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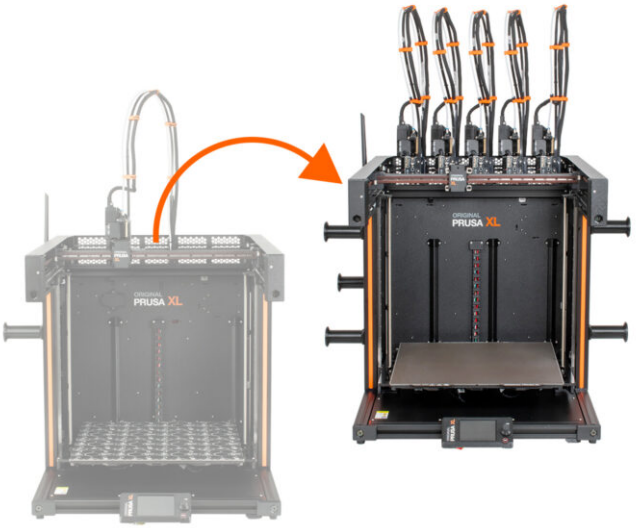
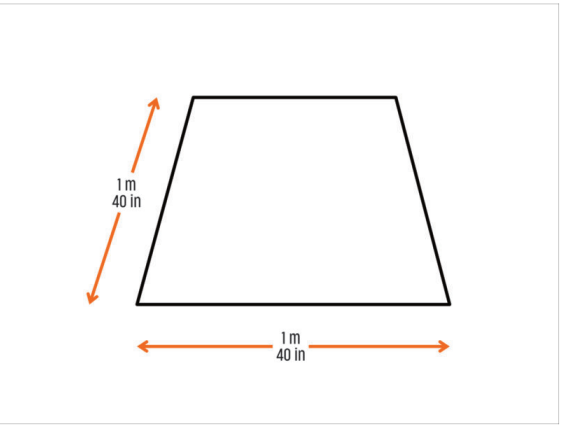
1. Introduction



STEP 1 Preparing the upgrade kit

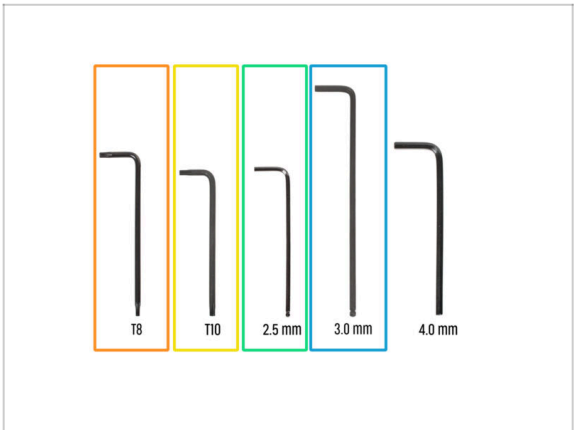


- Welcome to the tutorial on how to upgrade your Original Prusa XL Single-Tool to **Original Prusa XL Five-Head**.
- Please prepare the upgrade kit received from Prusa Research.
- For the assembly, prepare a clean workbench with a space of at least 1 m x 1 m (40 in x 40 in).

STEP 2 Getting the necessary tools

- **The package includes:**
- Needle-nose pliers (1x)
- Philips (PH2) screwdriver (1x)
- Universal wrench (1x)
- Nextruder box as a heatbed cover.
- Continue to the next step.

STEP 3 Getting the necessary tools



- **The package includes:**
- T8 Torx key
- T10 Torx key (T10 Torx screwdriver)
- 2.5 mm Allen key
- 3.0 mm Allen key

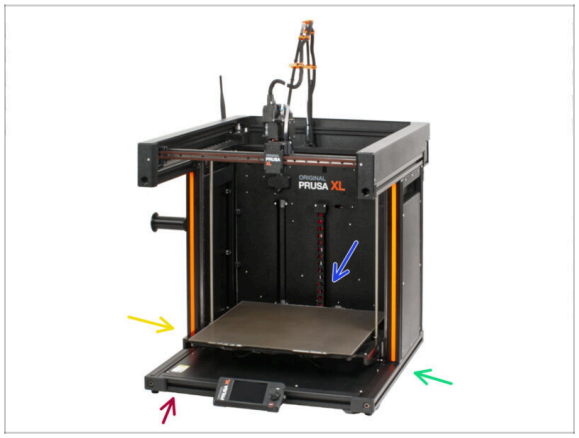
STEP 4 Labels guide

- All the boxes and bags including parts for the build are labeled.
- The amount of parts is written on the label. This number is included in the total number of each type of part.

STEP 5 Cheatsheet

- For accurate assembly, it is recommended to use a Cheatsheet that contains 1:1 scale drawings for accurate comparison of fasteners and some other parts.
- ⓘ You can download it from our site prusa.io/cheatsheet-xl. Print it at 100 %, don't rescale it, otherwise, it won't work.
- The frame covers are 1:1 scale, so you can compare the size by placing the frame cover on the paper to make sure you are using the correct type.

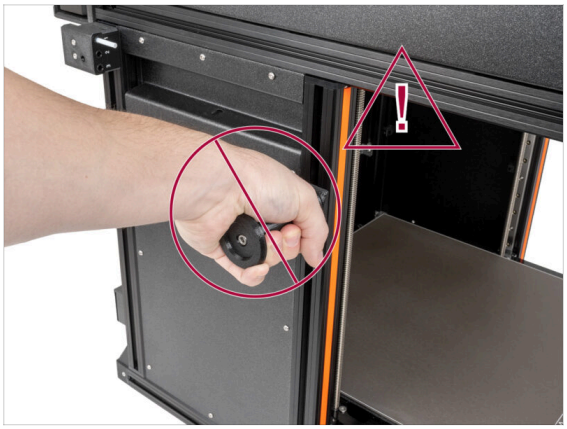
STEP 6 Front, left, right and rear side

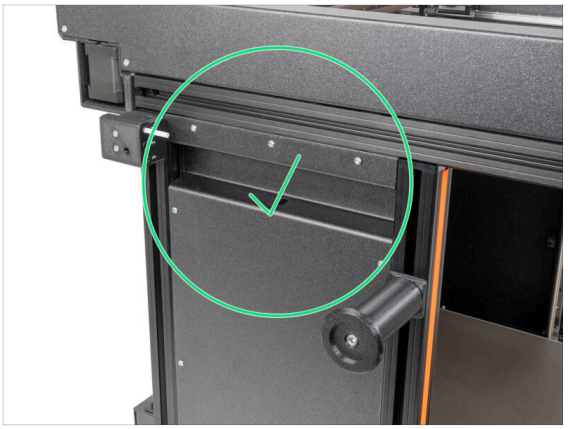


⚠ **IMPORTANT:** The XL printer is large and it is almost impossible to have the entire body in every single picture. Throughout the manual, there will used terms to **describe the side you will be working on**:

- **Front side** - a place where is **xLCD screen**.
- **Left side** - can be recognized thanks to the **safety sticker** near its edge.
- **Right side** - opposite to the left side, there is **no safety sticker** on this side.
- **Rear side** - the remaining side, where is **PSU.**

STEP 7 Manipulating with the printer

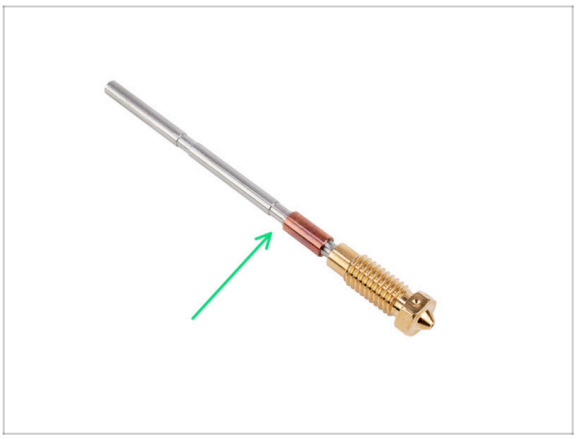




⚠ **Never manipulate the printer by using the upper metal flanges. You can damage the LED lights hidden inside.**

- During the assembly manipulate the base using the extrusions.

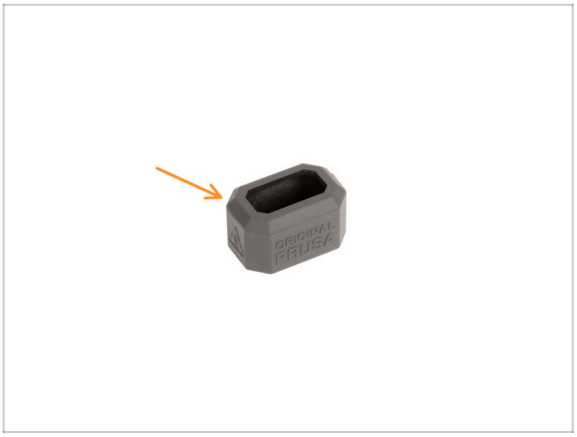
STEP 8 Spare nozzles



ⓘ The Nextruder upgrades come with pre-installed 0.4mm nozzles.

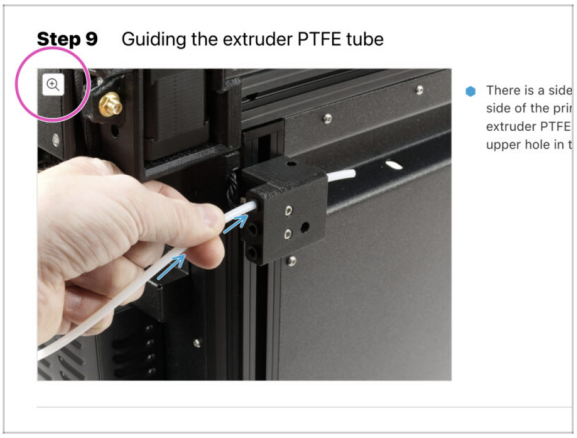
- You'll find spare nozzles in the upgrades. You can replace the nozzle on your existing Nextruder with a new 0.4 mm diameter nozzle
- For replacing the Prusa nozzle, go to **How to replace the Prusa Nozzle (XL multi-tool)**

STEP 9 Silicone sock



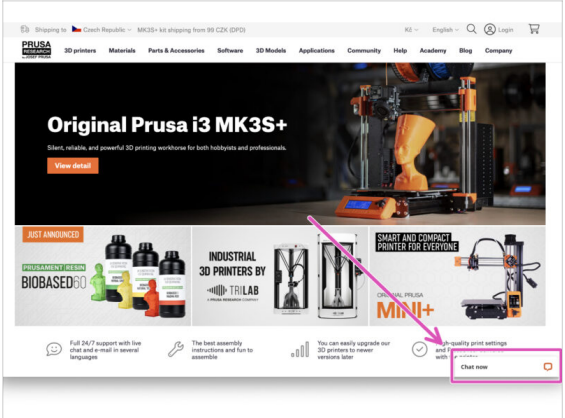
- A silicone sock is supplied with each Nextruder package.
- The main function of a silicone sock is to keep the temperature in the heater block stable, which improves the printer's performance.
  - ⓘ Also, it keeps your hotend clean from filament dirt and protects it in case the print detaches from the print surface.
- You will be asked to install the sock later in this guide.
  - ⓘ How to install the sock - check the article.

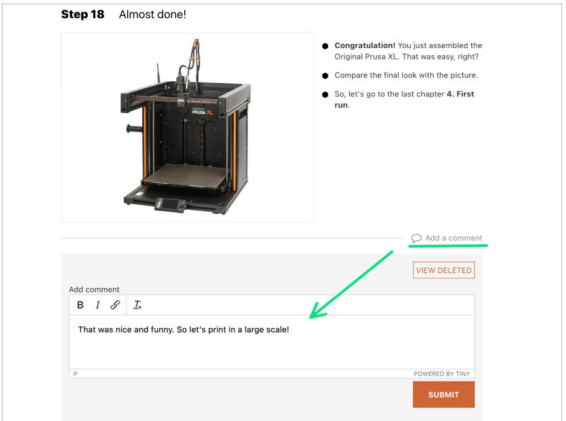
STEP 10 View high resolution images



- ⓘ 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 11 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

STEP 12 How to successfully finish the assembly

⚠ To successfully finish the upgrade please follow all these:

- **Always read all the instructions at the current step first**, it will help you to understand what you need to do. Don't cut or trim unless you are told to!!!
- **Don't follow pictures only!** It is not enough, the written instructions are as brief as they could be. **Read them!**
- Read the comments from the other users, they are a great source of ideas. We read them too and based on your feedback improve the manual and the entire assembly.
- **Use a reasonable force**, the printed parts are tough, but not unbreakable. If it doesn't fit, check your approach twice.
- **Most important: Enjoy the build, have fun**. Cooperate with your kids, friends or partners.

STEP 13 Reward yourself

- Look in the box and find bag of Haribo Bears.
- After years of thorough scientific research, we came to a solution => At the end of each chapter, you will be told a specific amount of bears to consume.
- Eating incorrect amount than prescribed in the manual might lead to sudden boost of energy. Please consult a professional in the closest candy store.

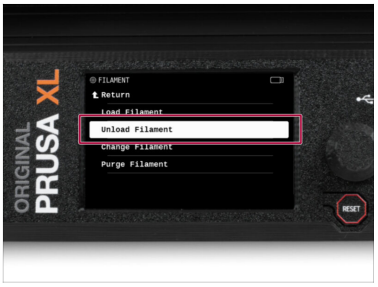
⚠ **Hide the Haribo for now!** From our experience an unattended bag with sweets will suddenly disappear. Confirmed by multiple cases all around the World.

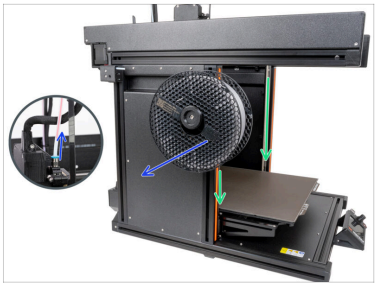
STEP 14 Prepare your desk

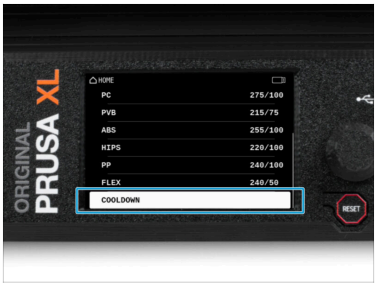
- Tidy up your desk! Tidying up decreases the probability of losing small parts.
- **Clear your workspace.** Make sure you have enough room. A nice clear flat workbench will get you the results you are aiming for.
- **Let there be light!** Make sure you are in a well-lit environment. Another lamp or even an extra flashlight will probably come in handy.
- Prepare something to contain the plastic bags and the removed packing materials so you can recycle them afterwards. Make sure there are no important parts being discarded.
- OK, we are ready. Let's start! Let's go the next chapter: **2. Printer preparing**

2. Printer preparing

STEP 1 Preparing the printer







- If you have loaded the filament, unload it from the hotend. On the screen, navigate to *Filament -> Unload Filament*.
- Remove the filament from the hotend. It is is necessary to completely remove it from the printer.

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

- Move the Z-axis down. On the screen, navigate to *Control -> Move axis -> Move Z.*
- Cool down the printer. On the screen, navigate to *Preheat -> Cooldown.*

⚠ **Wait until the hot parts are cooled down** to ambient temperature. It takes approximately 10 minutes.

STEP 2 Protecting the heatbed

- **Before you proceed, it is recommended to protect the heatbed.**
- **Make sure the heatbed is cooled down** to ambient temperature. Place the empty cardboard box approximately to the front center part of the heatbed.

STEP 3 Printer unpluging

- From the rear side of the printer, turn the power switch OFF (symbol "O").
- Unplug the PSU cable.

STEP 4 Can I open the Haribo?

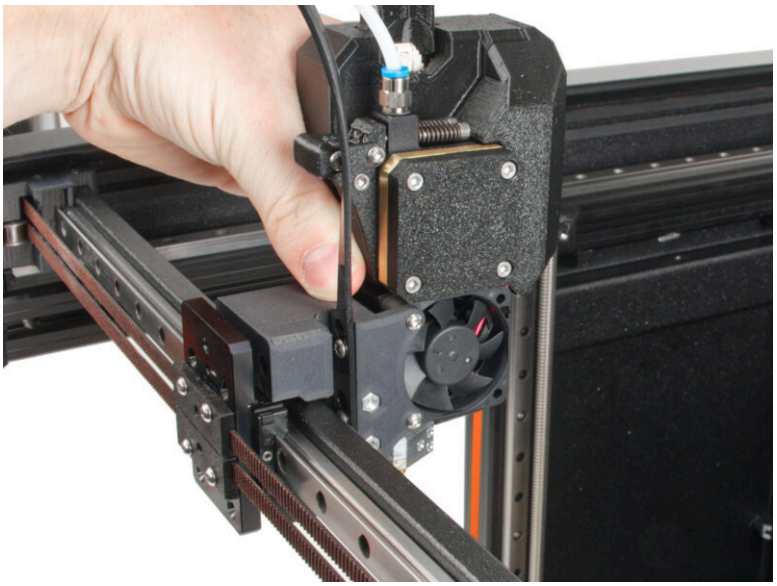
⚠ **Keep the Haribo bag closed for now!**

- This dose of energy is primarily for printer assembly. **Wait until you are prompted to open it.**

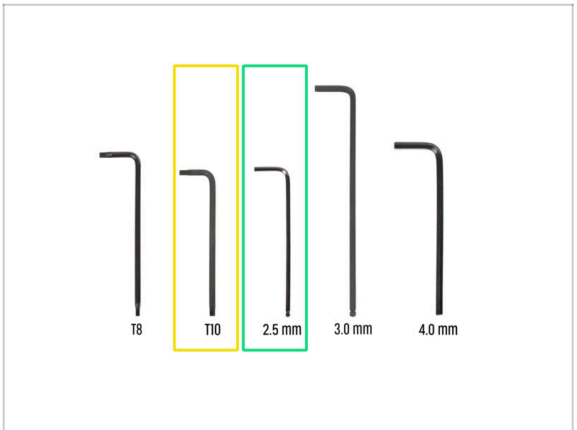
STEP 5 Let's get started

- Everything checked? So, let's start with disassembling the printer. Let's go to the next chapter: **3. Nextruder detaching**

3. Detaching the Nextruder

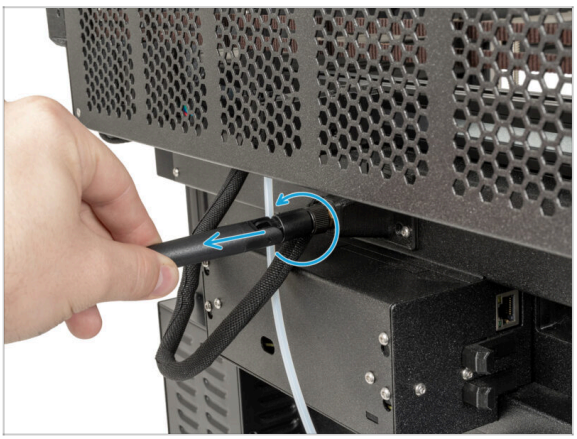


STEP 1 Tools necessary for this chapter



- **For this chapter, please prepare:**
- T10 Torx key (T10 Torx screwdriver)
- 2.5mm Allen key

STEP 2 Wi-Fi antenna detaching



ⓘ This step is only for the printer, which has a Wi-Fi antenna on the back of the printer.

- Turn the printer, so the back side of the printer is facing you.
- Unscrew the Wi-Fi antenna from the antenna connector and place it nearby.

