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1A. Introduzione



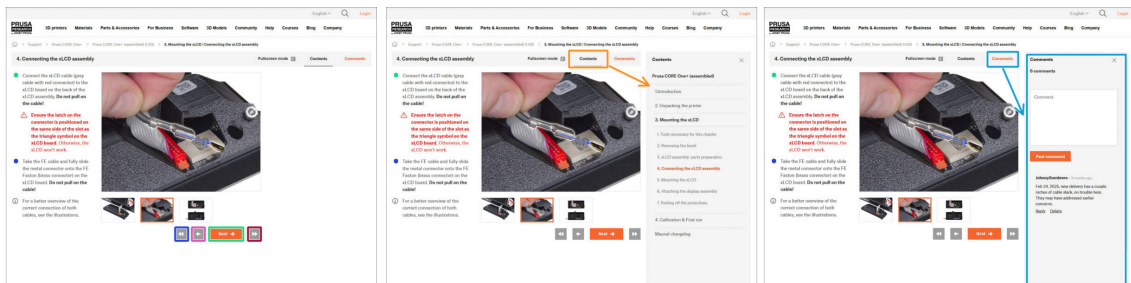
PASSO 1 Info sulla guida



- Ciao, benvenuto nella guida per convertire la tua Original Prusa MK4S in una **CORE One+**.
- Please prepare the upgrade kit received from Prusa Research.
- Nella prima parte della guida, vedremo i componenti principali della tua stampante MK4S, e poi smonteremo la stampante.

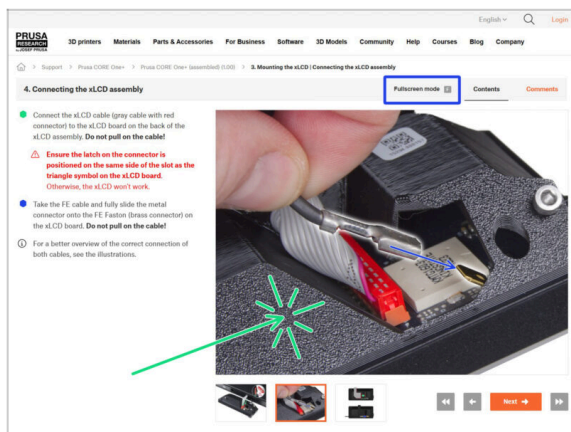
Poi, sistemeremo un paio di cose e, alla fine, potremo iniziare il processo di assemblaggio del CORE One+.

PASSO 2 Come navigare nel manuale



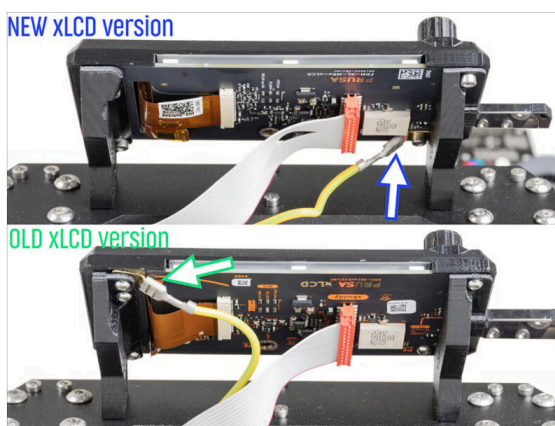
- Use the graphical navigation buttons in the bottom right corner or the arrow keys on your keyboard:
- **Next button / Right arrow key** - Moves to the next image, or to the next step if it's the last image in the step.
- **Left arrow button / Left arrow key** - Moves to the previous image, or to the previous step if it's the first image in the step.
- **Play backward button / Up arrow key** - Moves to the previous step.
- **Play forward (Next) button / Down arrow key** - Moves to the next step.
- Click on **Contents** to expand the full list of steps in this guide. This allows you to jump to any step regardless of the sequence.
- Clicca su **Commenti** per aprire la discussione su un passo specifico e lasciare il tuo feedback.

PASSO 3 Visualizza immagini ad alta risoluzione



- When you browse the guide on help.prusa3d.com, you can view the original images in high resolution for clarity.
- Just click on the image to open it in high resolution for a detailed view.
- Click on **Fullscreen mode** or press the F key to maximize your screen space and focus entirely on the instructions.

PASSO 4 Compatibilità



⚠ L'unica opzione di conversione a CORE One+ è da **MK4S**.

Se hai una stampante vecchia, devi prima aggiornarla a MK4S, dopodiché puoi procedere con la conversione in CORE One+.

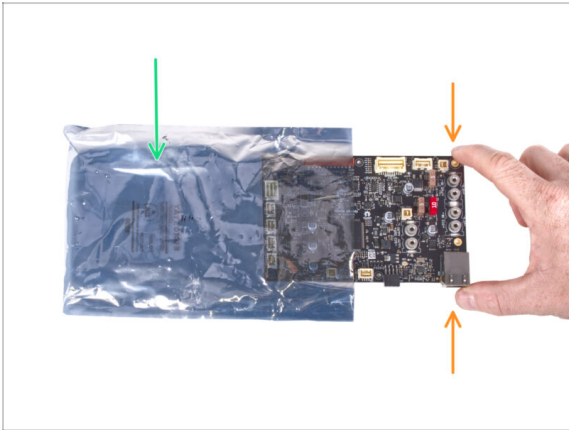
i There are two versions of the conversion package, depending on the xLCD version in your MK4S printer.

⚠ The silver PSU is not compatible with the conversion kit.

If you have this PSU version, you will need to purchase a compatible one.

Per maggiori informazioni, consulta le note di compatibilità sulla [pagina dell'e-shop del Kit di conversione CORE One+](#).

PASSO 5 Importante: Protezione dell'Elettronica



⚠ WARNING: Make sure to **protect the electronics against electrostatic discharge (ESD)**. When possible, always unpack the electronics right before you need them.

Here are some tips to prevent damage to the electronics:

- **Keep the electronics inside an ESD-safe bag** right until you are asked to install them.
- **Always touch the sides of the board only** while handling it. Avoid touching the components on the surface.
- **Before you touch the electronics** use any grounded conductive (metal) structure nearby to neutralize the possible static charge from your hands.
- Be extra cautious **in rooms with carpets**, which are often a source of electrostatic energy.
- Anche i vestiti di lana o di alcuni tessuti sintetici possono accumulare facilmente elettricità statica. È più sicuro indossare abiti di cotone per l'assemblaggio.

PASSO 8 Siamo qui per te!

The screenshot shows the Prusa 3D printer assembly instructions for Step 8: Connecting the xLCD assembly. The interface includes a navigation bar at the top with links like '3D printers', 'Materials', 'Parts & Accessories', 'Software', '3D Models', 'Applications', 'Community', 'Help', 'Academy', and 'Blog'. The main content area displays the step title, a list of instructions, a main image of the assembly, and a comments section. A red box highlights the 'Comments' tab, and a red arrow points to the 'Chat now' button in the bottom right corner.

- Lost in the instructions, missing screw or cracked printed part? **Let us know!**
- You can contact us using the following channels:
 - Using comments under each step.
 - Using our 24/7 live chat here at help.prusa3d.com
 - Writing an email to info@prusa3d.com

PASSO 9 Pro tip: inserire i dadi



- 3D printed parts are very precise, however, there still might be a tolerance in the printed part and the same goes for the size of the nut.
- Therefore it might happen, that the nut won't fit easily in or might be falling out. Let's see, how to fix it:
 - **Nut won't fit in:** use a screw with a thread along its entire length (typically: M3x10, M3x18) and screw it from the opposite side of the opening. While tightening the screw, the nut will be pulled in. Remove the screw afterwards.
 - **Nut keeps falling out:** Use a piece of tape to fix the nut temporarily in place, as soon as you insert the screw in, you can remove the tape. *Using glue isn't recommended as it can partly reach into the thread and you won't be able to tighten the screw properly.*
- Every time we recommend using the "screw pulling technique", you will be reminded with Joe's avatar ;)
- ① Parts in the pictures are used as an example.

PASSO 10 Beccuccio per la lubrificazione dei cuscinetti



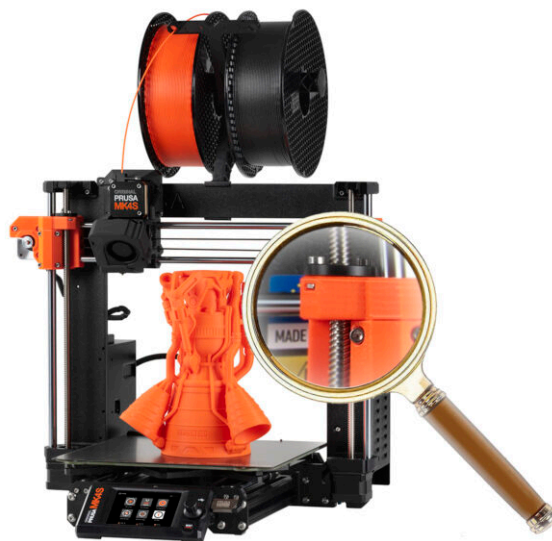
- We will reuse two LM8UU bearings from your MK4S. It is a good practice to re-lubricate them before re-using.
- For this purpose, we suggest printing the **Bearing Lubrication Pacifier from Printables**, Before disassembling the printer
- ① It is a quick print, just under 20 minutes.
- The lube tube is included in the package.

PASSO 11 Prepara la scrivania



- 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.
- ⚠ **It's highly recommended to place a soft pad on your workbench. Some sheet metal parts have sharp edges that could scratch the surface.**
- Ok, siamo pronti. Iniziamo! Vai al prossimo capitolo.

1B. Ispezione MK4S



PASSO 1 Introduzione



- Some parts of your printer can be reused for upgrading, so it's essential to check their condition before starting.

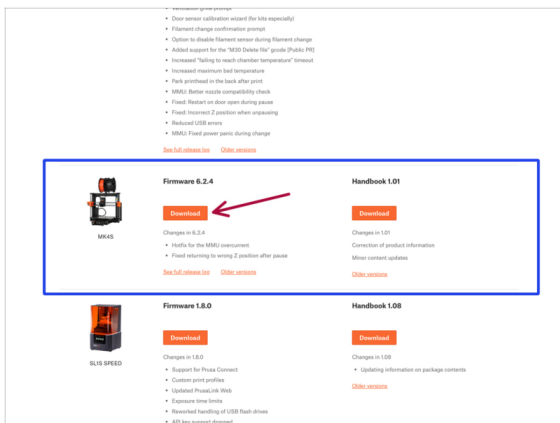
This chapter will guide you through a visual inspection of these parts. If you find any in poor condition, you'll have enough time to order replacements while still using the printer.

⚠ Do not disassemble or disconnect anything until prompted.

- Any parts that are found to be in poor condition during the inspection can be replaced with new parts. Everything is available in our [eshop](#).

i Please note that you have to be logged in to access all parts.

PASSO 2 Aggiornamento Firmware

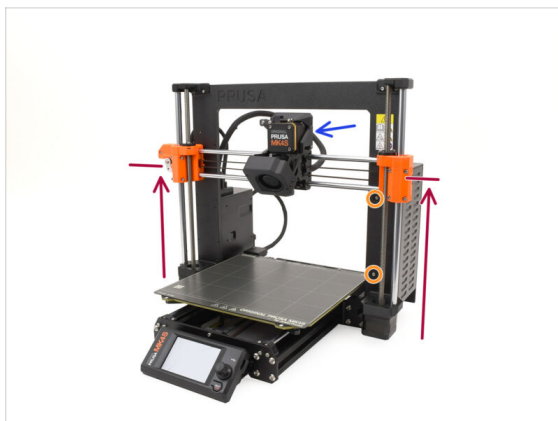


- On the printer, visit the menu **Info > Version Info** to check the firmware version.

⚠ Ensure your MK4S printer has **firmware 6.2.4 or newer before continuing. Otherwise, your newly converted CORE One will not work, and will resist updating.**

- The latest firmware can be downloaded at:
[Help.Prusa3D.com/Downloads](https://help.prusa3d.com/downloads)
- For more info, visit the [Firmware Update Article](#).

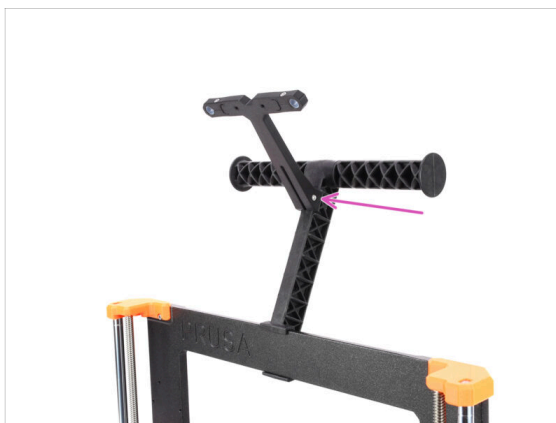
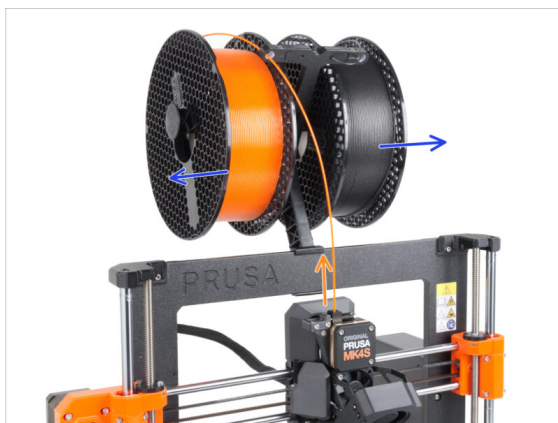
PASSO 3 Preparazione Stampante 2



Before you start, do the following:

- Sposta il gruppo dell'asse X a circa 2/3 dell'altezza, in modo che:
 - ① Pro Tip: Long press the knob and use the "Z Axis Move" option.
- The rear of the extruder is accessible.
- The PSU screws are accessible.
- All the screws on the electronics box are accessible.

PASSO 4 Preparazione stampante 2



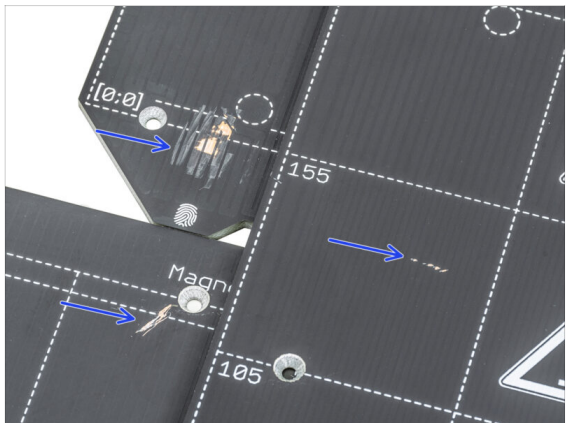
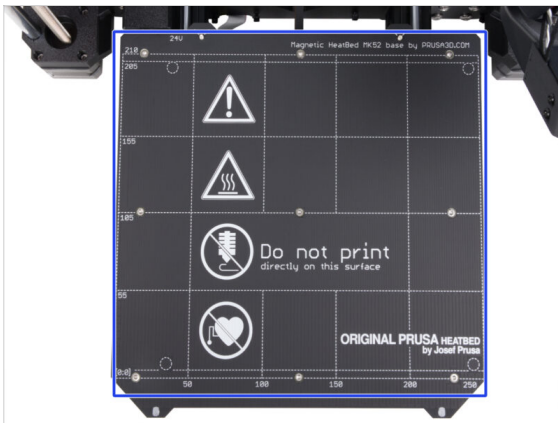
- Unload a filament, if it is loaded.
 - ① Menu Filament > Unload filament
- Remove the filament spools.
- Remove the spool holder.

PASSO 5 Preparazione stampante 3



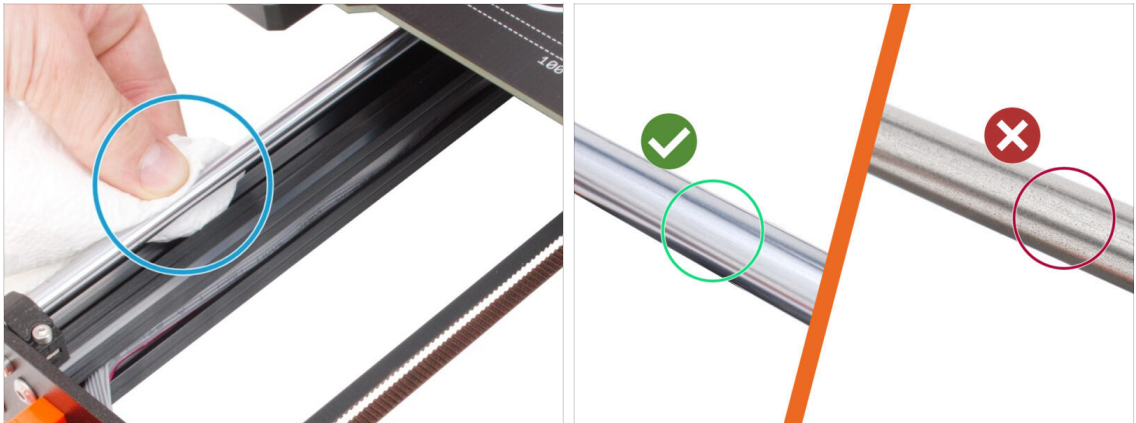
- Turn off your printer and disconnect it from the power.
- Remove the print sheet and save it for later use.

PASSO 6 Ispezione del piano riscaldato



- Carefully inspect the surface of the heated bed. If you find any major scratches (up to the copper layer) consider replacing it with a new piece.

PASSO 7 Ispezione delle barre Y



- Wipe the entire length of the Y-axis smooth rods with a paper towel to remove any dirt.

i Carefully inspect the surface of the smooth rods up close, as we are going to reuse them.

- The surface must be clean and smooth.
- If you find very deep scratches, corrosion, or a rough surface, it is highly recommended to replace the rods.

You can purchase a new Smooth Rod Y-axis (8×330 mm) in our [eshop](#)

- Similarly, if the smooth rods are scratched or the bearings do not move smoothly (stuttering occurs), we recommend ordering new LM8UU bearings as well.

You can purchase new LM8UU bearings in our [eshop](#).

PASSO 8 Haribo?



! Keep the Haribo bag closed for now!

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

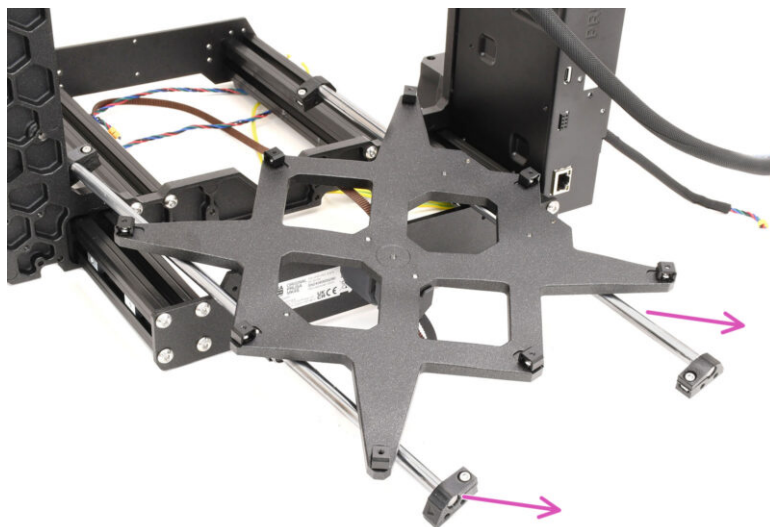
PASSO 9 Iniziamo



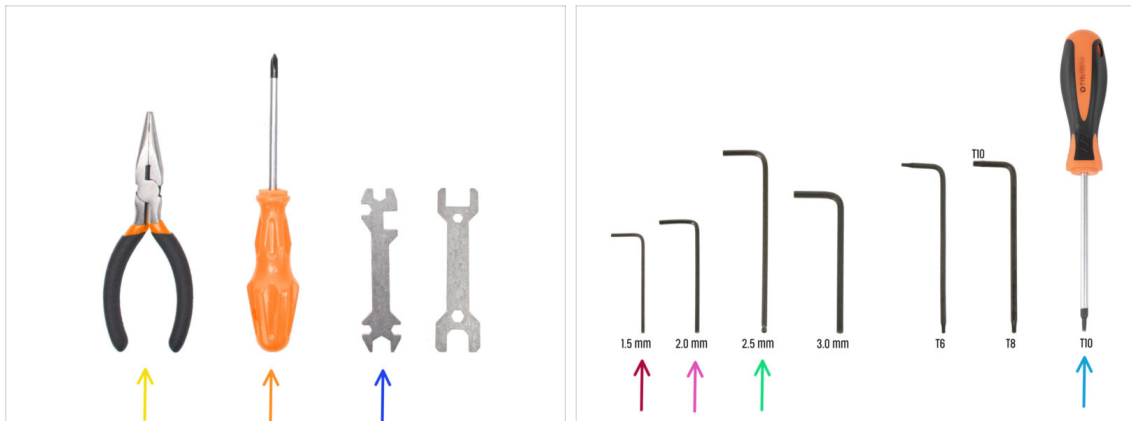
- Got everything checked? Great! Let's begin disassembling the printer.

Proceed to the next chapter.

1C. Smontaggio della stampante



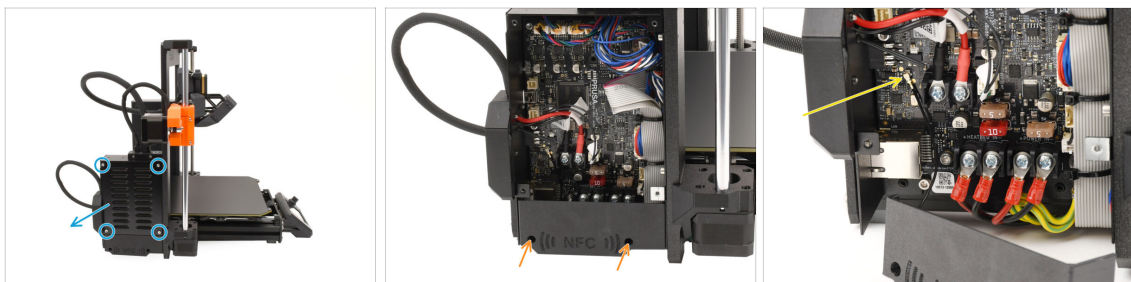
PASSO 1 Attrezzi Necessari



● For this chapter, please prepare:

- Pinza a becchi lunghi
- Cacciavite a stella
- Chiave universale
- Chiave a brugola da 1.5mm
- Chiave a brugola da 2mm
- Chiave a brugola da 2.5mm
- Cacciavite T10

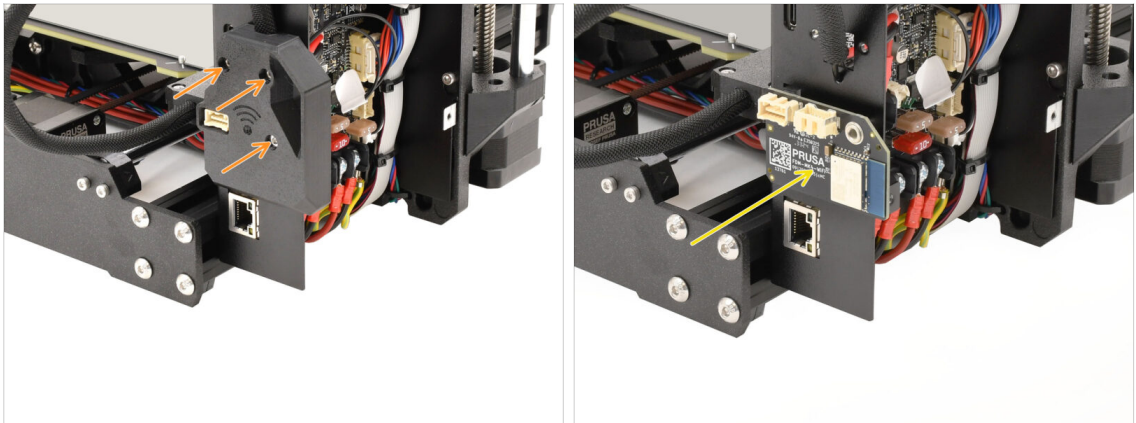
PASSO 2 Smontaggio Elettronica



- Let's move onto the **left** side of the printer.
- Remove the four screws holding the xBuddy box cover and remove the cover.
- Using the 2.5mm Allen key, remove the two screws holding the NFC cover.
- Disconnect the NFC antenna from the xBuddy board by gently lifting the tiny connector.

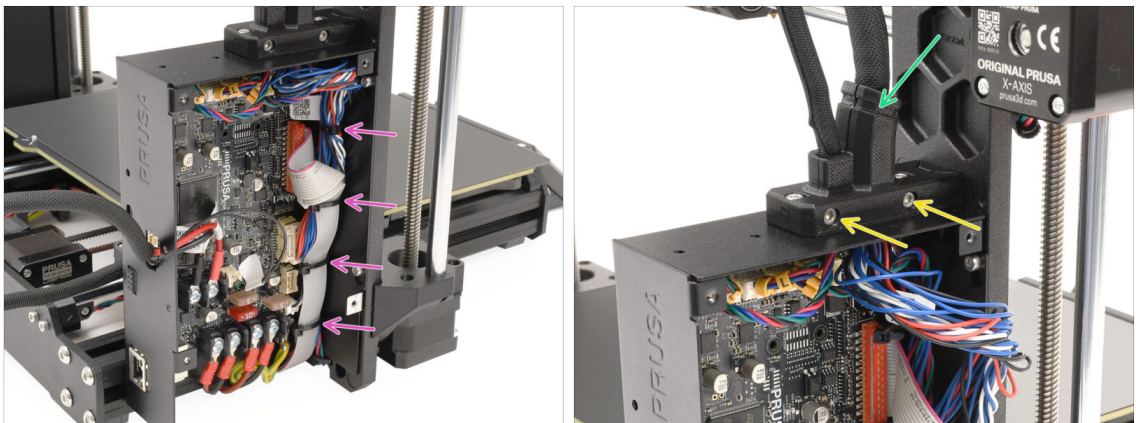
Then, remove the antenna along with the cover.

PASSO 3 Smontaggio Wi-Fi



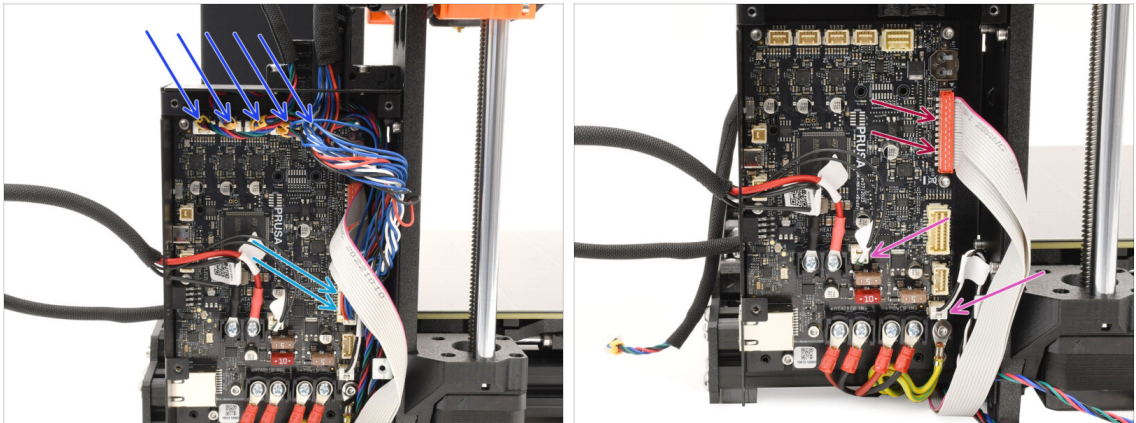
- ✚ On the back of the electronics box, remove the three screws holding the Wi-Fi cover and remove the cover.
- ✚ Remove the Wi-Fi module and **save it for later use**.
 - ⚠ Ensure you store the module and all electronic components in an ESD-safe environment to prevent damage!

PASSO 4 Smontaggio del fascio di cavi



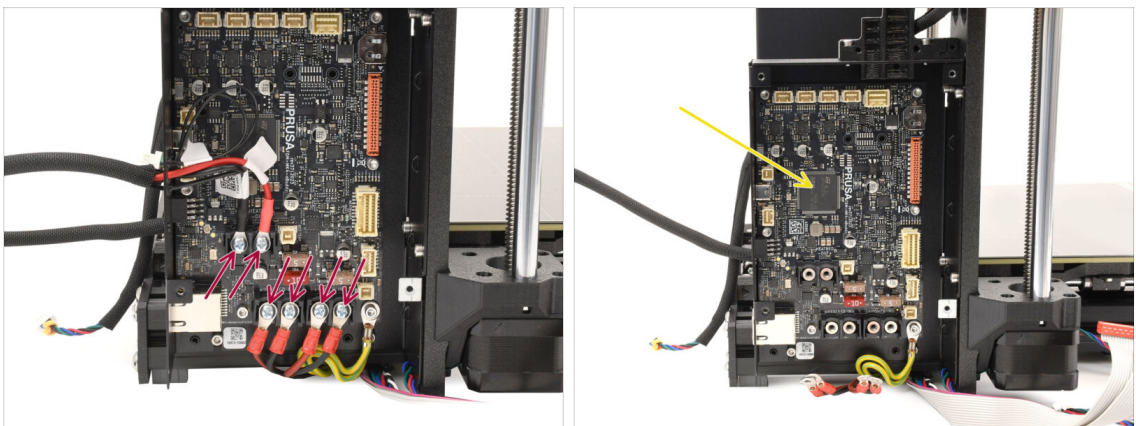
- ✚ Remove all the zip-ties securing the cable bundle inside the xBuddy box.
 - ⚠ When cutting the zip-ties, proceed carefully to prevent any damage to the cables or the electronics!
- ✚ Remove the two screws on the main cable holder.
- ✚ Cut the zip-tie holding the cover together, then remove the outer part of the holder.

PASSO 5 Disconnettere i cavi 1



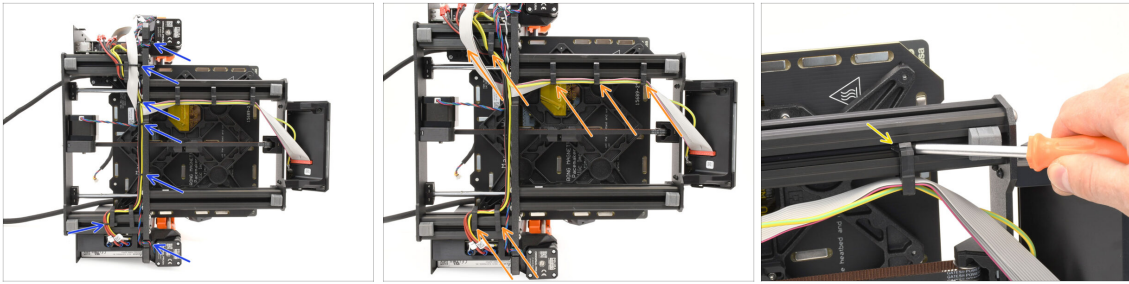
- ◆ Disconnect all the connectors on the top of the xBuddy board.
 - ⚠ There is a safety latch on each of these connectors, which must be pressed in order to disconnect it.
- ◆ Disconnect the extruder main cable connector.
- ◆ Disconnect the heatbed thermistor and power panic cables.
- ◆ Disconnect the xLCD connector by lifting it carefully up.

