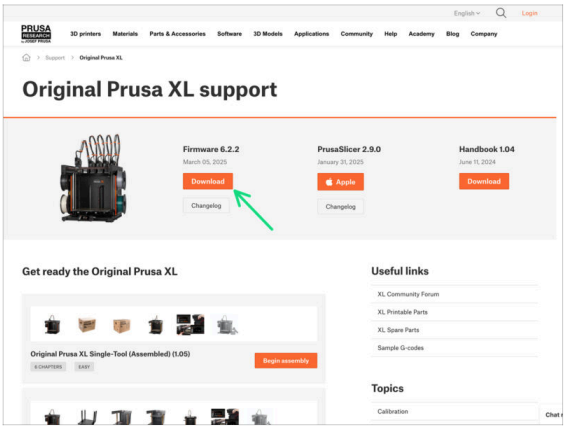
STEP 2 Preparing the printer

⚠ Make sure that the printer is placed in a stable place where no ambient vibrations are transmitted (for example, where other printers are printing).

- From the rear side of the printer, plug in the PSU cable.
- Turn the power switch ON (symbol "**I**").

STEP 3 Firmware update



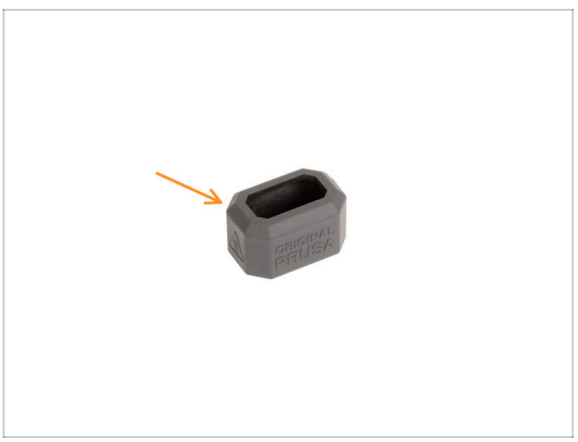


ⓘ All shipped printer packages include a USB drive with the latest firmware. However, it is recommended to check and possibly upgrade the firmware version.

- Visit the help.prusa3d.com page.
- Navigate to the Prusa XL page.
- Save the firmware file (*.bbf) onto the bundled USB drive.

ⓘ Pro tip: To access Prusa XL homepage you can use the URL: prusa.io/XL

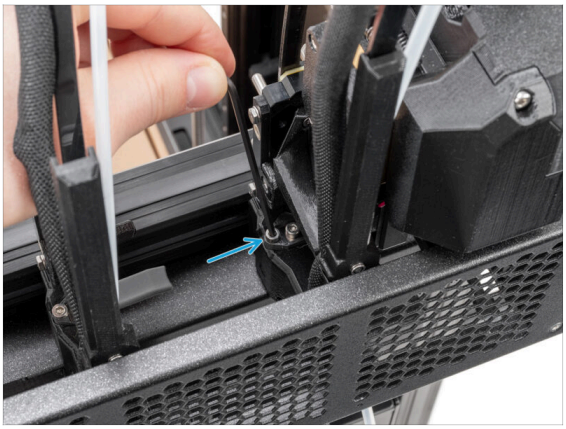
STEP 4 Prusa Nextruder sock (Optional)



- A silicone sock is supplied with each Nextruder package.
- If you want to install the sock, **do it before the calibration**.

ⓘ How to install the sock - check the article.

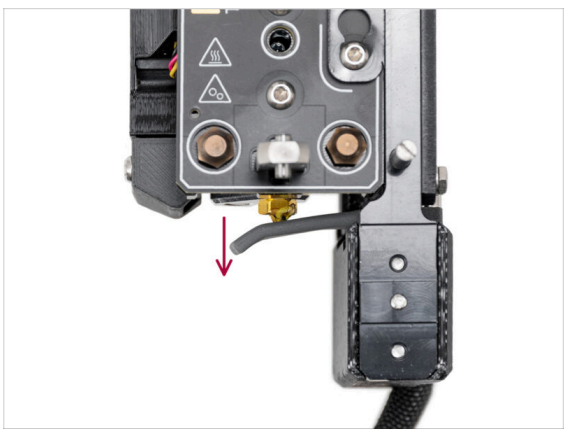
STEP 5 Nozzle seal height calibration

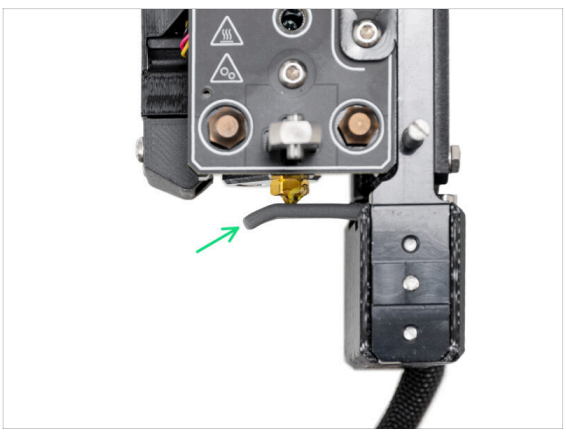


Starting in May 2024, you may receive a gray nozzle seal. The assembly and functionality remain identical to the red one.