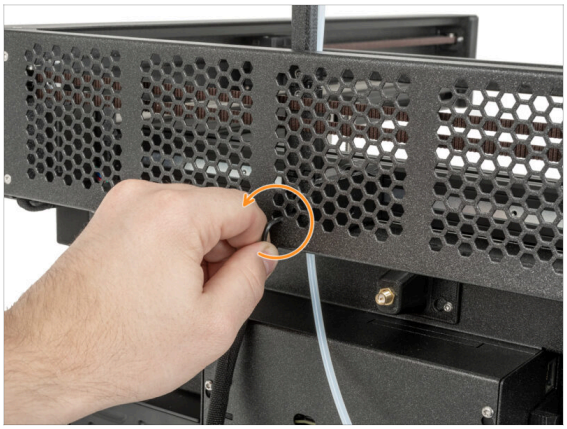
STEP 3 PTFE unpluging

- Turn the printer so the left side of the printer is facing you.
- Gently push the black collet to release the PTFE tube.
- Pull out the PTFE tube.

STEP 4 Disconnecting the Nextruder cable

- Turn the printer, so the back side of the printer is facing you.
- ⚠ There is an antenna cable behind the antenna-holder, do not pull the connector!
- Loosen two screws on the cover slightly. No need to remove them completely. Push the cover to the right and gently remove it from the screws.
- Push the safety latch and disconnect the Nextruder cable from the connector "DWARF1".
- Attach the antenna-holder to the screws and push the cover to the left. Tighten the screws.

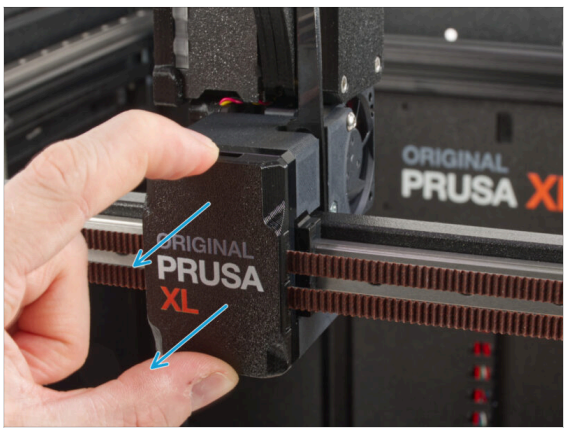
STEP 5 Detaching the dock

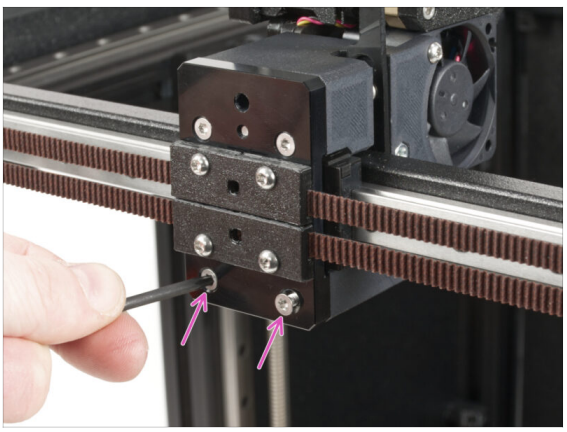


ⓘ If you have an older version of the CoreXY back cover, untighten the screw in the dock same as the instructions say. The process is the same.

- Using a 2.5mm Allen key, untighten the screw inside the (middle hole) dock.
- Keep the Nextruder cable bundle next to the printer.

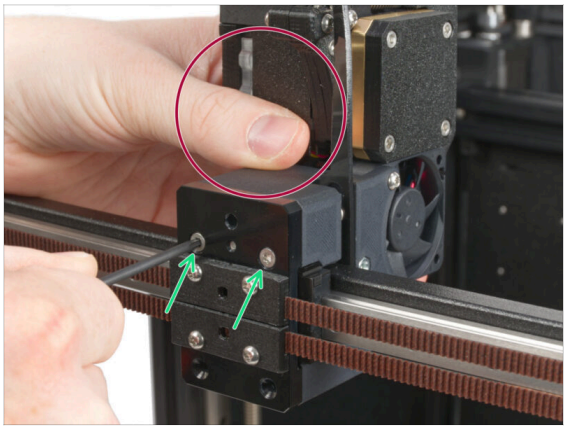
STEP 6 Detaching the Nextruder

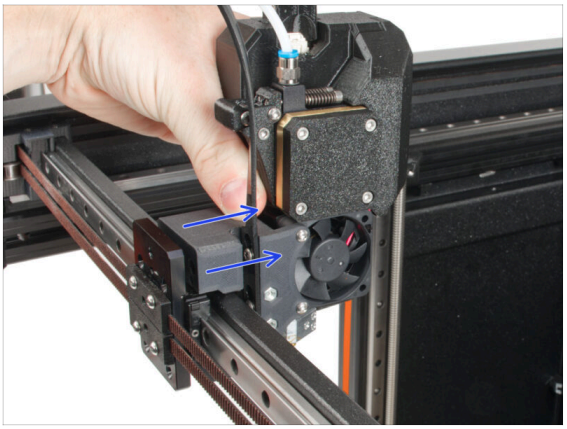




- Turn the printer, so the front side is facing you.
- Snap off the x-carriage-cover back from the X-carriage. **Do not throw it away, we'll use it later!**
- Using a T10 Torx key, remove two M3x12bT screws.

STEP 7 Detaching the Nextruder





- Hold the Nextruder during disassembly.
- Untighten two M3x12bT screws using a T10 Torx key.
- Detach the Nextruder and place it nearby, we will rebuilt it in the next steps.

STEP 8 Still no sweets?

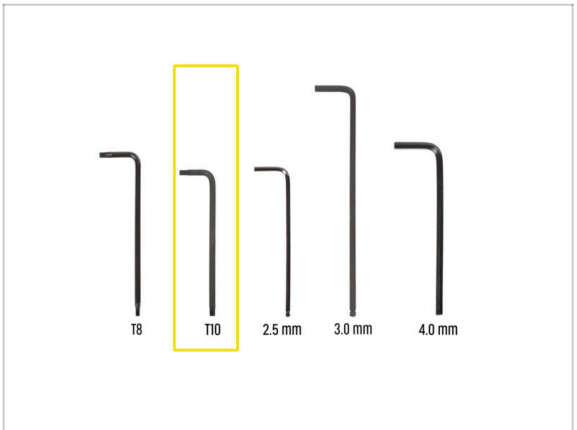
- **Please don't open the bag yet.**
- But you are getting close to your first taste ;).

STEP 9 Good job!

- Well done! Let's go to the next chapter: **4. ToolChanger assembly**

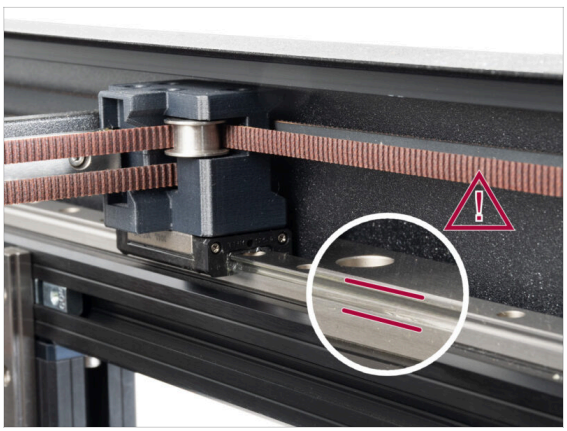
4. ToolChanger assembly

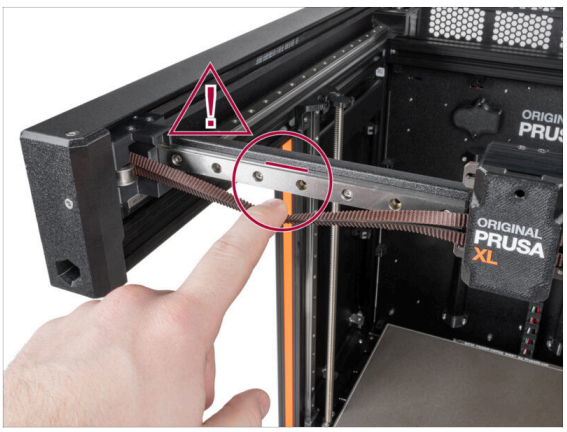
STEP 1 Tools necessary for this chapter



- **For this chapter, please prepare:**
- T10 Torx key (T10 Torx screwdriver)

STEP 2 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 mainly in the linear rail channels on the linear sides.

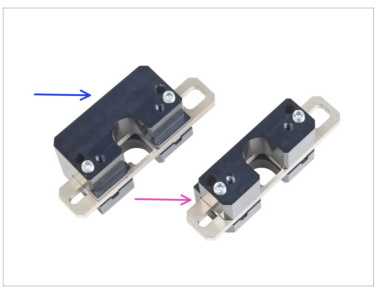
STEP 3 Preparing the X-carriage

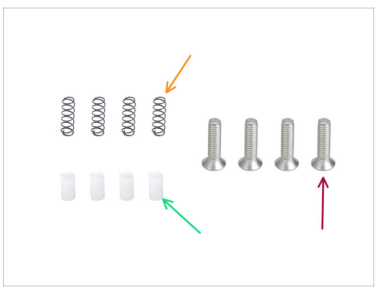
⚠ Reminder: To handle the printer, **always grab the handles on both sides of the printer**. Do not lift the printer by the aluminum extrusions or the metal sheet profiles on top.

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

- Check 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.

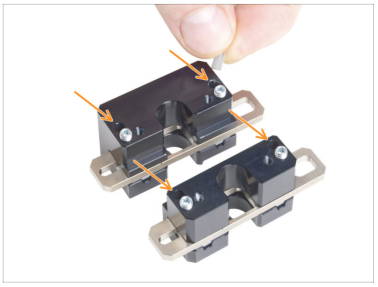
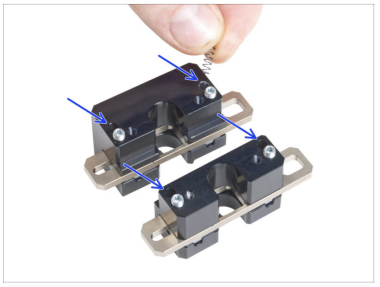
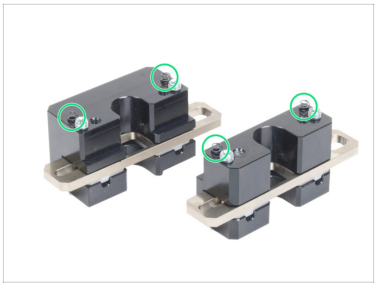
STEP 4 Installing the ToolChanger: parts preparation





- **For the following steps, please prepare:**
- Tool Changer Upper Lock (1x)
- Tool Changer Lower Lock (1x)
- Spring 3x9 (4x)
- TC push pin (4x)
- M3x12bT screw (4x) *you removed in the previous chapter*
- X-carriage-cover (1x) *you removed in the previous chapter*

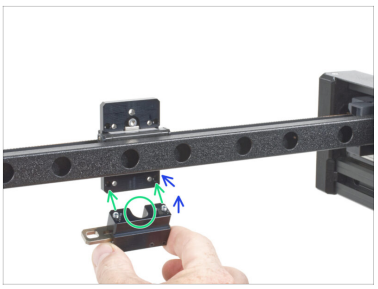
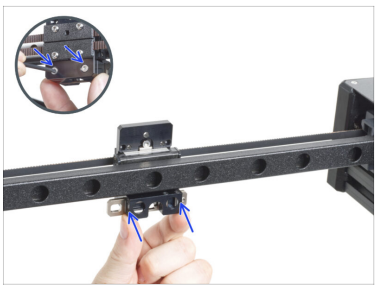
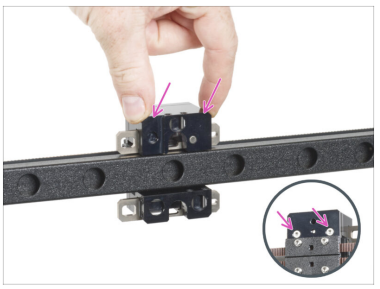
STEP 5 Preparing the ToolChanger

- Insert each TC push pin into the holes in both metal parts.
- Insert each Filament sensor sping 3x9 into the same holes as a TC push pins.
- The tool changer is prepared. **The springs must be sticking out.**

⚠ **Be careful that the springs and pins do not fall out when handling the parts.**

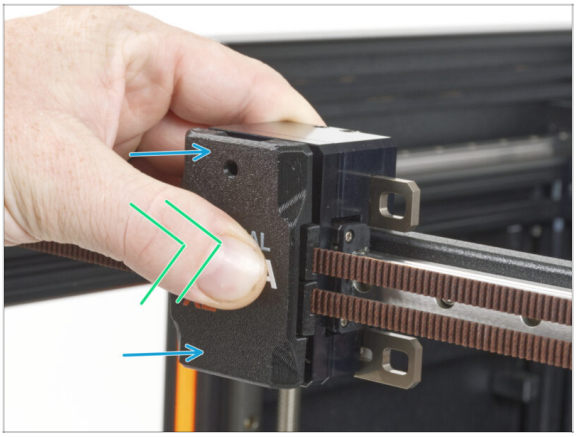
STEP 6 Installing the ToolChanger

⚠ **Be careful that the springs and pins do not fall out when handling the parts.**

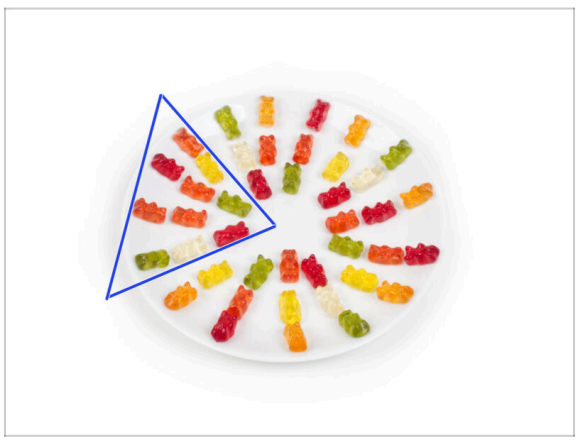
- Line up the screws in the TC block lower assembly lock with the blind holes in the X-carriage. **See the correct orientation of the part**. Use the U-shaped groove in the part.
- Take a look at the X-carriage from the rear side.
- Attach the TC block lower assembly lock to the X-carriage and secure it with two M3x12bT screws from the front side. Ensure the correct orientation of the part.
- Attach the TC block upper assembly to the X-carriage from the top and secure it with two M3x12bT screws from the front side.

STEP 7 Covering the X-carriage



- Attach the x-carriage-cover on the X-carriage with the hole up.
- Push the center of the cover using your thumb. The cover will then snap into the latches on the X-carriage. You will feel a light "click" when it is successfully snapping.

STEP 8 Haribo



⚠ **Carefully and quietly** open the bag with the Haribo sweets. High level of **noise might attract nearby predators!**

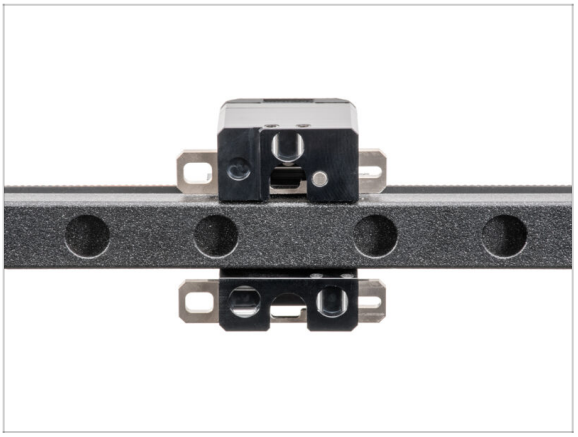
- Spread the entire contents of the bag on a clean plate and arrange them according to the picture. The color doesn't matter that much.

ⓘ The total number in your package may vary slightly. However, the exact number is important. If any gummy bears are missing, please go to your nearest candy store immediately.

- Eat ten gummy bears.

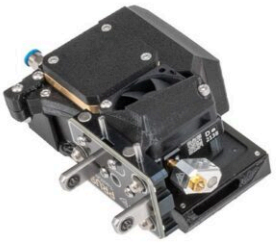
ⓘ **Did you know that** gummy bears were first created by a German candy maker named Hans Riegel in the 1920s.

STEP 9 Almost done

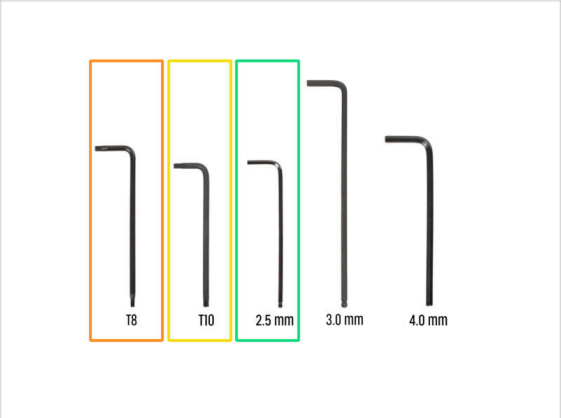


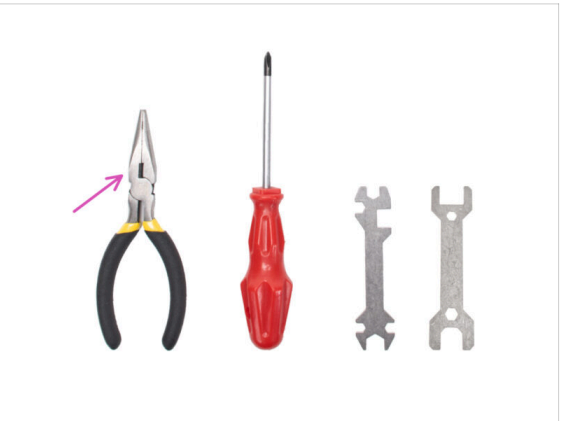
- That wasn't so hard. Anyway, good job! Let's go to the next chapter: **5. Nextruder upgrade**

5. Nextruder upgrade



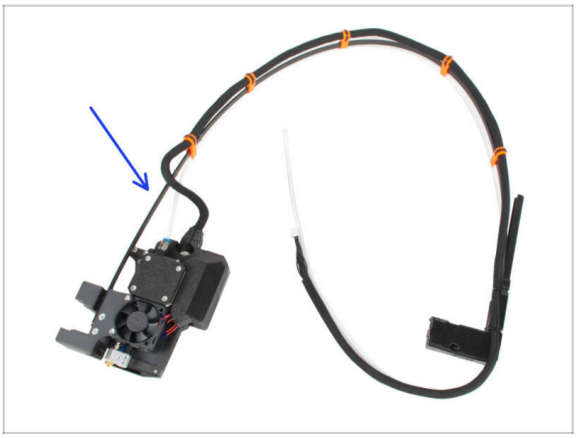
STEP 1 Tools necessary for this chapter





- **For the next steps, please prepare:**
- T8 Torx key
- T10 Torx key (T10 Torx screwdriver)
- 2.5mm Allen key
- Needle-nose pliers *for cutting zip ties*

STEP 2 Dock disassembly: parts preparation



- **For the following steps, please prepare:**
- Old Nextruder assembly (1x)

STEP 3 Dock disassembly: cable bundle

⚠ While cutting the zip-ties, be careful about the black cable bundle!