PASSO 6 Disconnettere i cavi 2



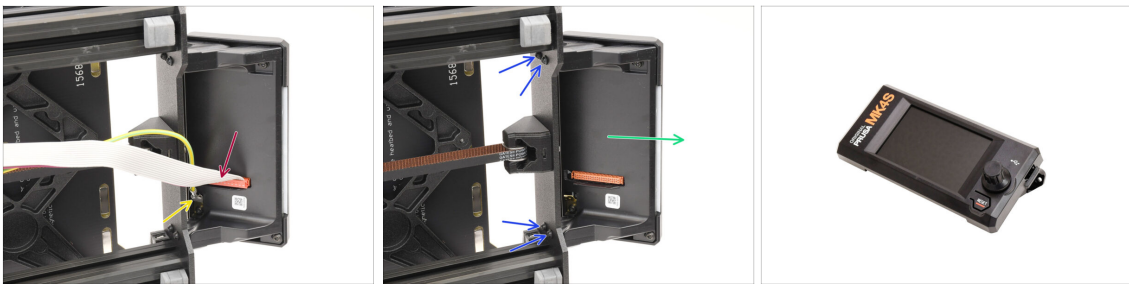
- ◆ Using the Phillips screwdriver, remove all the terminal screws holding the heatbed and power cable connectors.
- ◆ Leave the xBuddy board in the electronics box for now, as this way, it is well protected from damage.

PASSO 7 Rilascio del fascio di cavi



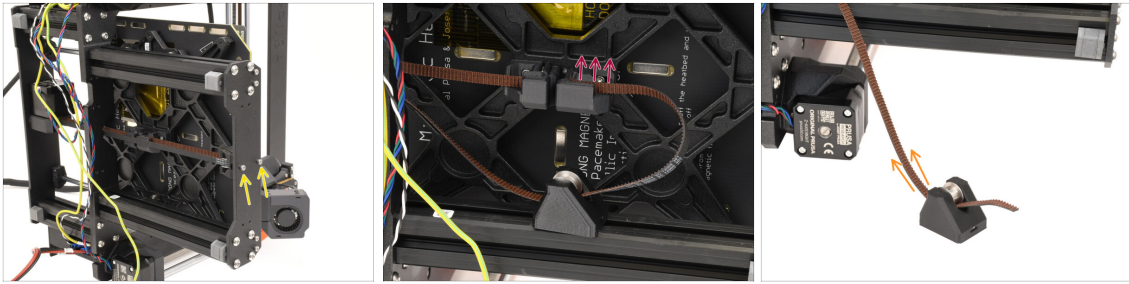
- Lay the printer onto the PSU side to access the bottom part.
- Carefully remove all the zip-ties holding the cable bundle
- Remove all the cable holders from the frame and detach them from the cables.
 - Pro tip: You can pry them off the metal profiles using the screwdriver.

PASSO 8 Rimozione xLCD



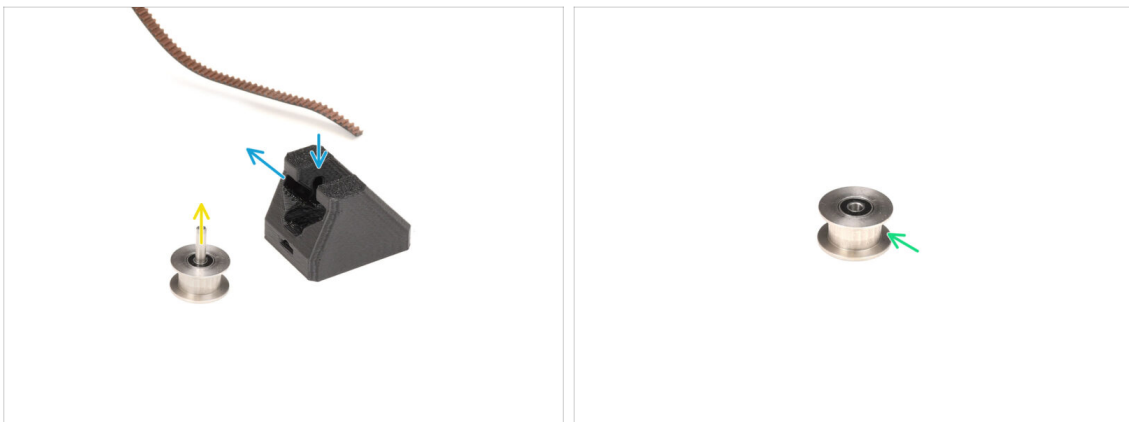
- Disconnect the main cable from the xLCD by gently lifting the connector up.
- Disconnect the grounding cable.
- Using the T10 screwdriver, remove the four screws holding the xLCD assembly.
- Remove the xLCD assembly and **save it for later use!**

PASSO 9 Rimozione Idler Y



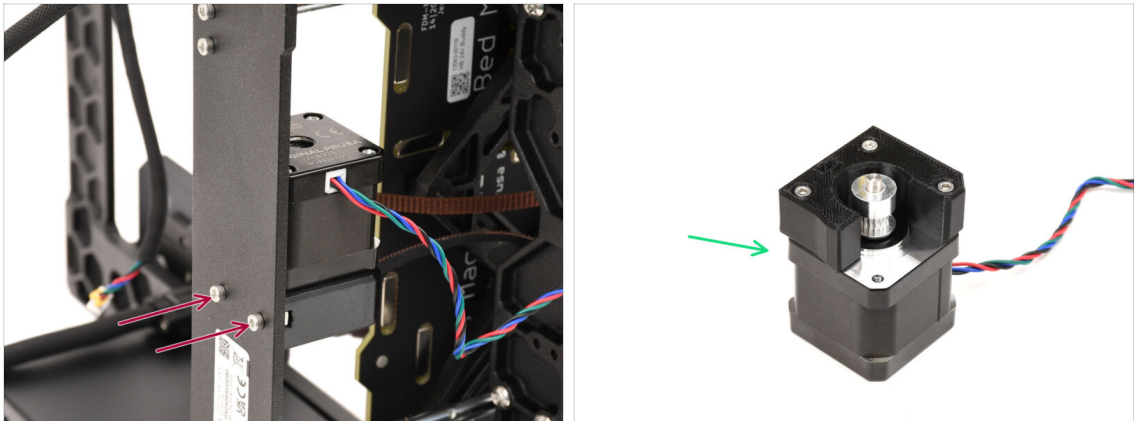
- ✦ Using the 2.5mm Allen key, remove the two screws holding the Y-Axis Idler on the front plate.
- ✦ Pull the end of the Y-axis belt out of the holder at the bottom of the heatbed to disengage it.
- ✦ Remove the belt from the idler by pulling it out.

PASSO 10 Rimozione della puleggia folle



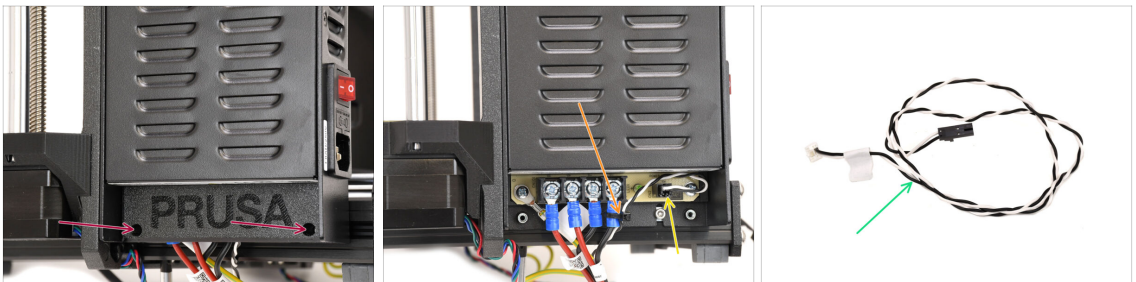
- ✦ Orient the Y-Idler as shown in the picture.
Remove the pulley by first moving it inward, then pulling it out to the side.
Refer to the groove pattern in the picture for the correct trajectory.
- ✦ Remove the center shaft from the pulley.
- ✦ **Save the pulley for later use.**

PASSO 11 Rimozione del motore Y



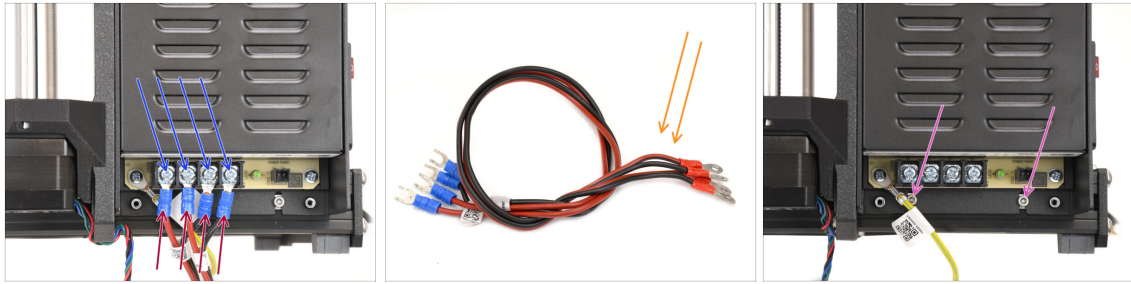
- Remove the two screws on the back of the printer, holding the Y-axis motor in place.
- Remove the Y-axis motor assembly and **save it for later use**.

PASSO 12 Power Panic Cable Removal



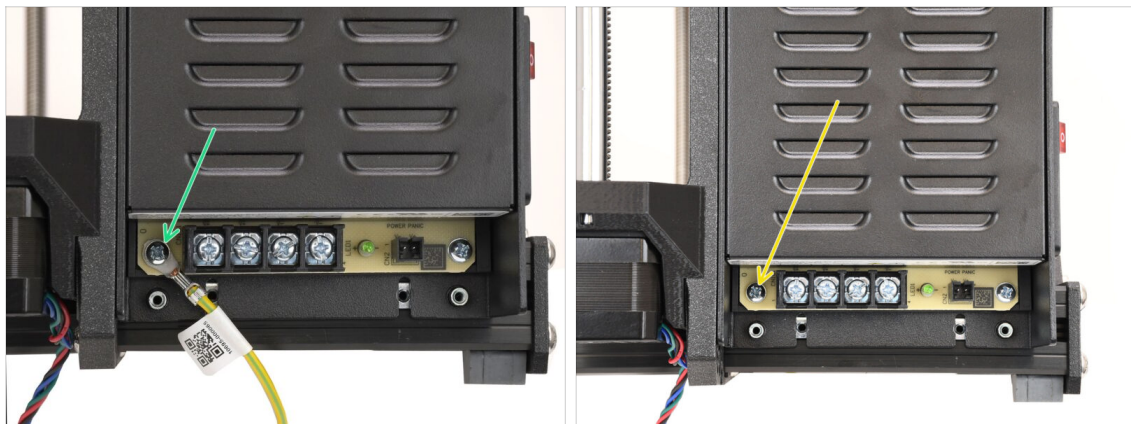
- Let's move onto the right side of the printer carcass, where the PSU lives.
- Remove the two screws securing the cover, then take off the cover.
- Carefully cut off the zip-tie holding the power panic cable.
- Save the power panic cable for later use.**
- i** The power panic cable may look different, depending on your xBuddy board version.

PASSO 13 Rimozione del cavo di alimentazione



- ◆ Using the Phillips screwdriver, loosen the four power terminal screws. Do not remove them entirely.
- ◆ Remove the four power cable connectors by pulling them downward.
- ◆ Remove the power cables and **save them for later use**.
- ◆ Using the 2.5mm Allen key, remove the two screws holding the PSU to the printer's frame.

PASSO 14 Rimozione Alimentatore 1



- ◆ Remove the screw holding the grounding cable to the PSU.
- ◆ Disconnect the grounding cable—it will no longer be needed.
- ◆ Re-install the screw you previously removed.

PASSO 15 Rimozione Alimentatore 2

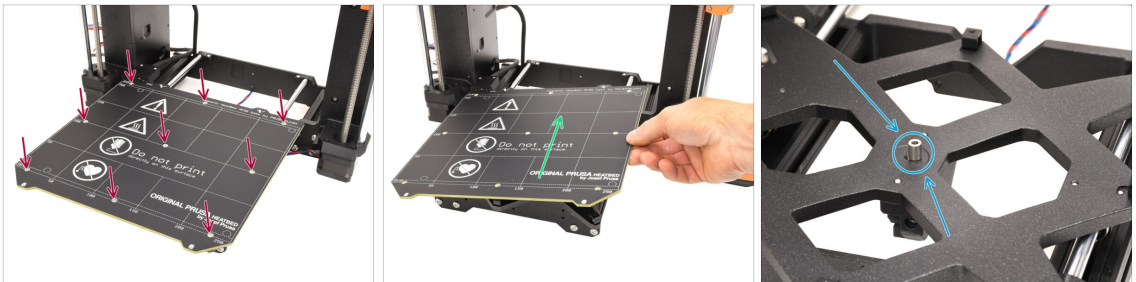


- On the front of the frame, remove the two screws holding the PSU.

⚠ The PSU might fall off to the side!

- Remove the PSU and **save it for later use**.

PASSO 16 Rimozione del piano riscaldato



- Let's move onto the heated bed.

- Using the T10 Torx screwdriver, remove all 9 screws holding the heated bed.

- Remove the heated bed by lifting it up. **Save it for later use**.

- There is a spacer in the middle of the heated bed. Make sure to save it for later use too!

📌 Be careful and store the heated bed on a soft surface to prevent scratching it.

PASSO 17 Rimozione Asse Y



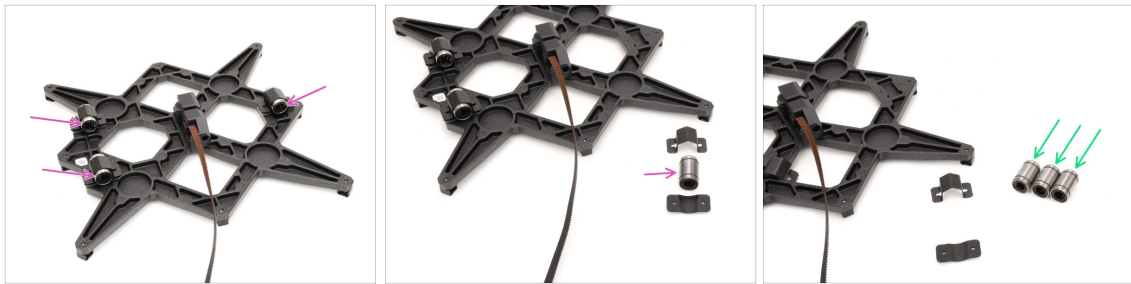
- Using the 2.5mm Allen key, remove the four screws holding the Y-axis rods to the front of the frame.
- Remove the four screws holding the Y-axis rods to the back of the frame.
- Remove the whole Y-axis assembly from the printer's frame.

PASSO 18 Smontaggio Asse Y



- Remove the four screws fixing the rods to the Y-rod holders. Then, remove the plastic rod holders.
- Turn the assembly around.
- Pull out both the Y-axis rods. Clean them up and **save them for later use**.
- Remove all the screws holding the bearings to the carriage.

PASSO 19 Rimozione dei cuscinetti



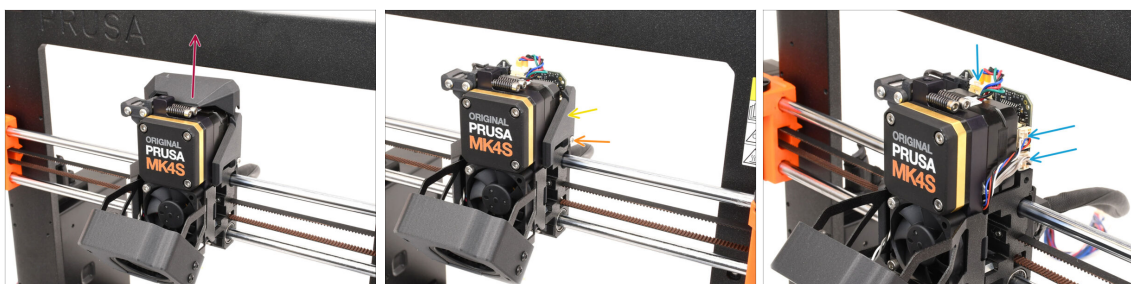
- ◆ Remove all three bearings from the bearing holders.
- ◆ Clean the bearings from any excess grease or dirt, and **save them for later use**.
- ❗ Due cuscinetti di questo tipo saranno utilizzati per montare la CORE One+.

PASSO 20 Rimozione Giunto di Espansione



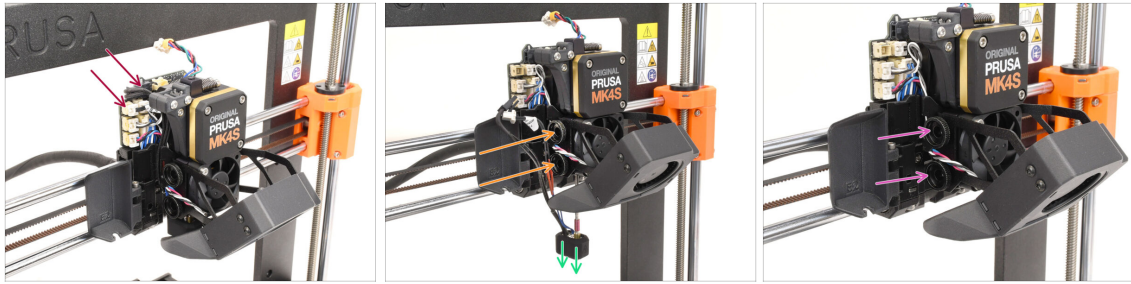
- ◆ Using the 2mm Allen key, remove all 8 expansion joints from the Y-Carriage.
- ◆ **Save the expansion joints for later use.**

PASSO 21 Rimozione della copertura dell'estrusore



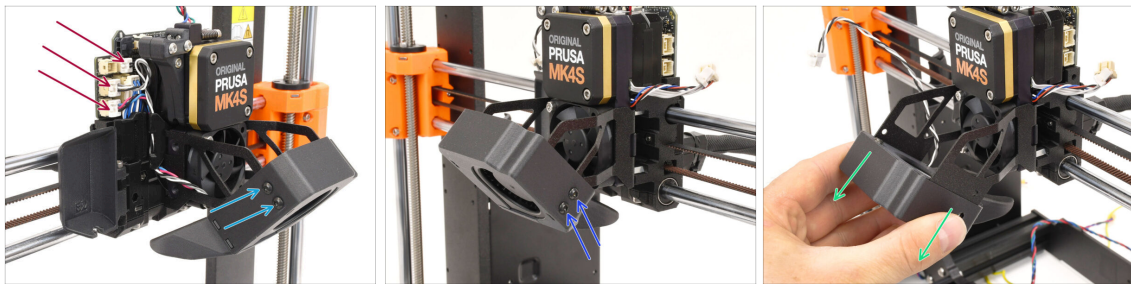
- ◆ Let's move onto the extruder.
- ◆ Remove the top cover on the extruder by lifting it up.
- ◆ Remove the screw holding the cover on the right side.
- ◆ Remove the side cover.
- ◆ Disconnect the motor, filament sensor and loadcell cables.

PASSO 22 Rimozione Gruppo Hotend



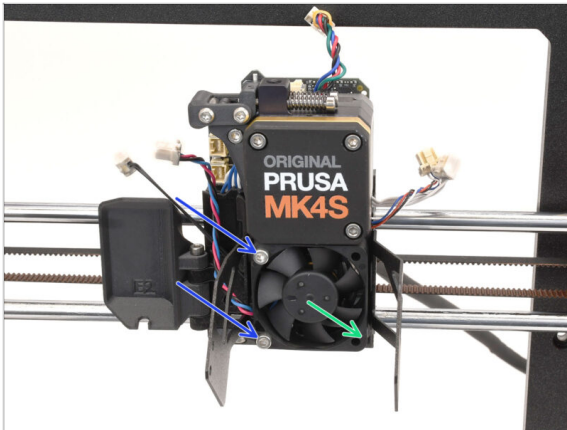
- On the opposite side, disconnect the nozzle thermistor and nozzle heater cables.
- Release the two thumb screws, until the hotend assembly drops.
- Remove the hotend assembly and **save it for later use**.
- Remove the two thumb screws and save them for later use.

PASSO 23 Rimozione Ventola di Stampa



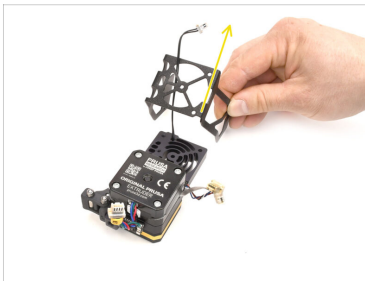
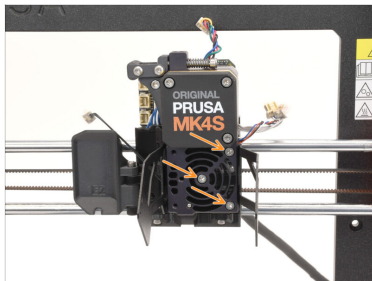
- Scollegare i cavi sul lato sinistro del Nextruder.
- Using the T10 screwdriver, remove the two screws holding the print fan on the left side.
- Remove the two screws on the right.
- Remove the print fan assembly by sliding it out. Proceed carefully to prevent damaging the cable going through the metal holder. **Save the fan assembly for later use!**

PASSO 24 Rimozione Ventola Dissipatore



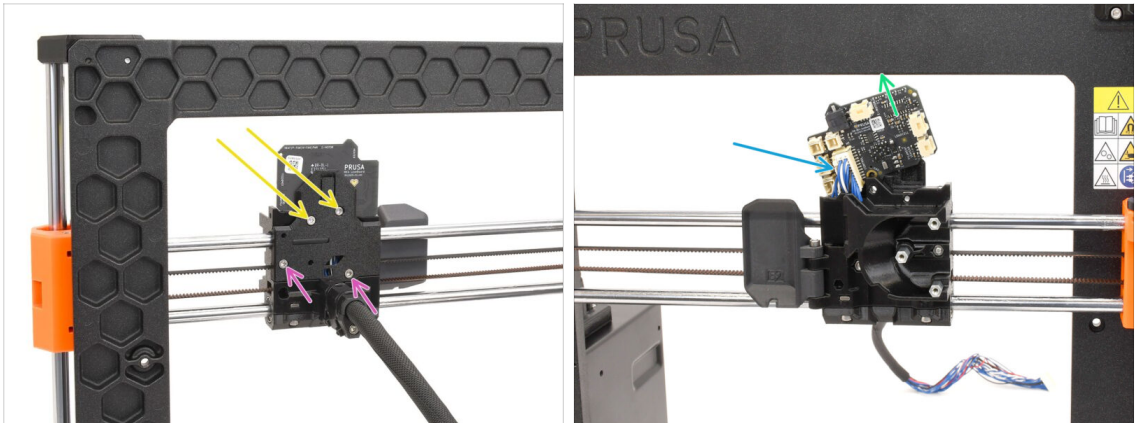
- ❖ Togli le due viti che fissano la ventola dell'hotend al dissipatore di calore.
- ❖ Remove the fan and **save it for later use**.
- 📌 Proceed carefully to prevent damaging the cable.

PASSO 25 Rimozione Nextruder



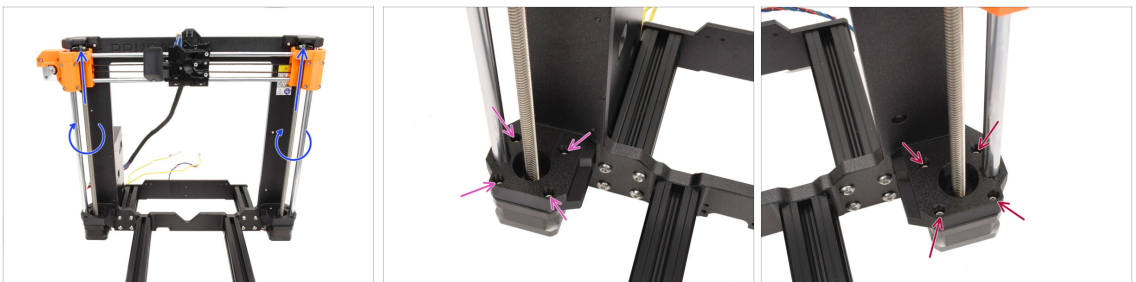
- ❖ Remove the three screws holding the Nextruder to the X-carriage.
⚠ **Watch out! The Nextruder might fall out!**
- ❖ Remove the Nextruder from the printer.
- ❖ Remove the Print fan support and a plastic spacer (if present). Proceed carefully to prevent damaging the heatsink thermistor cable.
- ❖ **Save the Nextruder for later use.**

PASSO 26 Rimozione LoveBoard



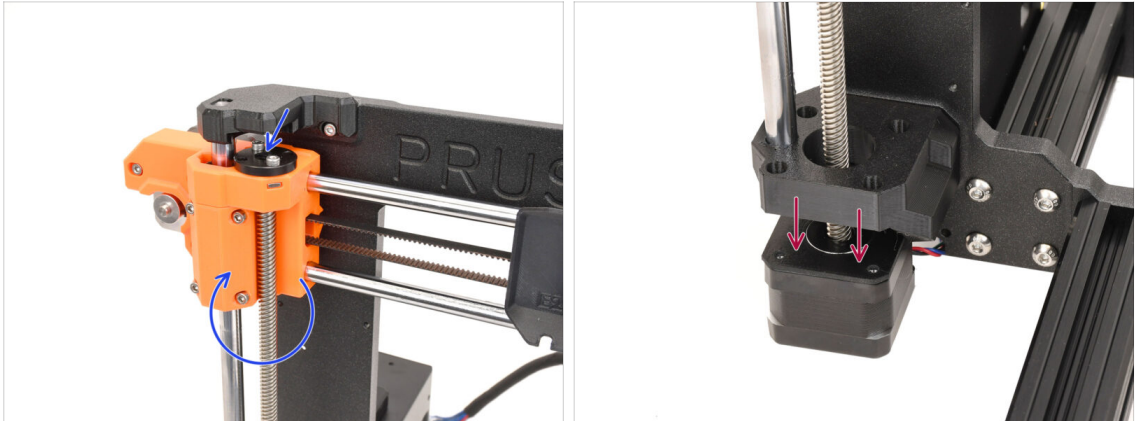
- Move onto the back of the X-carriage.
- Remove the two marked screws on top of the backing plate.
- Loosen the two remaining screws, but do not remove them entirely yet.
- Lift the Loveboard slightly to disconnect it from the main cable. Proceed carefully to prevent any damage to the Loveboard.
- **Remove the Loveboard and save it for later use.**

PASSO 27 Rimozione dei motori Z



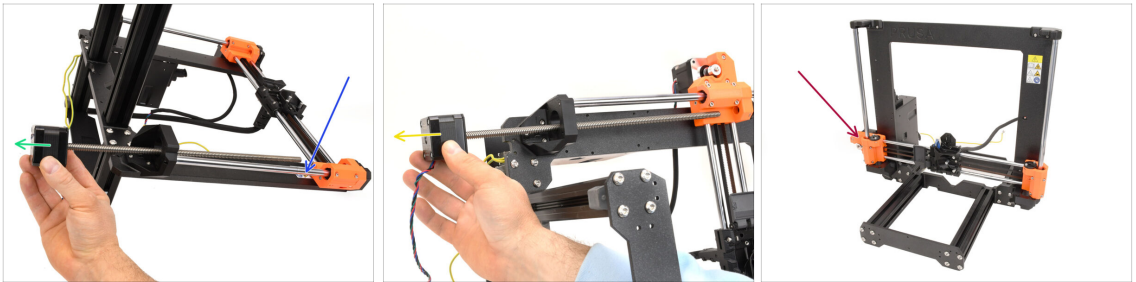
- Gira a mano entrambe le barre filettate per spostare il gruppo dell'asse X fino in cima.
- Using a ball-end 2.5mm Allen key, remove all 4 screws securing the left Z motor.
- Remove the 4 screws holding the right Z motor as well.

PASSO 28 Z Motors Removal 2



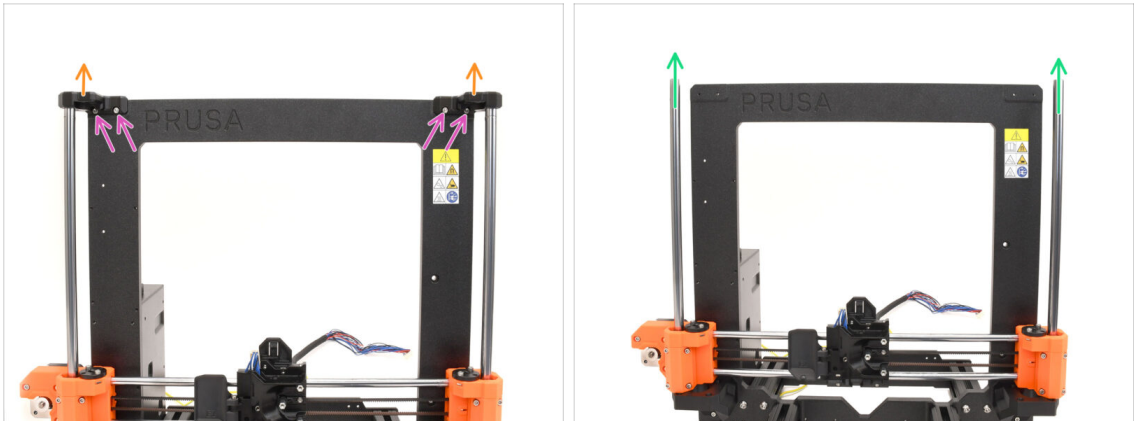
- Rotate the threaded rods on both sides to disengage both the motors from the trapezoid nuts on the X-End parts.
- Disengage the motors on both sides from the holders. The X-axis will drop slightly.