- The following image was made with the Nextruder and dock removed from the printer for better visibility of how it should be set. **Please do not remove the docks from the printer and set the seal height with the dock still connected to the printer.**
- In the next step, we'll calibrate the height of the nozzle seal.
- Using the 2.5 mm Allen key, tighten or untighten the M3x30 screw to calibrate the height of the nozzle seal.
- Proceed to the next step.

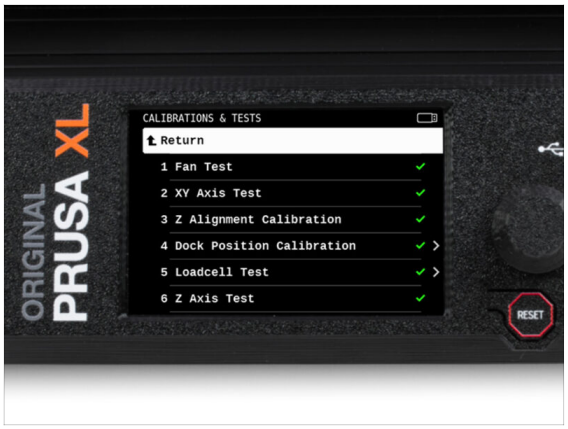
STEP 6 Nozzle seal height calibration





- If is the Nozzle seal too low or too high, we need to reposition its height.
- Using a 2.5 mm Allen key:
  - Turn the M3x30 screw clockwise to set the Nozzle seal lower.
- The correct position of the Nozzle seal is, that the Nozzle seal isn't bent and it is touching the nozzle.

STEP 7 Wizard



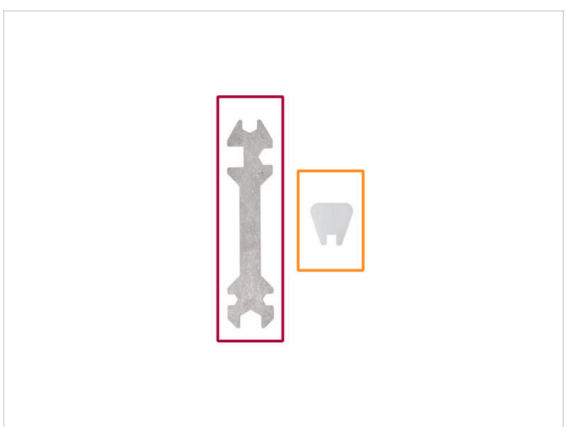
- After the printer starts up, the screen prompts for the printer test and setup wizard.

ⓘ The wizard will test all important components of the printer. The whole process takes a few minutes. Some parts of the wizard require direct user interaction. Follow the instruction on the screen.

⚠ **NOTE: While testing the axes, make sure that there is nothing in the printer that is obstructing the movement of the axes.**

⚠ **WARNING: Do not touch the printer during the wizard unless prompted! Some parts of the printer may be HOT and moving at high speed.**

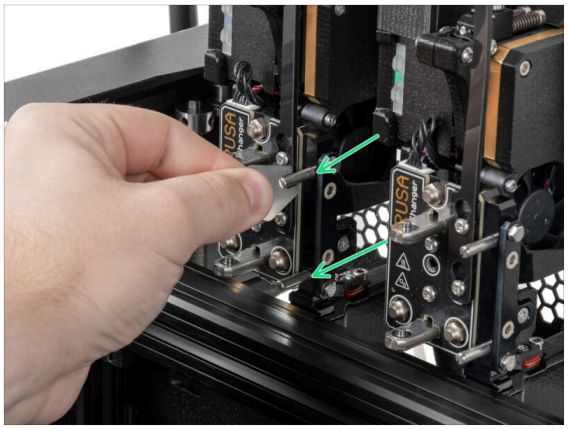
STEP 8 Wizard: Dock Position Calibration



- You will need:
  - Universal wrench (1x)
  - Mini wrench (1x)
- Dock calibration will guide you through how to properly calibrate the position of individual tool heads on the printer.

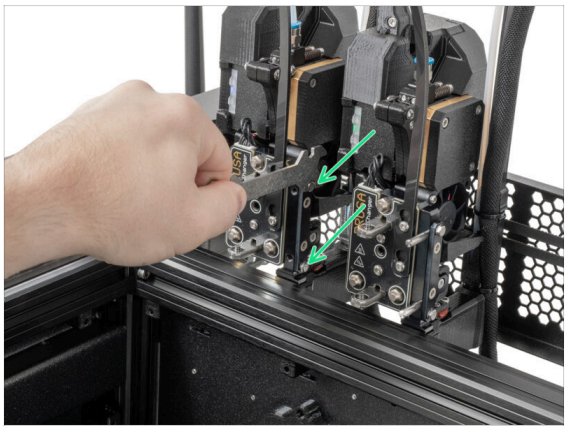
⚠ It is necessary to follow every step in the dock calibration properly! **Do not rush, read every step twice, then proceed with the instruction.**

STEP 9 Wizard: Loosen pin



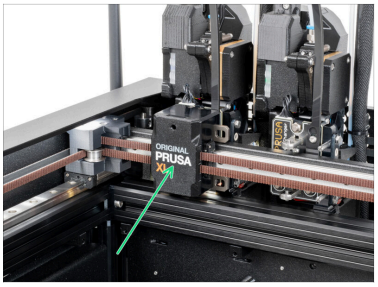
- Follow the wizard instructions on the screen.
- Using a Mini wrench, loosen and remove both dock pins on Dock 1.