- On an xl-dock-cable-router, cut the zipties.
- Pull out the PTFE tube from the xl-dock-cable-router.
- Using a T10 Torx screwdriver, unscrew two M3x8rT screws. **Do not throw them away!**

STEP 4 Dock disassembly

- Using a T10 Torx key, unscrew the upper M3x12bT screw from the xl-dock-cable-router. **Keep the screw for later use.**
- Using a T10 Torx key, unscrew the lower M3x12bT screw from the xl-dock-cable-router. The screw will fall out from the lower hole. **Keep the screw for later use.**
- Remove the dock-cable-router_single_tool_adapter from the xl-dock-cable-router. **Discard the old xl-dock-cable-router in the trash.**
- Remove the M3x12 screw from the dock-cable-router_single_tool_adapter. **Throw the screw away!**

STEP 5 New dock assembly: parts preparation

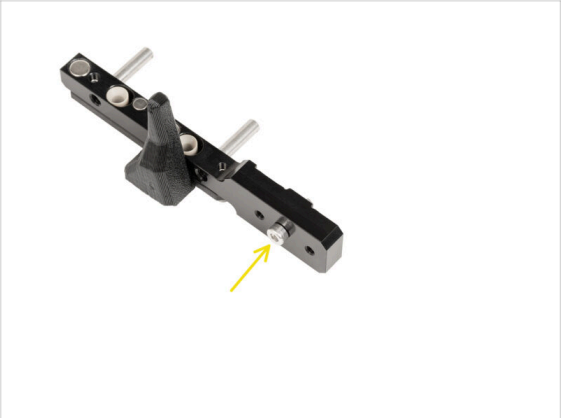


- **For the following steps, please prepare:**
- XL-dock-cable-router (1x)
- Parking tool (1x)
- M3nS nut (1x)
  - ⓘ Take on from the **Nozzle Seal Assembly** bag.
- M3nN nut (2x)
- M3x14 screw (1x)
- M3x12bT screws (2x) *you removed in the previous steps*
- M3x8rT (2x) *you removed in the previous steps*

STEP 6 New dock assembly: inserting the nut

- Insert the M3nS nut into the hole in the new xl-dock-cable-router.
- Push the nut into the xl-dock-cable-router using a 2.5mm Allen key.

STEP 7 New dock assembly: metal dock



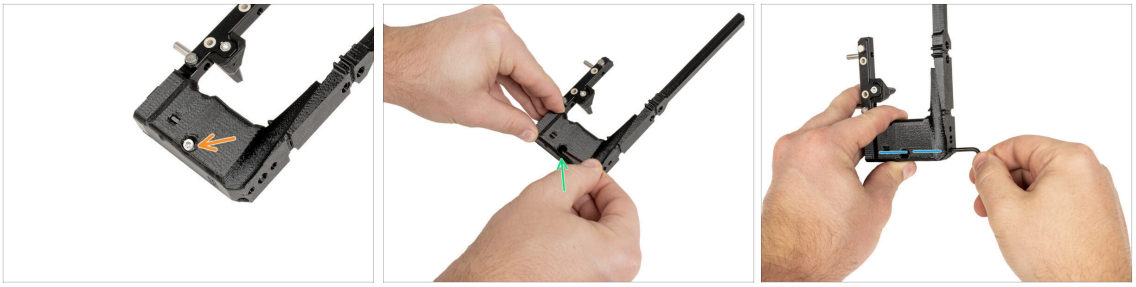
- Insert the M3x14 screw into the middle hole in the parking tool as described in the picture.
- Insert the parking tool with the screw into the new xl-dock-cable-router.

⚠ Double-check the screw. Is it there? Proceed to the next step.

STEP 8 New dock assembly: upper screw

- Insert the M3x12bT screw into the plastic cutout.
- Tighten the screw with a T10 Torx key.

STEP 9 New dock assembly: lower screw

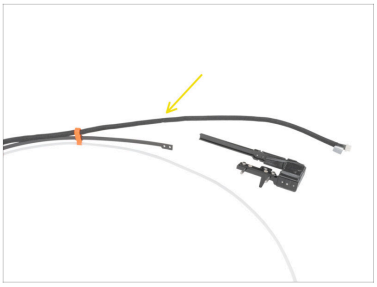


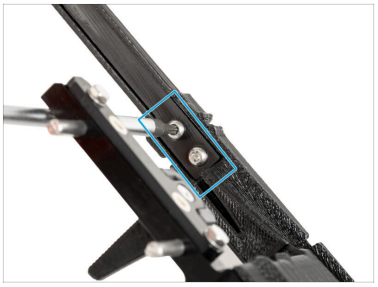
- Insert the M3x12bT screw into the lower hole.
  - ⓘ The screw has to be fully inserted into the xl-dock-cable-router.
- Push the screw into the xl-dock-cable-router with a T10 Torx key.
- Tighten the screw with the T10 Torx key.

STEP 10 New dock assembly: cable support

- From the back side of the xl-dock-cable-router:
- Locate two holes for the nuts.
- Insert two M3nN nuts into the holes.

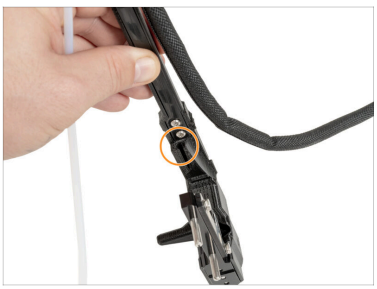
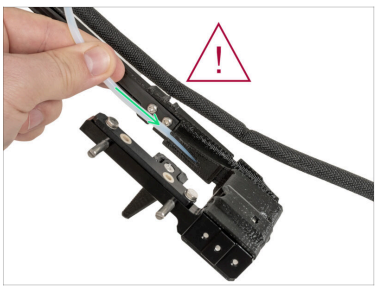
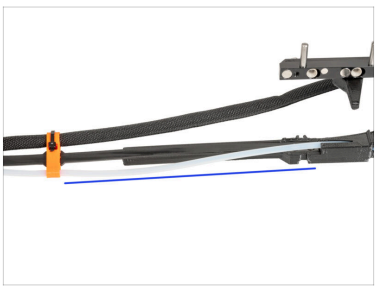
STEP 11 New dock assembly: cable support





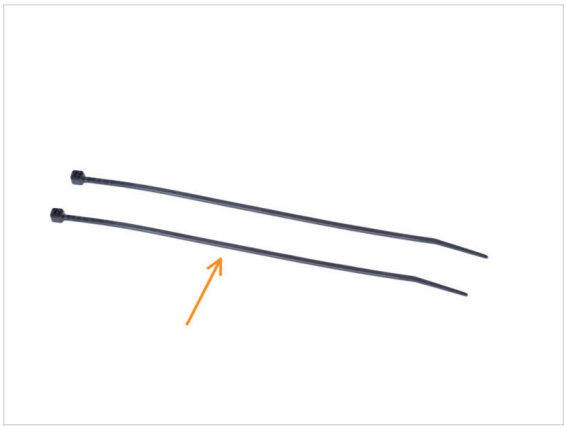
- Prepare the cable support next to the xl-dock-cable-router.
- From the front side of the xl-dock-cable-router:
- Insert the cable support into the xl-dock-cable-router as described in the picture.
- ⚠ Check that the cable support is correctly inserted as shown.
- Secure the cable support with two M3x8rT screws using a T10 Torx screwdriver.

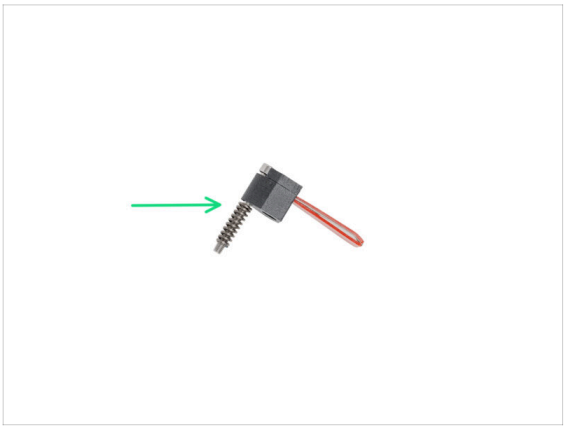
STEP 12 New dock aseembly: PTFE tube

- Locate a hole for the PTFE tube in the xl-dock-cable-router.
- ⚠ Push the PTFE tube through slowly and in a controlled, otherwise you may pinch or tangle it.
- Gently insert the PTFE tube into the cable bundle through the hole.
- The PTFE tube has to look like this.

STEP 13 New dock assembly: parts preparation



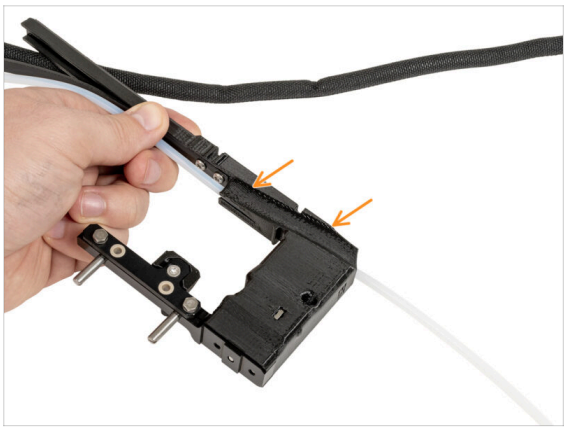


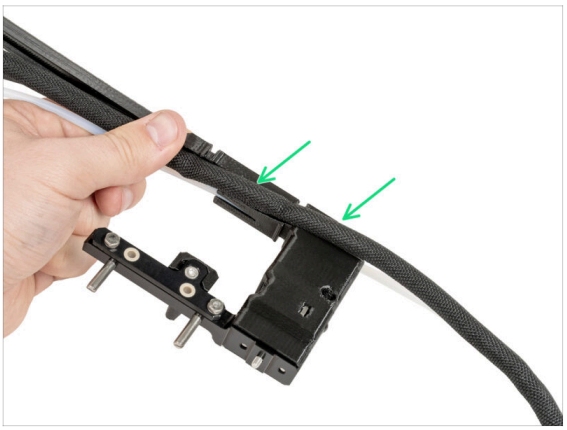
ⓘ Starting from May 2024, you may receive a gray nozzle seal. The assembly and functionality remain identical to the red one.

- **For the following steps, please prepare:**
- Zip-ties (2x)
- Nozzle seal (1x)

ⓘ Slide the spring over the M3x30 screw, taking care not to let it fall off.

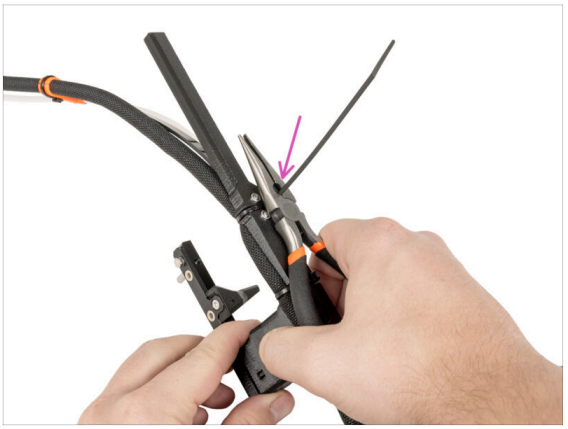
STEP 14 New dock assembly: cable bundle





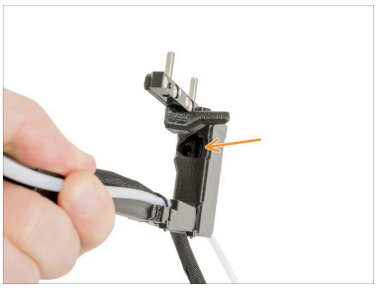
- Locate the cable bundle cutout on a side of the xl-dock-cable-router
- Insert the cable bundle into the cutout.

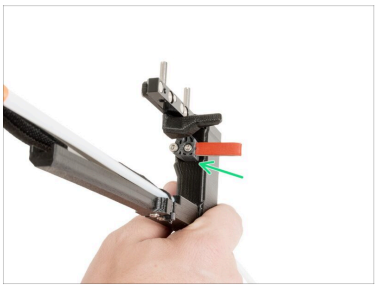
STEP 15 New dock assembly: cable bundle securing

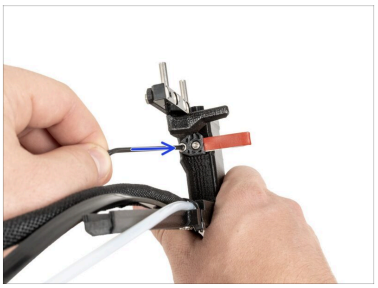


- From the back side of the xl-dock-cable-router:
- Wrap the zip-ties around the dock and tighten it in the designated place.
- Cut the both excess of the zip ties.

STEP 16 New dock assembly: nozzle seal







- Locate the hole for the nozzle seal.
- Insert the nozzle seal (with the spring) into the hole.
- Secure the nozzle seal with a 2.5 mm Allen key. **Do not over-tighten, a few turns are enough for now.**

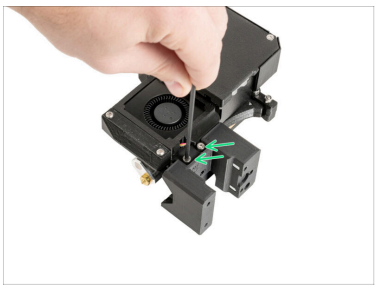
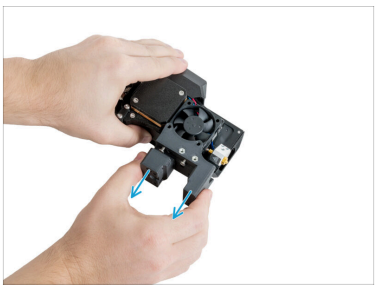
  ⓘ Heigh calibration will be done later after finishing the dock assembly.

STEP 17 Nextruder disassembly: cable bundle



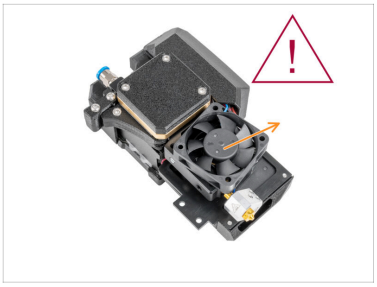
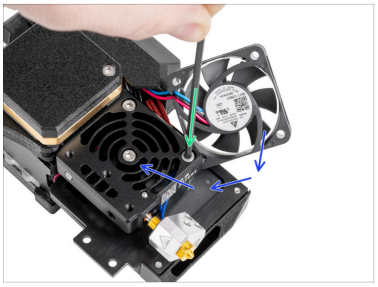
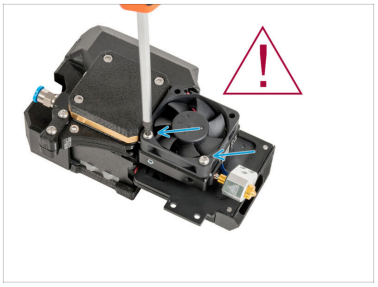
- From the front side of the Nextruder, using a T10 Torx screwdriver untighten two screws to release the cable support.
- Press the Festo fittings and pull out the PTFE tube.
- Press the secure pin and remove the Nextruder cable.

STEP 18 Nextruder disassembly: Nextruder body

- From the right side of the Nextruder, using a T10 Torx screwdriver unscrew two M3x20rT screws. **Do not throw them away!**
- From the left side of the Nextruder, unscrew two screws using a 2.5 mm Allen key.
- Pull out the Nextruder body from the Nextruder.

STEP 19 Nextruder disassembly: heatsink screw

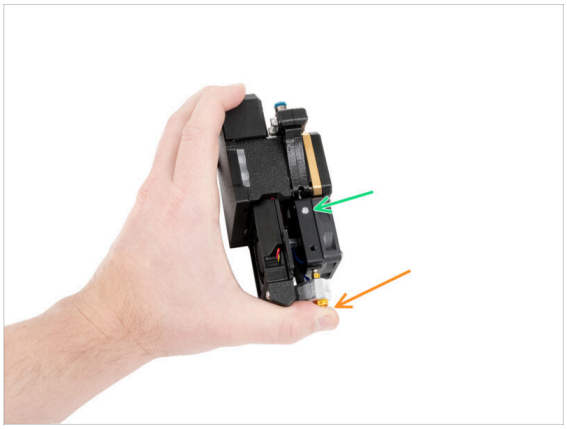
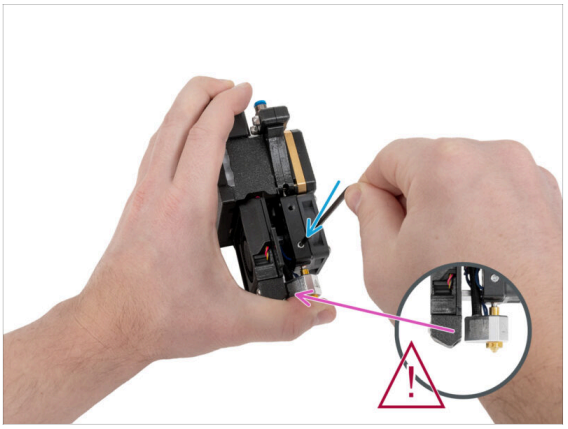




⚠ The heatsink fan is **still connected**, be gentle about the cables!

- Gently move the heatsink fan aside.
- With a 2.5 mm Allen key, remove the M3x10 screw from the lower hole. Leave the hole empty.
- Put the heatsink fan back in place.
- Insert two M3x20rT screws back into the fan holes and tighten them using a T10 Torx screwdriver.

⚠ **Don't pinch any cables!**

STEP 20 Grub screw relocate

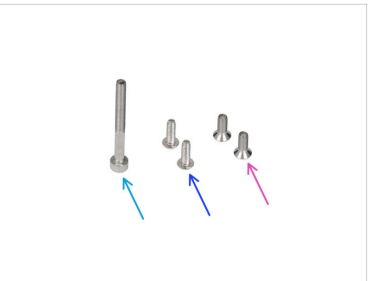



- Hold the Nextruder as described to prevent the nozzle from falling out of the heatsink after loosening the grub screw.
- Locate the grub screw in the heatsink.
- Using a T8 Torx key, relocate the grub screw from the upper hole to the lower hole. **Tighten the screw gently!**

ⓘ The grub screw is for the nozzle release.

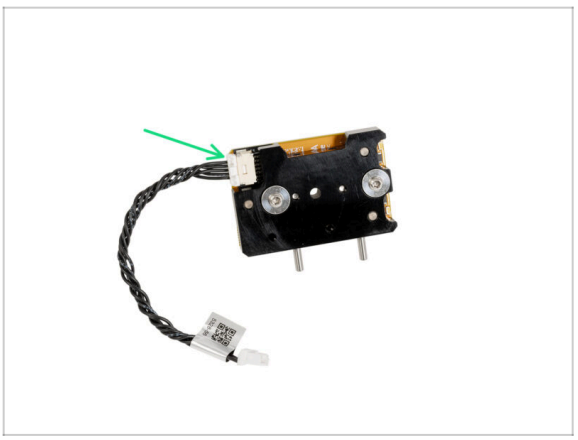
⚠ Make sure, that the Nozzle is not touching the fan-nozzle part.

STEP 21 Nextruder assembly: parts preparation



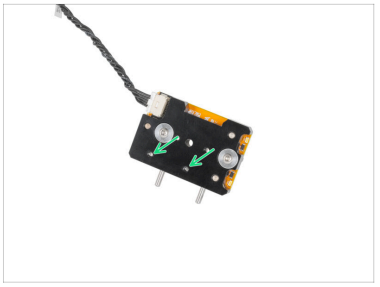
- **For the following steps, please prepare:**
- Tool-changer (1x)
- Tool-changer cable (1x)
- XL-tc-hotend-fan-shield (1x)
- M3x30 screw (1x)
- M3x8rT screws (2x)
- M3x8bT screws (2x)

STEP 22 Tool-changer cable connecting



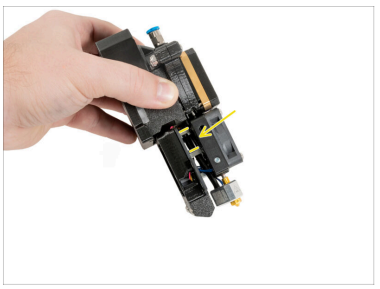
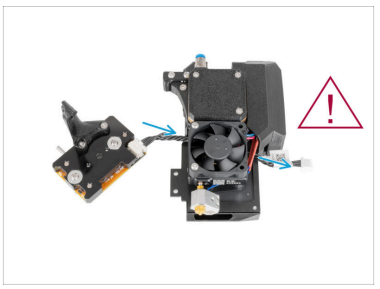
- Connect the tool-changer cable with the tool-changer.