PASSO 29 Z Motors Removal 3



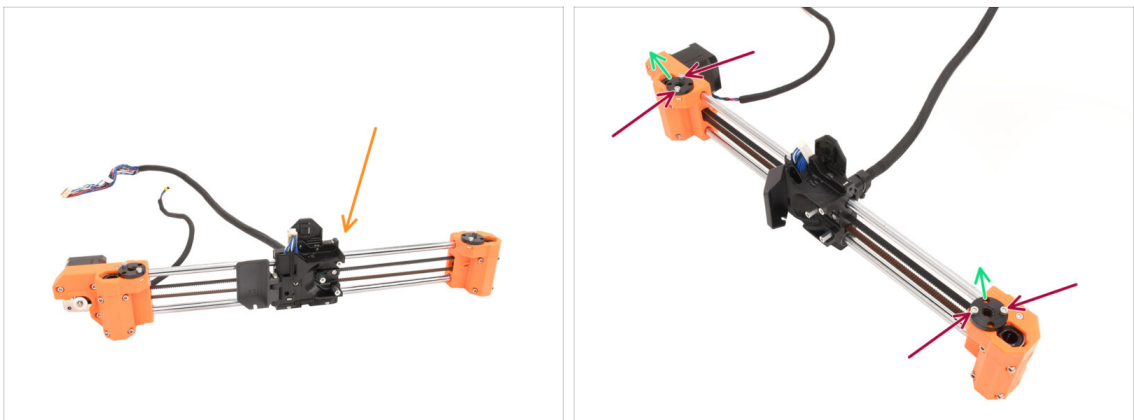
- Lay the frame onto its back part.
- Remove the right Z motor by sliding it out. **Save it for later use.**
- Remove the left Z motor. **Save it for later use.**
- Move the frame back to the original position. **Expect that the X-axis now moves freely and may fall rapidly.**

PASSO 30 Rimozione delle barre Z



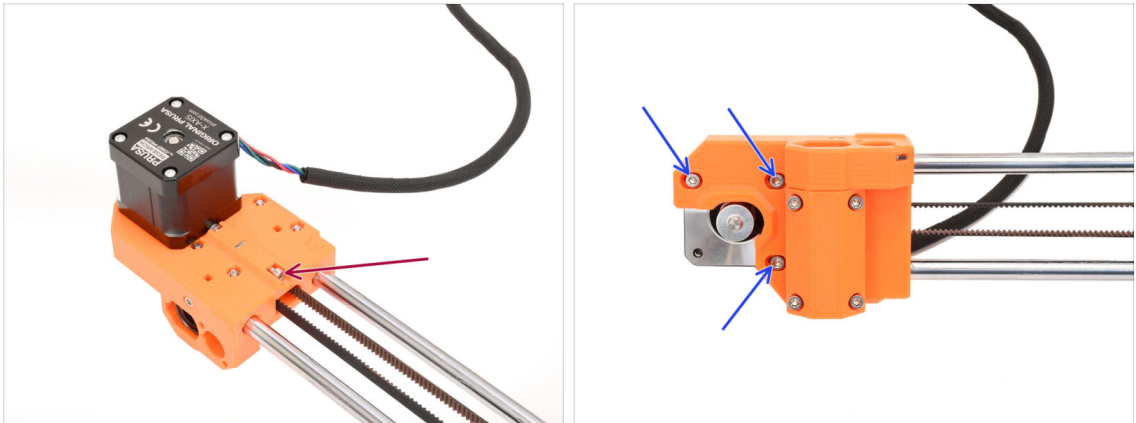
- ✦ Remove the four screws holding the Z-top parts on both sides.
 - ✦ Remove both Z-tops by pulling them up and disengaging from the rods.
 - ✦ Pull up both Z rods and remove them from the printer.
Save both rods for later use.
- i** A slight wiggling motion may help to disengage them from the plastic part.

PASSO 31 Rimozione Dado trapezoidale



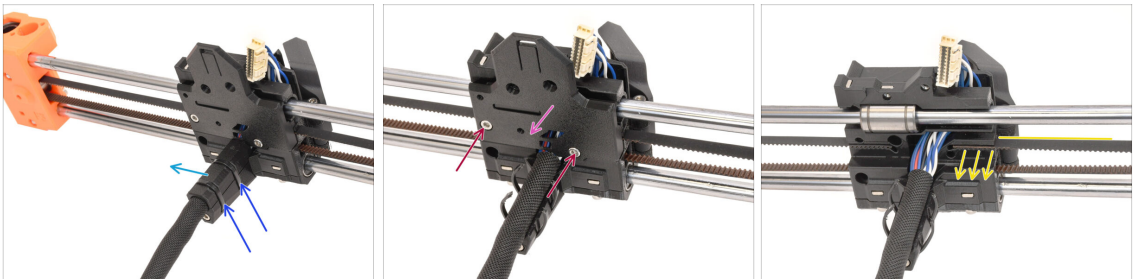
- ✦ Remove the X-axis assembly from the printer's frame.
 - ✦ Remove the four screws holding the trapezoid nuts on top of both sides of the assembly.
 - ✦ Remove both the trapezoid nuts and **save them for later use.**
- i** If the nuts are hard to remove, try rotating them, while pulling them up. If that doesn't help, carefully use the threaded rod on one of the Z-motors, to pry them out.

PASSO 32 Rilascio del motore X



- On the back of the assembly, remove the belt tensioning screw
- Loosen the three screws holding the motor on the front.
- ⓘ We need to release the belt tension, in order to release the belt in the upcoming step.

PASSO 33 Sgancio Cinghia X



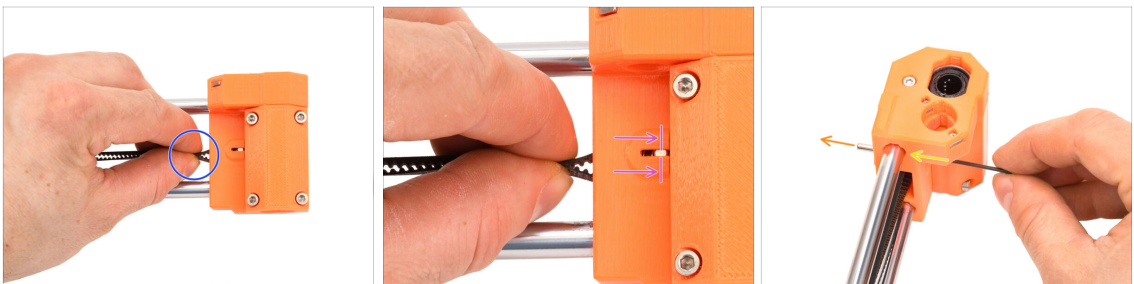
- On the back of the assembly, cut both the zip-ties holding the cable cover.
- Remove the cable cover.
- Remove both screws on the back of the X-carriage.
- Remove the cover on the back of the X-carriage.
- Pull out the end of the belt on the motor side, to disengage it.

PASSO 34 Rimozione Motore X



- Remove the three screws holding the X-motor at the front of the assembly.
- Remove the X-Axis motor and **save it for later use**.

PASSO 35 X Idler Shaft Removal



- Let's move onto the right X-end part.
- Use the belt as a handle for the Idler pulley inside the plastic part.
- Move the Idler **all the way inward**.

On the front, there is a small window where you can observe the idler shaft movement.

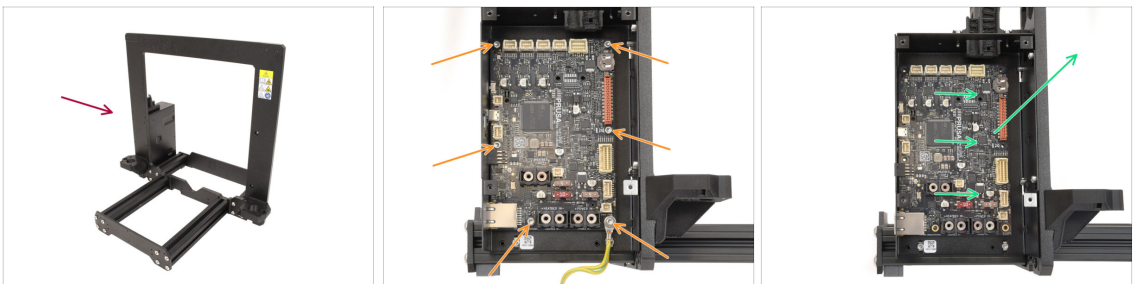
- While keeping the idler pushed all the way in, use the thinnest 1.5mm Allen key to push the shaft out of the part.
- The Idler shaft should exit the plastic part at the back. Remove it.

PASSO 36 Rimozione Tenditore X



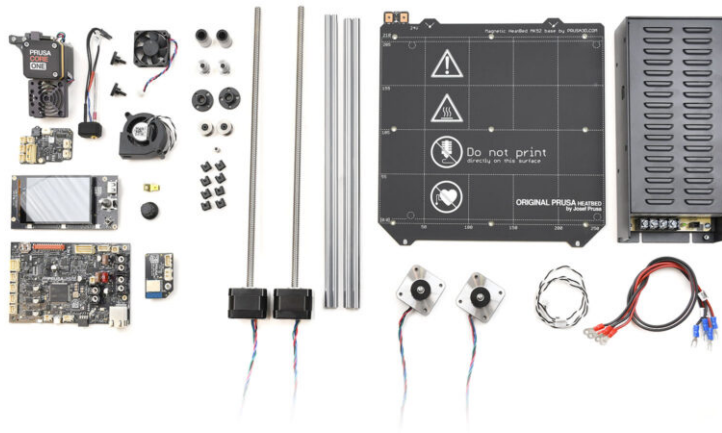
- Pull out the Idler pulley.
- Save the pulley for later use.

PASSO 37 Rimozione xBuddy

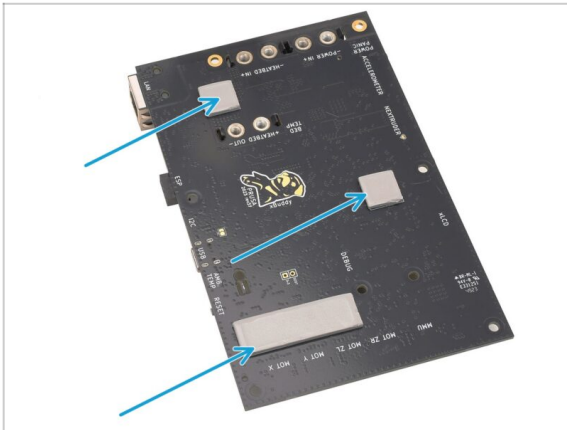


- Let's move back to the printer's frame.
- Remove the six screws holding the xBuddy board in place.
- Release the xBuddy by sliding it towards the frame, then lifting it. **Save it for later use.**

1D. Preparazione dei componenti

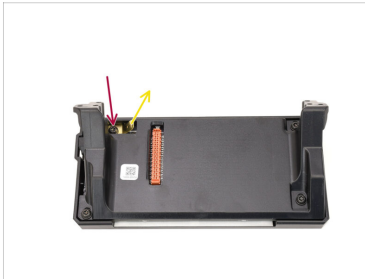


PASSO 1 Preparazione xBuddy



- Potrebbero esserci dei pad termici attaccati sul retro della scheda xBuddy. Togli i pad termici e ripulisci eventuali residui di colla.
- ⓘ Non usare oggetti affilati per togliere i pad.

PASSO 2 Smontaggio xLCD



- Prendi il gruppo display xLCD.
- Rimuovi la manopola dell'encoder e **conservalo per un uso successivo**.
- Flip the assembly around.
- Using the T10 Torx screwdriver, remove the screw holding the grounding faston connector.
- Remove the grounding faston connector and **save it for later use**.

PASSO 3 Smontaggio xLCD 2



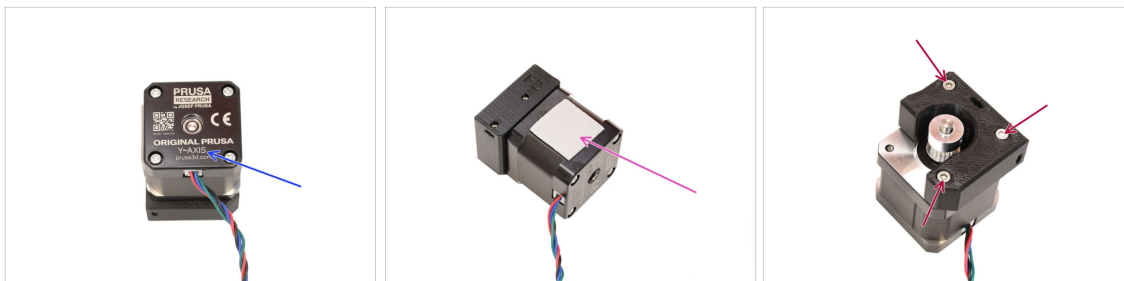
- Togli le tre viti che tengono insieme il gruppo.
- Separa il gruppo dalla parte anteriore della copertura.
- Remove the xLCD from the back of the cover. **Save it for later use.**

PASSO 4 Preparazione della ventola di stampa



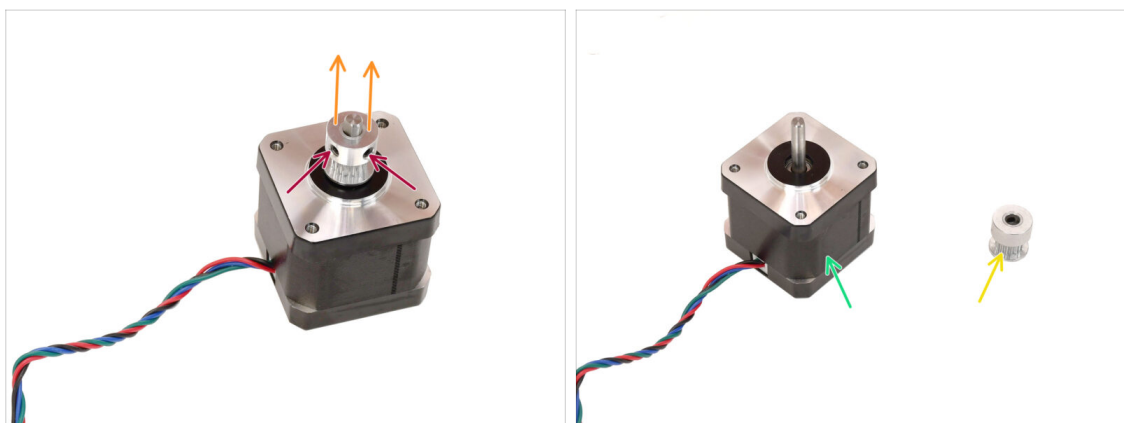
- Prendi il gruppo ventola di stampa.
- Con il cacciavite T10, rimuovi la vite che tiene fermo il coperchio della ventola.
- Remove the fan shroud.
- Remove the two screws holding the cover and open the cover.
- Remove the fan from the plastic part.
Save the fan alone for later use.

PASSO 5 Preparazione Motore Y



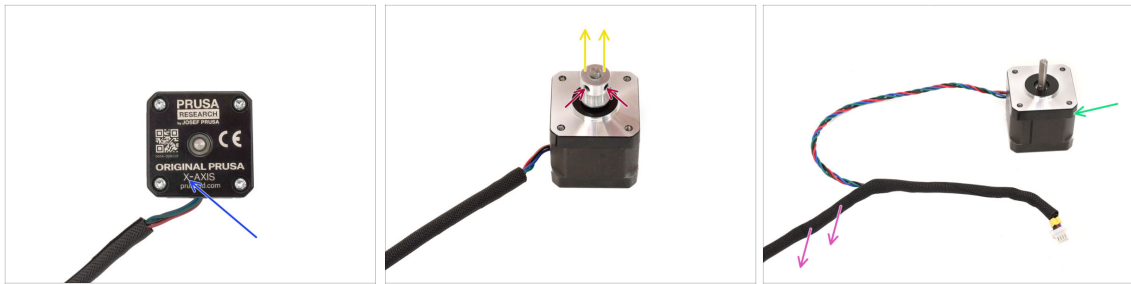
- Prendi il motore dell'asse Y.
- Togli il pad termico e tutti i pezzetti rimasti. Pulisci bene per togliere ogni residuo.
- Remove the three screws securing the motor to the plastic holder. Then, separate the motor from the holder.

PASSO 6 Y Motor Prep 2



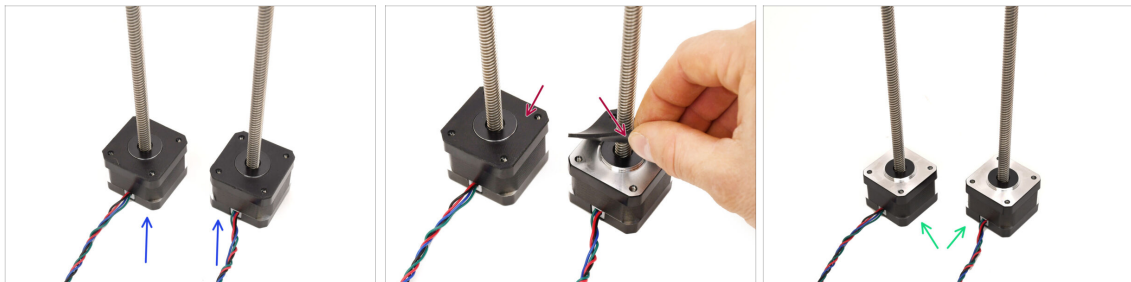
- Con la chiave a brugola da 2 mm, allenta le due viti senza testa sulla puleggia. Non toglierle del tutto.
- Separa la puleggia dal motore.
- **Save the motor for later use.**
- **Save the pulley for later use.**

PASSO 7 Preparazione Motore X



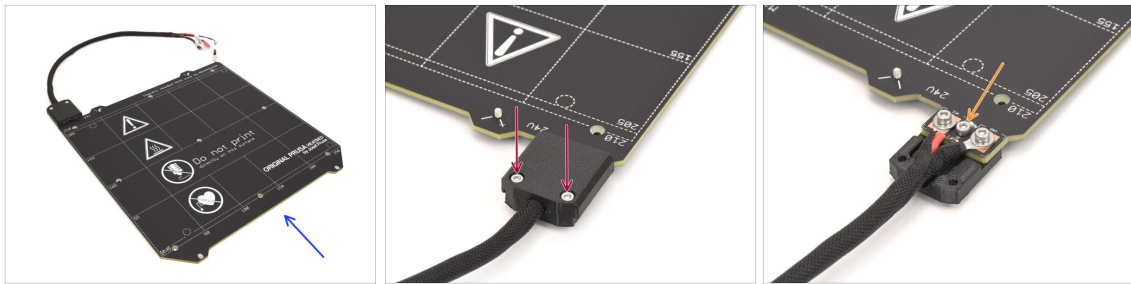
- Prendi il motore dell'asse X.
- Allenta le due viti senza testa sulla puleggia, ma non toglierle del tutto.
- Remove the pulley from the motor and **save it for later use**.
- Remove the textile wrap from the motor cable.
- **Save the motor for later use.**

PASSO 8 Preparazione Motore Z



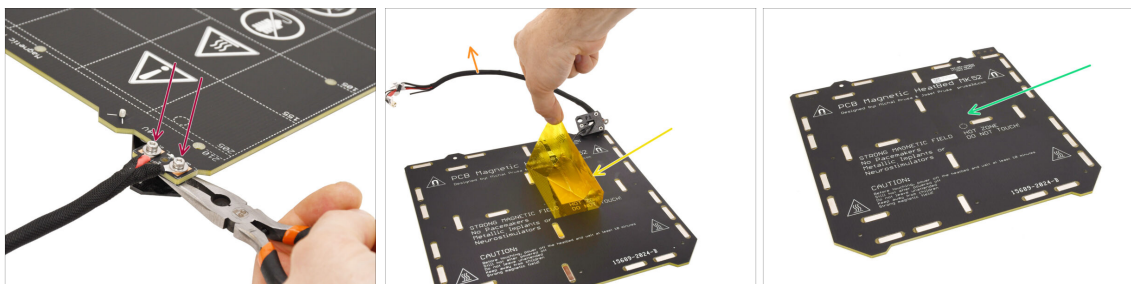
- Prendi i motori dell'asse Z.
- Togli i cuscinetti di gomma da entrambi i motori.
 - Clean off any residue from the pads.
- Save the motors for later use.

PASSO 9 Preparazione del piano riscaldato



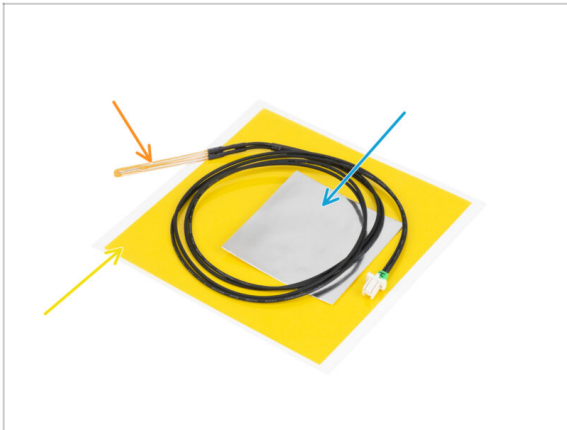
- Prendi il gruppo del piano riscaldato MK4S.
- Togli le due viti che tengono la copertura del cavo e togli la parte superiore della copertura.
- Remove the marked screw in the middle and detach the bottom part of the cover from the heatbed.

PASSO 10 Preparazione del piano riscaldato 2



- Togli le due viti che tengono i cavi di alimentazione.
- ① Tieni presente che sotto ci sono dei dadi M3nN che devi tenere fermi con la chiave Unikey o con delle pinze a becchi lunghi per togliere le viti in alto.
- Remove both the Kapton and aluminum stickers on the underneath to detach the thermistor.
- Remove the whole cable bundle together with the thermistor.
- Clean up any leftover adhesive and **save the heatbed alone for later use.**

PASSO 11 Preparazione Termistore



● Per i seguenti passi prepara:

● Termistore piano riscaldato CORE One (1x)

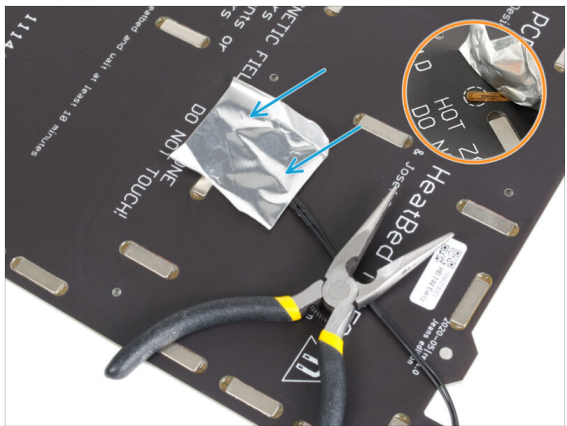
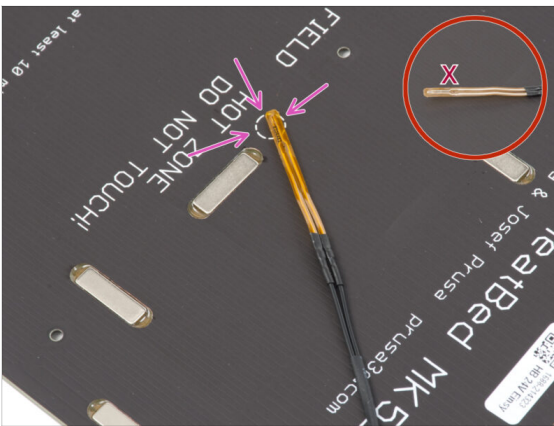
ⓘ This thermistor has a longer cable compared to the MK4/S version.

📌 The new thermistor comes in a separate bag within the main package.

● Nastro Kapton (1x)

● Nastro alluminio (1x)

PASSO 12 Installazione Termistore



● Posiziona il termistore sul piano riscaldato, assicurandoti che la punta sia posizionata all'interno del cerchio.

⚠ **Importante: se il termistore non è allineato bene, la stampante vedrà valori di temperatura sbagliati.**

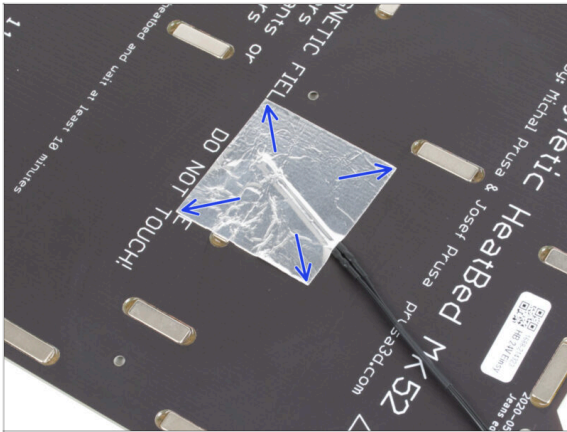
⚠ **Also, note which side the sensor is attached to on the heatbed.**

● Use the aluminum tape to fix the thermistor in place.

📌 The thermistor cable should be directed toward the power connector area.

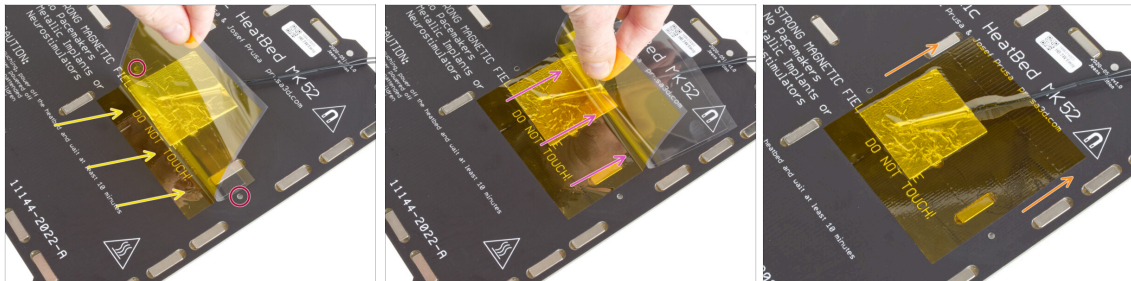
● Keep the tip of the thermistor in the circled area, while applying the tape.

PASSO 13 Thermistor Installation 2



- Stendi il nastro di alluminio intorno al termistore usando solo le dita, per assicurarti che sia completamente aderente.

PASSO 14 Thermistor Installation 3



- ⚠ Ora è il momento di mettere il nastro Kapton giallo finale.

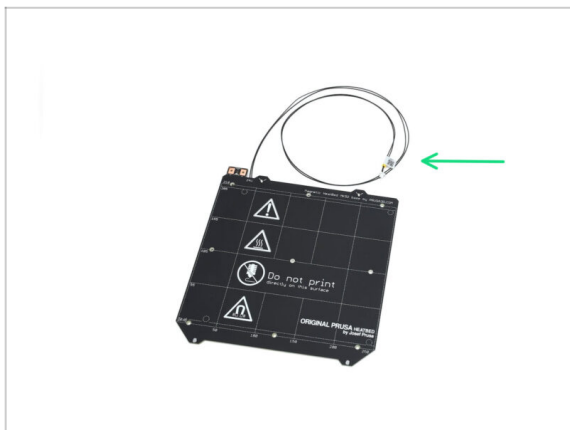
Non togliere tutto il nastro in una volta sola, altrimenti si arriccia! ⚠ Non togliere tutto il nastro in una volta sola, altrimenti si arriccia!

- Stacca una striscia di nastro Kapton di circa 1 cm (1/2 pollice) e attaccala al piano riscaldato.

- ⚠ Start applying the tape so that it overlaps the aluminum foil entirely, while making sure it **does not obstruct any screw holes in the heatbed.**

- Continue applying the tape gradually, ensuring it does not curl too much.
- Finally, Check that the entire surface has adhered properly.

PASSO 15 Rifacimento del piano riscaldato



- Hai rielaborato correttamente il piano riscaldato nella versione CORE One. **Mettilo da parte per dopo.**

PASSO 16 Gearbox Cover Preparation



- **Per le fasi successive, prepara:**
- Gearbox Cover CORE One (1x)
- ⓘ From the Printed Parts box.

PASSO 17 Rielaborazione Nextruder



- Prendi il gruppo Nextruder.
- Apri l'Idler.
- Loosen the three screws on the gearbox but do not remove them yet.
- Carefully remove the screws while holding the assembly together to prevent it from coming apart.
- Remove the cover, while keeping the rest of the gearbox together.

PASSO 18 Nextruder Rework 2



- Se il riduttore non è abbastanza lubrificato, aggiungi un po' di grasso tra gli ingranaggi.

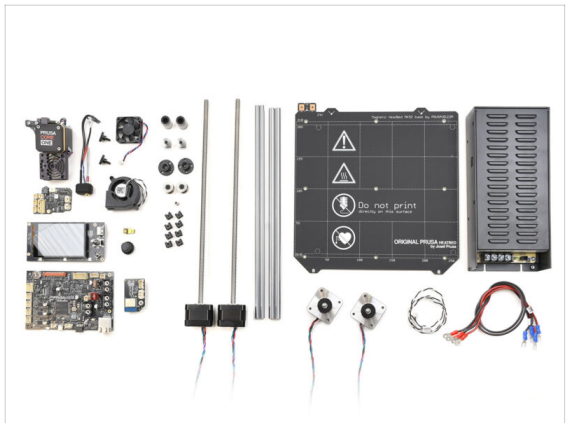
Se c'è già abbastanza lubrificante, puoi lasciarlo così com'è.
- Install the CORE One gearbox cover.
- Fix the assembly together using the three M3x25 screws you have removed earlier.
- **Save the reworked Nextruder for later use.**

PASSO 19 Controllo dei cuscinetti



- In precedenza, hai rimosso almeno tre cuscinetti LM8UU dalla tua stampante.
- 📌 Only two of this type of bearings will be used to build the CORE One.
- Check each bearing for seamless movement by attaching it to a smooth rod and sliding it back and forth.
- Select two of the best-performing bearings for later use.
- Set aside the remaining bearing(s).

PASSO 20 Controllo dei componenti



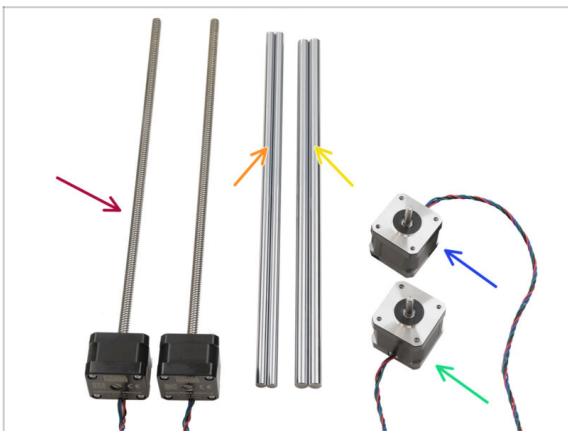
- La parte di smontaggio e preparazione è completata.
- ⚠ In the following steps, **we will list the required parts one by one**. Check that you have everything listed.