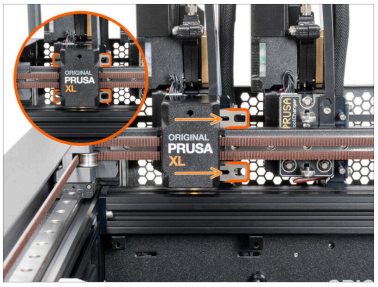
STEP 10 Wizard: Loosen screws



- Follow the wizard instructions on the screen.
- Using a Uni wrench, loosen two screws. **A few turns are enough.**

STEP 11 Wizard: Lock the tool

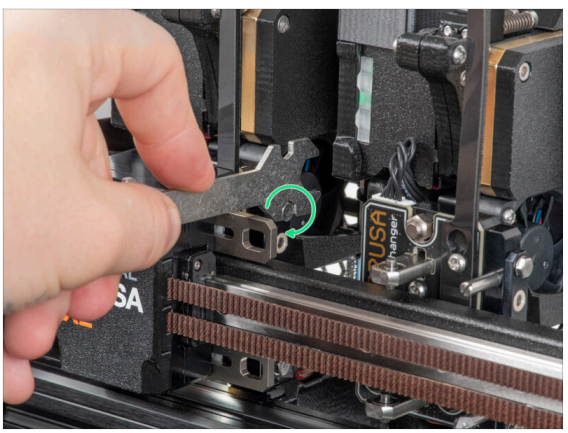




- Follow the wizard instructions on the screen.
- Manually move the Tool changing mechanism to the first tool.
- Manually lock the metal bars as described in the picture.

⚠ **The tool has to be locked in the tool changer.**

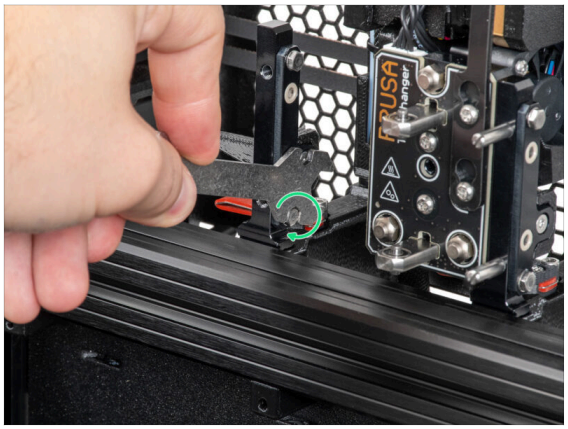
STEP 12 Wizard: Tighten the upper screw



- Follow the wizard instructions on the screen.
- Using a Uni wrench, tighten the upper screw on a side of the dock.

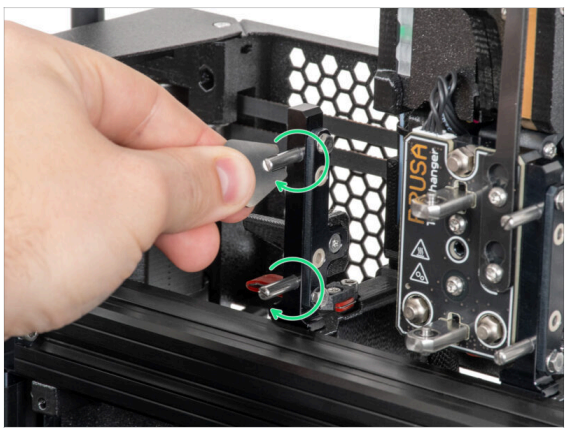
⚠ After confirming by the *continue* button on the LCD, the XY axis will leave the dock with the tool. **Clear the space.**

STEP 13 Wizard: Tighten the lower screw



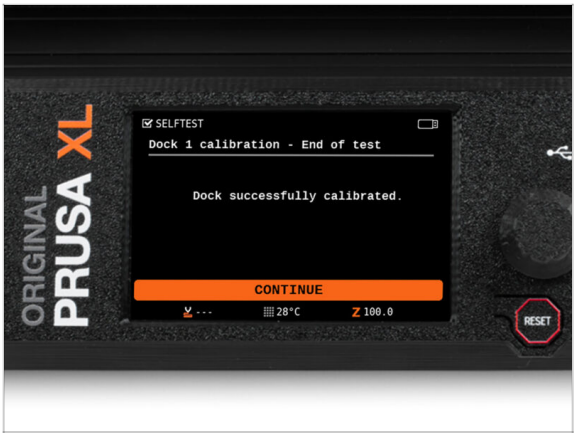
- Follow the wizard instructions on the screen.
- Using a Uni wrench, tighten the lower screw on a side of the dock.