STEP 23 Fan-shield assembly


- Insert two M3x8bT screws into the holes in the fan-shield.
- Locate two holes for the screws on the bottom side of the tool-changer.
- Attach the fan-shield and secure both M3x8bT screws using a T10 Torx screwdriver.

STEP 24 Tool-changer assembly

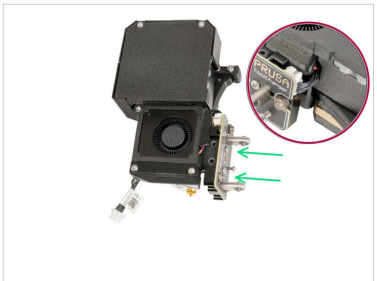




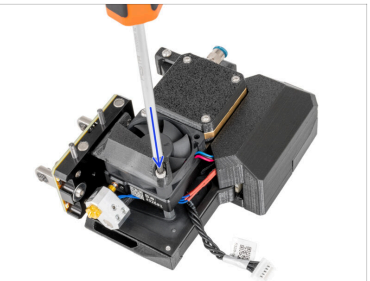
- Look at the graphic of the Nextruder.

  ⓘ The first picture shows, how it looks between the heatsink fan and the heatsink. The second photo shows a different angle.
- Locate the space between two M3nS spacers (long silver M3 nuts).
- Insert the tool-changer cable through two nuts to the back of the Nextruder.

⚠ **Be careful of cables!**

STEP 25 Tool-changer securing



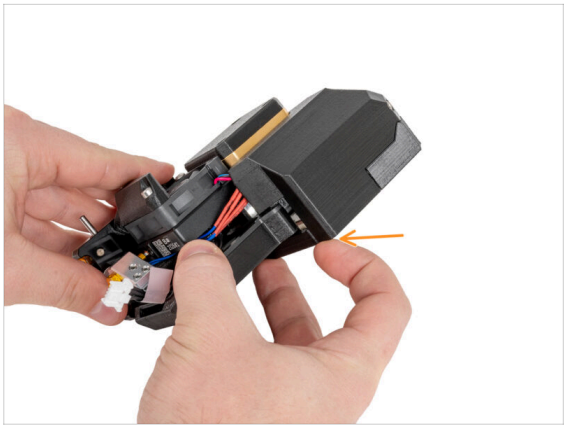
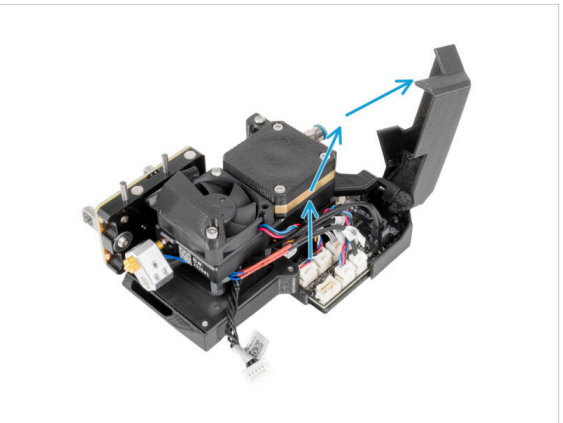


- From the Nextruder's print fan side:

⚠ The tool-changer cable has not to be pinched anywhere!

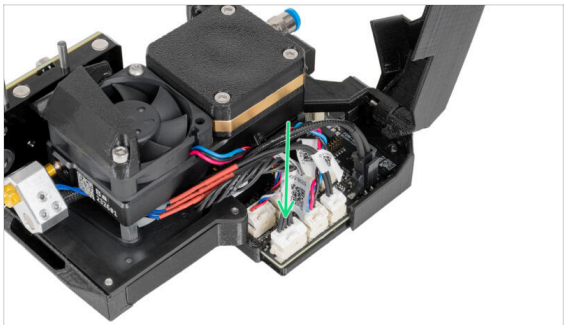
- Attach the tool-changer to the Nextruder.
- Secure the tool-changer with two M3x8rT screws using a T10 Torx screwdriver.
- From the Nextruder's heatsink fan side:
- Insert the M3x30 screw into the lower hole and tighten it using a 2.5 mm Allen key.

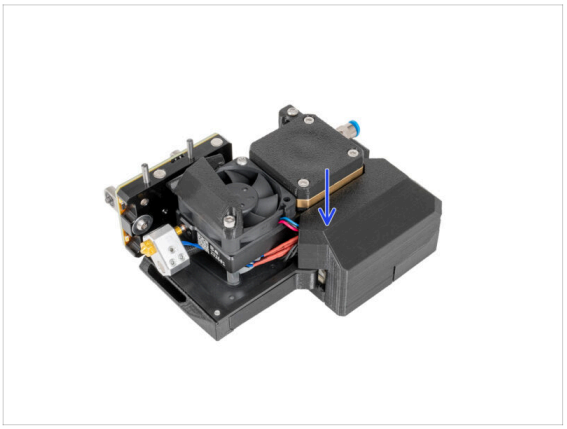
STEP 26 Tool-changer connecting

- Open the plastic cover by pulling out the bottom corner.
- Open the plastic cover.

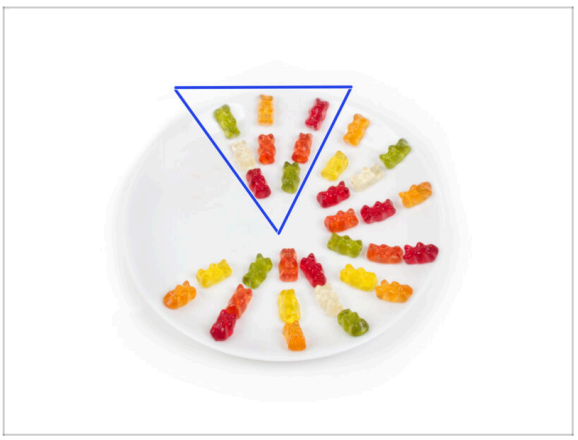
STEP 27 Tool-changer connecting





- Connect the tool-changer cable to the designated connector.
- Close the plastic cover. **Do not pinch any cables!**

STEP 28 Haribo



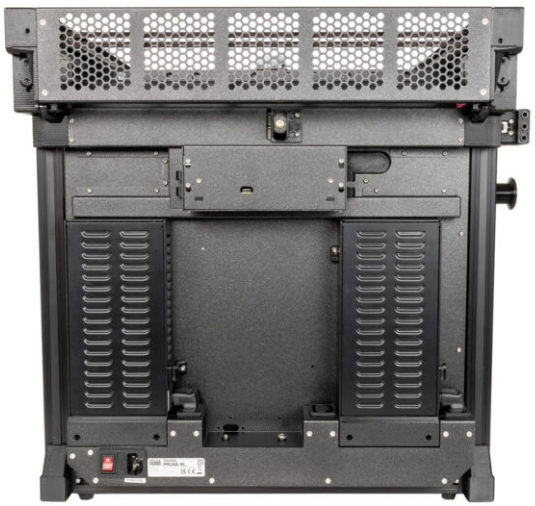
- Eat eight gummy bears.

Did you know that the original gummy bears were inspired by the dancing bears of Europe, and Riegel named them "Gummibärchen," which means "little rubber bears" in German.

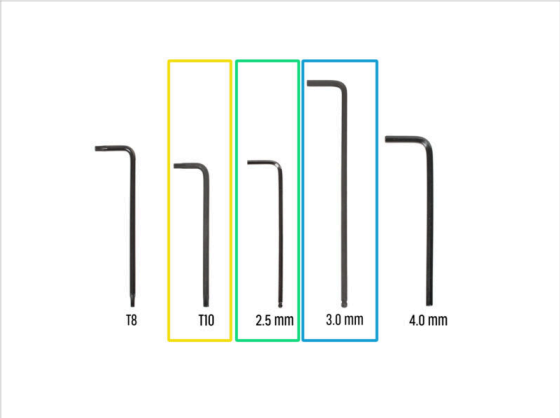
STEP 29 Good job!

- Well done! Nextruder and the cable bundle are prepared for the next steps.
- Let's go to the next chapter: **6. PSU & electronics assembly**

6. PSU & electronics assembly

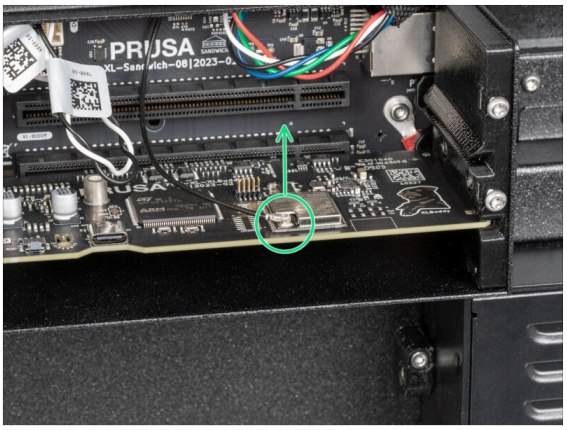


STEP 1 Tools necessary for this chapter



- **For the next steps, please prepare:**
- T10 Torx key / screwdriwer
- 2.5 mm Allen key
- 3.0 mm Allen key
- Needle-nose pliers (1x)
- Philips (PH2) screwdriver (1x)

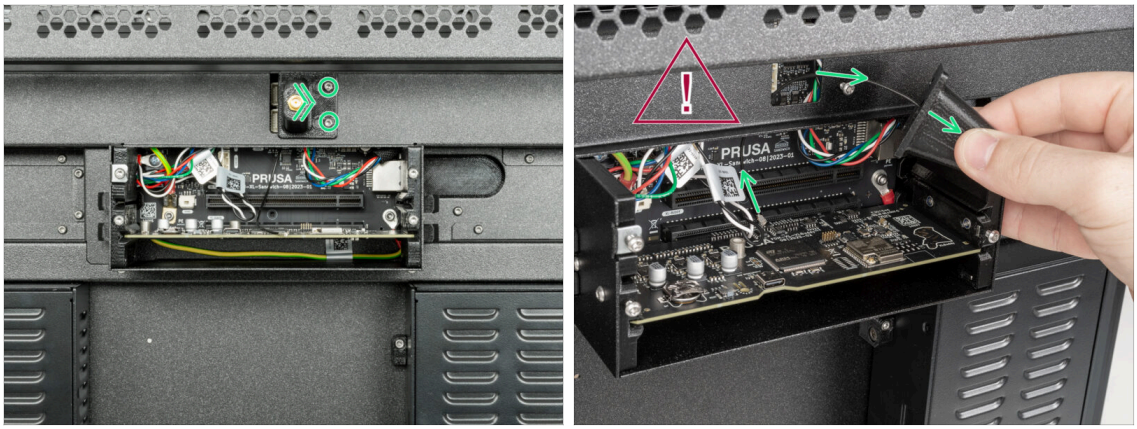
STEP 2 Back antenna disconnecting



- Turn the printer, so the back side is facing you.
- Using a T10 Torx key, loosen four screws securing the electronics cover. Remove the cover.
- Locate and unplug the Wi-Fi connector.

ⓘ If you have the **Wi-Fi antenna on the side** of the printer, **unplug the connector too**.

STEP 3 Back antenna disassembly



This step is only for the printer, which has a Wi-Fi antenna on the back of the printer.

Be careful, do not damage the Wi-Fi antenna cable.

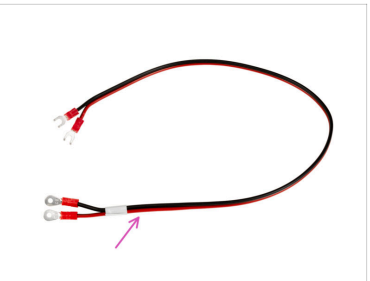
- Loosen two screws on the cover slightly. No need to remove them completely. Push the cover to the right and remove it from the printer.

STEP 4 Back covers disassembly

- Using a T10 Torx key, remove eight M3x4rT screws from the covers.
- Gently remove the rear-cable-management-upper and rear-cable-management-lower. Be aware of the cables.
- Using a T10 Torx key, remove two M3x4rT screws holding the rear-cable-management-base and remove it.
- Cut two zip ties. **Be aware of cables!**
- Good job. The back side of the printer is ready for the third PSU assembly.

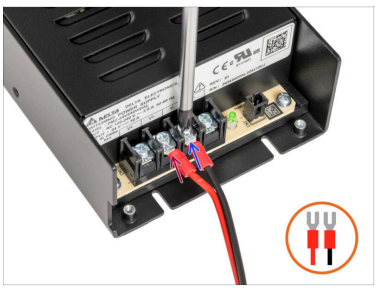
STEP 5 PSU assembly: parts preparation





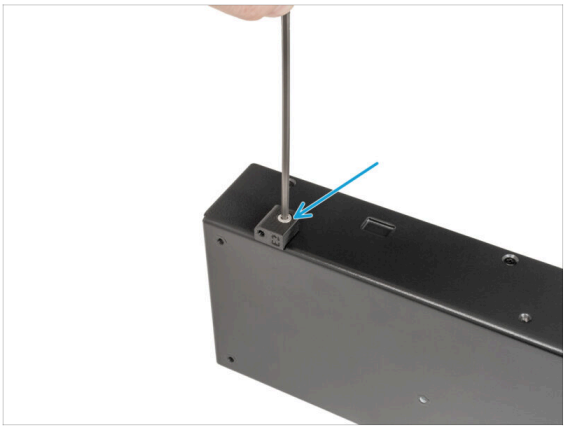
- **For the following steps, please prepare:**
- PSU (1x)
- M3x6 screws (2x)
- M3x20rT screw (1x)
- M4x12 screw (1x)
- PSU-upper-cover-mount (1x)
- Down-angled-ac-adapter (1x)
- Power cable (1x)

STEP 6 PSU assembly: PSU preparing


- Using a Phillips screwdriver, release two Terminal screws.
- Place the red cable on the left terminal and secure it with the terminal screw.
- Place the black cable on the right terminal and secure it with the terminal screw.
- From the side of the PSU, insert the Down-angled-ac-adapter as described in the picture.
- Turn the power switch ON (symbol "I").

STEP 7 PSU assembly: PSU preparing

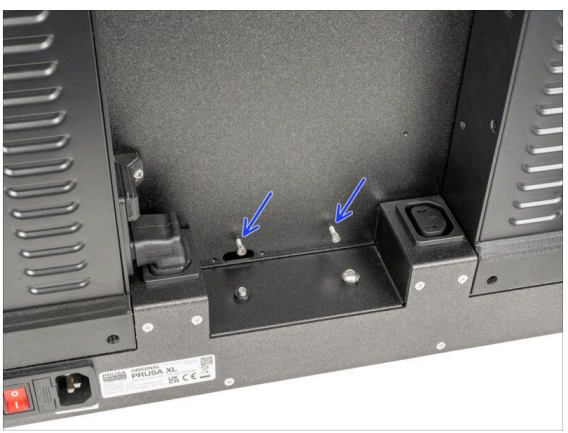


- Insert an M4x12 screw into the PSU-upper-cover-mount.

ⓘ On the opposite side than the Down-angled-ac-adapter assembly.

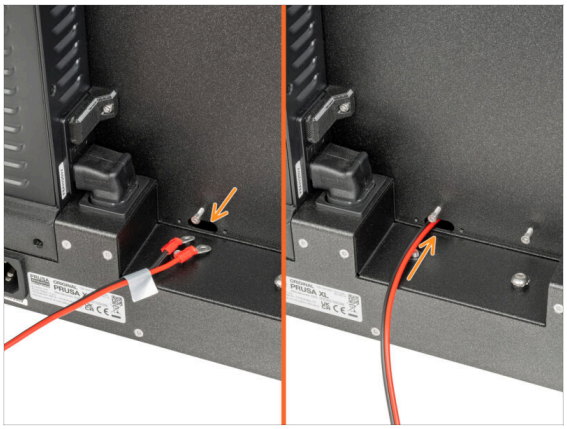
- Attach the PSU-upper-mount-cover to the PSU and secure the M4x12 screw using a 3mm Allen key.

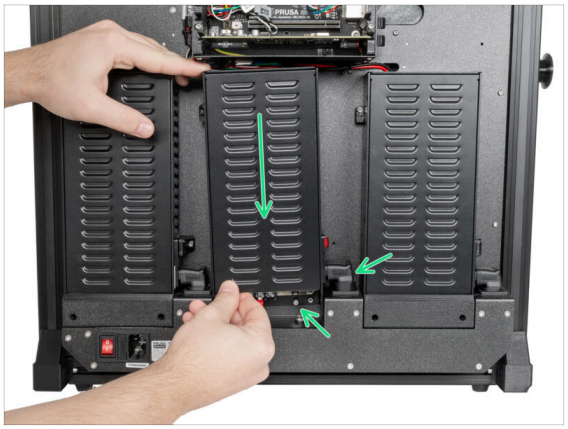
STEP 8 PSU assembly: printer preparing



- Locate two holes on the back of the printer.
- Insert two M3x6 screws and secure them. **A few turns are enough for now.**

STEP 9 Attaching the PSU

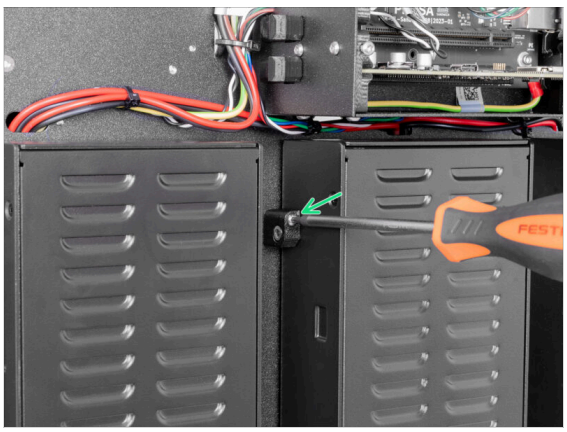


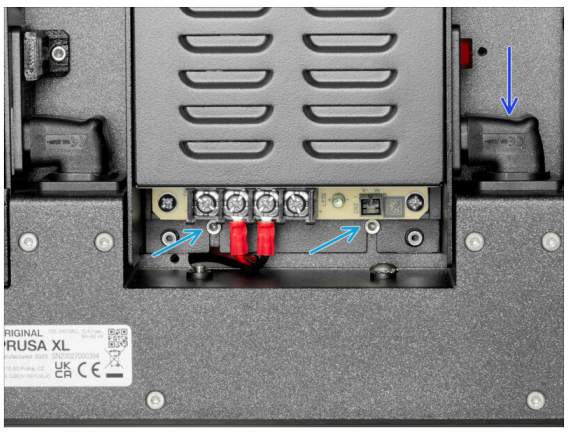


ⓘ Prepare the PSU behind the back side of the printer.

- Insert the power cable through the hole in the back of the printer.
- Gently attach the PSU using two M3x6 screws. Mind the Down-angled-ac-adapter.