PASSO 21 Parts Recap 1



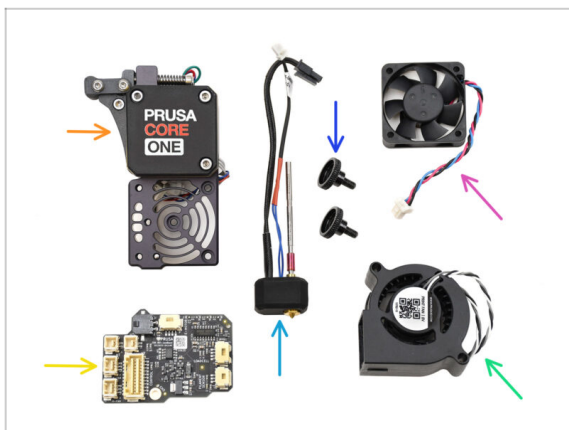
- Cuscinetto LM8UU (2x)
- Puleggia GT2-16 (2x)
- Dado trapezoidale (2x)
- Idler Pulley (2x)
- Distanziale piano riscaldato
- Expansion Joint (8x)

PASSO 22 Riepilogo parti 2



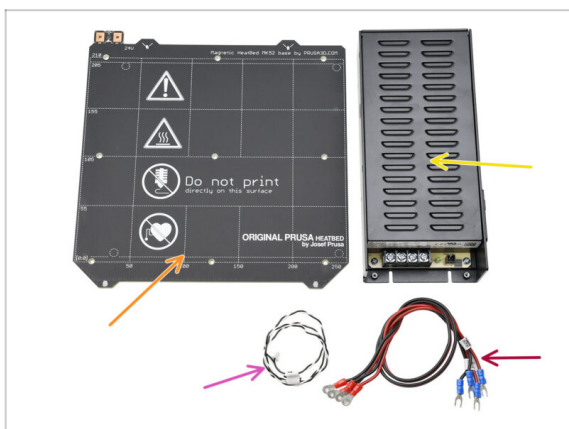
- Motore asse Z (2x)
- Asta 8x330 (2x)
- Asta 10x325 (2x)
- Motore Y
- Motore X

PASSO 23 Riepilogo parti 3



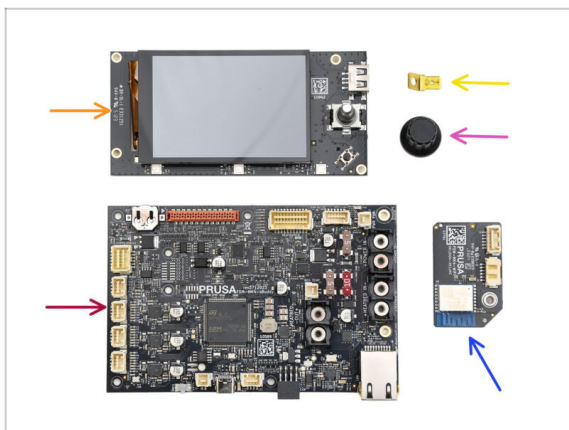
- Nexttruder Assembly
- Nozzle Assembly
- Vite zigrinata (2x)
- Hotend Fan
- LoveBoard
- Ventola di stampa

PASSO 24 Riepilogo parti 4



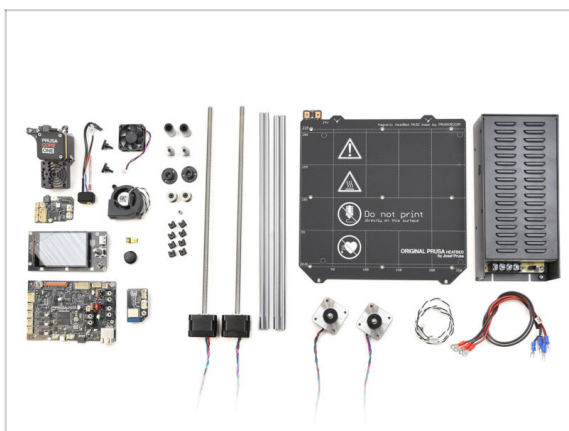
- Piano riscaldato
- Alimentatore
- Cavo Power Panic
- PSU Power Cable (2x)

PASSO 25 Parts Recap 5



- xLCD
- Connettore Faston con messa a terra
- Knob
- Scheda xBuddy
- Modulo Wi-Fi

PASSO 26 Parts Recap 6



- Congratulazioni! Tutte le parti necessarie della tua vecchia stampante sono state preparate. Tutte le parti necessarie della tua vecchia stampante sono state preparate.

⚠ Set aside any remaining, unused parts to avoid mixing them with the required components.

2. Gruppo Base

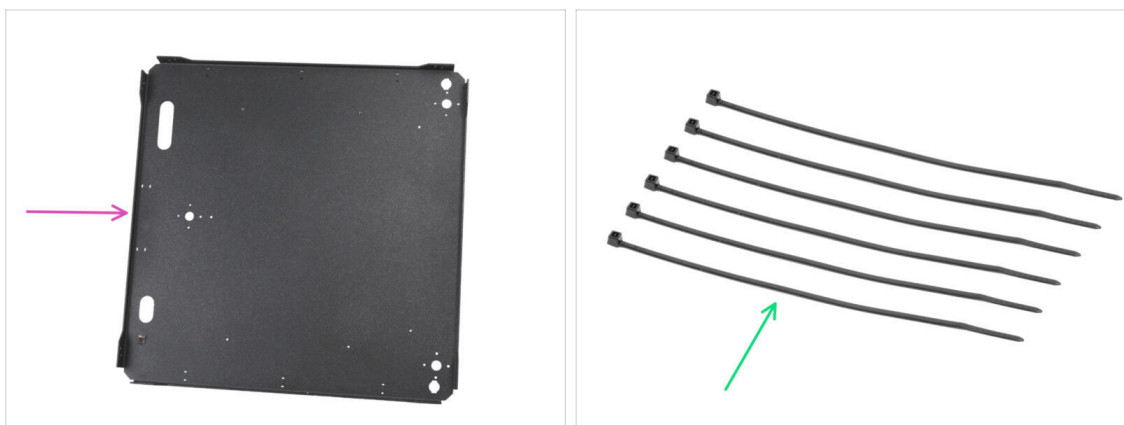


PASSO 1 Tools necessary for this chapter



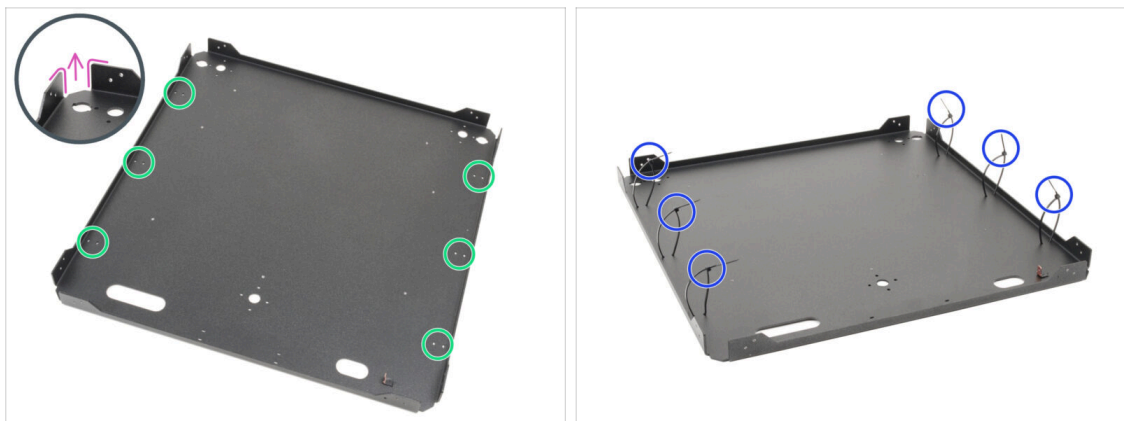
- Per questo capitolo prepara:
- Chiave 13-16
- Chiave a brugola da 2.5mm
- T10 torx key / T10 torx screwdriver

PASSO 2 Base assembly: parts preparation



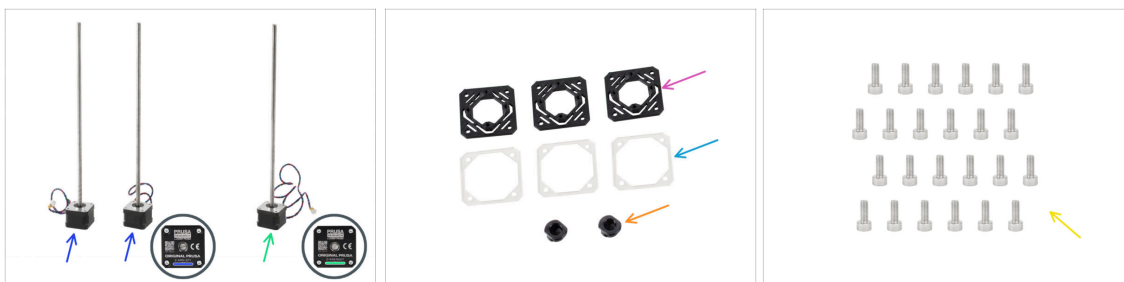
- For the following steps, please prepare:
- Bottom panel (1x) found in the Metal parts 1/3 package
- Zip tie (6x) found in the Electronics & Fasteners package

PASSO 3 Inserting the zip ties



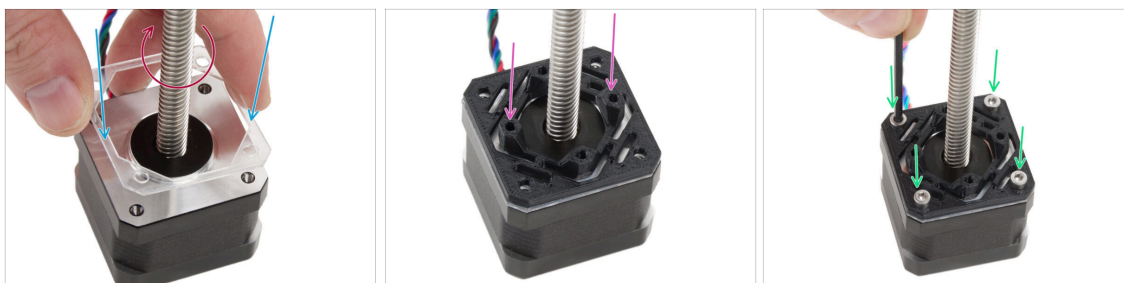
- ✿ Turn the bottom panel so that the bends of the plate are facing upwards.
- ✿ Note the twin holes for the zip ties around the perimeter of the panel.
- ✿ Insert six zip ties through the holes, placing them along both sides and partially tightening them, engaging only the first few teeth.
- ⚠ **Do not fully secure them yet, as we will route cables through them later.**
- ℹ Note: The orientation of the zip tie heads (inside or outside the metal sheet) doesn't matter.

PASSO 4 Base assembly: parts preparation



- ✿ **For the following steps, please prepare:**
- ✿ Z-axis left motor (2x)
 - 📌 One of these motors is in the electronics & chamber parts box.
- ✿ Z-axis right motor (1x)
- ✿ Z-motor-mount (3x) *found in the Printed parts package*
- ✿ Motor washer (3x) *found in the Electronics & Chamber parts package*
- ✿ Z-rod-mount (2x) *found in the Printed parts package*
- ✿ M3x8 screw (24x) *found in the Electronics & Fasteners package.*

PASSO 5 Installing the motor mounts



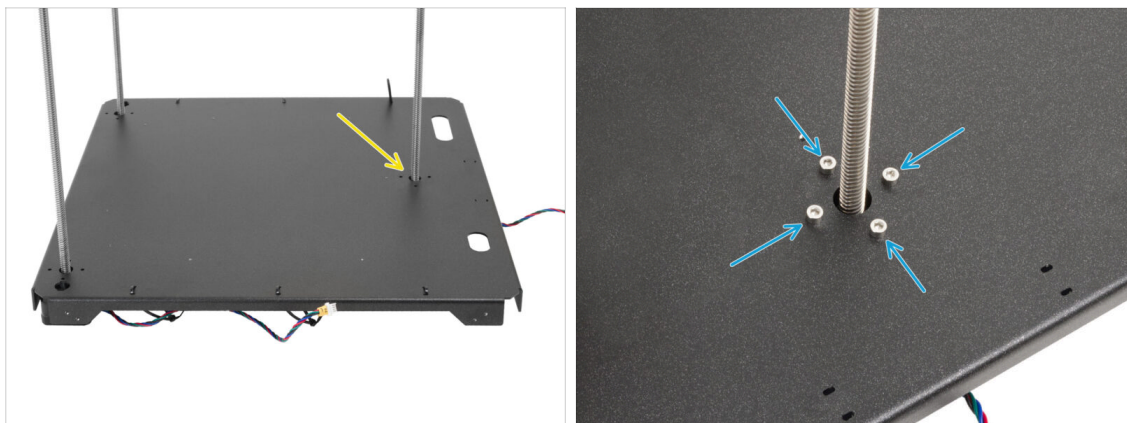
- 🔴 Try to rotate the threaded rods on each Z motor to make sure they are not completely blocked in rotation.
- 🔵 Attach one transparent motor washer pad on each Z motor.
- 🟡 Place one Z-motor-mount on each motor washer. **The protrusions on the part must be facing upwards.**
- ⬛ Align holes with all the parts.
- 🟢 Join all parts together with four M3x8 screws.
- ⬛ Follow the same procedure for all motors.

PASSO 6 Installing the rear motor



- 🟡 Turn the bottom panel upside down.
- 🟡 Locate the circle hole in the middle of the panel back side.
- 🔵 Take the **Z motor right** - the motor with the longest cable. Labeled ZR on the cable.
- 🟢 Push the motor threaded rod through the panel and align the holes in the panel with the holes in the motor assembly.
- ⚠️ **The motor cable must point outwards (towards you).**
- 🔵 Push both Z-axis motor left through the bottom panel.
- 🔴 **The motor cables must point to the rear motor side.**
- 📄 **i** In the following instructions, we will refer to the **front** and **rear** sides of the assembly. The **front side has TWO motors**, while the **rear side has ONE motor**. We will remind you along the way, but it's good to keep this in mind :).

PASSO 7 Securing the rear motor



- ✦ Begin securing the motors, starting from the rear motor.
- ✦ Insert and fully tighten four M3x8 screws into the **rear motor**.
 - ⚠ Make sure the screws stay straight and do not tilt as you tighten them.
 - ⚠ Do not overtighten the screws, as they thread directly into the plastic part. For a final tightening, use the shorter part of the key as a handle to apply the correct amount of torque.

PASSO 8 Installing the front motor right



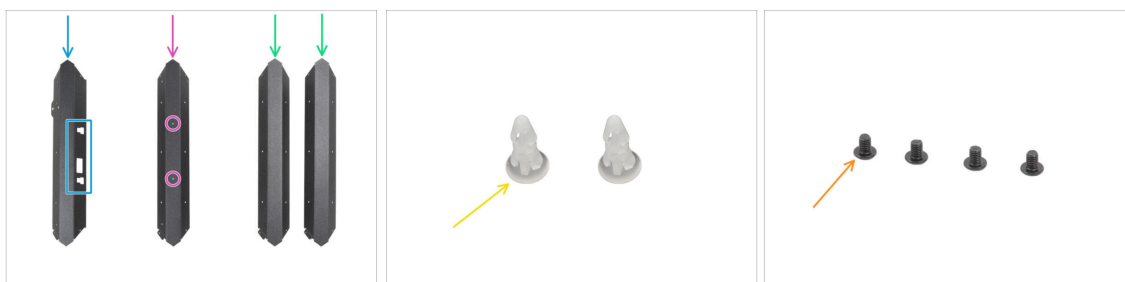
- ✦ First, insert the rod-mount into the opening next to the front right Z motor.
- ✦ Use the 13-16 wrench to rotate the rod mount 90 degrees, locking it into place.
- ✦ Secure the motor using four M3x8 screws. Tighten them completely.
 - ⚠ Make sure the screws stay straight and do not tilt as you tighten them.

PASSO 9 Installing the front motor left



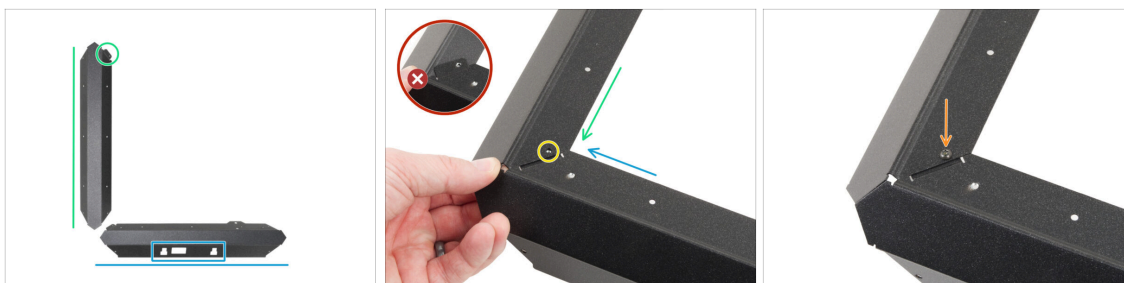
- Let's move to the front left motor (from the front view).
- ⚠ Ensure, the motor cable still points to the rear side.
- Insert the rod-mount into the opening next to the front right Z motor.
- Use the 13-16 wrench to rotate the rod mount 90 degrees, locking it into place.
- Secure the motor using four M3x8 screws. Tighten them completely.
- ⚠ Make sure the screws stay straight and do not tilt as you tighten them.
- Place the whole assembly aside for a while.

PASSO 10 Bottom frame: parts preparation



- For the following steps, please prepare:
- ⚠ Be very careful when handling sharp sheet metal parts to avoid injury or damage.
- ⚠ Metal sheet profiles may look identical at first glance, but there are some differences. **DOUBLE-CHECK** to pick the correct ones.
- Front profile (1x) **notice the cutouts** - found in the Metal parts 1/3 package
- Rear profile (1x) **with two holes on the flat side** - found in the Metal parts 1/3 package
- Universal profile (2x) **no holes on the flat side** - found in the Metal parts 1/3 package
- Spacer pin (2x) found in the Electronics & Fasteners package
- Vite M3x4rT (4x)

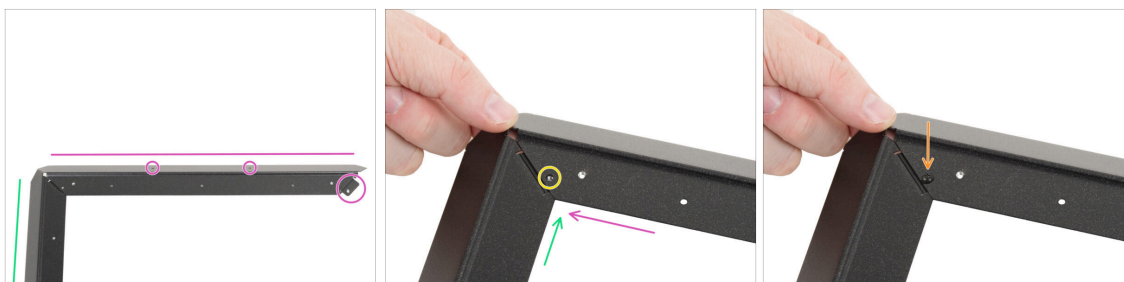
PASSO 11 Assembling the bottom profile: front + left



⚠ Be very careful when handling sharp sheet metal parts to avoid injury or damage.

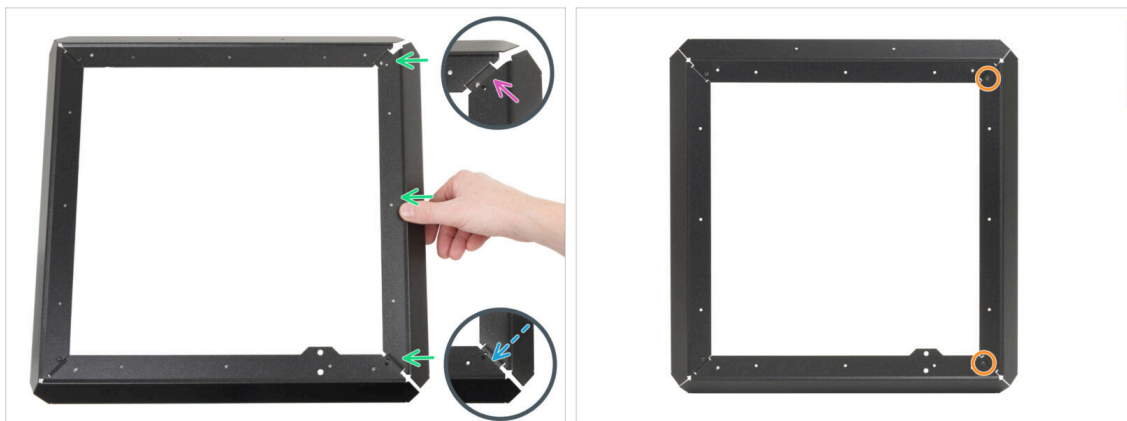
- 🔵 Place the front profile according to the picture. The cutouts must be facing you.
- 🟢 Place one of the universal profiles on the left side. Orient the part according to the picture. **Use the flange as a guide.**
- ⬛ Attach the two profiles together.
 - ⚠ The flange of the front plate (blue arrow) must be inserted **under** the left universal profile (green arrow), not on top of it.
- 🟡 Align the holes in both parts.
- 🟠 Join both parts together with the M3x4rT screw.

PASSO 12 Assembling the bottom profile: left + rear



- 🟡 According to the picture, place the rear profile (with two holes on the flat side) to the universal left profile. Orient the part according to the picture. **Use the flange as a guide.**
- ⬛ Join the rear profile with the universal left profile together.
 - ⚠ Make sure the flange is under the rear profile, not on top.
- 🟡 Align the holes in both parts.
- 🟠 Join both parts together with the M3x4rT screw.

PASSO 13 Assembling the bottom profile: right



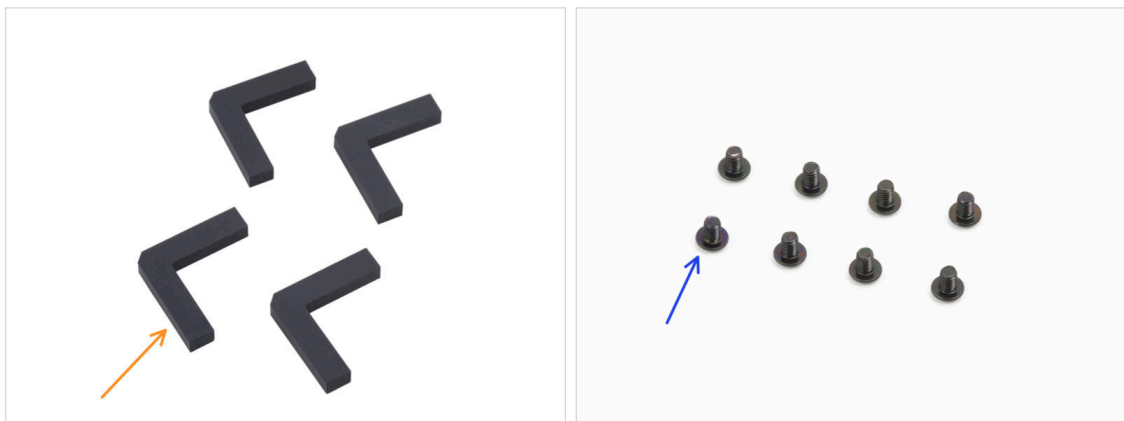
- Attach the universal right profile between the rear and front profile. **Ensure that:**
 - The **rear** end is **above** the rear profile flange.
 - The **front** flange is inserted **under** the front profile.
- Secure the left profile with M3x4rT on both ends.

PASSO 14 Inserting the spacer pins



- Insert the spacer pin into the hole in the front profile protrusion.
- Push firmly on the spacer pin so that it fits perfectly into the hole.
- Use the same procedure for the second spacer pin.

PASSO 15 Anti-vibration feet: parts preparation



● For the following steps, please prepare:

- Anti-vibration foot (4x) found in the *Electronics & Chamber parts package*
- Vite M3x4rT (8x)

PASSO 16 Installing the anti-vibration feet



- Place the bottom frame according to the picture. The front profile must be facing you.



Before applying the anti-vibration feet, **wipe the metal profiles with isopropyl alcohol** and let them dry. This ensures proper adhesion.

- Peel off the protective layer from all anti-vibration feet.

⚠ Rimuovi con cautela **solo la pellicola protettiva** da ogni piedino antivibrante. Se lo strato adesivo inizia a staccarsi insieme alla pellicola, fermati e prova a staccarla da un altro angolo.

- Stick one anti-vibration foot in each corner of the frame. Align it with the outer edge of the flat side of the profile.

PASSO 17 Installing the bottom frame



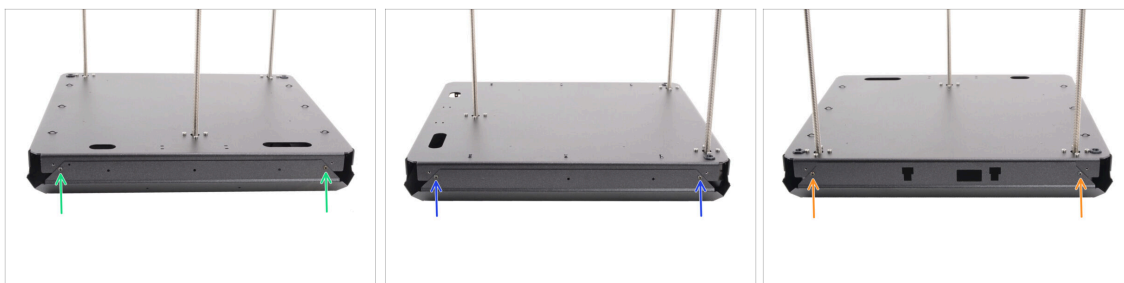
- 🔵 Turn the bottom frame upside down. **The front profile must be facing you.**
 - 🟡 Attach the rear side of the bottom panel assembly to the rear side of the bottom frame.
 - 🟠 Ensure that the front side of the bottom panel assembly (with two motors) aligns with the front profile of the bottom frame (with cutouts).
 - 🟣 Place all the motor cables inside the center area of the bottom frame to prevent pinching.
 - 🟢 Slowly and carefully lower the bottom panel assembly into the bottom profile.
 - ⬛ Ensure the assembly fits completely **inside the bottom profile.**
 - ⬛ Make sure no part of the bottom panel assembly extends outside the bottom frame
- ⚠️ **Double-check that no cables are pinched.**

PASSO 18 Mounting the bottom frame: right side



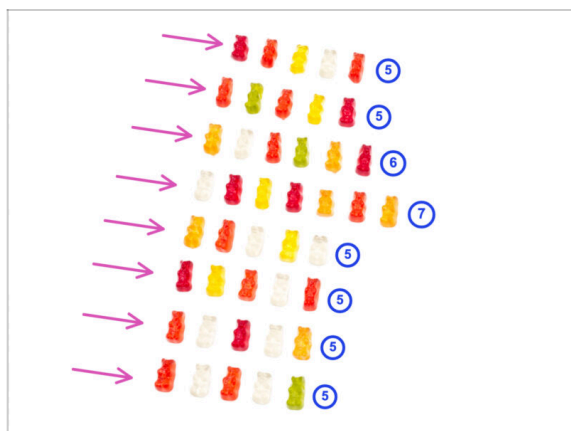
- ⬛ Focus on the front right corner and right side.
- 🟡 Slightly lift one of the corners of the bottom panel assembly.
- 🟢 Align the threaded hole in the bottom panel with the hole in the profile.
- 🟢 Join both parts together with the M3x4rT screw.
- ⬛ Move to the rear corner of the right side.
- 🟣 Align the holes in the base and the profile and secure it with the M3x4rT screw.

PASSO 19 Mounting the bottom frame: rear + left + front



- Move to the rear side of the assembly (side with one Z motor).
- Align holes in the base assembly and the profile and secure it with two M3x4rT screws.
- Focus on the left side of the assembly.
- Align holes in the base assembly and the profile and secure it with two M3x4rT screws.
- Turn the assembly with the front profile facing you (profile with cutouts).
- Align holes in the base assembly with the profile and secure them using two M3x4rT screws.

PASSO 20 È l'ora delle Haribo!



- It's time to reward yourself!
- Stack your gummy bears in eight rows.
- Arrange the number of gummy bears in each row as shown in the picture.
- ① If you don't get the exact number in the last row, we recommend finding the nearest candy store and buying the missing ones.
- Eat the first row.

PASSO 21 Fatto

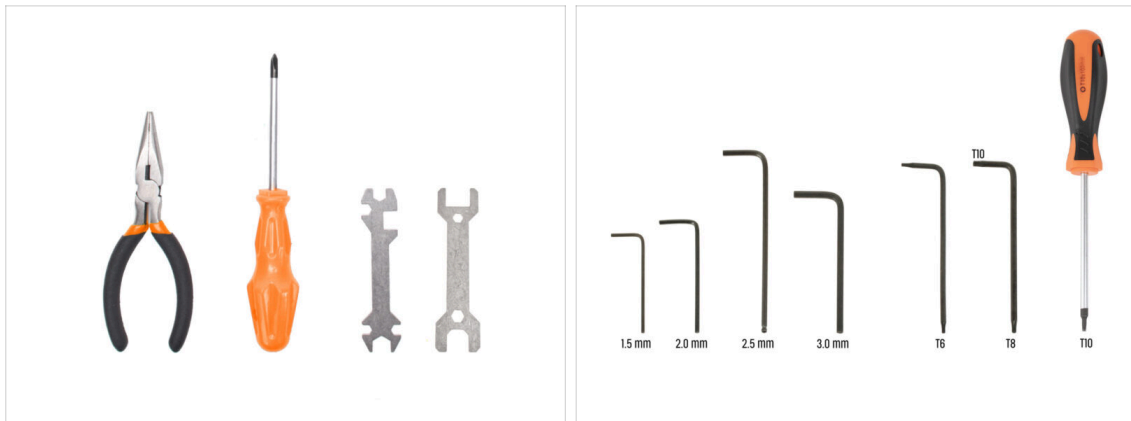


- **Congratulations!** You just assembled the **base assembly**.
- Set the assembly aside for now and let's move to the next chapter.