STEP 14 Wizard: Install pins



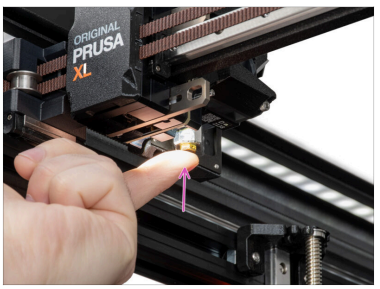
- Follow the wizard instructions on the screen.
- Insert the two metal pins and tighten them with a Mini wrench.
- After clicking on the *continue* button on the LCD, the printer will put back the tool into the dock1 and do a few calibration moves.
- After the Dock1 calibration, proceed to the Dock2 calibration and repeat the steps.

STEP 15 Wizard: Dock successfully calibrated



- Good job! The Dock1 is calibrated.
- According to the number of print heads, the dock calibration process is repeated.

STEP 16 Wizard: Test Loadcell



- The next step of the wizard will prompt you to touch the nozzle to test and calibrate the Loadcell. During this procedure, the parts of the printer are not heated, you can touch the parts of the printer. Click on **Continue**.
- Do not touch the nozzle yet, wait until prompted with the message: **Tap the nozzle NOW**.
- Slightly tap the nozzle. No need to use extra force. In case the Loadcell does not detect enough touch, you will be prompted to repeat the step. Otherwise, you will see **Loadcell test passed OK** when it succeeds.

STEP 17 Nozzle diameter confirmation

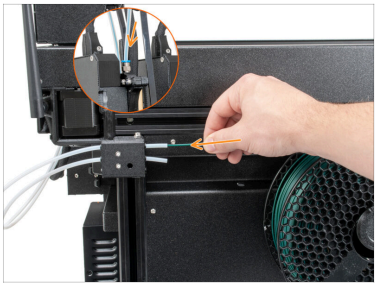
- In the next step of the wizard, the printer will ask you for the diameter of your nozzle.
- Count the marking (dots) on your nozzle in the Nextruder.
- Select the option:
  - 3 dots - 0.40 mm nozzle
  - 4 dots - 0.60 mm nozzle

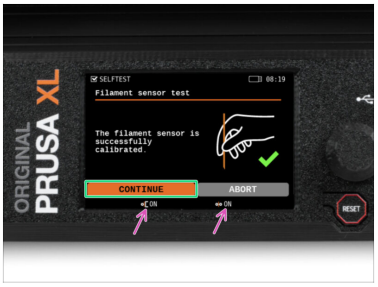
ⓘ Note that if you change the nozzle diameter, you will need to change the settings on the printer.

STEP 18 Wizard: Calibrate Filament Sensors

- During the calibration of the filament sensors, you will be prompted to use at least 130 cm of filament. *Hint: Use the Prusament shipped with your printer and hang it directly on the spool holder.*
- When you have prepared the filament, click on **YES**.
- Wait for the printer to prompt you to insert the filament into the side filament sensor.

STEP 19 Wizard: Calibrate Filament Sensors

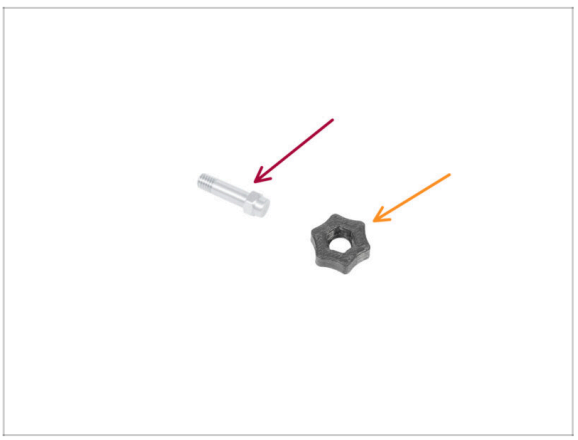




- Now, insert the filament into the side filament sensor and push it until it reaches the filament sensor in the extruder (you will feel a slight resistance).
- You can check the side filament sensor (left) and extruder filament sensor (right) status on the bottom bar on the screen.
- Both filament sensors are successfully calibrated and tested. Click on **CONTINUE**.

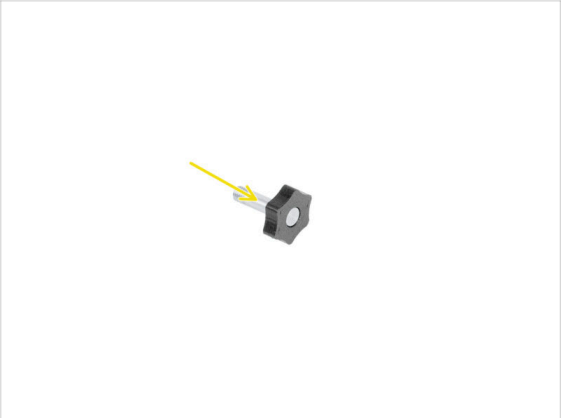
ⓘ According to the number of print heads, the filament sensor calibration is repeated.