STEP 10 Securing the PSU



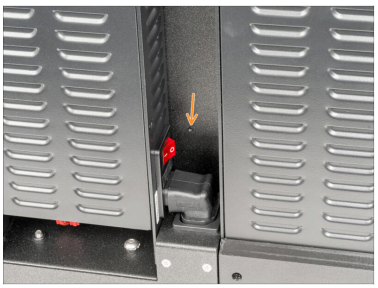


- On the left side of the PSU, insert the M3x20rT screw into the PSU-upper-cover-mount and secure the cover with the back plate of the printer.
- On the bottom of the PSU, tighten two M3x6 screws using a 2.5mm Allen key.
- Pushing down the Down-angled-ac-adapter, secure its position.

STEP 11 PSU covers: parts preparations

- **From the upgrade kit, please prepare:**
- Switch cover (1x)
- M3x8 screw (1x)
- PSU cover (1x)
- M3x10 screw (2x)

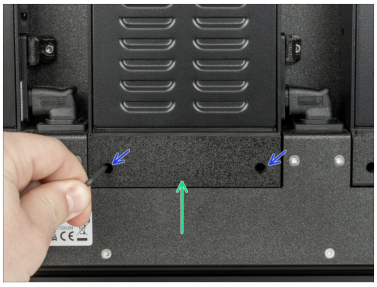
STEP 12 PSU covers: side cover



- Insert the M3x8 screw into the switch-cover.
- On the right side of the PSU, locate the hole in the back plate of the printer.
- Using a 2.5mm Allen key, secure the cover screw with the back of the printer.

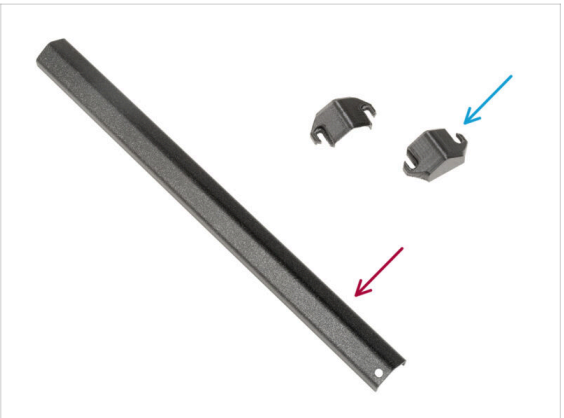
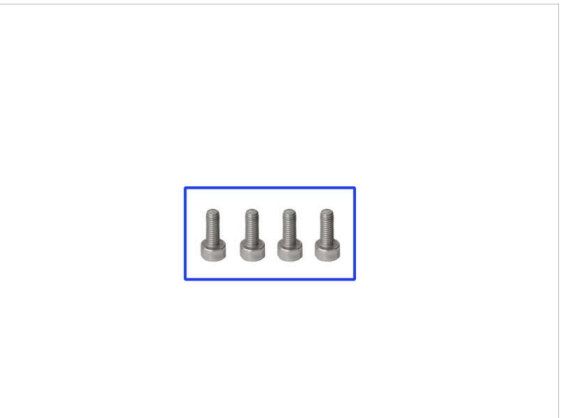
STEP 13 PSU covers: lower cover





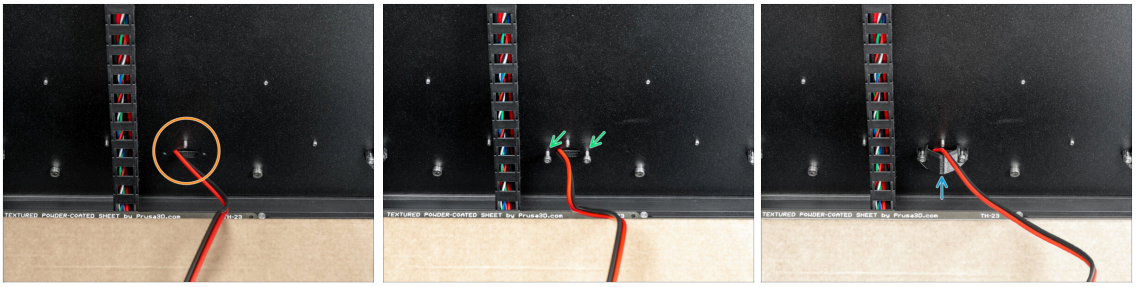
- Insert both M3x10 screws into the PSU cover.
- Insert the prepared PSU cover under the PSU.
- Tighten both M3x10 screws using a 2.5mm Allen key.

STEP 14 PSU power cable cover: parts preparation

- **For the next step, please prepare:**
- Cover PSU cable (1x)
- PSU-cable-cover (2x)
- M3x8 (4x)

STEP 15 PSU power cable cover: lower cover

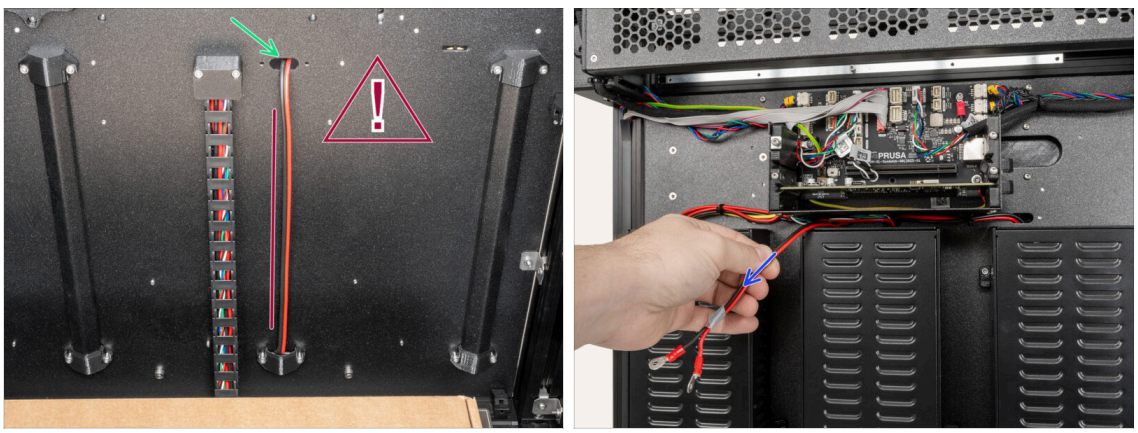


- Turn the printer, so the front side is facing you.
- Locate the hole with the power cable next to the heatbed cable bundle.

ⓘ This part is a little bit tricky because of the manipulation space with the 2.5mm Allen key.

- Insert two M3x8 screws into the holes as described in the picture.
- Between the screws and back plate, insert a PSU-cable-cover. **Do not tighten the screws yet!**

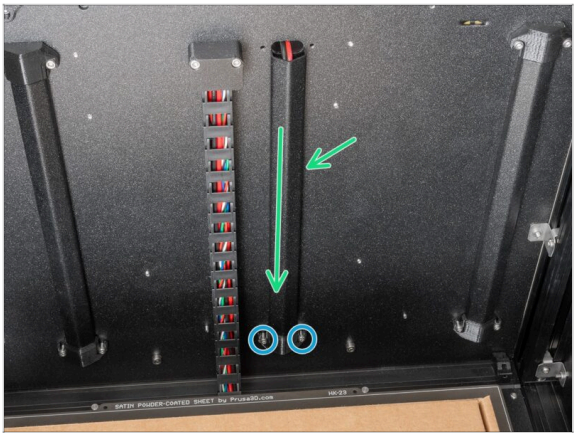
STEP 16 PSU power cable cover: power cable



⚠ **Do not twist the cable.**

- Insert the power cable through the upper hole.
- From the back side of the printer, gently pull the power cable out.

STEP 17 PSU power cable cover: middle cover

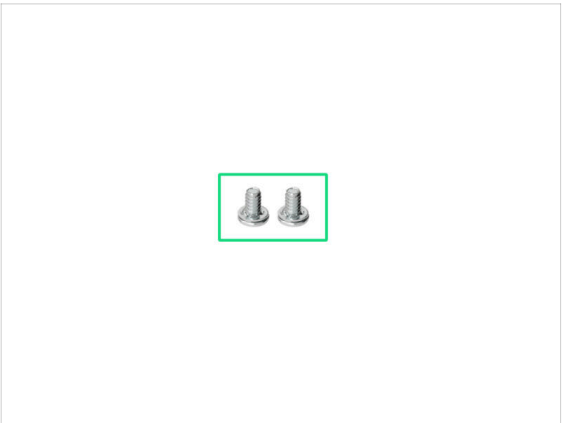


- Between the PSU-cable-cover and the back plate, insert the metal part.
- With the 2.5mm Allen key, tighten two M3x8 screws.

STEP 18 PSU power cable cover: upper cover

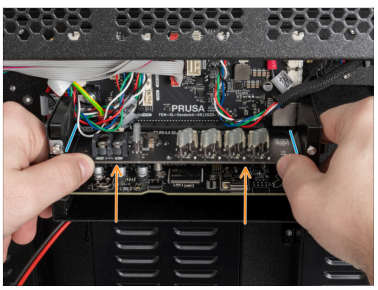
- Insert two M3x8 screws into the back plate as described in the picture.
- Insert the PSU-cable-cover onto the screws.
- Tighten two M3x8 screws using a 2.5mm Allen key.

STEP 19 XL-splitter: parts preparation



- **For the next steps, please prepare:**
- XL-splitter (1x)
- Terminal screws 6/32 (2x)

STEP 20 XL_splitter installation

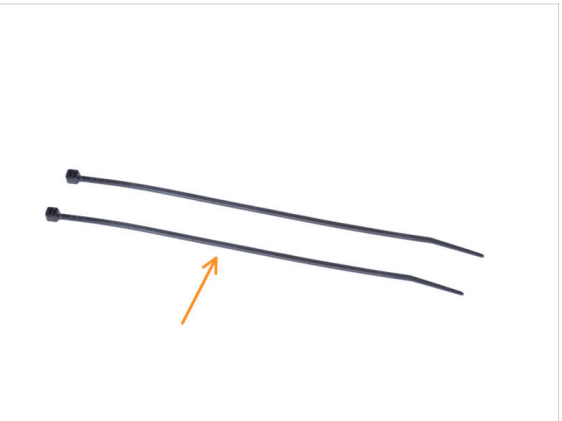


⚠ **Be careful, don't pinch any cables!**

- There are prepared guide grooves on the sides of the XL-buddy-box.
- Using both hands, insert the XL-splitter into the slot in the XL-sandwich-board.
- Take the power cable and turn it around the left side of the XL-buddy-box.
- Place the black cable on the left terminal and secure it with the terminal screw.
- Place the red cable on the right terminal and secure it with the terminal screw.

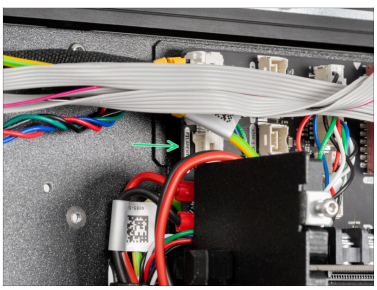
⚠ Note the correct orientation of the PE cable connector.

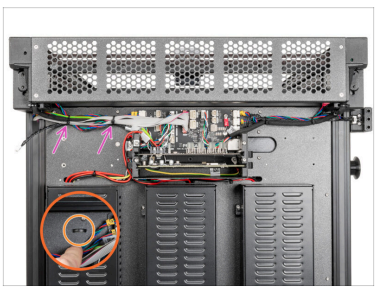
STEP 21 Filament sensor cable: parts preparation



- **For the next step, please prepare:**
- Filament sensor cable (1x)
- Zip-ties (2x)

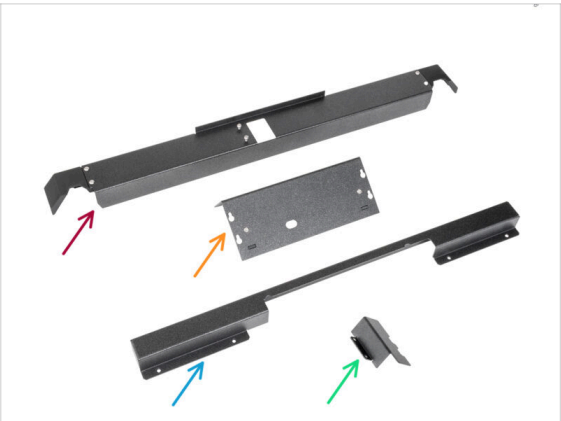
STEP 22 Filament sensor cable: connecting the cable

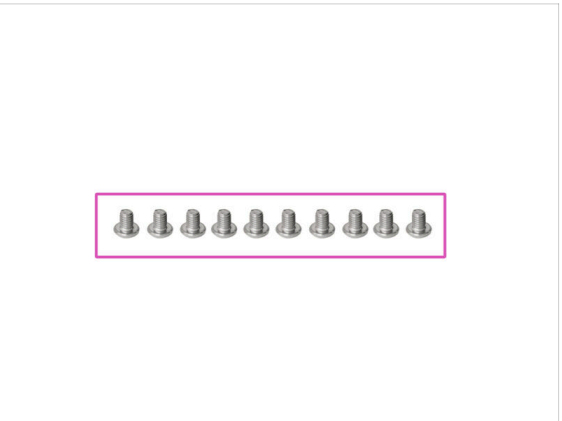




- Locate the filament sensor cable connector on the left side of the XL-sandwich board.
- Plug one end of the filament sensor cable to the connector.
- Locate the perforations in the metal sheet for the zip-ties.
- Push two zip ties through the perforations in the metal sheet to secure all the cables guiding from the electronics box. Tighten them gently. Cut the excess of the zip ties.
- ⓘ The black twisted cable is for the second filament sensor, which will be installed later in the next chapter.
- Good job! Now we can cover the cables.

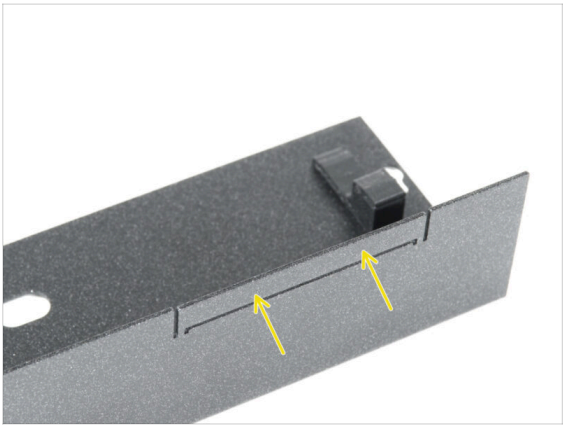
STEP 23 Metal plate cable covers: parts preparations

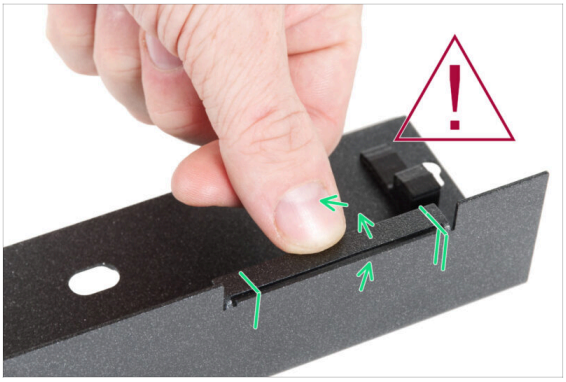




- **For the next steps, please prepare:**
- Rear-cable-management-upper (1x) *you removed in the previous steps*
- XL-buddy-box-cover (1x) *you removed in the previous steps*
- Rear-cable-management-lower (1x) *you removed in the previous steps*
- Rear-cable-management-base (1x) *you removed in the previous steps*
- M3x4rT screws (10x) *you removed in the previous steps*

STEP 24 Adjusting the XL-buddy-box-cover





CAUTION: Exercise caution as the sheets may have sharp edges.

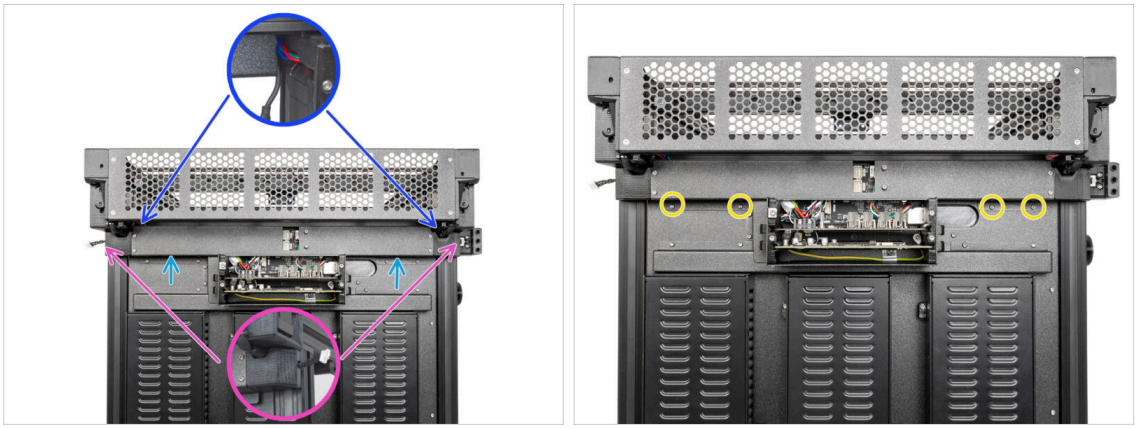
- Take the XL-buddy-box-cover and locate a rectangular cutout on it.
- According to the second picture, bend the cutout "inside" the cover. The sheet must be bent to 90 °.

STEP 25 Lower metal plate cable covers

⚠ **Do not pinch any cables!**

- Gently attach the Rear-cable-management-lower and secure it with four M3x4rT screws using a T10 Torx key.
- From the left side, attach the rear-cable-management-base and secure it with two M3x4rT screws using a T10 Torx key.

STEP 26 Upper metal plate cable covers



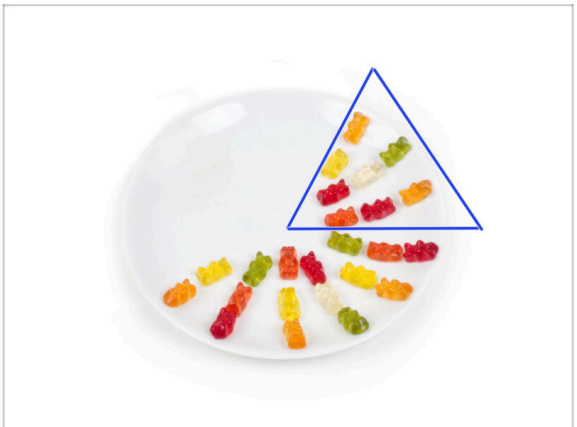
- Attach the Rear-cable-management-upper.
  - Make sure that no cable is pinched in the plastic covers.
  - Make sure that the metal cover does not pinch the motor cable.
- Secure the rear-cable-management-upper with four M3x4rT screws using a T10 Torx key.

STEP 27 XL buddy cover

ⓘ In this step, temporarily cover the electronics. This is to protect the electronics during the installation of the tool heads in the following chapter. The electronics cover does not need to be tightened.

- Attach the XL buddy box cover to the screws on the electronics box. And slide it down to lock it on the screws.

STEP 28 Reward yourself!



- Eat eight gummy bears.

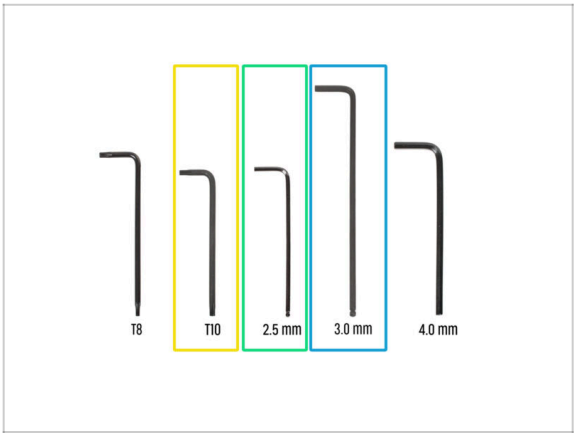
ⓘ **Did you know that** in 2014, a gummy bear-inspired emoji was added to the Unicode Standard, allowing gummy bear enthusiasts to express their love for the candy in digital conversations.