3. Assemblaggio posteriore

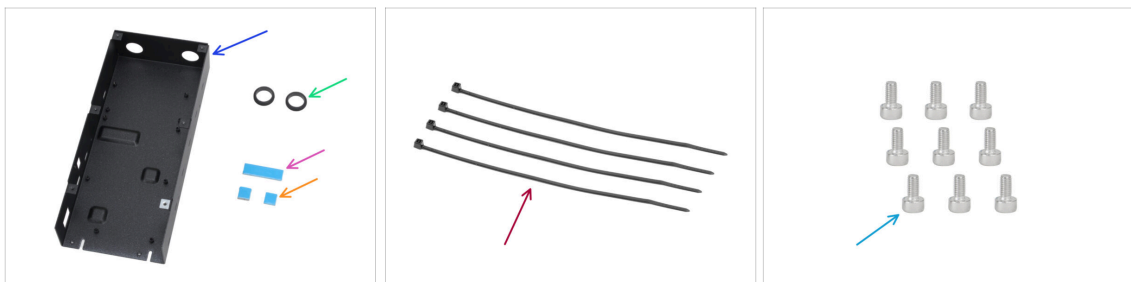


PASSO 1 Tools necessary for this chapter



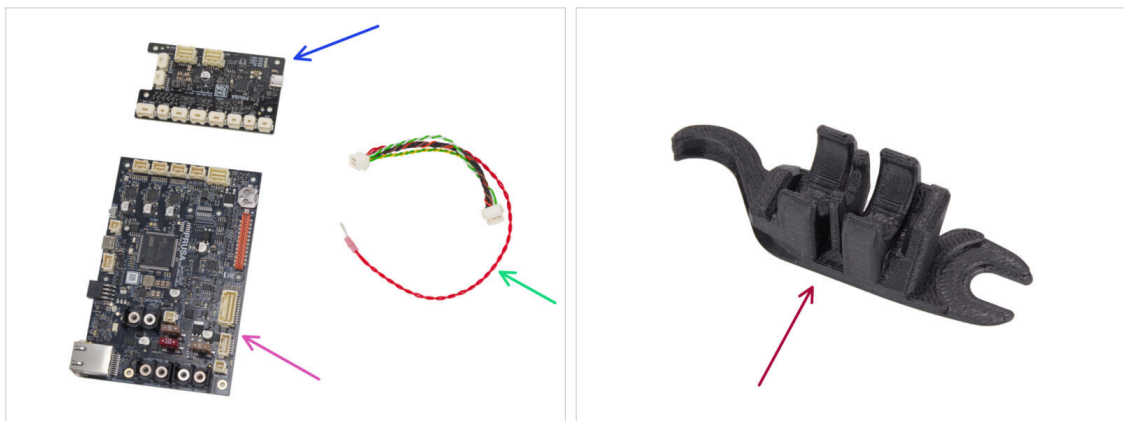
- **For this chapter, please prepare:**
- Cacciavite a stella PH2
- Pinza a becchi lunghi
- Chiave a brugola da 2.5mm
- T10 torx key / T10 torx screwdriver

PASSO 2 xBuddy: parts preparation I.



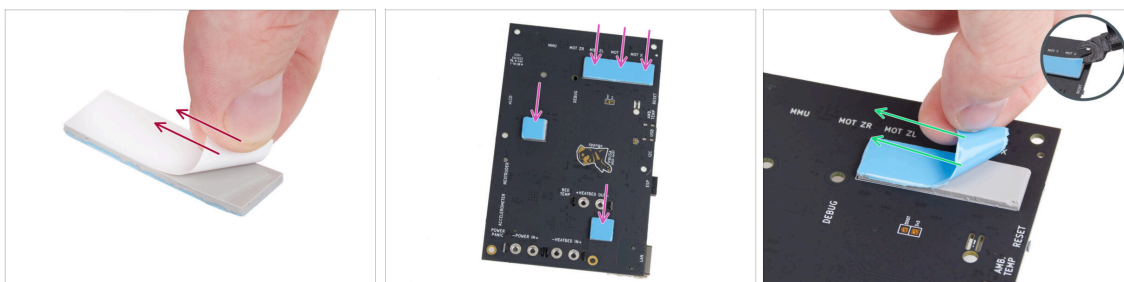
- **For the following steps, please prepare:**
- Scatola xBuddy CORE One (1x) *si trova nella confezione Metal parts 3/3*
- Grommet 19/16 mm (2x) *found in the Electronics & Fasteners package*
- Thermal pad 40x12x2.2 mm (1x) *found in the Electronics & Fasteners package*
- Thermal pad 12x12x2.2 mm (2x) *found in the Electronics & Fasteners package*
- Fascetta (4x)
- Vite M3x6 (9x)
- **i** The list continues in the next step...

PASSO 3 xBuddy: parts preparation II.



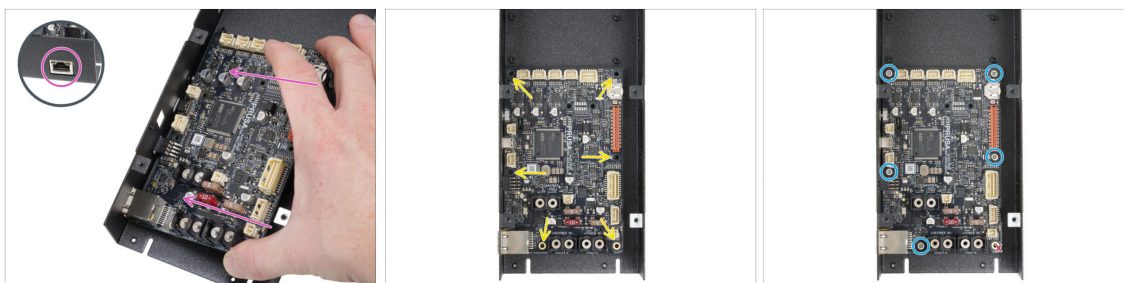
- xBuddy extension board (1x) *found in the Electronics & chamber package*
- Scheda xBuddy (1x)
- xBuddy extension cable (1x) *found in the Electronics & Fasteners package*
- Assembly-multi-tool (1x) *found in the Printed parts package*

PASSO 4 Applying the thermal pads



- Peel off the white protective layer from all thermal pads.
- ⚠ **Quando maneggi la scheda elettronica, tocca sempre e solo i lati della stessa. Evita di toccare i chip, i condensatori e altre parti dell'elettronica.**
- Attach the pads onto the back of the xBuddy board. There are markings that indicate the correct size and positions.
- ⓘ Ensure the pad attachment surface is clean and degreased.
- ⚠ **For the protection of the board's electronic components, we strongly recommend placing the xBuddy board on the soft pad. You can use the original xBuddy bubble wrap package.**
- Peel off the blue protective layer from all thermal pads.
- ⓘ Pro tip: If the edge of the layer is difficult to lift, you can use the thin side of the Assembly-multi-tool to help separate the protective layer.

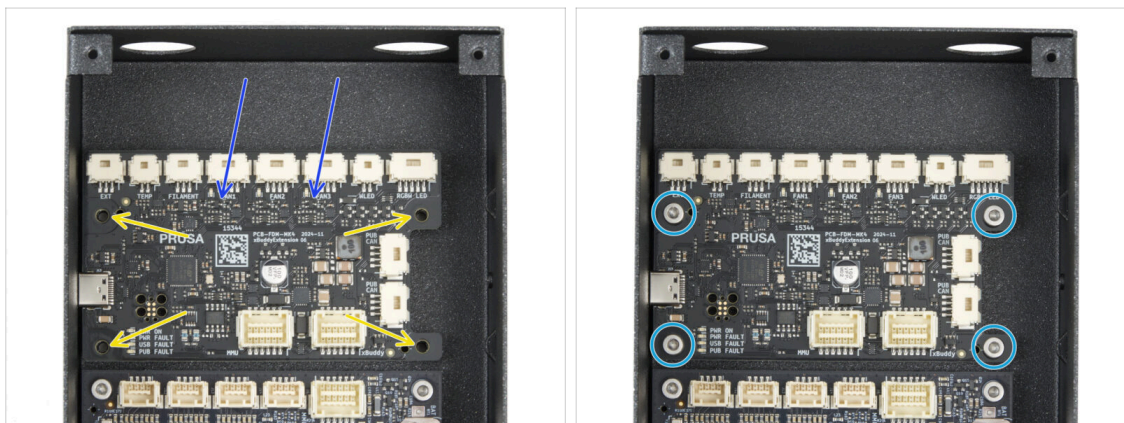
PASSO 5 Installare la xBuddy



⚠ Always touch the sides of the electronics board while manipulating it. Avoid touching the chips, capacitors and other parts of the electronics.

- ✿ Inserisci la scheda xBuddy nella scatola xBuddy.
 - Make sure the Ethernet connector is properly inserted into the hole in the xBuddy box.
- **Before fully securing**, align the board's holes with the xBuddy box's threaded standoffs.
- Fix the position of the xBuddy board by inserting five M3x6 screws. Do not fully tighten the screws. A few turns are enough for now.
- ⚠ **Put aside your instinct and leave the hole on the bottom right empty.**
- **Fully tighten all five screws. But very carefully**, otherwise you can damage the electronics board.

PASSO 6 Installing the xBuddy extension



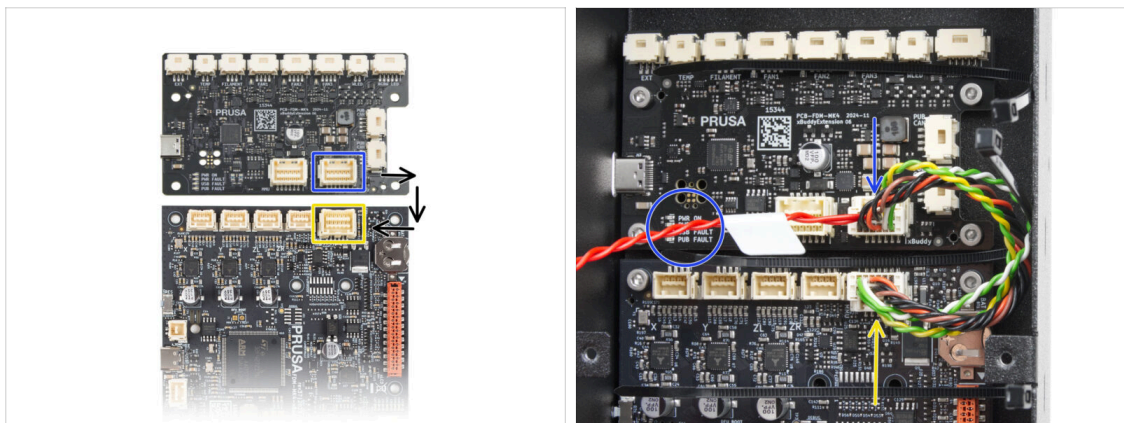
- Insert the xBuddy extension board to the xBuddy box above the xBuddy board. Notice the part orientation.
- Prima di fissarla completamente, centra i fori della scheda con i fori (colonne) della scatola di xBuddy.
- Fix the position of the xBuddy extension board by inserting four M3x6 screws. Tighten them completely.

PASSO 7 Installazione delle fascette



-  Take a closer look at to the xBuddy box. There are six perforations on the metal case.
-  **Procedi con molta attenzione. Fai attenzione a non danneggiare i connettori o i condensatori della scheda xBuddy.**
-  Attach the hook on the Assembly-multi-tool below the first perforation on the left.
-  Push the zip tie through the perforation and into the Assembly-multi-tool. It will guide the zip tie into the electronics box.
-  **Note the correct orientation of the zip tie. The teeth on the zip tie must be on the visible side.**
-  Repeat the process at the indicated perforations.
-  Skip the third and sixth perforations.

PASSO 8 Connecting the xBuddy extension board



-  Plug the xBuddy extension connector with the free red cable to the xBuddy extension board.
-  Leave the red cable free for now.
-  Plug the other end of the xBuddy extension cable to the xBuddy board.

PASSO 9 Inserting grommets: xBuddy box



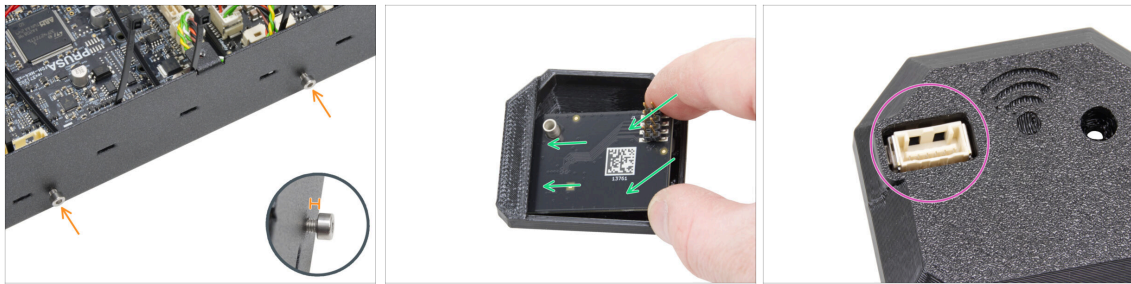
- Insert both grommets into both circle holes in the xBuddy box.
- Gently compress the grommet and fit it into the metal sheet, ensuring the groove locks into place

PASSO 10 Wi-Fi: preparazione dei componenti



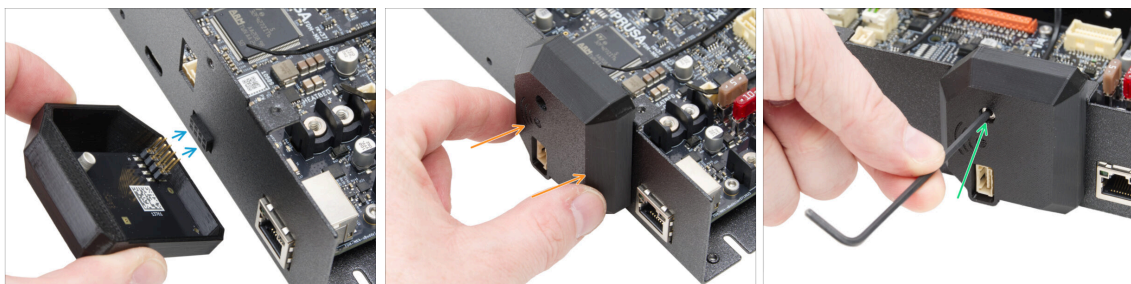
- For the following steps, please prepare:
- ESP-WiFi (1x) *reused from the MK4S*
- CORE-One-Wifi-cover (1x) *found in the Printed parts package*
- Vite M3x12 (1x)
- Vite M3x6 (2x)

PASSO 11 Assemblare il Wi-Fi



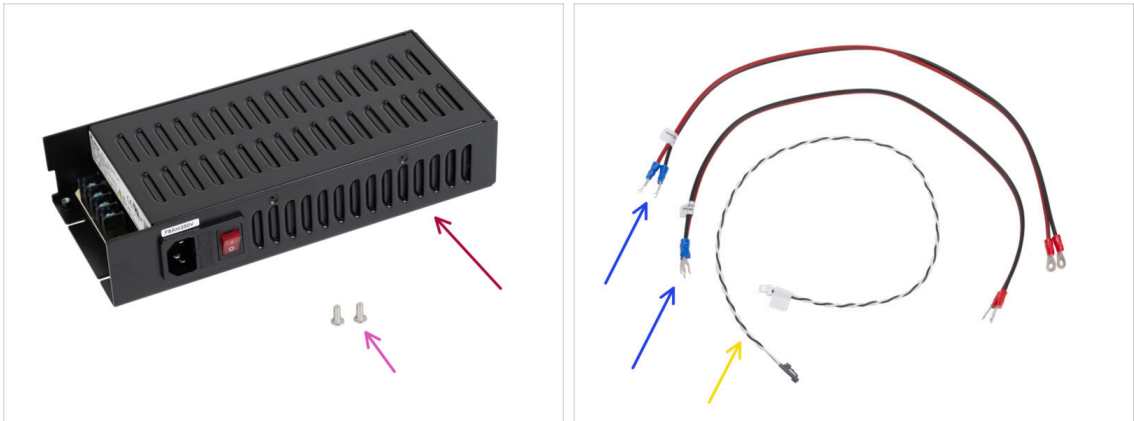
- ✚ Insert two M3x6 screw to the xBuddy box assembly from the right side. **Do not tighten them completely.** Leave at least a 4 mm (0.16 in) gap.
- ✚ Insert the ESP-WiFi module into the WiFi-cover, positioning it just below the bridge on the left side.
- ✚ On the other side, ensure the connector fits correctly into the hole in the cover.

PASSO 12 Installing the Wi-Fi assembly



- ⚠ **Be very careful when handling and connecting the ESP module to avoid bending and damaging the pins.**
- ✚ Take the WiFi cover assembly and connect the ESP module pins to the connector in the xBuddy.
- ✚ Close the WiFi cover carefully, ensuring the pins of the ESP module are properly engaged in the connector on the xBuddy.
- ✚ Secure the cover with the M3x12 screw.
- ⬛ Put the assembly aside for a while.

PASSO 13 PSU assembly: parts preparation



● For the following steps, please prepare:

● Delta PSU 240 W 24 V (1x) *power supply*

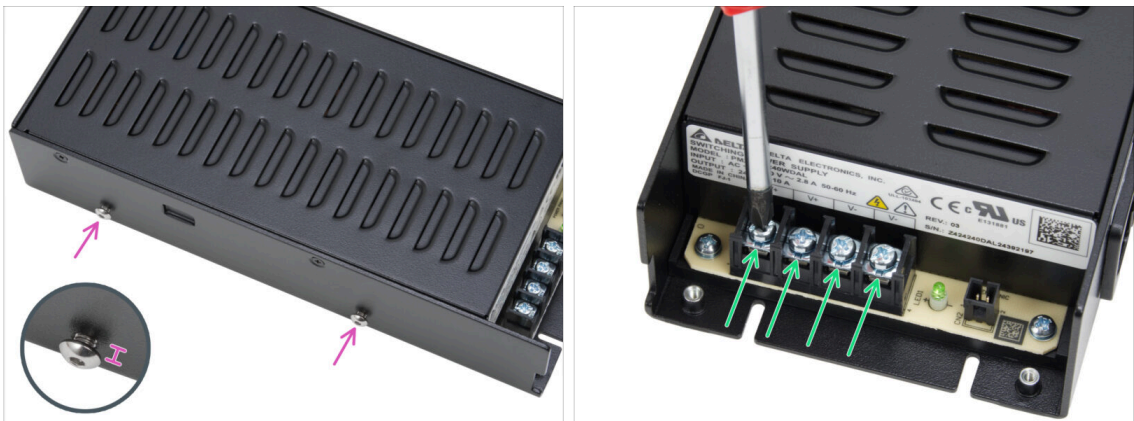
● Vite M4x6r (2x)

● xBuddy power cables (2x)

● Power panic cable (1x)

ⓘ The power panic cable may look different, depending on your MK4S printer / xBuddy board version.

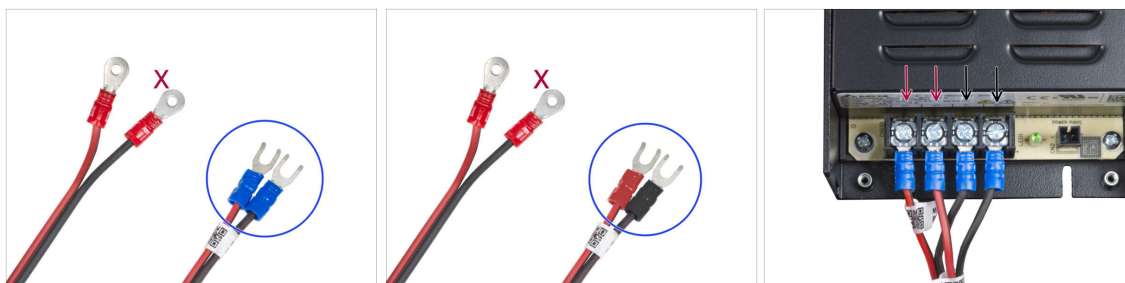
PASSO 14 Preparare l'alimentatore



● Insert two M4x6r screws into the left side of the PSU. **Do not tighten them completely.** Leave at least a 4 mm (0.16 in) gap between the screw head and the PSU.

● Slightly loosen all four power terminal screws on the PSU. **Do not remove them.** 3-4 turns are enough.

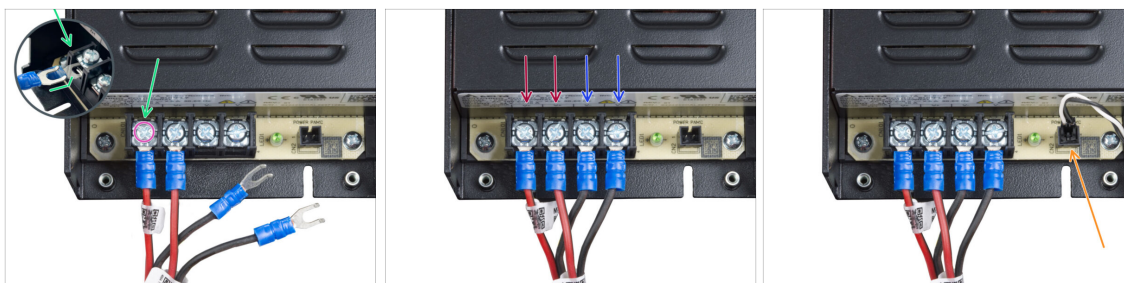
PASSO 15 Informazione sui cavi di alimentazione



- ❗ In the following steps, we will be connecting the power cables one by one. The terminal screws are installed on the PSU already. Loosen them but **don't remove them completely** so they don't get mixed up with the other type of screws used on the xBuddy board side of the cable. Each of the two power cables has two leads. One has a prevailing **red color = positive / +**
One has a prevailing **black color = negative / -**
- 🔵 Note that the power cables have different connectors on each end. For now, prepare the U-shaped connectors (crimping tube color may vary).
- ⬛ **Note that the polarity of the terminals on the PSU is:**
- 🔴 Positivo (V+)
 - 🔴 Positivo (V+)
 - ⬛ Negativo (V-)
 - ⬛ Negativo (V-)
- ❗ The red cable (positive) may have a black stripe on it. Similarly, the black cable (negative) can have a red stripe on it.

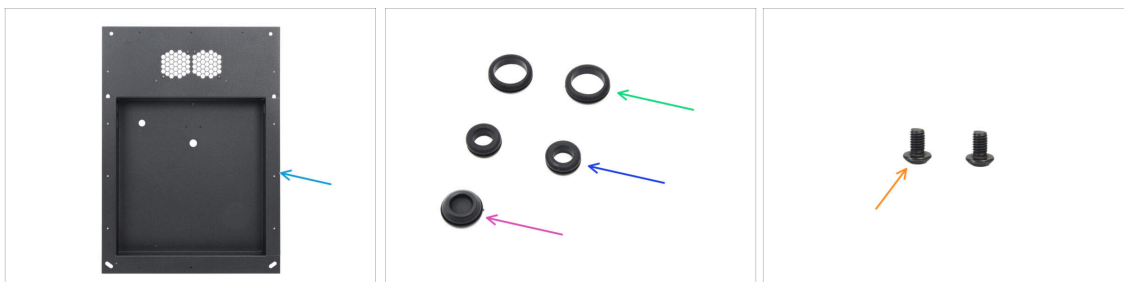
⚠ **Do not connect any cables yet, wait until you have been prompted.**

PASSO 16 Connettere l'unità di alimentazione



- Take the RED wire and slide the fork connector all the way into the first (positive) terminal from the left on the bottom of the PSU. Make sure the steel washer is above the "fork" connector.
- Tighten the terminal screw firmly.
- Use the same procedure to connect the second red wire to the second terminal slot from the left.
- Connect two black wires to the third and fourth terminal slots using the same procedure.
- Plug the black connector of the power panic cable to the right most connector.
- Put the assembly aside for a while.

PASSO 17 Back panel: parts preparation



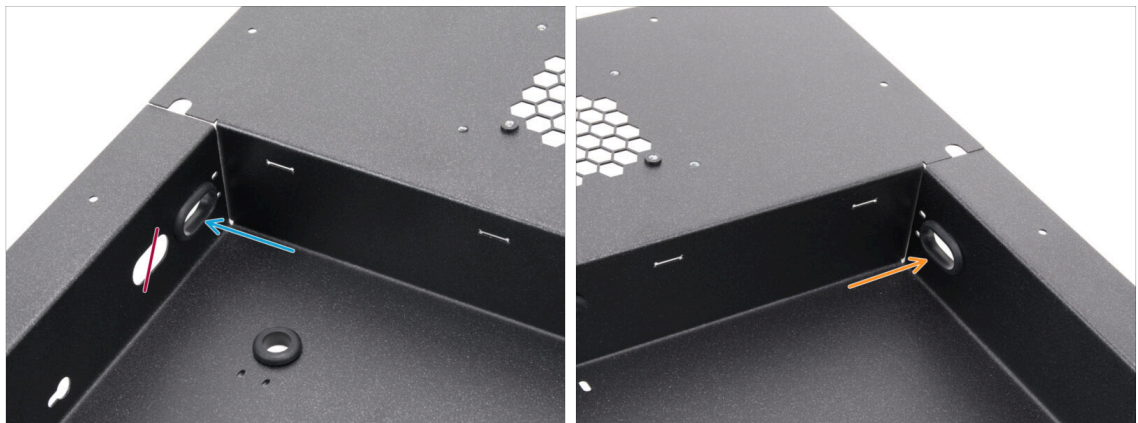
- For the following steps, please prepare:**
- Back panel (1x) found in the Metal parts 1/3 package
- Grommet 19/16 mm (2x) large one - found in the Electronics & Fasteners package
- Grommet 13.5/10 mm (2x) small one - found in the Electronics & Fasteners package
- Sealing plug 15.5 mm (1x) found in the Electronics & Fasteners package
- Vite M3x4rT (2x)

PASSO 18 Installing grommets: back panel top



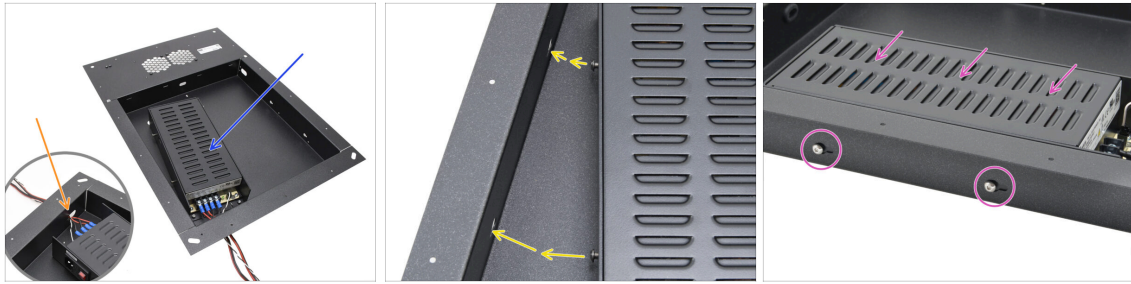
- Metti il pannello posteriore come mostrato nella prima immagine. Usa i due fori ovali come riferimento.
- Insert the sealing plug into the center hole.
 - **The sealing plug is not symmetrical.** Insert the side with the smaller diameter facing downward.
- Insert one small grommet to the left circle hole.
- Insert one small grommet into the oval hole.

PASSO 19 Installazione dei gommini: lati



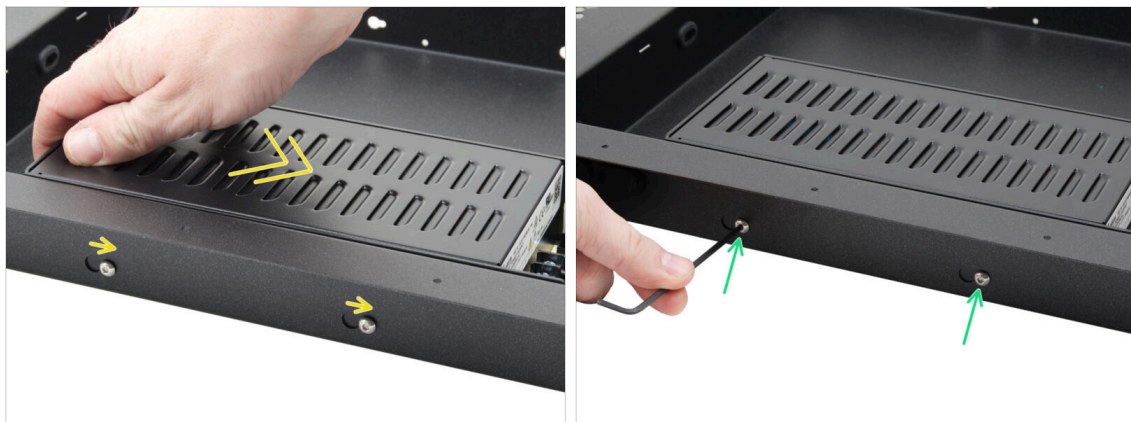
- Concentrati sulla parte superiore sinistra del pannello posteriore e individua i due fori ovali.
- Insert one large grommet into the oval hole closest to the corner.
- Move to the right top side of the back panel and insert one large grommet to the oval hole.

PASSO 20 Allineamento dell'alimentatore



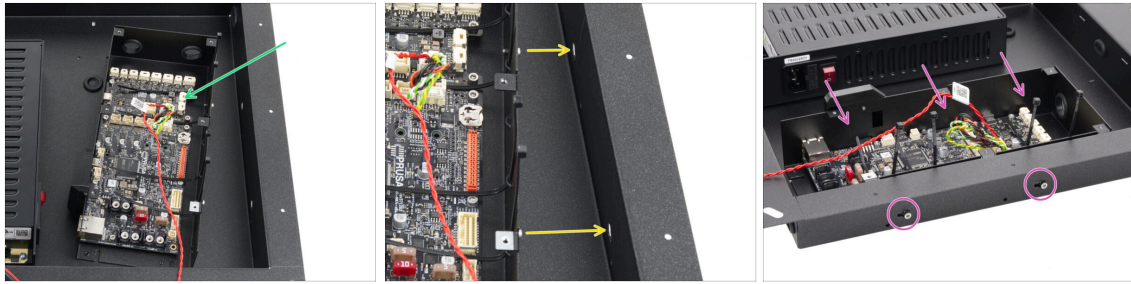
- Inserisci con attenzione l'alimentatore nella tasca del pannello posteriore.
- Push the cable bundle through the opening on the bottom of the panel.
- Align the screws on the PSU to the holes on the left side of the back panel.
- Slide the PSU so that the screws go through the holes.

PASSO 21 Montaggio dell'alimentatore



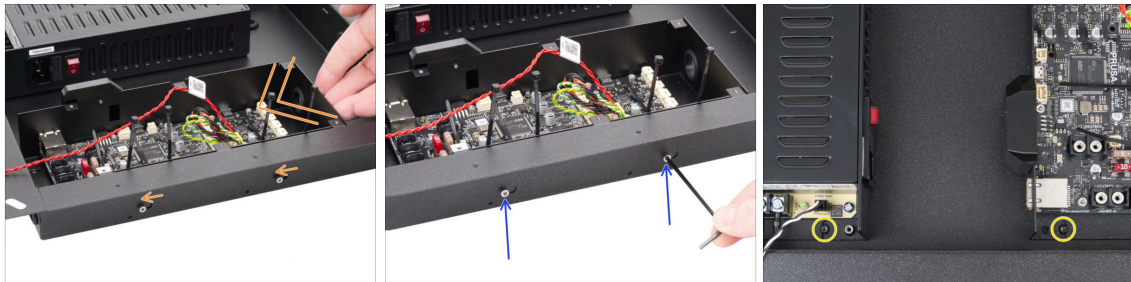
- Fai scorrere delicatamente l'alimentatore in modo che le viti si trovino in corrispondenza dei fori a forma di serratura.
- Maintain the PSU position and fully tighten both screws.