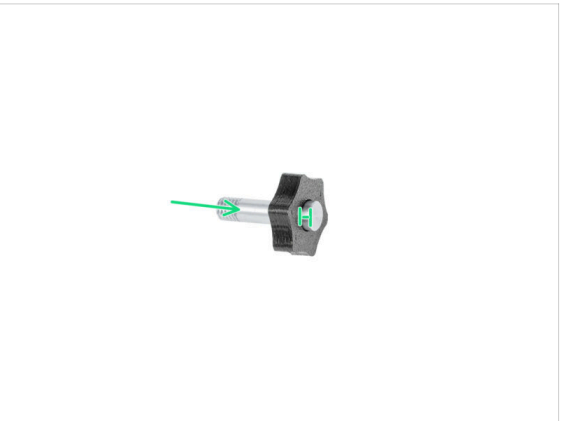
STEP 20 Calibration pin: parts preparing



- For the next step, please prepare:
  - Calibration pin (1x)
  - Calibration-pin-key (1x)

STEP 21 Calibration pin: parts assembly



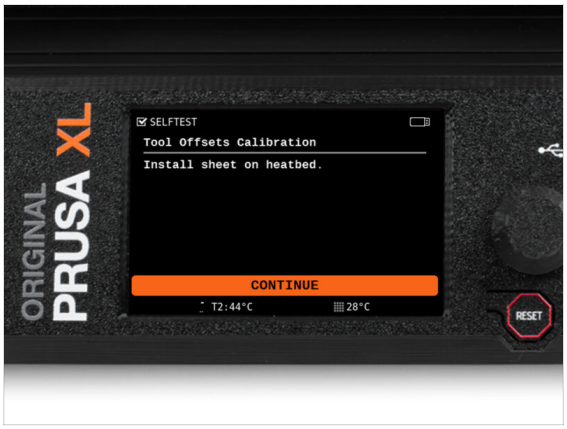


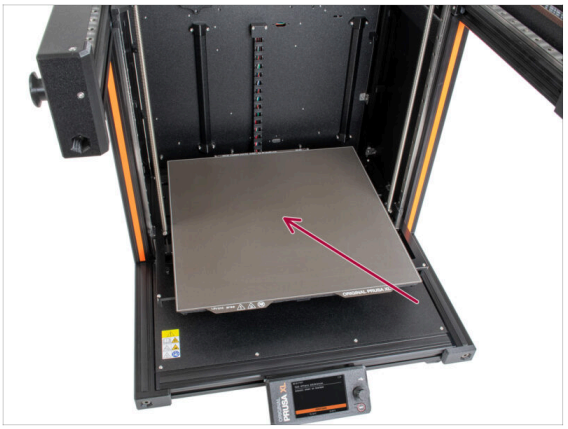
- Insert the calibration pin into the plastic part.
- Push the pin into the plastic part, so it will make a small gap on top.
- Well done, the pin is prepared.

STEP 22 Wizard: Tool Offset Calibration

- During offset calibration, you will need to screw the calibration pin into the center of the heatbed.
- Click on *Continue* to start the Tool Offsets Calibration.
- Calibration pin (1x)

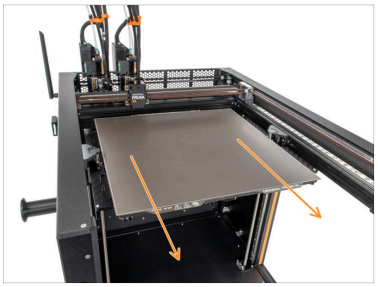
STEP 23 Wizard: Sheet install

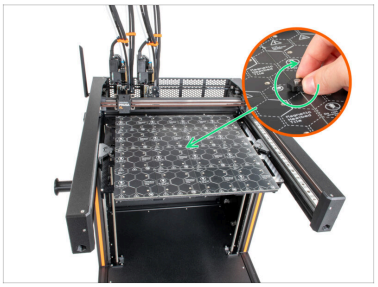




- Follow the wizard instructions on the screen.
- Put the print sheet onto the heatbed.
- Now, the printer starts short calibration.

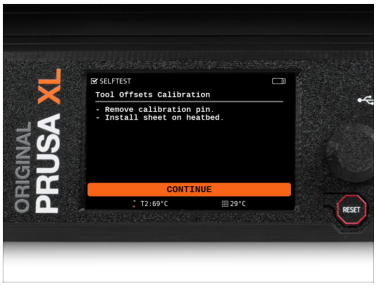
STEP 24 Wizard: Calibration pin installation

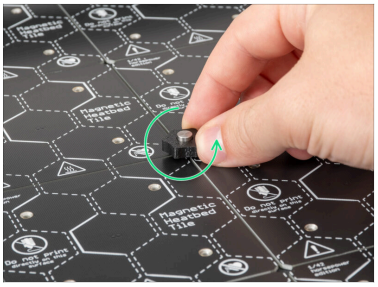


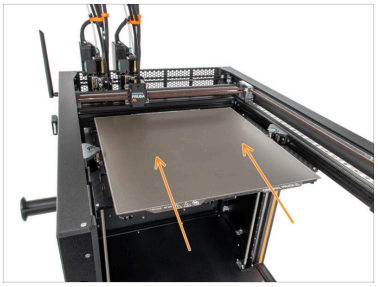


- Follow the wizard instructions on the screen.
- Take off the print sheet from the heatbed.
- Tighten the calibration pin into the middle of the heatbed. Turn the pin clockwise. **The pin has not move!**
- Now, the printer will calibrate both tool heads.