STEP 29 Well done!

- Good job! The third PSU is attached. Let's go to the next chapter: **7. Extruder & accessories assembly**

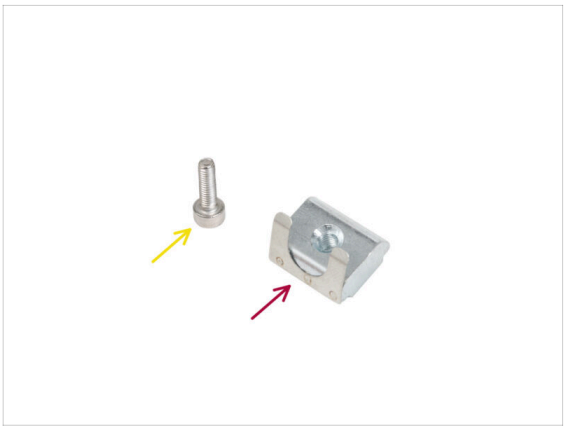
7. Nextruder & accessories assembly

STEP 1 Tools necessary for this chapter



- **For the next steps, please prepare:**
- T10 Torx key (T10 Torx screwdriver)
- 2.5 mm Allen key
- 3.0 mm Allen key

STEP 2 Filament sensor: parts preparation



- **For the following steps, please prepare:**
- Side filament sensor assembly - right (1x)
- M3x10 screw (1x)
- M3nEs nut (1x)

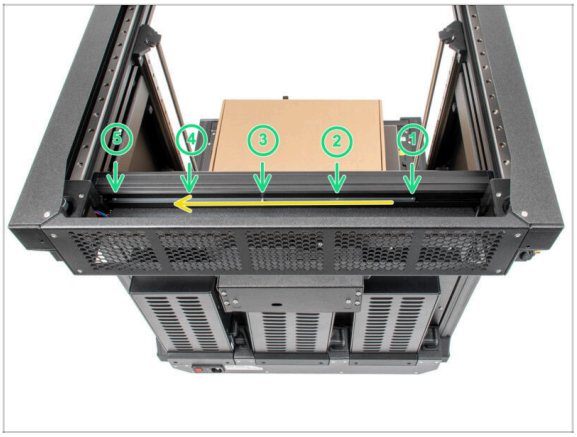
STEP 3 Right filament sensor

- From the right side of the printer:
- Insert the M3nEs nut into the extrusion.
- Connect the filament sensor cable to the filament sensor.
- Insert and tighten the M3x10 screw using a 2.5 mm Allen key.
- ⓘ You should now have both Side Filament sensors attached.

STEP 4 Nextruder cable: parts preparation

- **For the next steps, please prepare:**
- Cable bunde (5x)

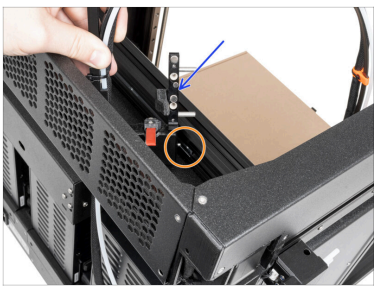
STEP 5 Guiding the Nextruder cable

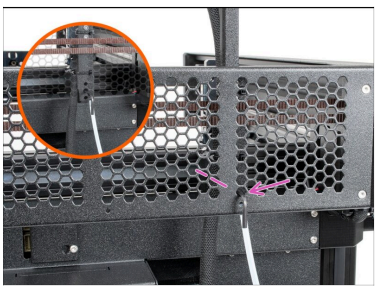


- Carefully turn the printer 180° so that the PSU (Power Supply Unit) side is towards facing you.
- Locate the long metal profile with five M3 holes inside the rear aluminium extrusion and push it to the left.
- We'll use all M3 holes in the metal profile.

⚠ Maintain the position of the long metal profile for the next step. **It must not move!**

STEP 6 Attaching the Nextruder docks





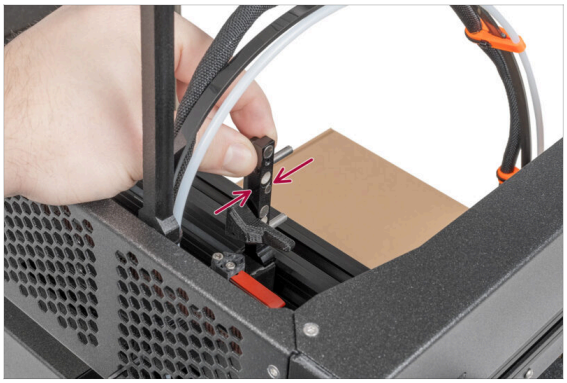
- Place the xl-dock-cable-router on the bottom metal sheet below the aluminum extrusion.
- There is a protruding screw from the xl-dock-cable-router. Attach the screw to the first screw hole on the long metal profile. Through the hole in the rear metal sheet, check if the cable holder is lined up with 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.**

- Remove the M3x10 screw using a 2.5 mm Allen key.

ⓘ **Attach all the remaining docks using the same procedure**

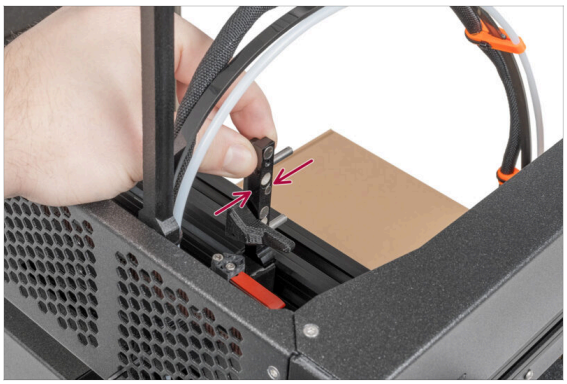
STEP 7 Dock inspection



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

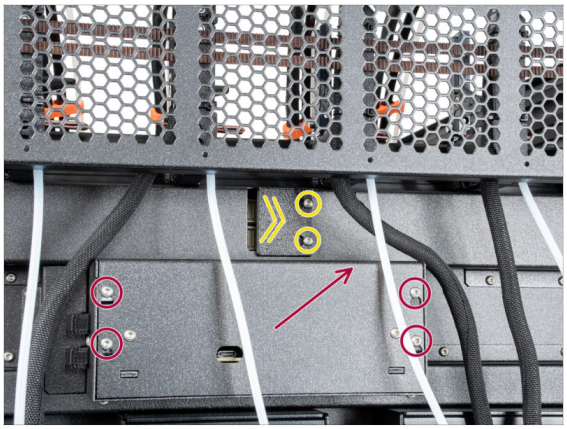
ⓘ **The dock is a press fit, so the screw needs to be tightened very hard.**

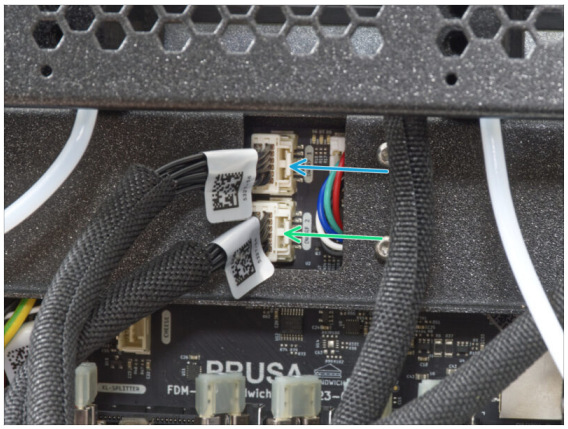
STEP 8 Dock inspection: video



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

STEP 9 Connecting the Nextruder cables



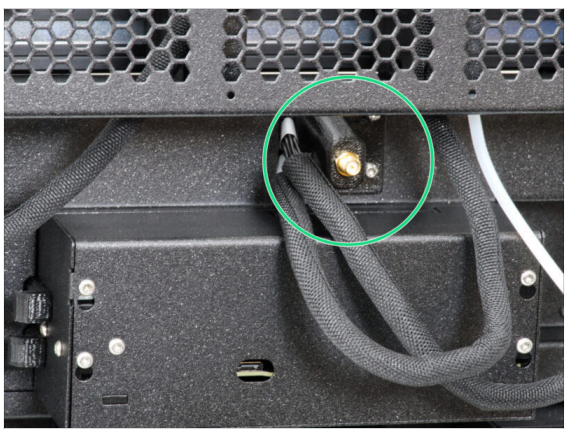


- Locate the xl-rear-cable-management-plug (cover) on the rear of the printer.
- Loosen two screws on the cover slightly. No need to remove them completely. Push the cover to the right and remove it from the printer.
- Loosen four screws securing the electronics cover. Remove the cover.

ⓘ The back of the printer is facing you.

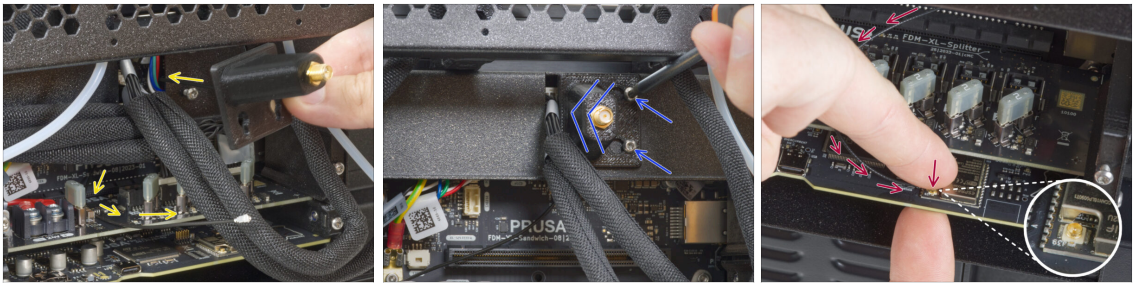
- Connect the first dock (from the right side) cable to the upper slot labeled DWARF 1.
- Connect the second dock (from the right side) cable to the lower slot labeled DWARF 2.

STEP 10 Wi-fi antenna holder versions



- The antenna connector is prepared by the manufacturer:
  - Version A: The Wi-Fi antenna holder is on the side. **We haven't removed it.**
- The antenna connector has to be assembled by you:
  - Version B: The Wi-fi antenna is in the middle. **Continue to the next step.**

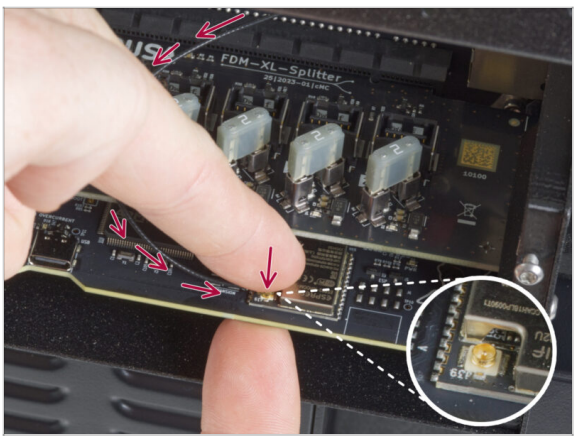
STEP 11 Installing the rear Wi-Fi antenna holder



This step is only for the printer, which has a Wi-Fi antenna on the back of the printer. If you have the **antenna on the side** of the printer, **proceed to the next step**.

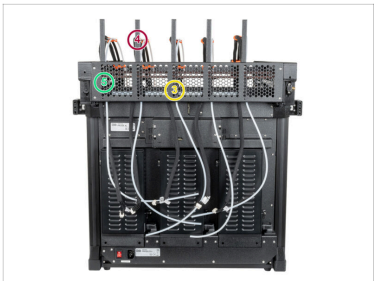
- Push the antenna cable through the opening in the cable cover (metal sheet) and guide it behind the cover to the electronics box.
- Attach the antenna-holder on the screws and push the cover to the left and tighten the screws.
- Connect the antenna to the apporpiate slot on the XL Buddy board.

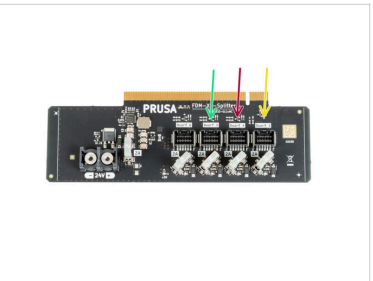
STEP 12 Connecting the side Wi-Fi antenna

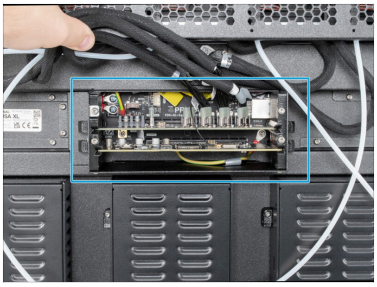


- Connect the antenna to the appropriate slot on the XL Buddy board.

STEP 13 Connecting the Nextruder cables



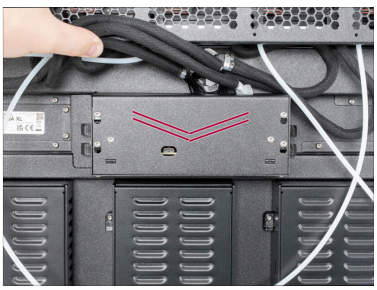


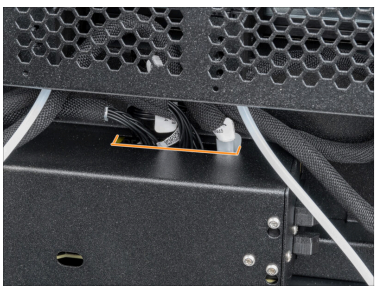


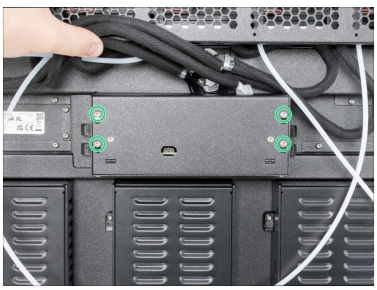
ⓘ **Do not take the XL-splitter board out of the printer**, the photo is only a tool for connecting the Nextruder cables.

- Connect the third, fourth and fifth (from the right) Nextruder to the splitter:
  - #3 Nextruder.
  - #4 Nextruder.
  - #5 Nextruder.
- XL-splitter with connected Nextruders has to look like this.

STEP 14 XL buddy box covering







⚠ **Be carefull, do not pinch any cables!**

- Put the XL-buddy-box-cover back on the printer.
- Check Nextruders cables, they have to be inside the cutout in the cover.
- With a T10 key tighten the four screws.

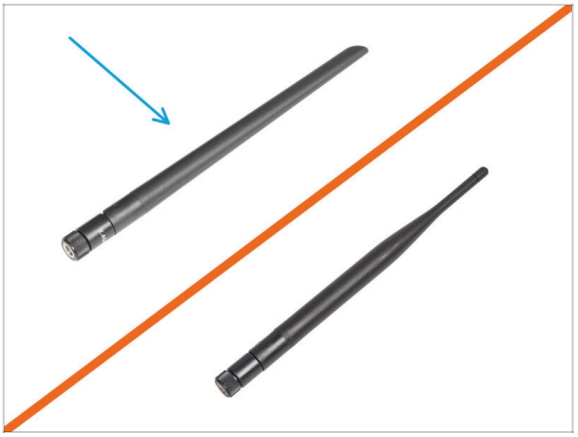
STEP 15 Guiding the docks PTFE tubes

- Locate the left filament sensor.
- Insert the **first** dock (from the right side) PTFE tube all the way into the **upper** hole in the part.
- Insert the **second** dock (from the right side) PTFE tube all the way into the **middle** hole in the part.
- Insert the **third** dock (from the right side) PTFE tube all the way into the **lower** hole in the part.

STEP 16 Guiding the docks PTFE tubes

- Locate the left filament sensor.
- Insert the **fourth** dock (from the right side) PTFE tube all the way into the **upper** hole in the part.
- Insert the **fifth** dock (from the right side) PTFE tube all the way into the **middle** hole in the part.

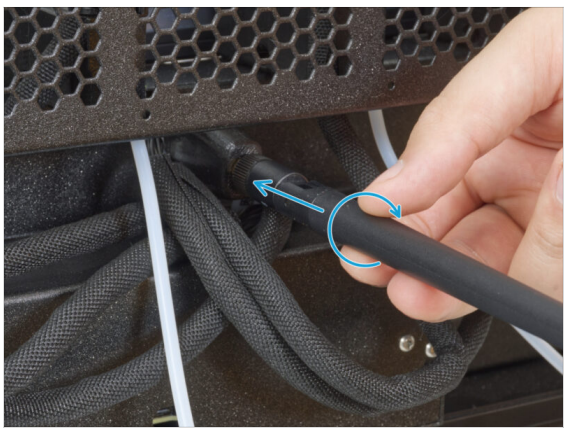
STEP 17 Installing the Wi-Fi antenna: parts preparation

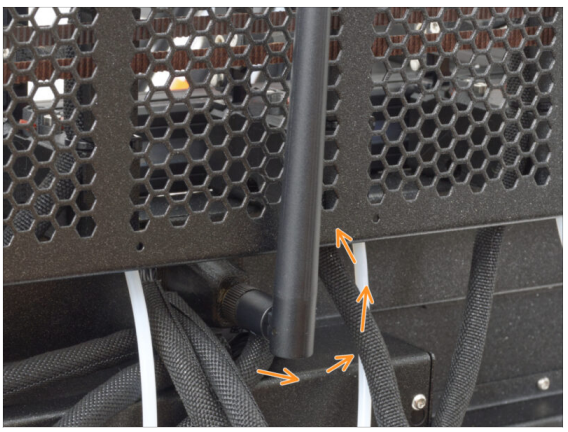


ⓘ This step is only for the printer, which has a Wi-Fi antenna on the back of the printer.

- **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 18 Installing the Wi-Fi antenna





ⓘ This step is only for the printer, which has a Wi-Fi antenna on the back of the printer.

- 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 19 Spool holder: parts preparation

- **For the following steps, please prepare:**
- Spool-holder-slider (4x)
- Spool-holder-base (4x)
- M4x12 screw (4x)
- M4nEs nut (4x)

STEP 20 Assembling the spool holder

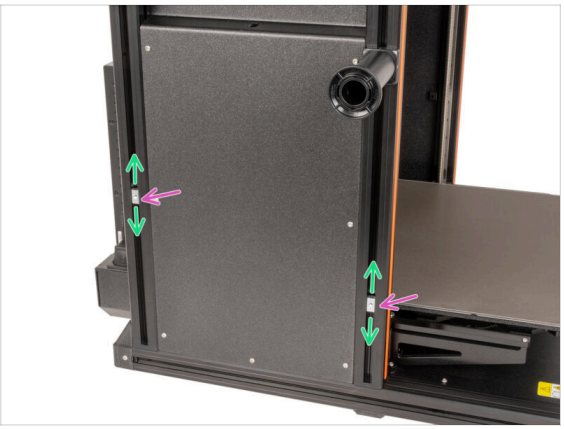
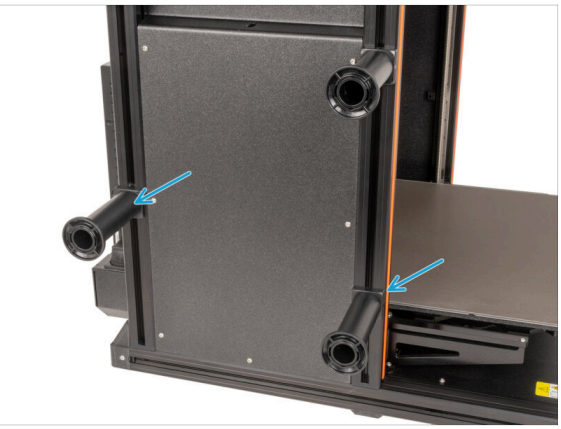
- Locate pins two pins on the spool-holder-base and line them with the rails in the spool-holder-slider.
- Insert the spool-holder-base into the spool-holder-slider and push it through a little through the part.
- Prepare all four spool holders.