PASSO 22 Aligning the xBuddy box assembly



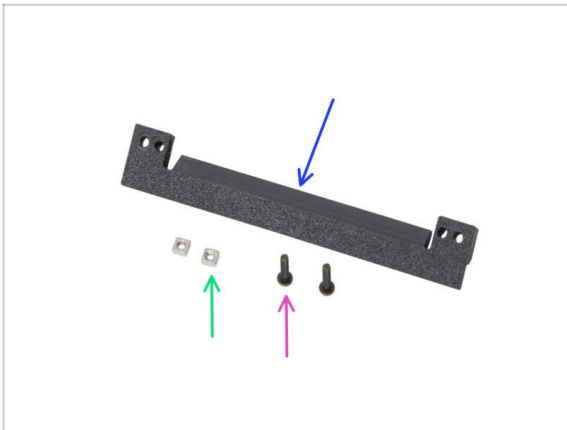
- Carefully insert the xBuddy box assembly into the rear panel pocket.
- Align the screws on the xBuddy box to the holes on the right side of the back panel.
- Slide the xBuddy box so that the screws go through the holes.

PASSO 23 Mounting the xBuddy box



- Gently slide the xBuddy box assembly so that the position of the screws moves to the end position of the keyhole-shaped holes.
- Maintain the xBuddy box position and fully tighten both screws.
- Fix the PSU and xBuddy box assembly to the back panel by tightening the two M3x4rT screws.

PASSO 24 PSU-cable-cover: preparazione dei componenti



- For the following steps, please prepare:
- PSU-cable-cover (1x) *found in the Printed parts package*
- Dado M3nS (2x)
- Vite M3x10rt (2x)

PASSO 25 Preparazione della copertura del cavo dell'alimentatore



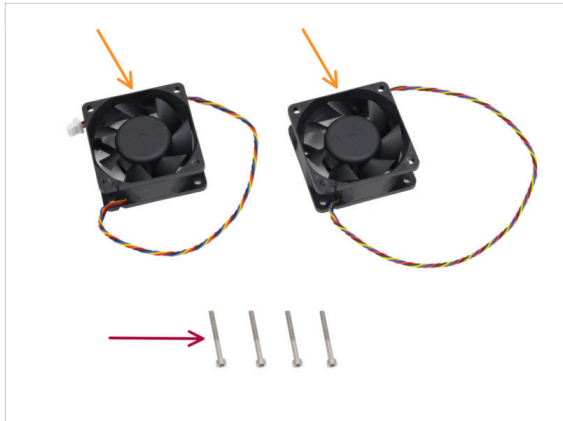
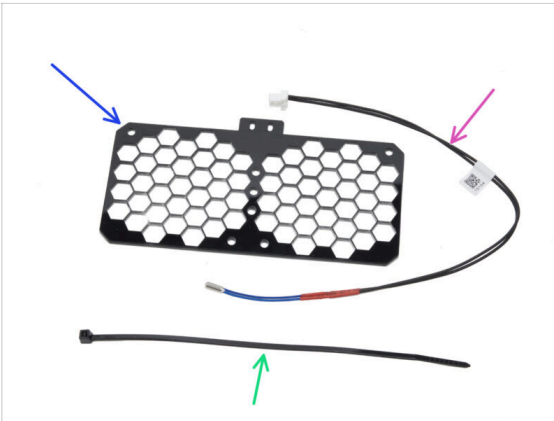
- Insert one M3nS nut into the hole on each end of the PSU-cable-cover.
- Ensure the holes are aligned.

PASSO 26 Installazione copertura PSU-cable-cover



- Attach the PSU-cable-cover inbetween the PSU and the xBuddy box.
- Secure the cover with two M3x10rT screws in the outermost holes of the part.

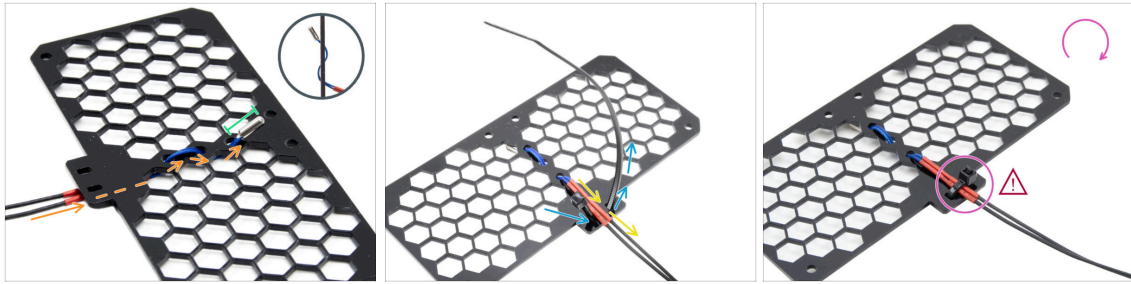
PASSO 27 Chamber fans: parts preparation



■ Per i seguenti passi prepara:

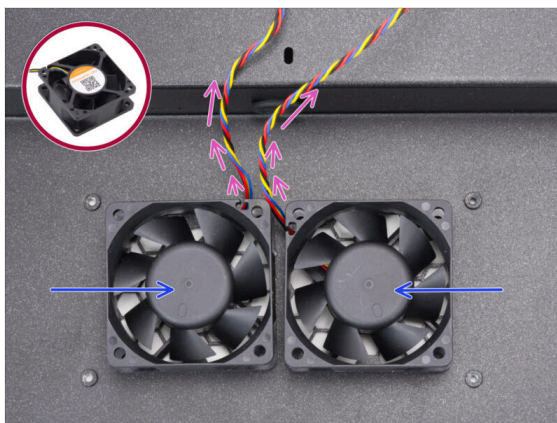
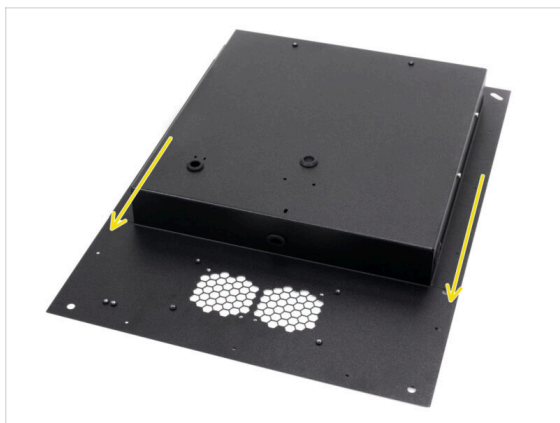
- Fan grid (1x) *found in the Electronics & Chamber parts package*
- Chamber thermistor 260 mm (1x) *found in the Electronics & Chamber parts package*
- Fascetta (1x)
- Cooling fan (2x) *found in the Electronics & Chamber parts package*
- Vite M3x30 (4x)

PASSO 28 Assembling the fan grid



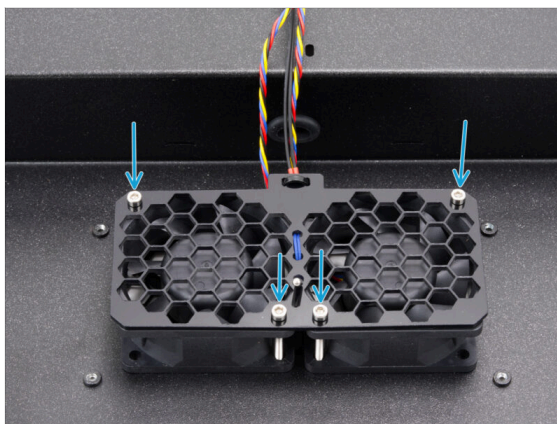
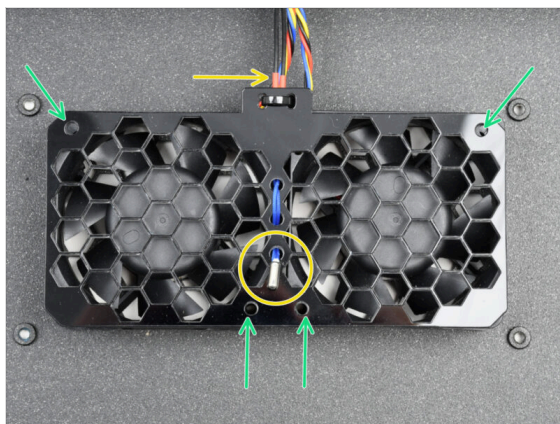
- Fai passare il cavo del termistore sotto la griglia. Infilalo nella direzione mostrata nella foto.
- ① The grid has both sides the same.
- Leave the whole thermistor part sticking out.
- Turn the grid over and push the zip tie through the pair of holes on the grid's protrusion.
- Route the thermistor cable in between the zip tie parts.
- Carefully secure the thermistor cable by tightening the zip tie. **Do not overtighten it, it may damage the cable.**
- ⚠ **Make sure that the header of the zip tie is facing the same way as in the picture. It must be on the same side as where the cable starts.**
- Put the assembly aside for a while.

PASSO 29 Montaggio delle ventole



- ✦ Posiziona e orienta il pannello posteriore come mostrato nella foto. I fori della griglia devono essere rivolti verso di te.
- ✦ Attach both fans to the grid in the back panel.
 - ⚠ **The side of the fan without the sticker must be facing up.**
 - ✦ Orient the fans so that the cables run from the corners in the centre.
 - ⬛ Let the cables hang freely for now, ensuring they are not pinched during handling.

PASSO 30 Copertura delle ventole di raffreddamento



- ✦ Posiziona il gruppo della griglia sulle ventole di raffreddamento.
 - ⚠ **Make sure that the thermistor is pointing up and its cable runs under the grid.**
- ✦ Align holes in the fans, fan grid and the back panel.
- ✦ Secure the fan assembly to the back panel with four M3x30 screws.
 - ⚠ **Do not overtighten the screws to avoid damaging the grid.**

PASSO 31 Profili posteriori: preparazione dei componenti



● Per i seguenti passi prepara:

- Rear profile (2x) found in the Metal parts 1/3 package

① Take two of the longer ones.

Note that the other two longer ones differ by having cutouts.

- Rivetto in nylon (11x)
- Vite M3x4rT (4x)
- 2.9x6.5sT self-tapping screw (1x)

PASSO 32 Installazione dei profili posteriori



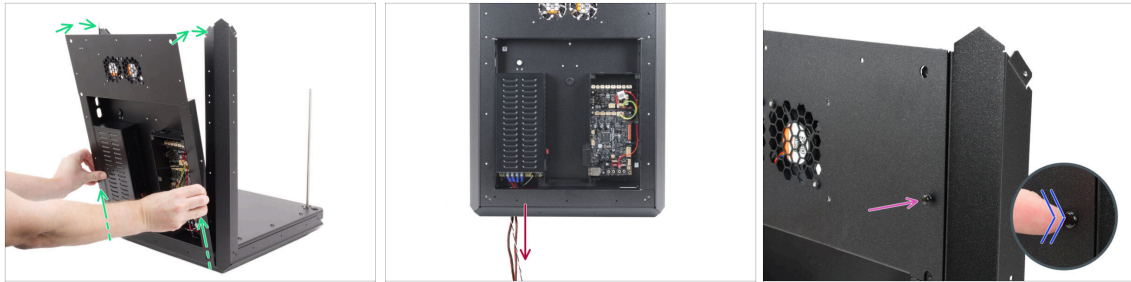
- Prendi il gruppo inferiore e giralo in modo che il lato posteriore (con un motore al centro) sia rivolto verso di te.



Focus on the right rear corner—the side with the longest oval opening in the bottom panel.

- Attach the rear profile to the right corner, using the **end without flanges**.
- Align the hole on the rear side and secure it with the M3x4rT screw.
- Secure the corner on the other side with a second M3x4rT screw - each corner will be secured with two M3x4rT screws.
- Proceed the same with the second rear profile on the rear left corner.

PASSO 33 Montaggio del pannello posteriore



- 🟢 Solleva un po' il gruppo posteriore e sistemalo con attenzione sulla base e sui profili posteriori.
- 🔴 Pull the power cables through the opening in the bottom assembly.
- 🟡 Insert one nylon rivet through the rear panel and rear profile on the top right side.
- 🟠 Push the rivet head with your finger until it is fully seated.

PASSO 34 Fissare il pannello posteriore



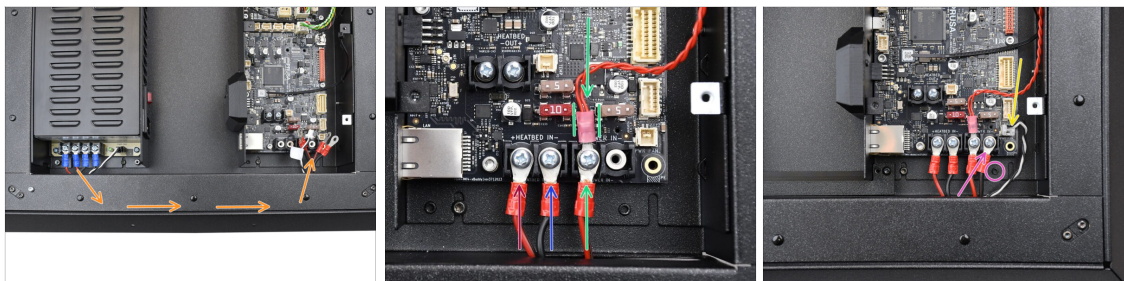
- 🟡 Installa tutti gli undici rivetti di nylon intorno al gruppo del pannello posteriore per fissarlo.
 - 🟢 Install the 2.9x6.5 self-tapping screw into the bottom left opening on the back panel.
- 🔧 Don't overtighten to avoid stripping the self-tapping thread.

PASSO 35 Preparazione delle viti dei terminali di alimentazione



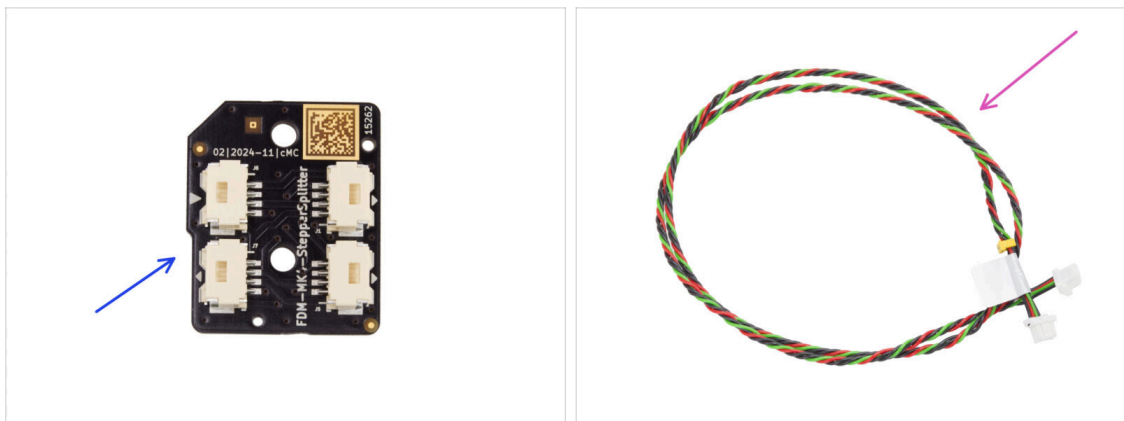
- Per le fasi successive, prepara:
- 6-32 Power Terminal Screw (4x)

PASSO 36 Collegare i cavi di alimentazione



- Guida il fascio di cavi di alimentazione attraverso il pannello posteriore, verso la scheda xBuddy.
- Take one red cable from the PSU and connect it to the leftmost terminal on the xBuddy board using the 6-32 terminal screw. Tighten it firmly but do not overtighten.
- Attach the black PSU cable to the second terminal. Tighten it firmly, but avoid overtightening.
- Take the second red cable from the PSU and stack it with the red cable from the extension board.
Secure **both cables together** in the third terminal using the terminal screw.
- 📌 Carefully guide the xBuddy extension cable between the fuses, ensuring it does not press against any of them.
- Attach the last black PSU cable to the xBuddy, **making sure it does not obstruct the threaded hole underneath**.
- Connect the power panic cable to the bottom right connector on the xBuddy board.

PASSO 37 Sdoppiatore stepper: preparazione dei componenti



● Per i seguenti passi prepara:

- Stepper splitter (1x) *found in the Electronics & Chamber parts package*
- Stepper splitter cable (1x) *found in the Electronics & Fasteners package*

PASSO 38 Orientare il cavo sdoppiatore Stepper



● Gira con molta attenzione il gruppo sul retro (pannello posteriore).

● **It is recommended to support the rear of the assembly** with a soft, raised pad to prevent it from resting on the protruding Wi-Fi module.

① Tip: Use the foam padding from the sheet metal parts package or an empty cardboard box.

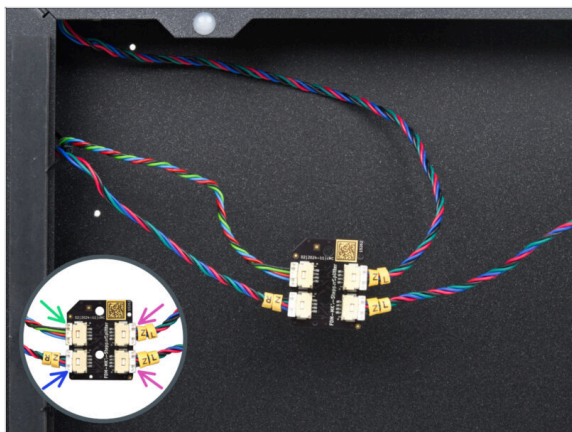
● Guide the Stepper splitter cable through the three zip ties on the left side.

● For now, leave the side with the label hanging freely outside.

● Guide the Z-axis motor R cable through the three zip ties on the left side.

⚠ **Do not tighten the zip ties at this moment.**

PASSO 39 Collegamento dello sdoppiatore stepper



● Collega i cavi del motore Z allo sdoppiatore stepper:

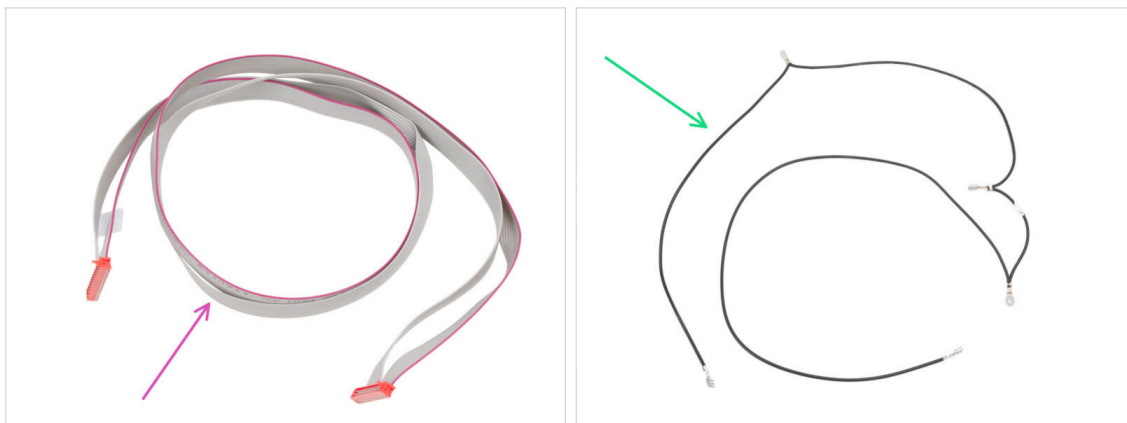
- Cavo sdoppiatore per stepper
- Motore asse Z R
- Motore asse Z L
- Motore asse Z L

PASSO 40 Montaggio dello sdoppiatore stepper



- Individua due perni distanziatori nel telaio inferiore.
- From the inside of the frame, prepare the Stepper splitter and attach its holes opposite the pins.
 - Check the correct orientation of the part by the logo on the board. **The logo is upside down.**
- Push the aligned Stepper Splitter onto the pins until you feel a click - this secures the Stepper Splitter. Push in the center of the board.
 - ① It is necessary to apply a significant pressure to seat the part in. Yet, be very careful not to damage the components.

PASSO 41 Cavo LCD: preparazione componenti



● Per i seguenti passi prepara:

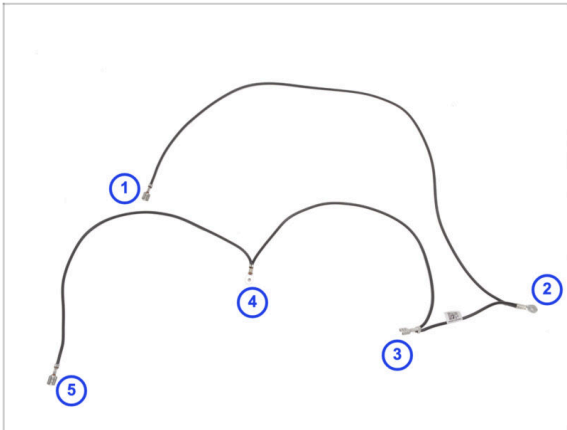
- xLCD cable (1x) *found in the Electronics & Fasteners package*
- Main FE cable (1x) *found in the Electronics & Fasteners package*

PASSO 42 Guidare il cavo del display LCD



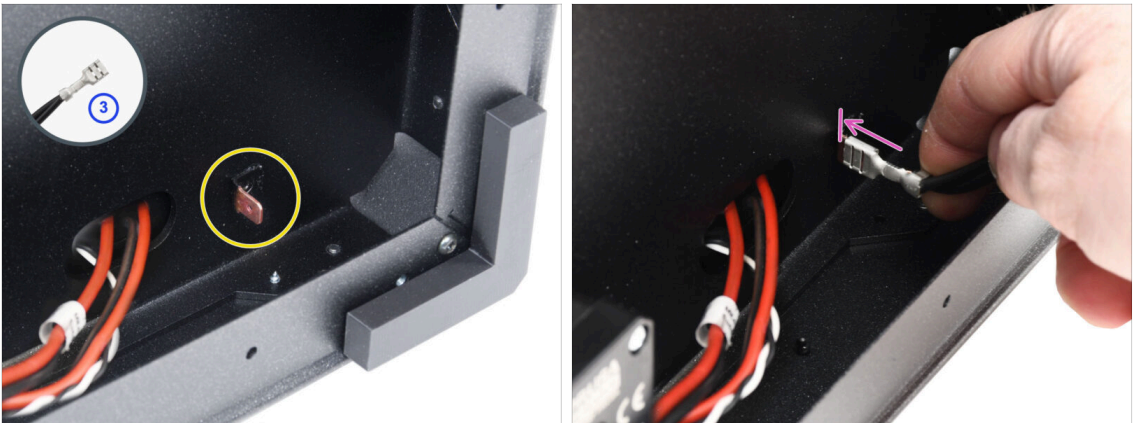
- Guida il cavo dello sdoppiatore Stepper attraverso il foro ovale fino all'elettronica.
- Take the end of the xLCD cable with the QR code label.
- Push a few centimeters of the xLCD cable (the end with the QR code label) through the oval hole in the bottom panel.
 - ❗ The cable must be slightly folded to pass through the hole.
- Guide the xLCD cable through the zip ties on the left side of the frame.
- Guide the xLCD cable through the rectangular opening in the front profile. Keep protruding approximately 6 cm (2.36 in).
- Leave the cable hang freely for now.

PASSO 43 INFO Cavo principale FE



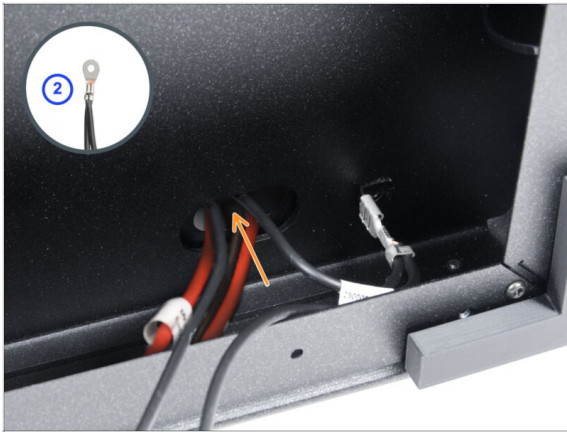
- Metti il cavo FE principale come mostrato nella foto, assicurandoti che ogni connettore sia posizionato nel modo giusto.
- The connectors are numbered in the picture for reference only. This numbering will be used in the following steps to help with proper connections.
- ⓘ Note: We will always indicate which connector to use in the following steps. However, it's a good idea to remember this overview for easier assembly.

PASSO 44 Collegamento del cavo FE (n. 3)



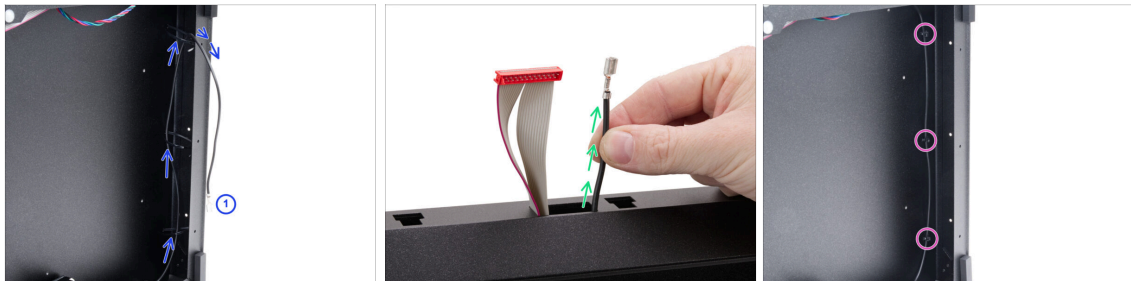
- Prepara il connettore numero 3.
- ⓘ That's the female faston connector in the middle of the cable.
- Locate the male Faston connector in the bottom right corner.
- Slide the FE cable connector completely onto the Faston connector.

PASSO 45 Orientare il cavo FE (n. 2)



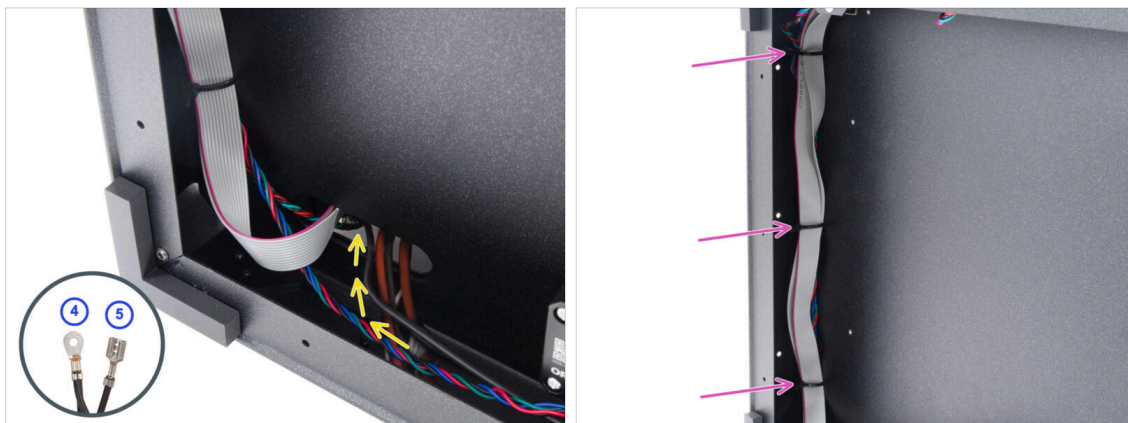
- Prendi il connettore del cavo FE numero 2.
- ⓘ The round connector nearby.
- Insert the connector loosely into the hole in the bottom panel.

PASSO 46 Orientare il cavo FE (n. 1)



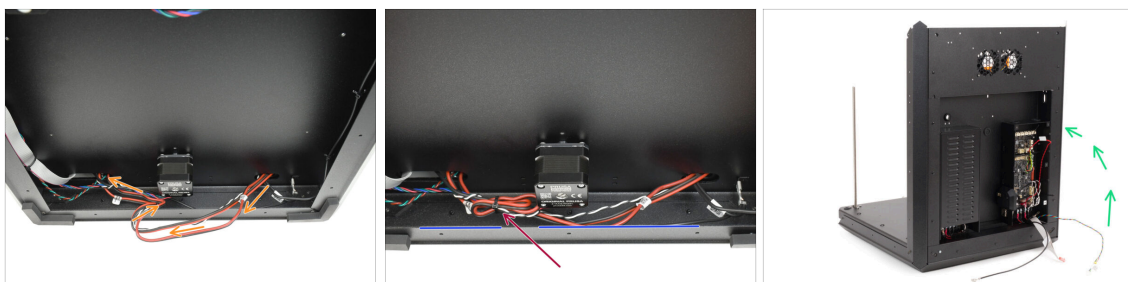
- Prendi il connettore numero 1 e infilalo nelle fascette sul lato destro del telaio.
- ⓘ That is the long part with just one faston connector at the end.
- Push the connector through the rectangular opening in the front profile. Keep protruding approximately 6 cm (2.36 in).
- Leave the cable hang freely for now.
- Tighten all three zip ties. Cut off the excess.

PASSO 47 Orientare il cavo FE (n. 4 e 5)



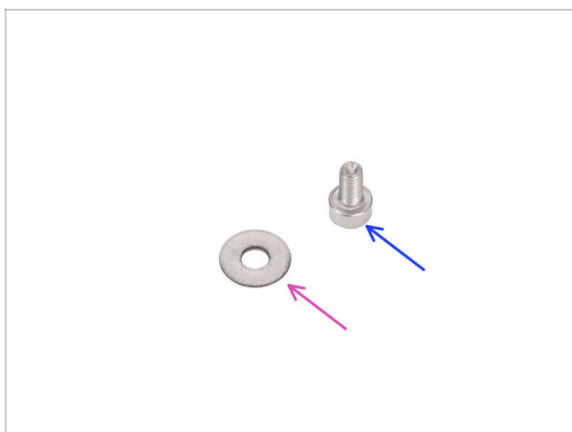
- Prendi i connettori del cavo FE numero 4 e 5.
- Push both connectors through the leftmost hole in the bottom. Leave them free for now.
- Tighten all three zip ties on the left side of the frame. Cut off the excess.
 - There's no need to fully tighten the zip ties. However, the cables must still be easy to move for any necessary length adjustment during connection.

PASSO 48 Disposizione dei cavi



- Nella parte inferiore, fai un occhiello intorno al cavo del motore Z per accorciarlo.
- Secure the loop to the Z-motor cable with a zip-tie.
 - Make sure the cables are kept at a reasonable distance from the metal profile, while also preventing them from being overly tight.
- ⚠ **This prevents cables from hanging below the metal profiles, where they could get caught and damaged. High current flows through these cables, so damaging them might cause a serious harm to the printer and its surroundings!**
- Carefully lift the printer upright.