STEP 25 Wizard: Offset calibration done





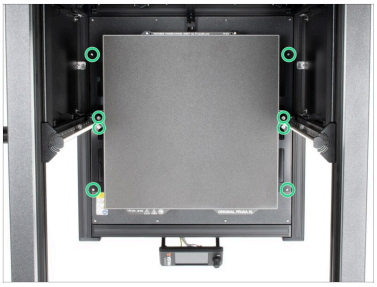
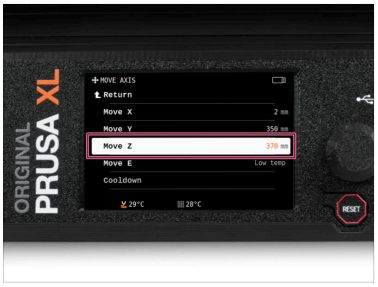


- Follow the wizard instructions on the screen.
- Untighten the calibration pin from the heatbed and take it off. Rotate counterclockwise.
- Place the print sheet onto the heatbed.
- The printer will finish the calibration.
- Good job! The Offset calibration is done.

STEP 26 Calibration pin

- Insert the calibration pin into the side filament sensor.

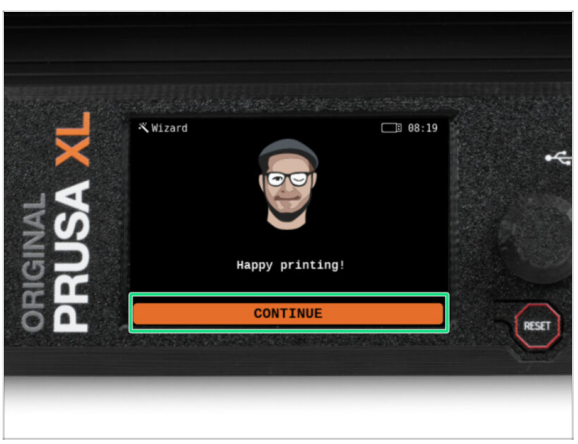
STEP 27 Semi-Assembled version only - Checking the Heatbed installation

ⓘ In this step, we will make sure the Heatbed is installed correctly

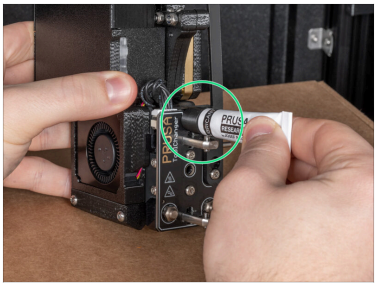
- Using the T10 screwdriver, slightly loosen all screws on the sides of the bed-frame. **A few turns are enough.**
- Visit the menu ***Control > Move Axis*** and adjust the **Move Z** value to the lowest position.
- Leave the heatbed for a few seconds until it settles in the lowest position.
- While in the lowest position, tighten all screws using the T10 screwdriver.

STEP 28 It's done



- **That's all, the printer is ready to print.** But still, follow the instructions in this manual to the end.

STEP 29 Regular printer maintenance



To keep your printer working properly over time, it is highly recommended to do regular maintenance.

- For regular printer maintenance, follow the Regular printer maintenance (XL) article for information and instructions.

On multi-tool printers, it is necessary to focus on lubricating the coupler pins of the ToolHeads.

Lubricating the coupler pins can be made along with the rest of the maintenance, or it can also be done if you notice that your prints have banding or ringing issues.

- To lubricate the coupler pins use our dedicated online guide How to lubricate the coupler pins on Original Prusa XL.

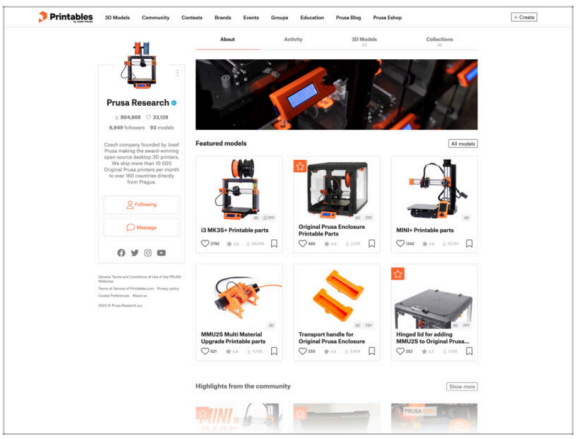
You will need to print an applicator to lubricate the pins. Please refer to the dedicated guide for more information.

STEP 30 Quick guide for your first prints

Now, please read the **3D Printing Handbook**, which is tailor-made for your printer and **follow the instructions to set up the printer properly**. The latest version is always available at **this link**.