STEP 21 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 22 Spool holder: left side assembly

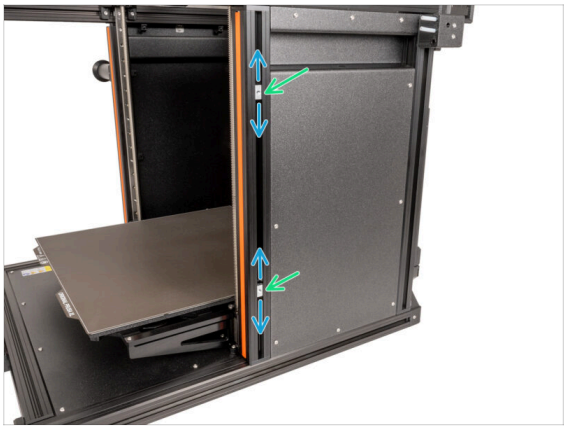



- Carefully turn the printer so that the side with the Filament sensor (with 3 PTFE tubes) is facing you.
- Insert the second and third M4nEs nut in the extrusion. Insert the side with the spring (metal plate) first, then push the nut inside.
- The M4nEs nuts are free to move, you can adjust the position as you want. But remember, the nuts must be slightly pushed in to smoothly move. Anyway, we recommend approximately the same position as you can see in the picture.
- Attach and tighten the second and the third spool holder to the M4nEs nut using a 3 mm Allen key. Note that there is a protrusion on the spool-holder-mount, which must fit into the groove in the extrusion.

⚠ **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 23 Spool holder: right side assembly



- Turn the printer, so the Filament sensor (with two PTFE tubes) is facing you.
- Insert the fourth and fifth M4nEs nut in the extrusion approximately to the same position as shown.
- The M4nEs nuts are free to move, you can adjust the position as you want. But remember, the nuts must be slightly pushed in to smoothly move. Anyway, we recommend approximately the same position as you can see in the picture.
- Attach and tighten the fourth and the fifth spool holder to the M4nEs nut using a 3 mm Allen key. Note that there is a protrusion on the spool-holder-base, which must fit into the groove in the extrusion.

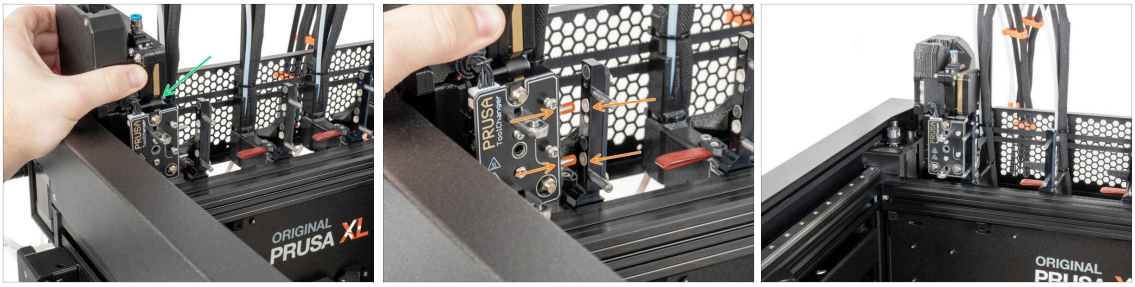
⚠ **Do not use the spool holder as a handle!**

ⓘ 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 24 Nextruder assembly: parts preparation

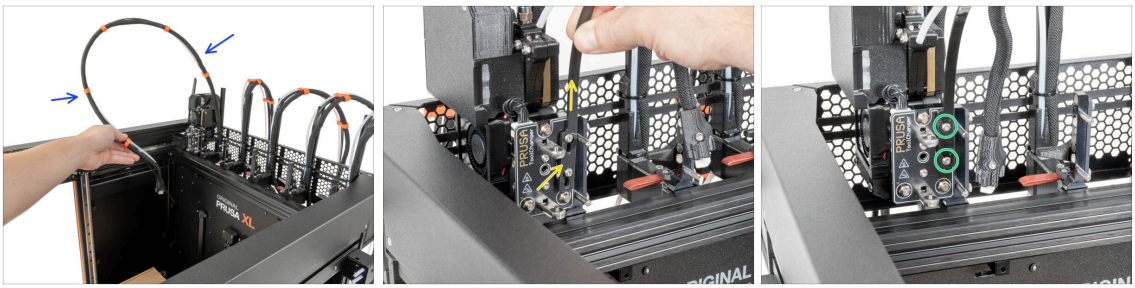
- **For the next steps, please prepare:**
  - Nextruder (5x)

STEP 25 How to dock the Nextruder



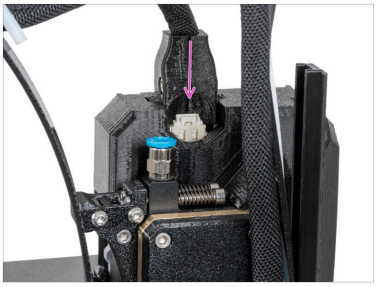
- Take the Nextruder and place it carefully next to the dock.
- Place the two metal inserts through the white holes in the dock. The magnets will help you dock the Nextruder.
- Check that the Nozzle seal lightly touches the nozzle.
- Well done, the first Nextruder is ready!
- Connect the second, third, fourth and fifth Nextruder in the same way as the first.

STEP 26 Nextruder cable bundle assembly



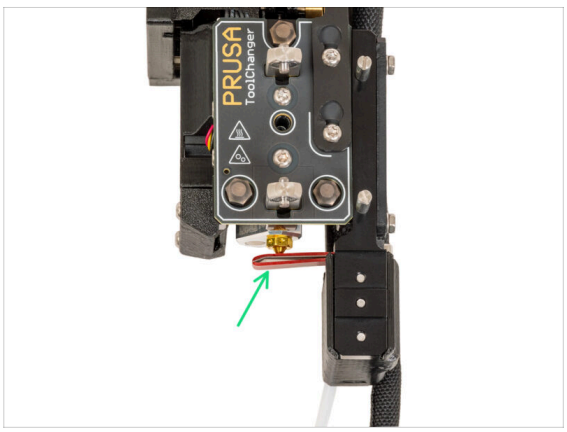
- **Repeat this step for all tool heads:**
  - Take the first dock Nextruder cable bundle.
  - Check that the cable bundle is not twisted!
  - Hook up the keyhole openings in the flexible plate of the cable bundle onto the screw heads and push it up to correct the position.
  - Using a T10 key tighten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

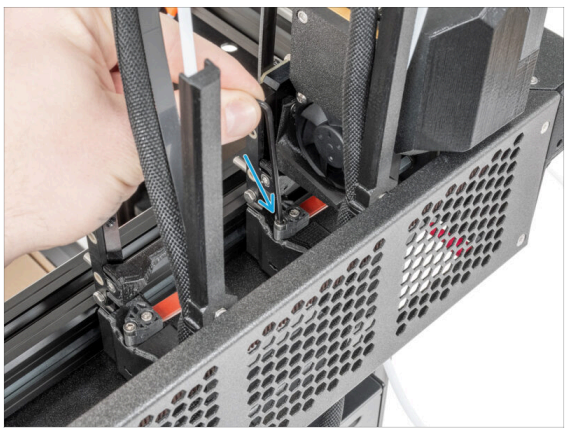
STEP 27 Nextruder cable bundle assembly



- **Repeat this step for all tool heads:**
  - Attach the cable connector into the top of the Nextruder.
  - Insert the semi-transparent PTFE tube into the FESTO fitting on the Nextruder. Push it all the way in.
- Assemble and connect all Nextruders.
- Good job!

STEP 28 Nozzle seal height calibration

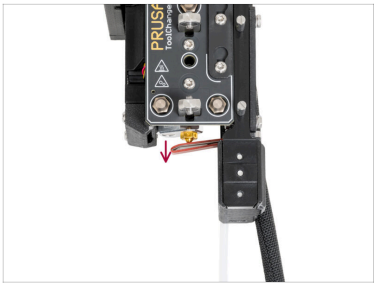
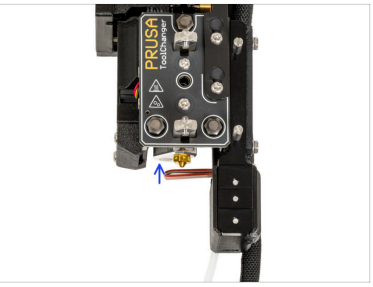
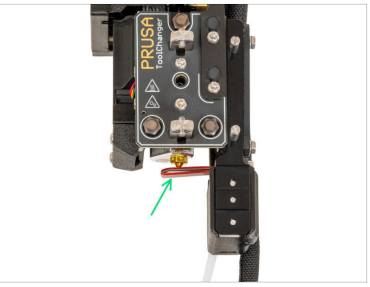




ⓘ Starting from May 2024, you may receive a gray nozzle seal. The assembly and functionality remain identical to the red one.

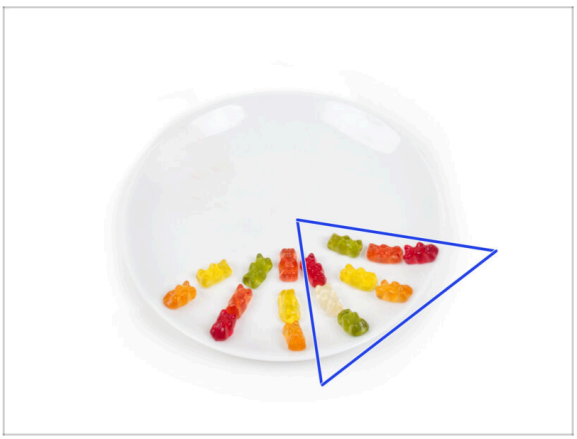
- The following image was made with the Nextruder and dock removed from the printer for better visibility of how it should be set. **Please do not remove the docks from the printer and set the seal height with the dock still connected to the printer.**
  - In the next step, we'll calibrate the height 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 29 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.
  - Turn the M3x30 screw counterclockwise to set the Nozzle seal higher.
- The correct position of the nozzle seal is when it isn't bent and is touching the nozzle.

STEP 30 Haribo time!



- Eat another eight gummy bears.

Did you know that the bright colors of gummy bears are achieved through the use of food coloring, which adds to their visual appeal.

STEP 31 Remaining fasteners

- To avoid the concern of having leftover nuts and screws, refer to the following list of fasteners that should remain unused from the initial package upon completing the assembly.

ⓘ Note that if you have used any spare, the final count may vary.

- **Remaining fastener items:**
  - Terminal screw (1x)
  - M3x6 (1x)
  - M3x8 (1x)
  - M3x8bT (1x)
  - M3x8rT (2x)
  - M3x10 (3x)
  - M3x12 (1x)
  - M3x12bt (2x)
  - M3x14 (1x)
  - M3x20rT (2x)
  - M3x30 (1x)
  - M3x35 (2x)
  - M4x12 (1x)
  - M3nN (1x)
  - M3nS (1x)
  - Spring 15x5 (1x)

STEP 32 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 **8. First run**

8. 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 4.7.0 or newer**

ⓘ You can download firmware updates in **Downloads**. The guide for updating the firmware is in **How to update firmware (MK4, XL)**

ⓘ 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

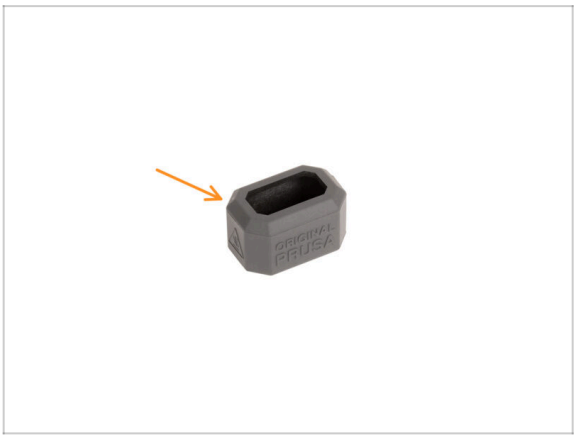
⚠ Make sure that the printer is placed in a stable place where no ambient vibrations are transmitted (for example, where other printers are printing).

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

STEP 3 Factory reset

- After upgrading, the first thing we need to do is reset the printer to factory defaults.
- On the printer screen, go to *Settings -> System -> Factory reset* and select Reset Settings & Calibrations.
- Wait till the printer is ready.
- Restart the printer.
- Select the language you prefer.
- Good job. The printer is ready for Wizzard. Proceed to the next step.

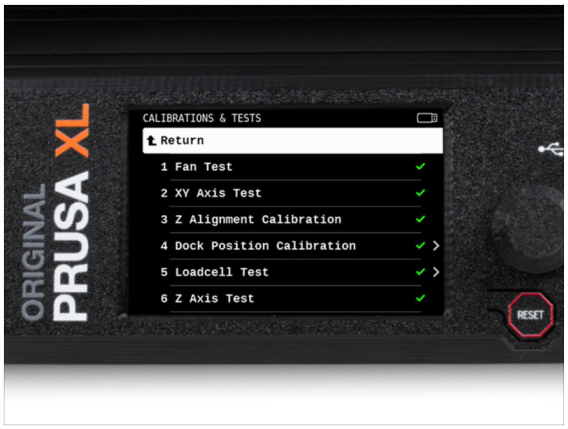
STEP 4 Prusa Nextruder sock (Optional)



- 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 Wizard



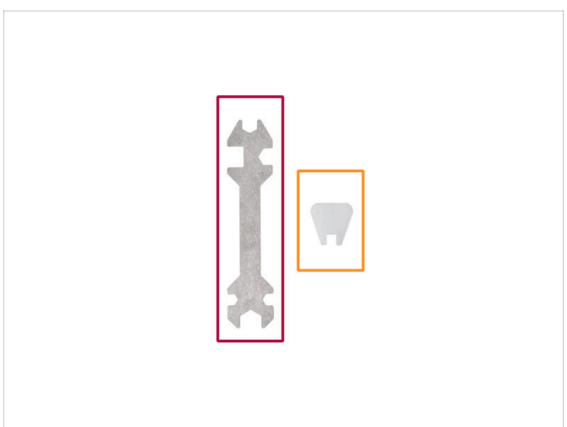
- After the printer starts up, the screen prompts for the printer test and setup wizard.

ⓘ 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.**

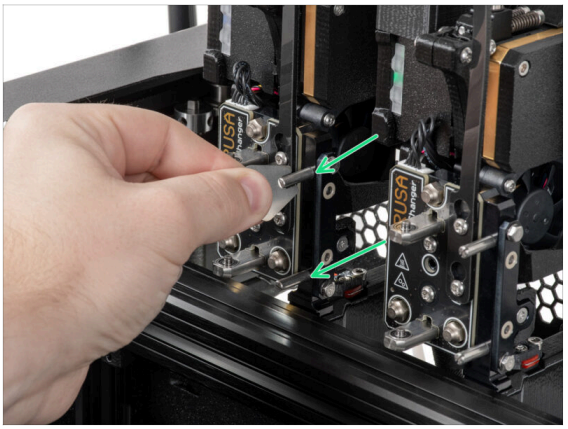
STEP 6 Wizard: Dock Position Calibration



- 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.

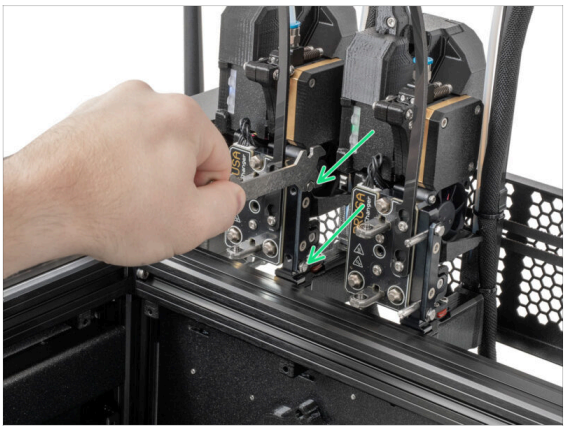
⚠ It is necessary to follow every step in the dock calibration properly! **Do not rush, read every step twice, then proceed with the instruction.**

STEP 7 Wizard: Loosen pin



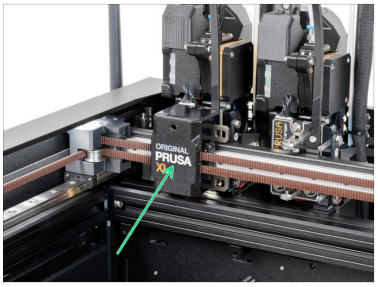
- Follow the wizard instructions on the screen.
- Using a Mini wrench, unscrew and remove both dock pins on Dock 1.

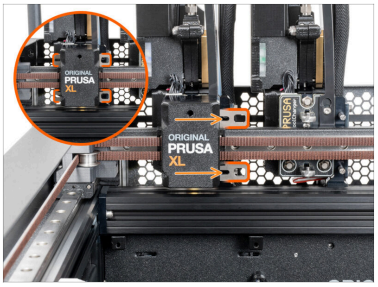
STEP 8 Wizard: Loosen screws



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

STEP 9 Wizard: Lock the tool

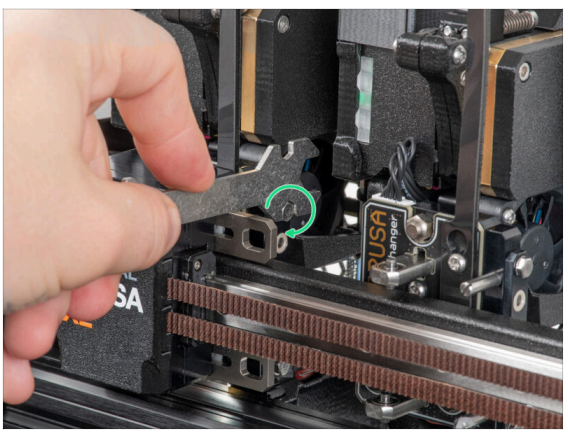




- Follow the wizard instructions on the screen.
- Manually move the Tool changing mechanism to the first tool.
- Manually lock the metal bars as described in the picture.