PASSO 49 Cavo FE - xBuddy: preparazione dei componenti



● Per i seguenti passi prepara:

● Rondella M3w (1x)

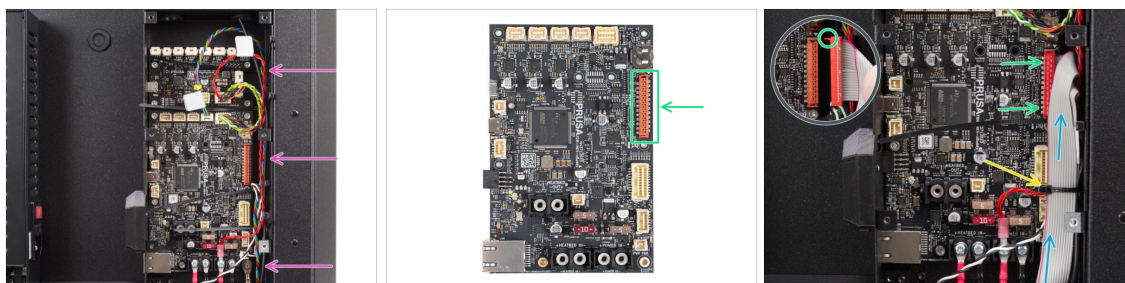
● Vite M3x6 (1x)

PASSO 50 Collegare il cavo FE: xBuddy



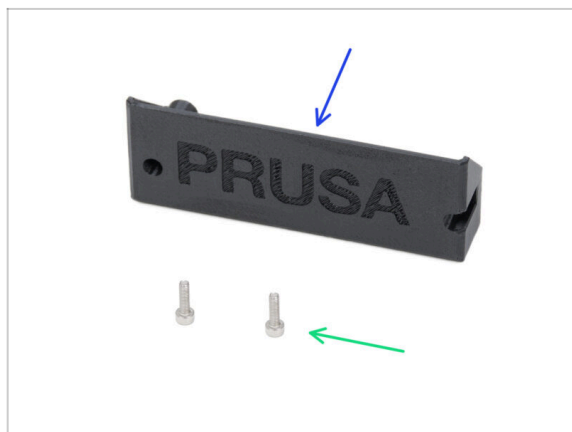
- Rimetti la stampante in piedi. Focalizza l'attenzione sul lato posteriore.
- Take the connector number 4 and connect it to the xBuddy using the M3x6 screw and M3w washer.
 - ⚠ The M3 washer must be between the screw head and the connector.
- Guide the FE cable (number 5) alongside the xBuddy box and pass it through the right-side holes out of the box.
- Guide the Stepper splitter cable alongside the xBuddy box and connect it to the second slot from the right in the top row on the xBuddy board (labeled ZR).

PASSO 51 Collegare il cavo del display xLCD



- Metti i cavi come mostrato: fai passare tutti i cavi lungo il lato destro della scatola xBuddy.
- ⚠ Make sure all the cables guide through the zip ties in the xBuddy box, not under them.
- Place the xLCD cable over the other cables and route it upwards.
- Connect the xLCD to the slot on the right side of the xBuddy. **Note the safety latch on the xLCD cable connector. The latch must fit into the upper side of the connector.**
- Secure the cable arrangement by tightening the bottom zip tie.
- ⚠ Do not overtighten the zip tie, as it may damage the wires.
- Carefully cut off the excess length of the zip tie. **Avoid cutting cables!**

PASSO 52 Copertura dell'alimentatore: preparazione dei componenti



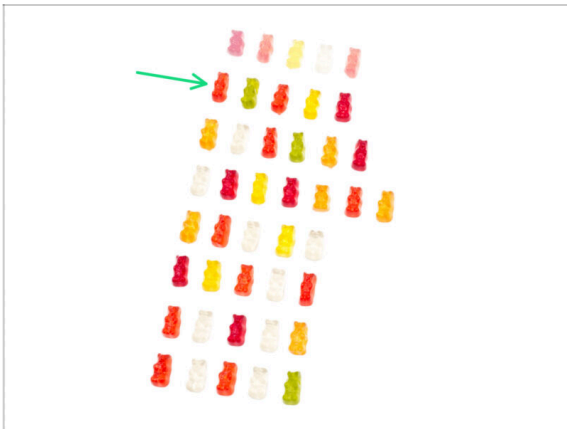
- Per i seguenti passi prepara:
- CORE-One-PSU-cover (1x) found in the Printed parts package
- Vite M3x10 (2x)

PASSO 53 Collegamento del cavo FE: Alimentatore



- Togli la vite dalla scheda dell'alimentatore. **Non buttarla via!**
- Ensure the FE connector (number 2) is routed into the PSU compartment.
- Insert the removed screw through the FE cable connector and screw it back to the PSU board.
- Note the correct orientation of the connector.
- Rotate the connector counter-clockwise, positioning it so it doesn't block the threaded hole underneath.
- Attach the PSU-cover over the PSU connectors and secure with two M3x10 screws.

PASSO 54 È l'ora delle Haribo!



- È ora di ricaricarsi per il prossimo capitolo!
- Eat the second row.
- ⚠ **No cheating**—eat only the number shown!

PASSO 55 Fatto

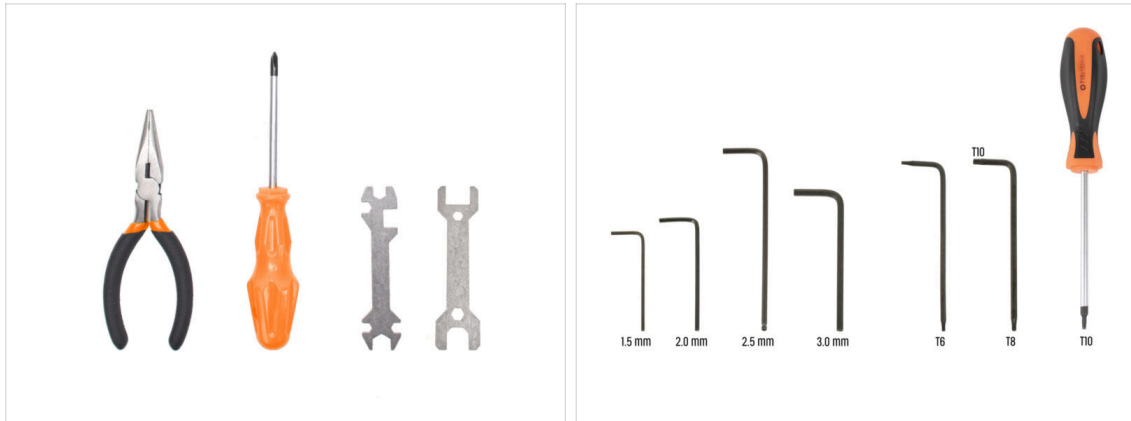


- Congratulazioni! Il gruppo posteriore è installato.
- Now continue to the next chapter.

4. Assemblaggio del piano riscaldato

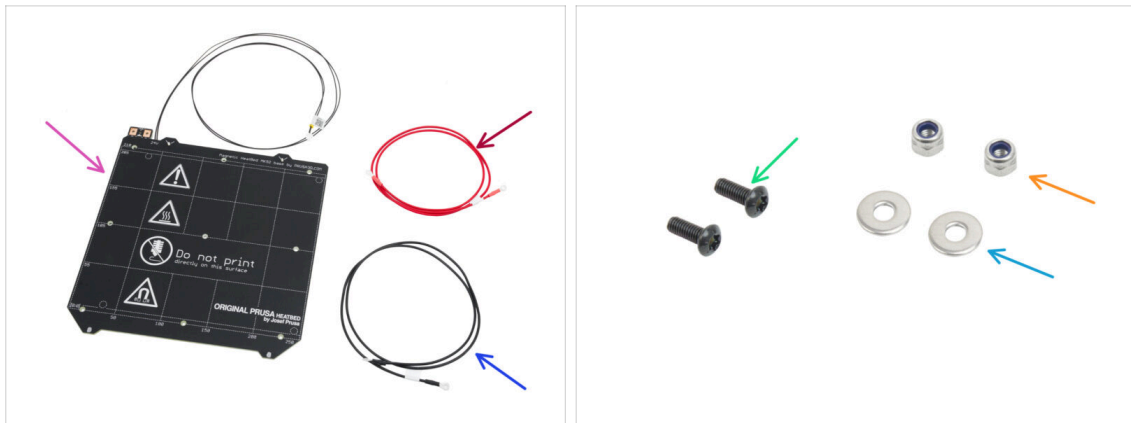


PASSO 1 Tools necessary for this chapter



- **For this chapter, please prepare:**
- Pinza a becchi lunghi
- Chiave universale
- Chiave 13-16
- Cacciavite a stella PH2
- Chiave a brugola da 2.5mm
- Chiave a brugola da 2.0mm
- T10 torx key / T10 torx screwdriver

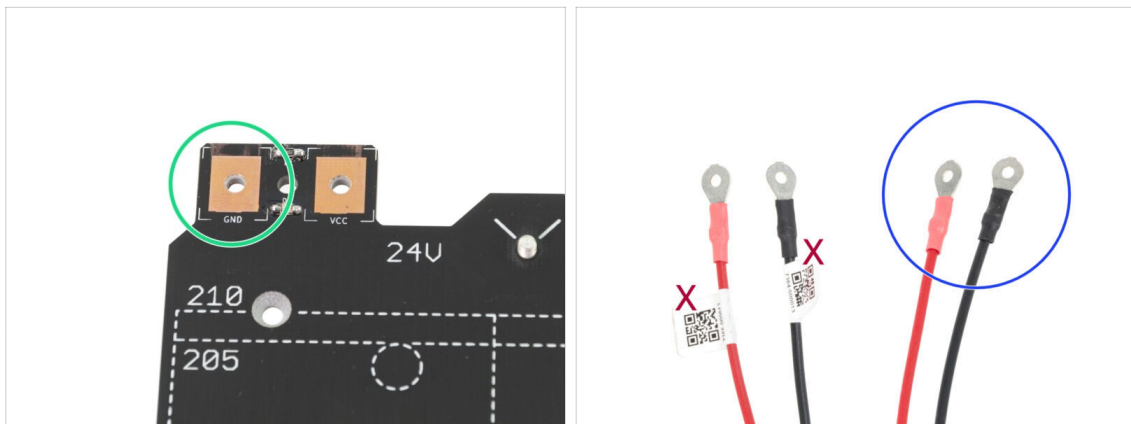
PASSO 2 Piano riscaldato: preparazione componenti



For the following step please prepare:

- Heatbed MK52 24V (1x)
- Heatbed cable red (1x) *found in the Electronics & Fasteners package*
- Heatbed cable black (1x) *found in the Electronics & Fasteners package*
- Vite M3x10rt (2x)
- Dado M3nN (2x)
- Rondella M3w (2x)

PASSO 3 Heatbed Cable Assembly 1

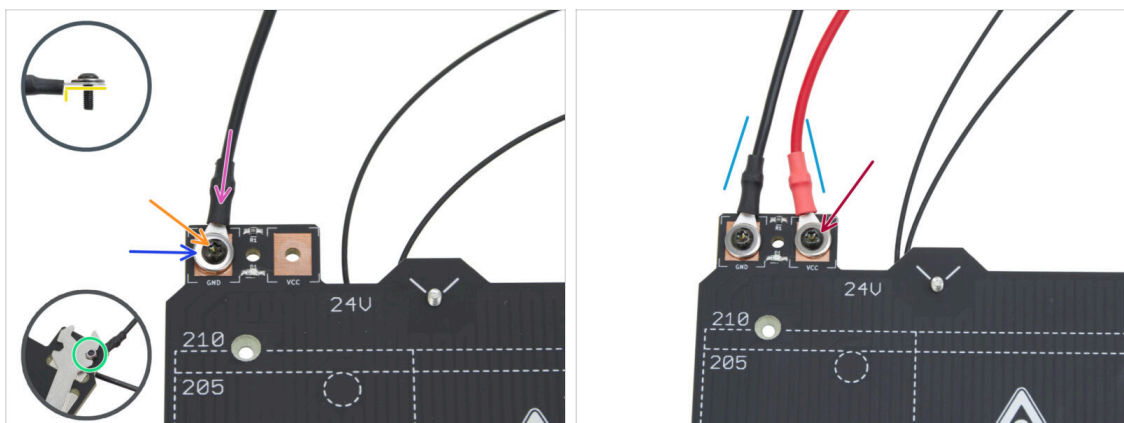


- Follow the polarity markings on the heatbed:

The pad labeled **GND** should be coupled with the **BLACK WIRE**.

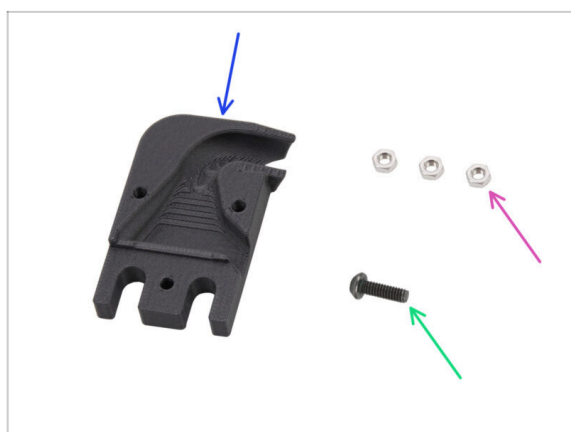
- Take both power cables. Note the labels on each. Use the unlabeled ends for the heatbed connection.

PASSO 4 Heatbed Cable Assembly 2



- Place the black cable onto the "GND" pad.
- Orient the lug connector with the thicker part facing downward.
- Place the M3w washer on top of the connector.
- Insert the M3x10rT screw through all the components.
- Attach the M3nN nut onto the M3x10rT screw from below and tighten it slightly.
- Using the same technique, attach the red cable to the "VCC" pad.
- Guide the heatbed cables slightly inward in a "V" shape, **then fully tighten the nuts from below.**

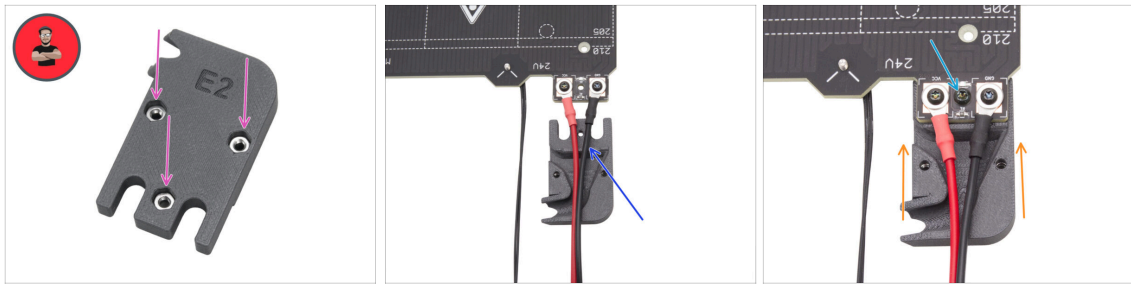
PASSO 5 Bed-cable-cover-bottom: preparazione dei componenti



● For the following steps, please prepare:

- Bed-cable-cover-bottom (1x)
- Dado M3n (3x)
- Vite M3x10rT (1x)

PASSO 6 Attaching the cable cover



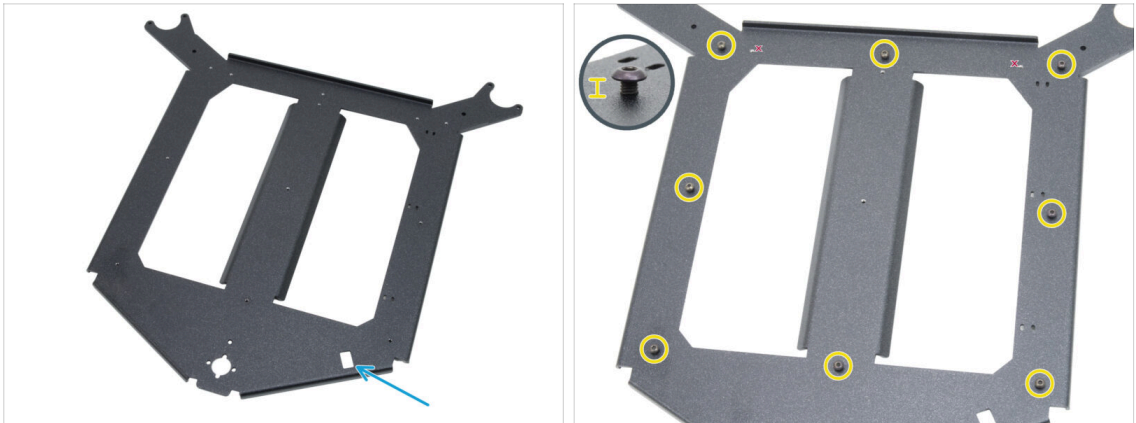
- ✿ Insert three M3n nuts into the Bed-cable-cover-bottom part.
- ❗ Pro tip: Use the screw-pulling technique.
- ⬛ Make sure the nuts are fully inserted and held in place.
- 🔵 Insert the Bed-cable-cover-bottom under the heatbed cables. Note the orientation of the part.
- 🟠 Slide the Bed-cable-cover-bottom under the cable joint of the heatbed.
- 🔵 Line up the hole in the heatbed with the cable cover and secure it with the M3x10rT screw.

PASSO 7 Heatbed carriage: parts preparation



- ⬛ **For the following steps, please prepare:**
- ✿ Heatbed carriage (1x) *found in the Metal parts 1/3 package*
- 🟠 Giunto di espansione (8x)
- 🟢 Vite M3x4r (8x)
- 🔧 The Fasteners package includes both M3x4r and M3x4rT screws. Make sure you have the correct type prepared.

PASSO 8 Preparing the heatbed carriage



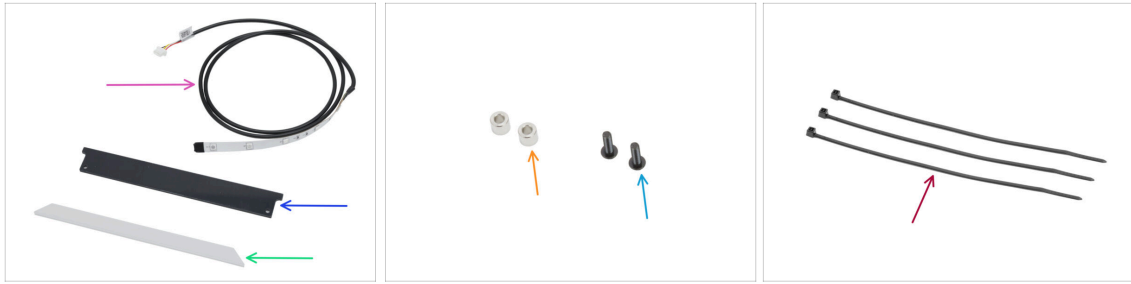
- Place the heatbed carriage in front of you in the same orientation as in the picture.
- Make sure the **rectangular cutout is facing you on the right side**.
- Insert eight M3x4r screws around the heatbed carriage.
- ⚠ **Do not tighten completely, leave a gap of approximately 3 mm (0.12 in).**

PASSO 9 Installing the expansion joints



- Attach one expansion joint to any M3x4 screw in the same orientation as shown.
- Note the U-shaped "groove" for the screw inside the expansion joint - point it towards the screw.
- Slide the expansion joint onto the screw.
- Grasp the expansion joint in the rectangular cutout of the universal wrench.
- Position the key with the expansion joint in its correct orientation as shown in the illustration.
- **Maintain the expansion joint in the correct position** and firmly tighten the M3x4r screw through the expansion joint with a 2.0 mm Allen key.
- ⚠ **Repeat this procedure for all other expansion joints. Follow their correct position!**

PASSO 10 RGB LED strip: parts preparation



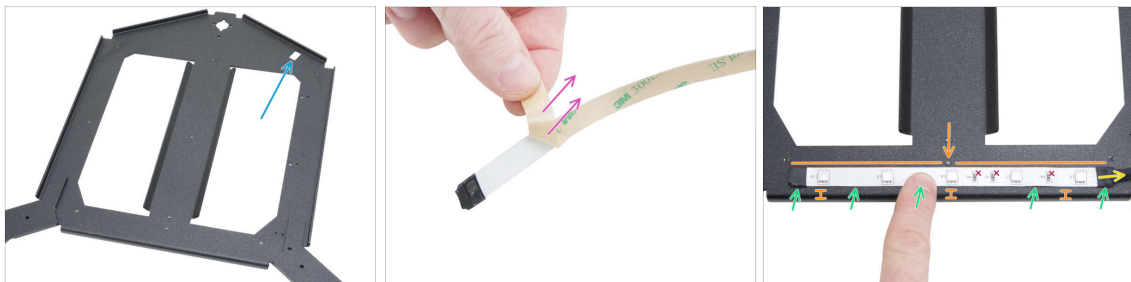
● For the following steps, please prepare:

- RGB LED strip 166 mm (1x) *found in the Electronics & Fasteners package*

⚠ Avoid direct contact with the LED and resistors on the LED strip.

- LED status cover (1x) *found in the Electronics & Chamber parts package*
- LED strip diffuser (1x) *found in the CoreXY parts + Hinges set package*
- Spacer 3.2/6x5 mm (2x) *found in the Electronics & Fasteners package*
- Vite M3x10rt (2x)
- Fascetta (3x)

PASSO 11 Installing the LED strip



- Place the heatbed carriage in front of you in the same orientation as in the picture.

● Make sure the **rectangular cutout is far from you and on the right side**.

- Carefully peel off the protective (paper) layer from the RGB LED strip.

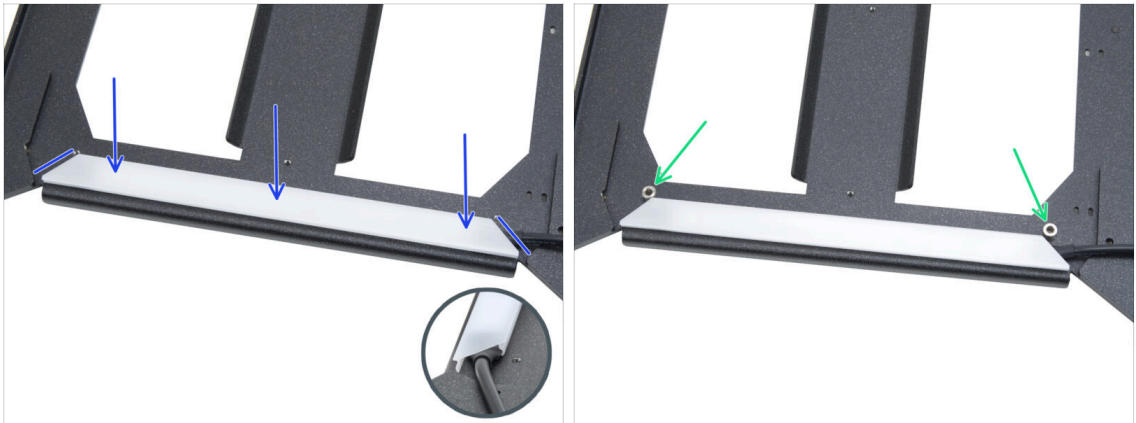
⚠ After removing the protective layer, the RGB LED strip is adhesive.

- Stick the RGB LED strip evenly to the front of the heatbed carriage, approximately 3 mm (0.12 in) from the folded edge. Align the middle LED with the screw on the carriage.

● The RGB LED strip **cable must point to the right**.

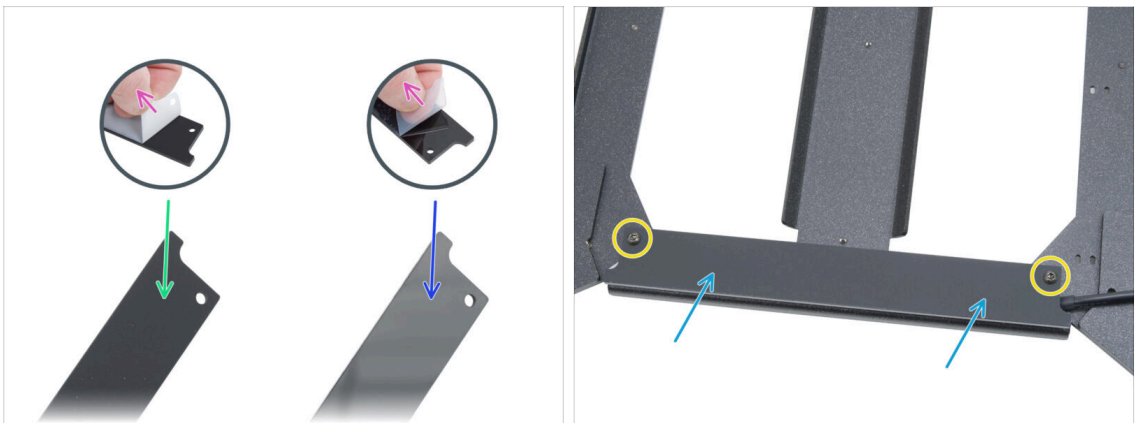
- After sticking, press lightly on the blank areas of the strip to ensure adhesion. **Do not touch LEDs and resistors!**

PASSO 12 Attaching the LED strip diffuser



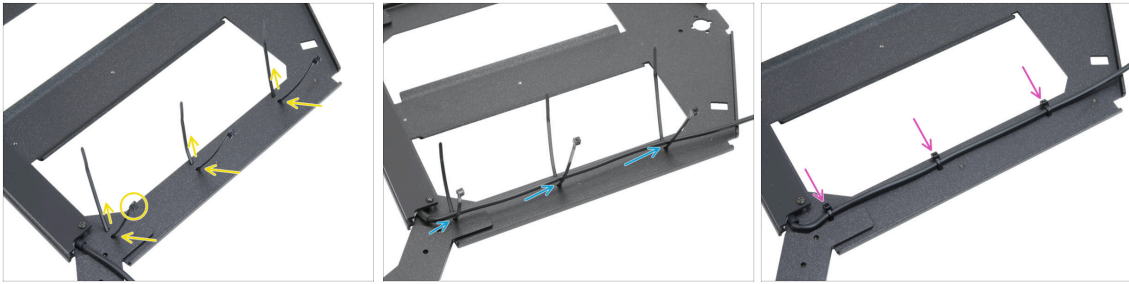
- Place the LED strip diffuser over the RGB LED strip. Note the orientation of the part - according to the beveled edges.
- Place two spacers 3.2/6x5 mm on the holes in the edges of the LED assembly.

PASSO 13 Covering the RGB LED strip



- From both sides of the LED status cover, peel off the protective layers.
- Note that one side of the cover is matte.
- The other side of the cover is glossy.
- Attach the LED strip cover to the assembly, **matte side up**.
- Secure all parts together by inserting and tightening two M3x10rT screws. **Do not overtighten the screws**, as it may crack the cover.

PASSO 14 Guiding the RGB LED strip cable



- ✦ Thread the three zip ties along the **RIGHT SIDE** of the heatbed carriage. Make sure the zip tie heads are facing outward.
- ✦ Guide the RGB LED strip cable through all zip ties.
- ✦ Then tighten all three zip ties. Cut off excess zip ties.

PASSO 15 Preparazione alla lubrificazione dei cuscinetti



- ✦ **For the following steps, prepare:**
 - ✦ LM8UU Bearing (2x) *removed from the MK4S printer*
 - ✦ Prusa lubricant applicator 8mm (1x)
 - ✦ Lubrificante Prusa (1x)
 - ✦ Several paper towels to wipe oil and grease from the bearing surface.
- ⚠ **Use the lubricant wisely, less is better! Using too much of the lubricant may cause issues.**

PASSO 16 Lubrificazione del cuscinetto

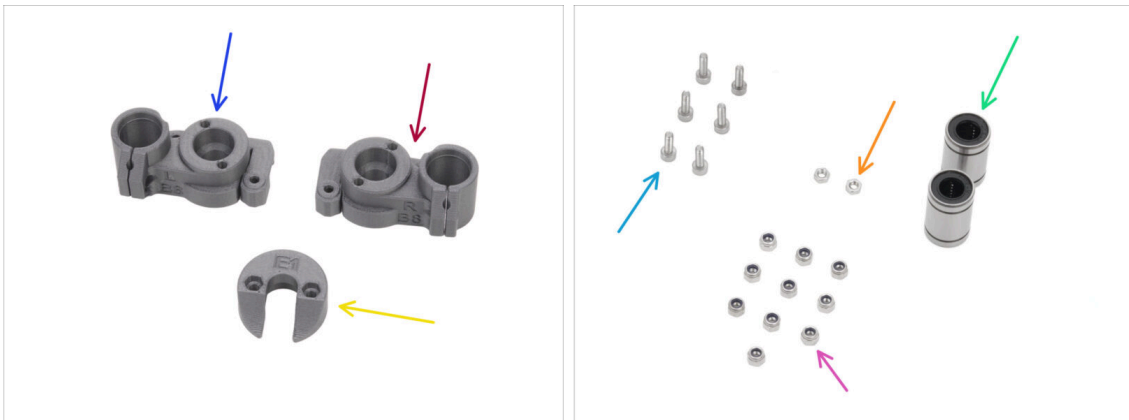


i Use any piece of fabric as a pad to protect your working surface from grease.

⚠ Make sure the bearing is clean inside.

- Wipe the preservative oil off the bearing surface with a paper towel.
- It is necessary to lubricate all 4 rows of balls inside the bearing.
- Screw the tube into the applicator.
- Carefully slide the entire bearing onto the applicator.

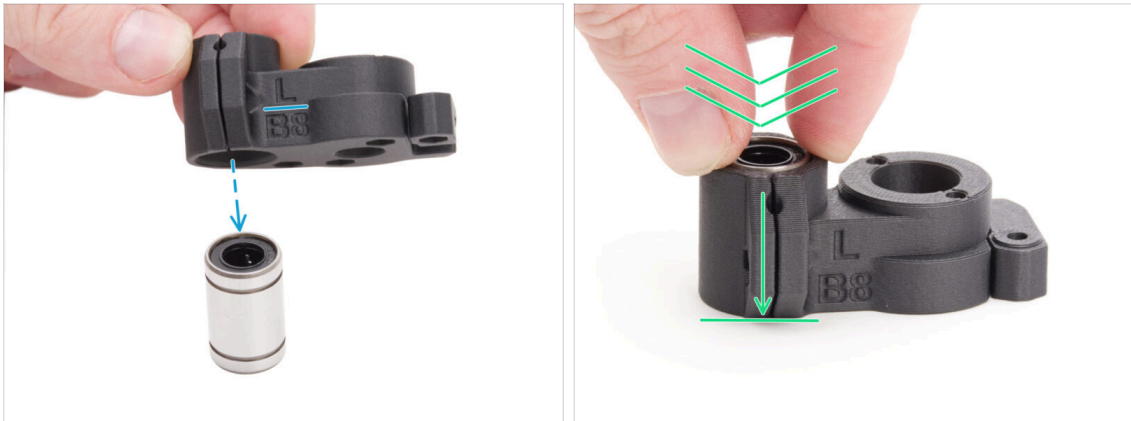
PASSO 17 Bed mounts: parts preparation



■ **For the following steps, please prepare:**

- CORE-One-bed-mount-left (1x) *found in the Printed parts package*
- CORE-One-bed-mount-right (1x) *found in the Printed parts package*
- CORE-One-bed-spacer-rear (1x) *found in the Printed parts package*
- LM8UU bearing (2x) *freshly lubricated*
- Vite M3x10 (6x)
- Dado M3n (2x)
- Dado M3nN (10x)

PASSO 18 Assembling the bed mounts



- Place the CORE-One-bed-mount-left onto the bearing, ensuring the correct orientation.
- Press the part onto the bearing, applying more force to ensure it moves all the way down. You will feel a click, indicating that the plastic part and bearing are correctly seated.
- ⚠ The bearing must be fully enclosed within the part and must not protrude.
- Follow the same procedure with CORE-One-bed-mount-right.