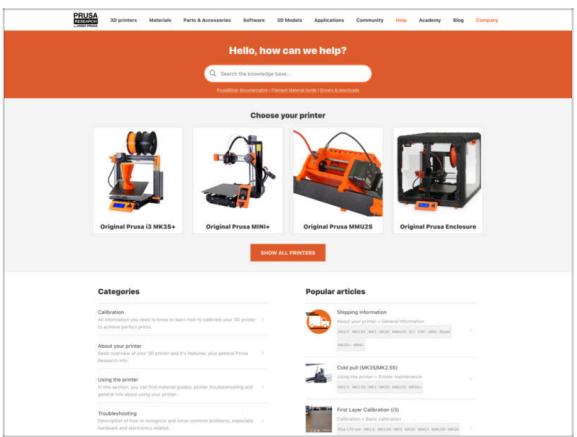
Read the chapters *Disclaimer* and *Safety instructions*.

STEP 31 Printable 3D models



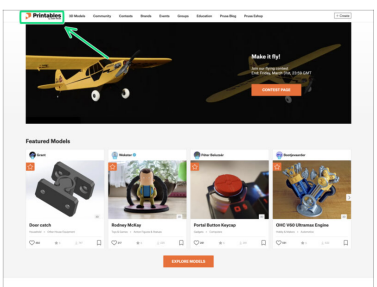
- **Congratulations! You should be ready to print by now ;-)**
- You can start by printing some of our test objects bundled on the included USB stick - you can check them out Printables.

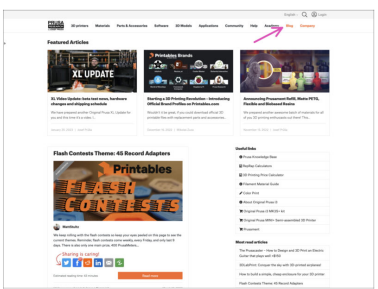
STEP 32 Prusa knowledge base

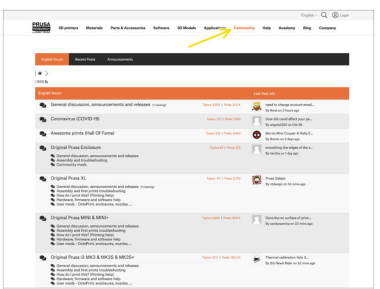


- If you encounter any problems at all, don't forget you can always check out our knowledge base at help.prusa3d.com
- We're adding new topics every day!

STEP 33 Join Printables!

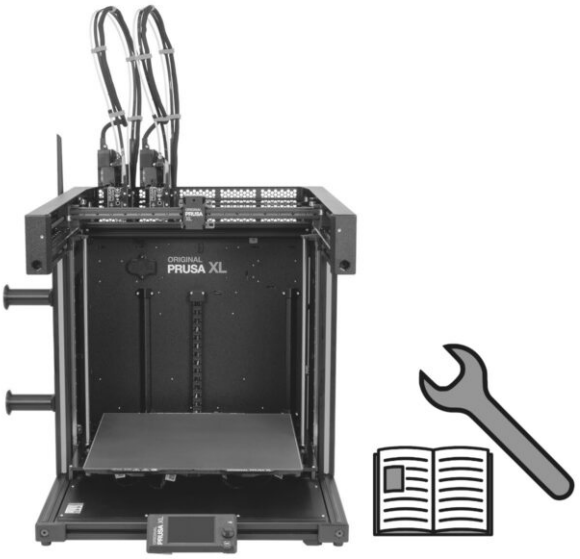




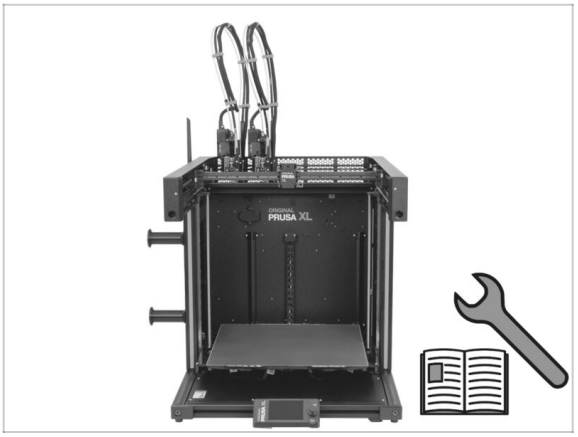


- **Don't forget to join the biggest Prusa community! Download the latest models in STL or G-code tailored for your printer. Register at Printables.com**
- Looking for inspiration on new projects? Check our blog for weekly updates.
- If you need help with the build, check out our forum with a great community :-)
- ⓘ All services share one account.