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

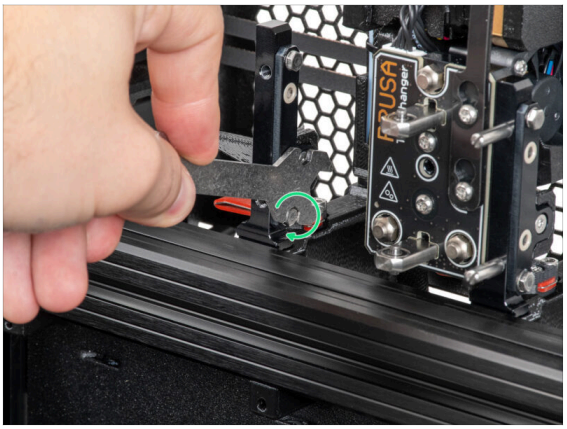
STEP 10 Wizard: Tighten the upper screw



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

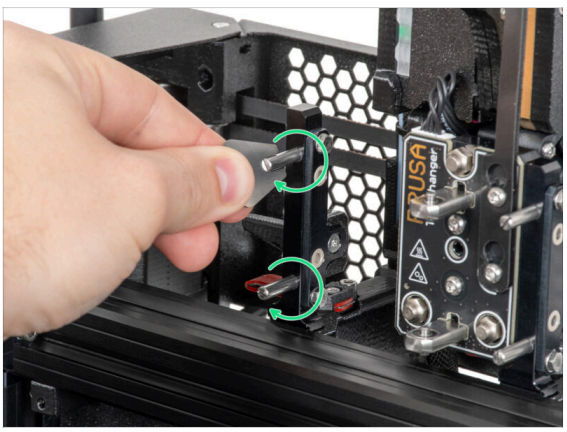
⚠ After confirming by the *continue* button on the LCD, the XY axis will leave the dock with the tool. **Clear the space.**

STEP 11 Wizard: Tighten the lower screw



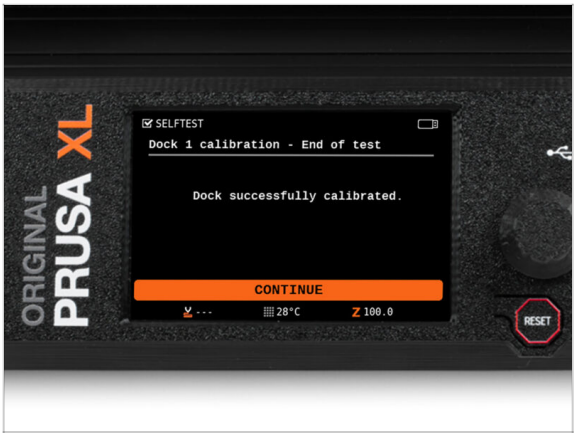
- Follow the wizard instructions on the screen.
- Using a Uni wrench, tighten the lower screw on a side of the dock.

STEP 12 Wizard: Install pins



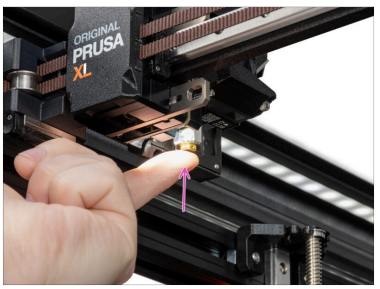
- Follow the wizard instructions on the screen.
- Insert the two metal pins and tighten them with a Mini wrench.
- After clicking on the *continue* button on the LCD, the printer will put back the tool into the dock1 and do a few calibration moves.
- After the Dock1 calibration, proceed to the Dock2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

STEP 13 Wizard: Dock successfully calibrated



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

STEP 14 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.

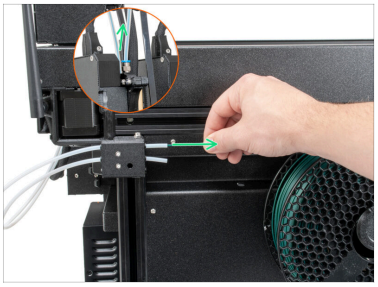
STEP 15 Wizard: Recalibrate Filament Sensors

- After the upgrade, we need to recalibrate the filament sensors.
- Your printer should have no filament at all.
- Please proceed through the filament sensor calibration. Follow the instructions on the display.
- Select **NO**, your printer has no filament at all.
- Wait for the printer to prompt you to insert the filament into the side filament sensor.
- Proceed to the next step.

STEP 16 Wizard: Recalibrate Filament Sensors

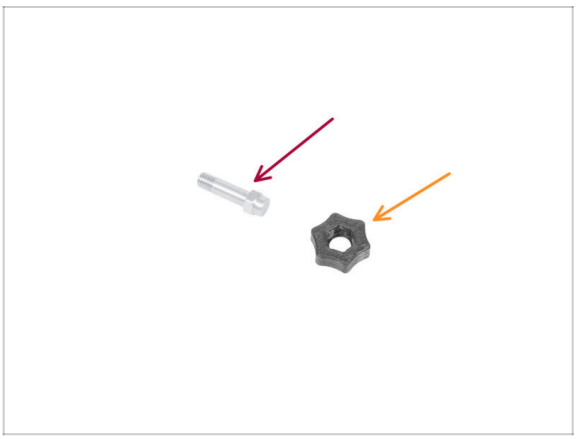
- Now, insert the filament into the PTFE tube (the tool head you selected) in the side filament sensor and push it until it reaches the filament sensor in the extruder (you will feel a slight resistance).
- You can check the side filament sensor (left) and extruder filament sensor (right) status on the bottom bar on the screen.
- It takes several seconds for the filament sensor to be calibrated.
- After the successful calibration, proceed on the screen by selecting **Continue**.
- Proceed to the next step.

STEP 17 Wizard: Recalibrate Filament Sensors



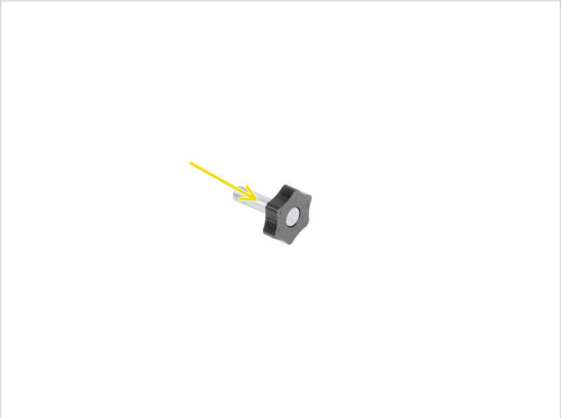
- You will be prompted to remove the filament from the side filament sensor.
- Remove completely the filament from the side filament sensor.
- On the screen, select **Finish** and proceed with the calibration with all tool heads on your printer.

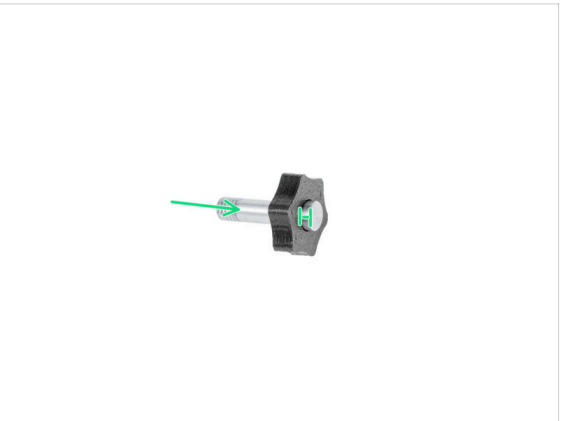
STEP 18 Calibration pin: parts preparing



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

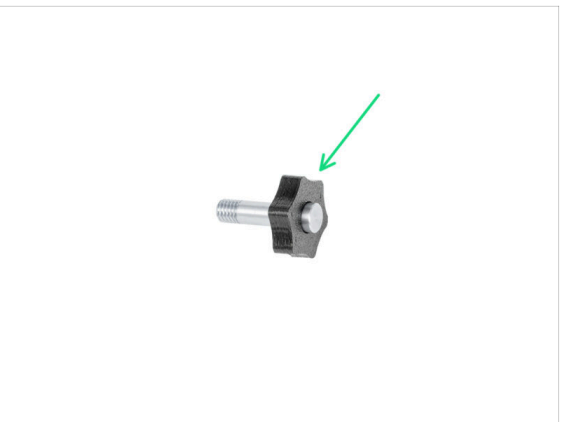
STEP 19 Calibration pin: parts assembly





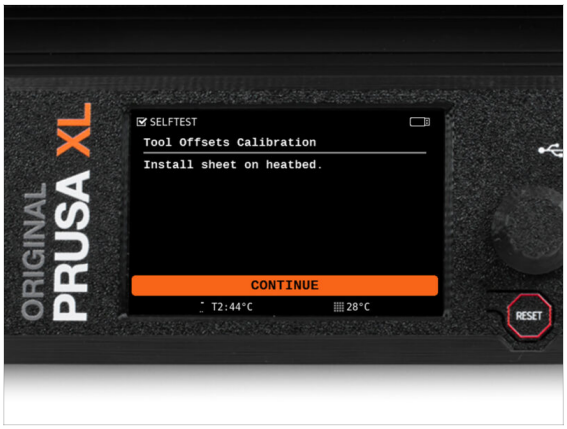
- Insert the calibration pin into the plastic part.
- Push the pin into the plastic part, so it will make a small gap on top.
- Well done, the pin is prepared.

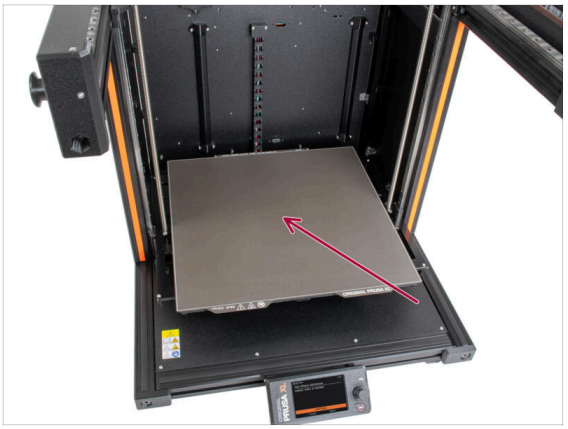
STEP 20 Wizard: Tool Offset Calibration



- 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)

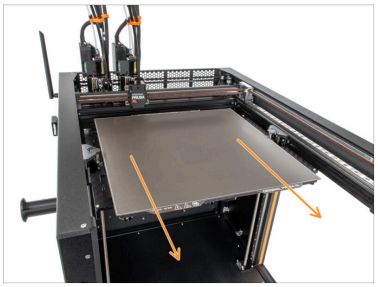
STEP 21 Wizard: Sheet install

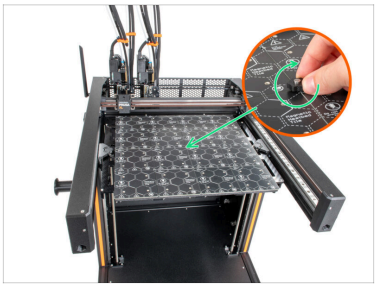




- Follow the wizard instructions on the screen.
- Put the steel sheet on a heatbed.
- Now, the printer starts short calibration.

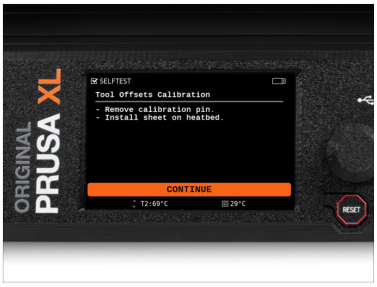
STEP 22 Wizard: Calibration pin installation

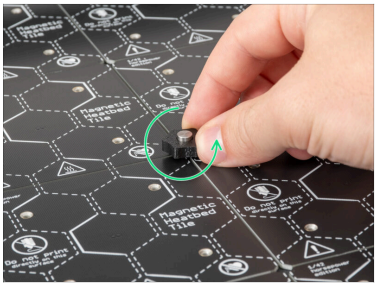


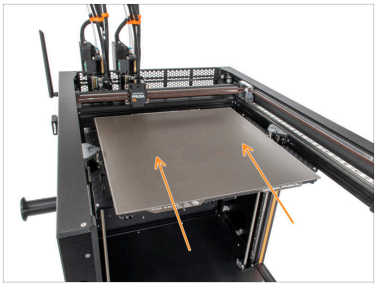


- Follow the wizard instructions on the screen.
- Take off the steel sheet from the heatbed.
- Install the calibration pin into the middle of the heatbed. Turn the pin clockwise.
- Now, the printer will calibrate all five tool heads.

STEP 23 Wizard: Offset calibration done





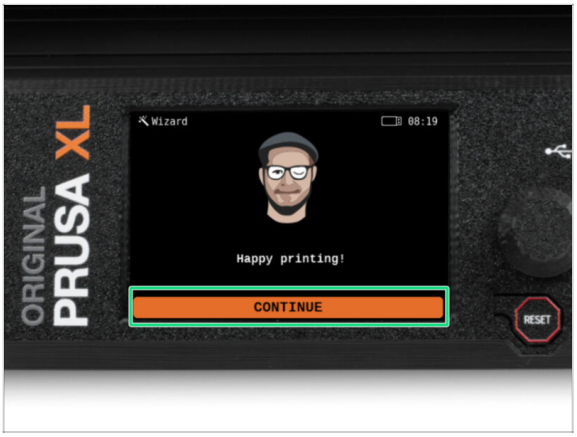


- Follow the wizard instructions on the screen.
- Untighten the calibration pin from the heatbed and take it off. Rotate counterclockwise.
- Place the steel sheet on a heatbed.
- The printer will finish the calibration.
- Good job! The Offset calibration is done.

STEP 24 Calibration pin

- Insert the calibration pin into the side filament sensor.

STEP 25 It's done



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

STEP 26 Reward yourself!

- It looks like you have successfully assembled and connected everything. No doubt ;). **Congratulations!** You deserve a big reward for that. Eat all the remaining gummy bears... and don't forget to share with those who supported you during the assembly.

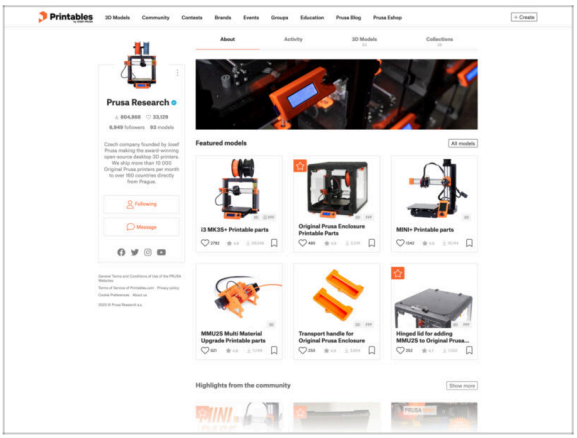
ⓘ **Did you know that** Haribo gummy bears are one of the most important parts of the Original Prusa printers assembly instructions.

STEP 27 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**.

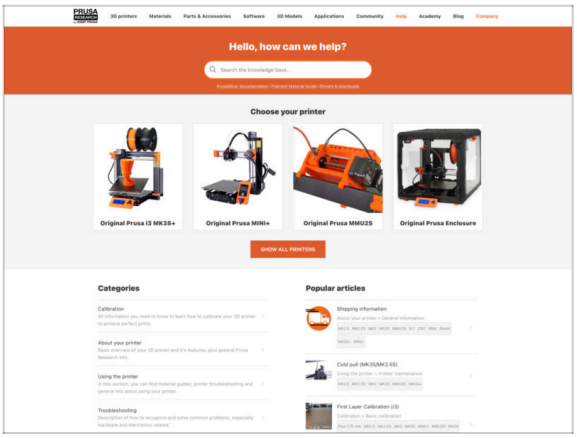
Read the chapters *Disclaimer* and *Safety instructions*.

STEP 28 Printable 3D models



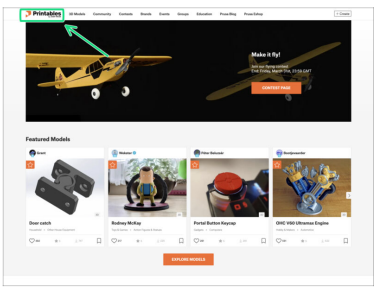
- **Congratulations! You should be ready to print by now ;-)**
- You can start by printing some of our test objects bundled on the included USB stick - you can check them out Printables.

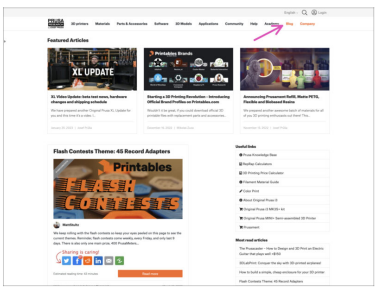
STEP 29 Prusa knowledge base

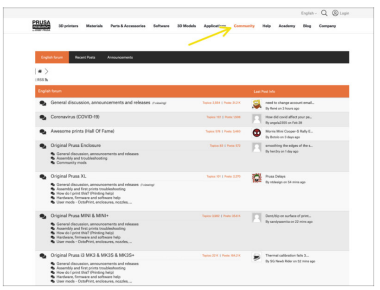


- If you encounter any problems at all, don't forget you can always check out our knowledge base at help.prusa3d.com
- We're adding new topics every day!

STEP 30 Join Printables!

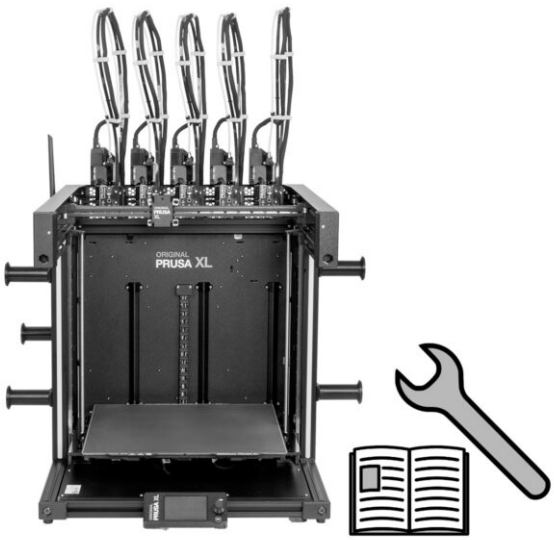




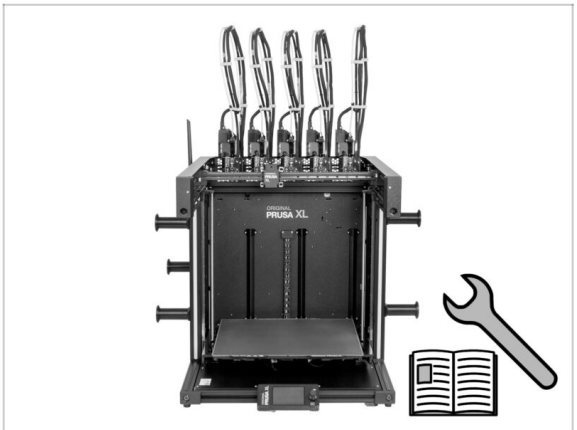


- **Don't forget to join the biggest Prusa community! Download the latest models in STL or G-code tailored for your printer. Register at Printables.com**
- Looking for inspiration on new projects? Check our blog for weekly updates.
- If you need help with the build, check out our forum with a great community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

Manual changelog XL (Single-head to Five-head upgrade)

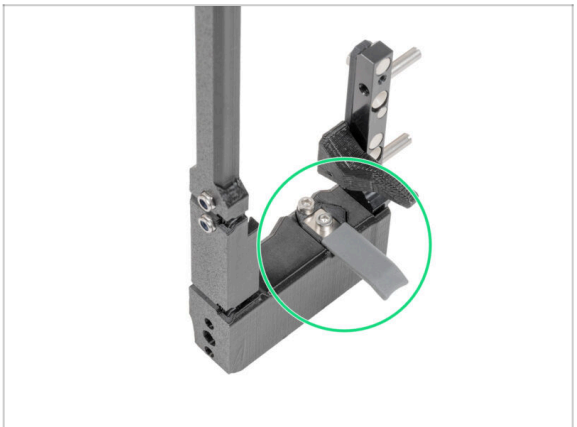


STEP 1 Manual changelog XL (Single-head to Five-head upgrade)



- Version history:
- 01/2024 - Initial version 1.00
- 05/2024 - Updated to version 1.01

STEP 2 Changes to the manual (1)



- 05/2024
  - Added information about the new gray nozzle seal.
- Manual version 1.01

Notes:

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