Manual changelog XL Dual-Head (Assembled)

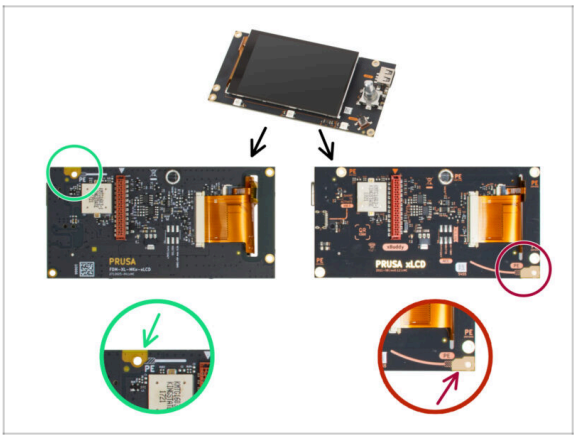


STEP 1 Version history



- **Versions of the Original Prusa XL semi-assembled (single tool) manual:**
- 06/2023 - Initial version 1.00
- 07/2023 - Updated to version 1.02
- 08/2023 - Updated to version 1.03
- 11/2023 - Updated to version 1.04
- 05/2024 - Updated to version 1.05
- 09/2024 - Updated to version 1.06
- 04/2025 - Updated to version 1.07

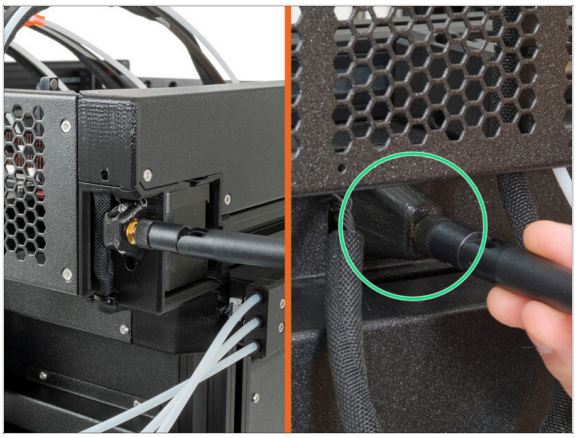
STEP 2 Changes to the manual (1)



- 07/2023 - xLCD assembly
  - Added instructions for the new xLCD.

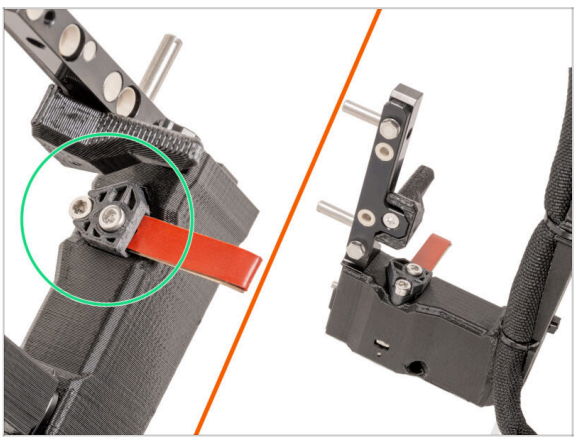
ⓘ Manual version 1.01

STEP 3 Changes to the manual (2)



- 08/2023 - Antenna adapter
  - Added instructions for the new antenna adapter.
- Manual version 1.02

STEP 4 Changes to the manual (3)

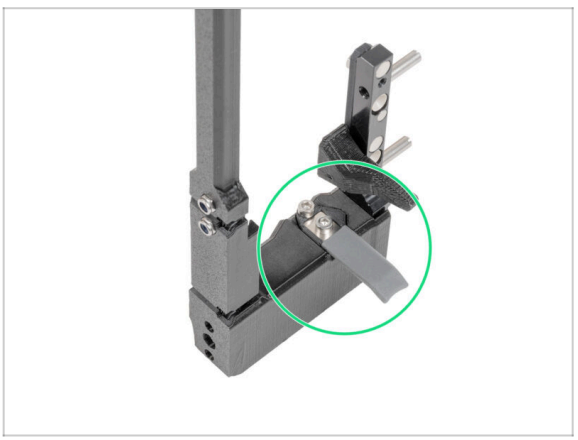


- 08/2023 - Nextruder dock
  - Added instructions for the new dock.
- Manual version 1.03

STEP 5 Changes to the manual (4)

- 11/2023 - Spoolholder
  - Added instructions for the new injection molded Spoolholder.
- Manual version 1.04

STEP 6 Changes to the manual (5)

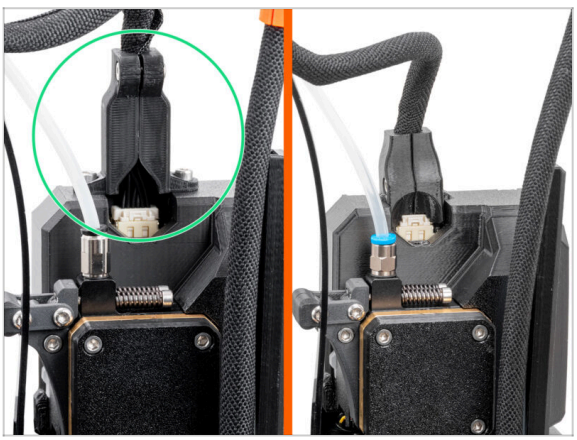


- 05/2024
  - Added information about the new gray nozzle seal.
- Manual version 1.05

STEP 7 Changes to the manual (6)

- 09/2024 - xLCD
  - Added instructions for the new injection molded xLCD.
- Manual version 1.06

STEP 8 Changes to the manual (7)



- 04/2025 - Main cable connector cover
  - Added instructions for the new main cable connector cover.
- Manual version 1.07

Notes:

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