PASSO 19 Securing the bed mounts



- Insert one M3n nut into the CORE-One-bed-mount-left.
- Position the CORE-One-bed-mount-left according to the picture:
 - Position the bearing so that two ball rows face the bottom of the part, not just one.
- Keep the bearing in the position and secure it by inserting and tightening one M3x10 screw.
- ⚠ Ensure that the top surface of the bearing is flush with the top surface of the plastic part.
- Follow the same procedure with CORE-One-bed-mount-right.

PASSO 20 Bed mounts: inserting the nuts



- Insert four M3nN nuts into both bed mounts.
- Make sure they are inserted completely inside.

PASSO 21 Montaggio della parte CORE-One-bed-spacer-rear



- Insert two M3nN nuts into the CORE-One-bed-spacer-rear.
- Insert the nuts down as much as possible.

PASSO 22 Installare il supporto bed-mount-right



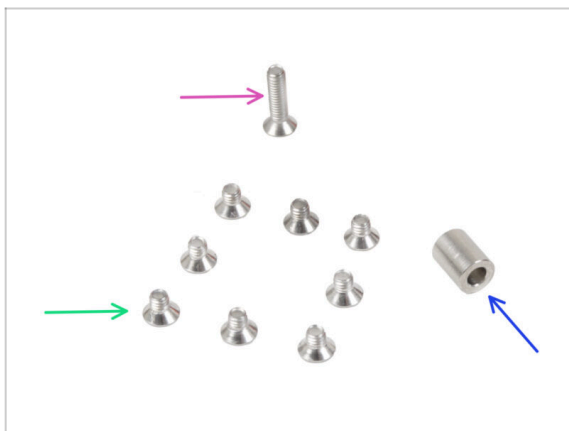
- Turn the heatbed carriage piece with the "forks" facing you and with the **expansion joints facing up**.
- Take the CORE-One-bed-mount-**right** part and slide it **under the right fork** - with the bearing on the right.
- Fix it with two M3x10 screws.

PASSO 23 Installazione del supporto bed-mount-left



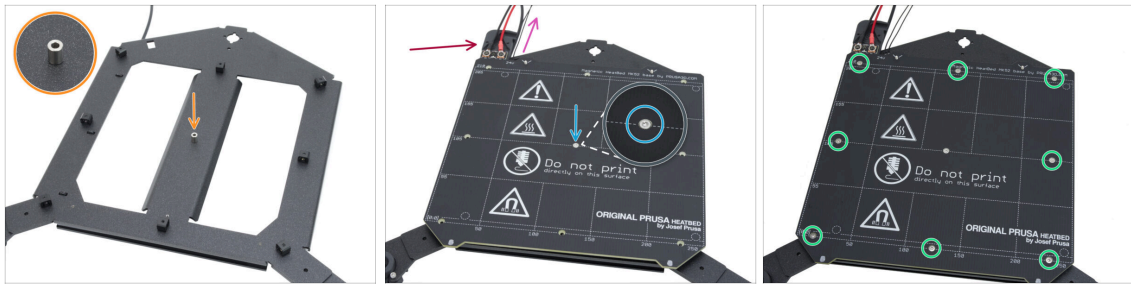
- Take the One-bed-mount-**left** part and slide it **under** the **left** fork - with the bearing on the left.
- Fix it with two M3x10 screws.

PASSO 24 Mounting the heatbed: parts preparation



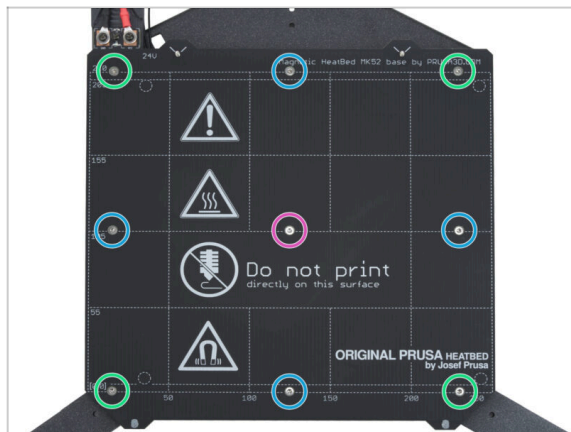
- For the following steps, please prepare:
- Vite M3x12bT (1x)
 - i* The screw may also be labeled M3x12cT.
- Spacer 6x3.1x8 mm (1x) *from the disassembled printer*
- Vite M3x4bT (8x)
 - i* The screw may also be labeled M3x4cT.

PASSO 25 Montare il piano riscaldato



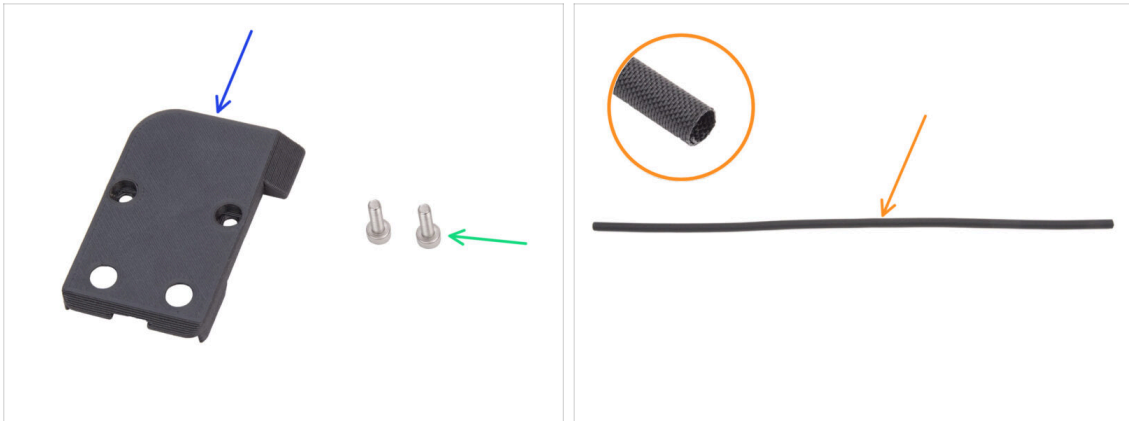
- Place the spacer onto the heatbed carriage on the side with the expansion joints and align it with the hole in the center.
- Put the heatbed on the heatbed carriage and secure it by the M3x12bT. **Do not fully tighten the screw yet.**
 - Make sure the heatbed thermistor cable (the thinnest pair) is routed alongside the heatbed power cables. Do not route it around or across any expansion joints.
- ⚠ **Ensure the correct orientation of the part. Use the heatbed cables as a guide.**
- Insert the M3x4bT screws into the remaining holes in the heatbed. **Do not fully tighten the screws yet.**

PASSO 26 Serraggio del piano riscaldato



- ⚠ **IMPORTANT:** The heatbed must be tightened in a specific order. Repeat the sequence multiple times, ensuring the final tightening after at least two rounds.
- After all screws are in place, tighten them in the following sequence:
 - Vite centrale
 - First four screws (edges)
 - Last four screws (corners)
- ⚠ Tighten the screws gently, but firmly.

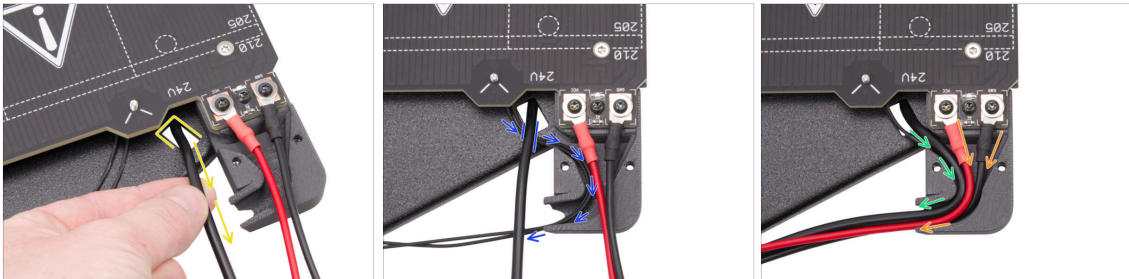
PASSO 27 Covering the cables: parts preparation



● For the following steps, please prepare:

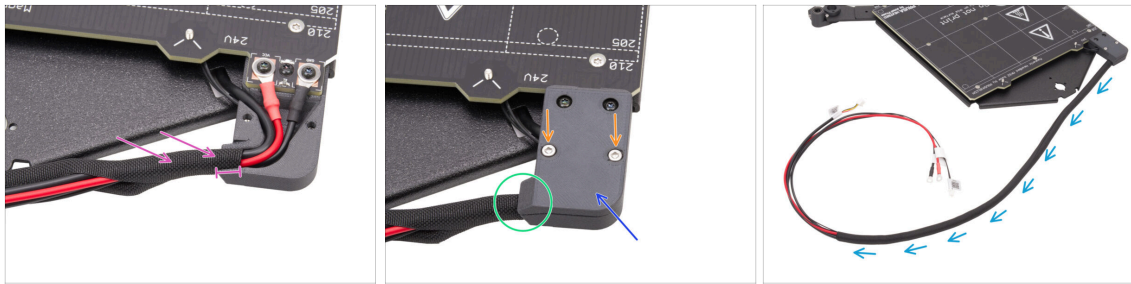
- CORE-One-bed-cable-cover-top (1x) found in the Printed parts package
- Vite M3x10 (2x)
- Guaina in tessuto 520 x 8 mm (1x) si trova nella confezione Electronics & Chamber parts

PASSO 28 Guiding the heatbed cables



- Pull the RGB LED strip cable from the bottom through the rectangular cutout to the top.
- Guide the heatbed thermistor cable under the RGB LED cable, and insert the heatbed thermistor cable into the cable channel in the cable cover.
- Route the RGB LED strip cable through the cable channel.
- Guide the heatbed power cables through the cable channel.

PASSO 29 Covering the heatbed cables



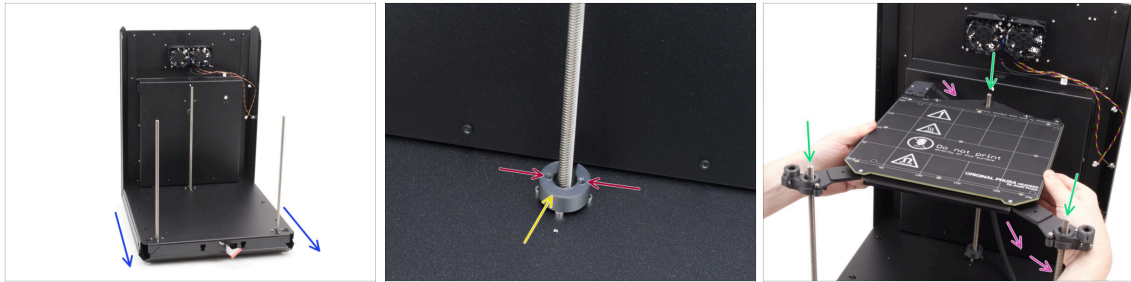
- ✦ Thread approximately 5 cm (2 in) of the textile sleeve onto the heatbed cable bundle and slide the textile sleeve 1 cm (0.39 in) into the cable channel.
- ✦ Attach the CORE-One-bed-cable-cover-top on the heatbed cables.
- ✦ Make sure the textile sleeve is still in place - inside the cable cover. **Do not pull on the textile sleeve.**
- ✦ Secure the top cover with two M3x10 screws.
- ✦ Wrap the rest of the textile sleeve around the cable bundle.

PASSO 30 Mounting the heatbed: parts preparation



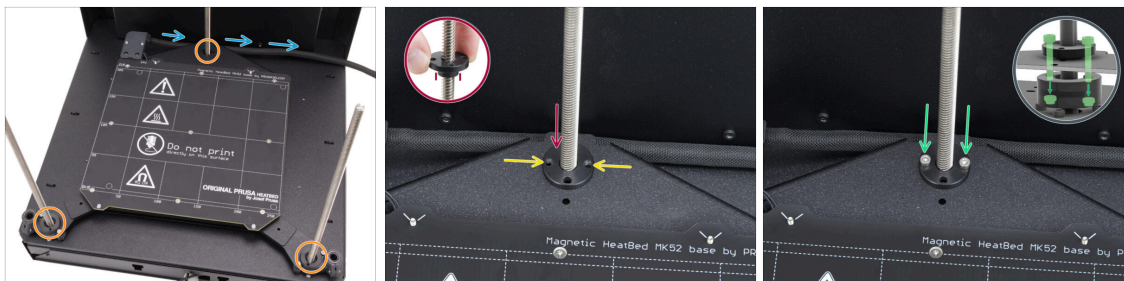
- ✦ **For the following steps, please prepare:**
 - ✦ Dado trapezoidale (3x)
 - ⓘ Two of these trapezoidal nuts are from the disassembled printer. The last one is in the Electronics and Chamber parts package.
 - ✦ Vite M3x18 (6x)

PASSO 31 Attaching the heatbed assembly



- Take the back and base assembly and orient the front side towards you.
- Place the CORE-One-bed-spacer-rear onto the rear motor screw heads, making sure it stays in place.
 - ⚠ Note the orientation of the part and holes as shown. The holes must be parallel to the motor screw heads.
- Very carefully thread the heatbed assembly onto the threaded rods of the Z motors, then gently lay it down onto the base.
 - ⚠ Keep in mind that there is a spacer on the rear motor. Avoid the spacer by the heatbed cable.
- The heatbed cable must run **under the heatbed** and **behind the rear motor**.

PASSO 32 Mounting the heatbed assembly: rear motor



- ❖ Ensure the heatbed assembly is seated correctly—all threaded rods pass through the correct holes.
- ❖ Double-check that the heatbed cable bundle (textile sleeve) runs properly—it **must go under the heatbed assembly** and **behind the threaded rod** of the rear motor.
- ❖ Manually thread the trapezoidal nut onto the rear Z motor. Screw the nut all the way down until it seats into the heatbed carriage.
 - ⚠ Ensure the correct orientation of the part. **The protruding section must face downwards.**
- ❖ Align the holes in the trapezoidal nut, carriage and bed-spacer-rear.
 - i It doesn't matter which holes you use in the trapezoidal nut.
 - i Tip: You can push a 1.5 mm Allen key through the holes in all the parts to align them.
- ❖ Secure the trapezoidal nut, heatbed carriage and bed-spacer-rear together with two M3x18 screws.

PASSO 33 Mounting the heatbed assembly: front motor left



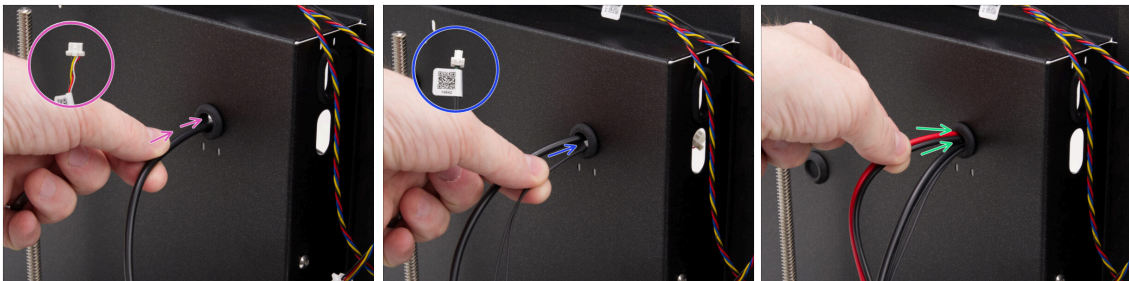
- ❖ Manually thread the trapezoidal nut onto the **left** Z motor. Screw the nut all the way down until it seats into the plastic part.
 - ⚠ Ensure the correct orientation of the part. **The protruding section must face downwards.**
- ❖ Align the holes in the trapezoidal nut with those in the plastic part. Either pair of holes can be used.
- ❖ Secure all the part together with two M3x18 screws.

PASSO 34 Mounting the heatbed assembly: front motor right



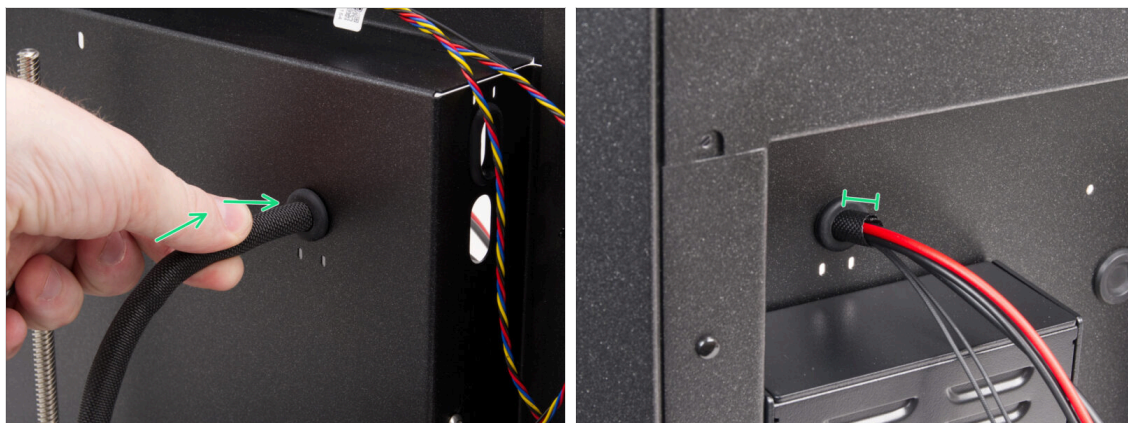
- Manually thread the trapezoidal nut onto the **right** Z motor. Screw the nut all the way down until it seats into the plastic part.
- ⚠ Ensure the correct orientation of the part. **The protruding section must face downwards.**
- Align the holes in the trapezoidal nut with those in the plastic part. Either pair of holes can be used.
- Secure all the part together with two M3x18 screws.

PASSO 35 Attaching the heatbed cables I.



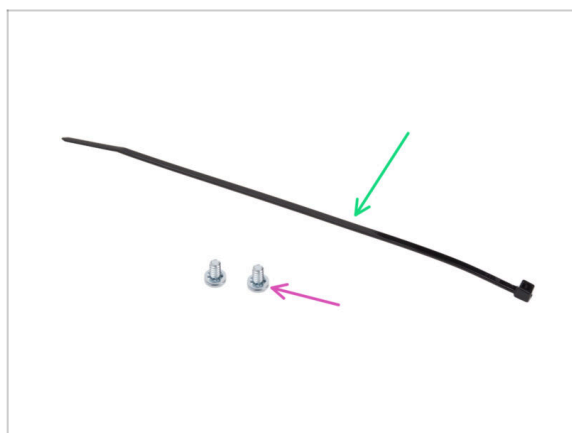
- Locate the grommet hole at the top right of the rear assembly and push the heatbed cables through in the following order:
 - Guide the RGB LED strip cable through the hole first.
 - Route the thermistor cable through.
 - Finally, insert both power cables through the hole.

PASSO 36 Attaching the heatbed cables II.



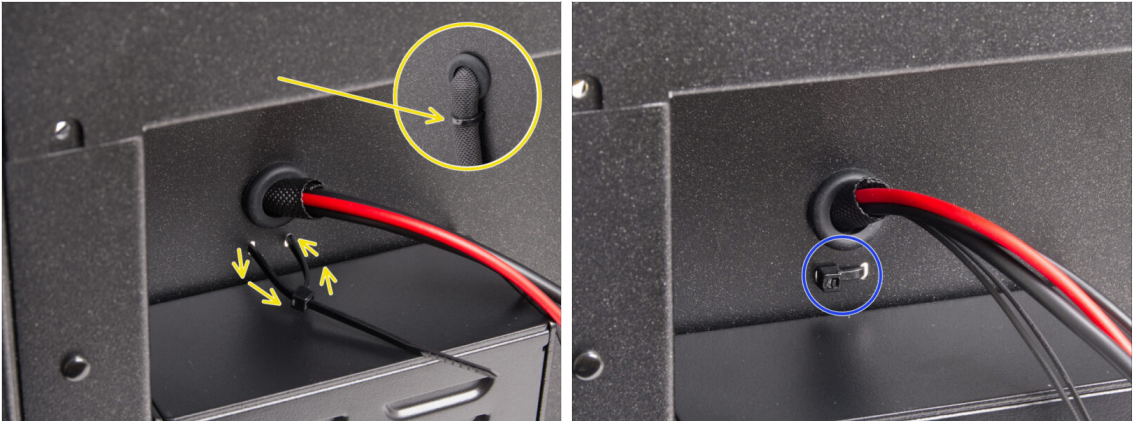
- Push the heatbed cables and the textile sleeve through the grommet hole.
- No more than 1 cm (0.39 in) of the textile sleeve should protrude from the back side.

PASSO 37 Securing the heatbed cables: parts preparation



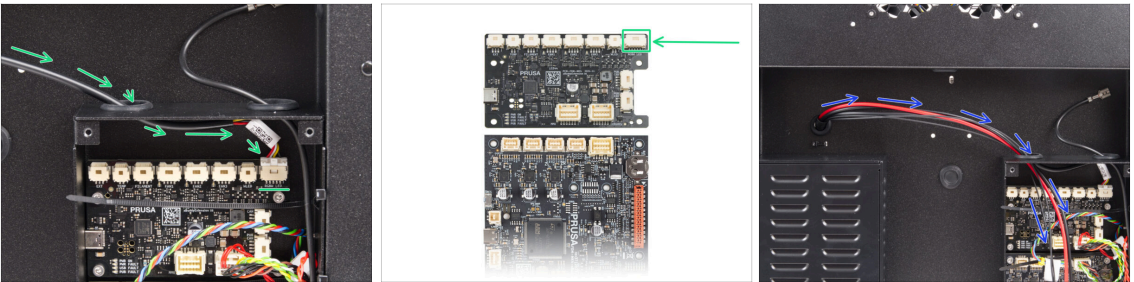
- For the following steps, please prepare:
- Fascetta (1x)
- 6/32" terminal screw (2x)

PASSO 38 Securing the textile sleeve



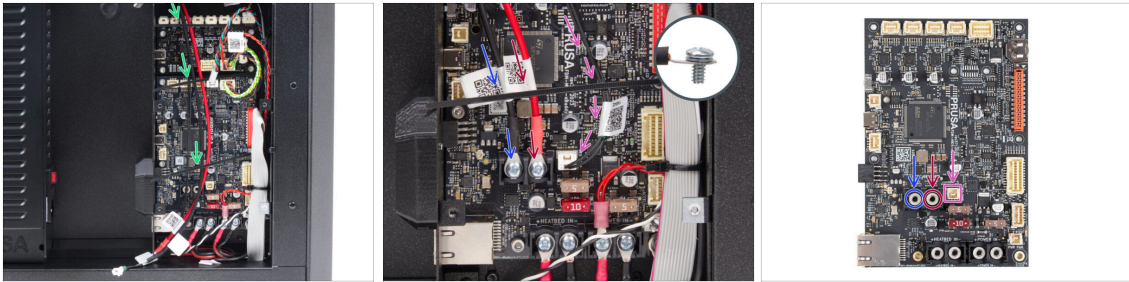
- Guide the zip tie through the two holes under the heatbed cables and make a loop around the heatbed cable bundle (textile sleeve) on the inside.
- Tighten the zip tie firmly and cut off the excess.

PASSO 39 Guiding the heatbed assembly cables



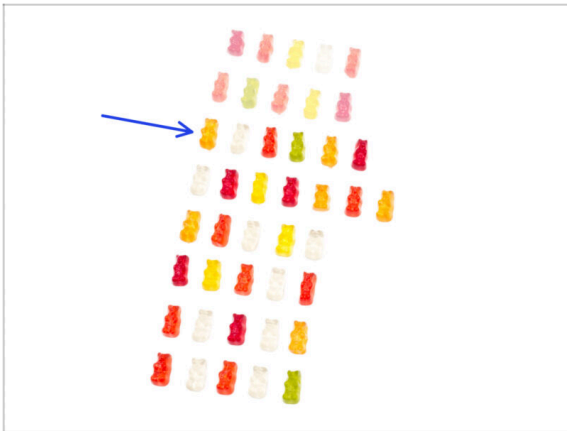
- Route the RGB LED strip cable through the left hole in the xBuddy box and connect it to the first slot on the xBuddy board labeled 'RGBW LED.'
- Connect it to the first slot from the right on the xBuddy extension board.
- Guide the heatbed power cables along with the thermistor through the left hole. Leave the cables hanging freely for now.

PASSO 40 Connecting the heatbed power cables



- Ensure that none of the heatbed cables run over the zip ties—they must be guided underneath.
- Using the 6-32 terminal screw, connect the **black** power cable to the **left** terminal on the xBuddy board. Tighten firmly.
- Using the 6-32 terminal screw, connect the **red** power cable to the **right** terminal. Tighten firmly.
- Plug the heatbed thermistor connector to the connector next to the power terminals.

PASSO 41 È l'ora delle Haribo!

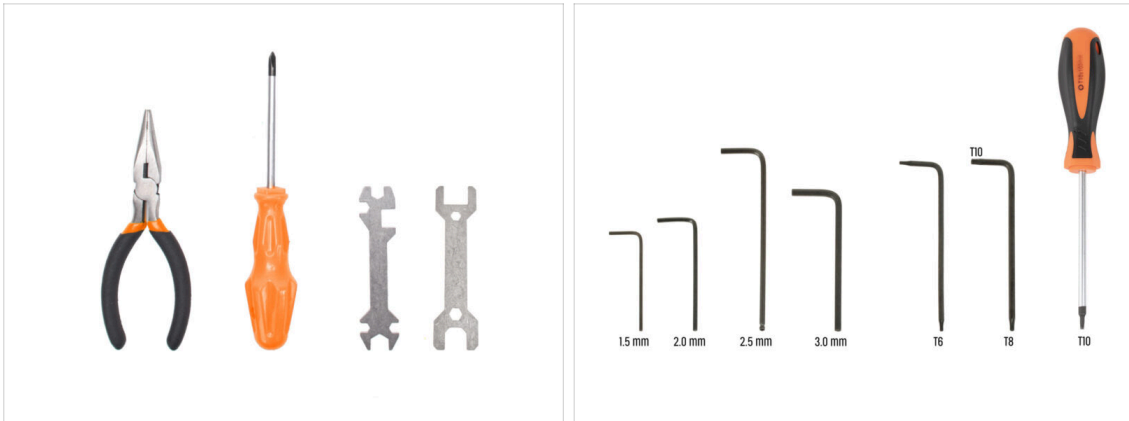


- Time for another quick energy boost!
- Eat the third row.
 - With one extra treat. You deserve it!

5. Gruppo CoreXY

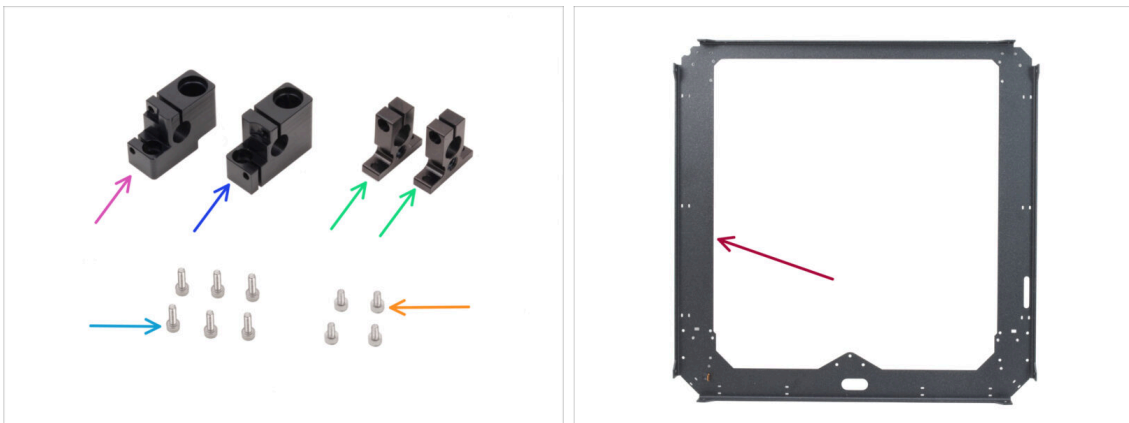


PASSO 1 Tools necessary for this chapter



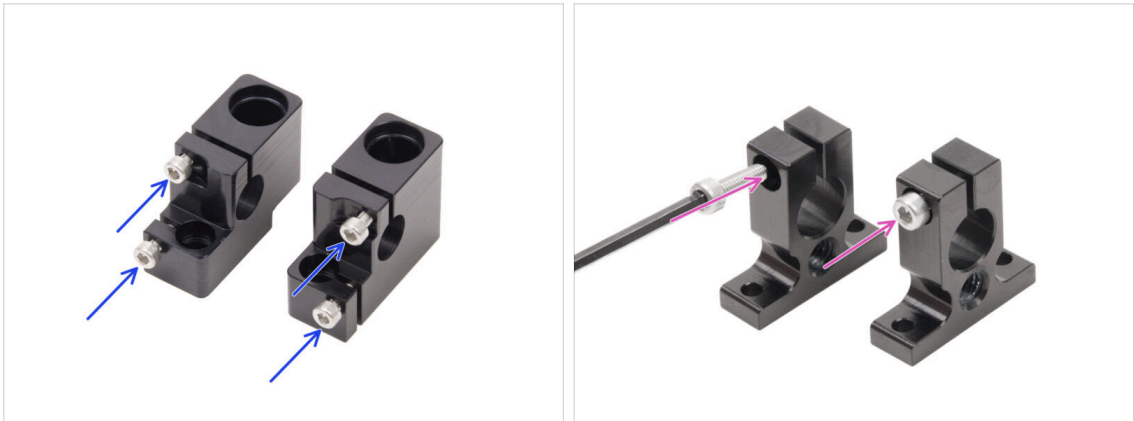
- **For this chapter, please prepare:**
- Pinza a becchi lunghi
- Chiave a brugola da 2.0mm
- Chiave a brugola da 2.5mm
- T10 torx key / T10 torxy screwdriver

PASSO 2 Rod holders: parts preparation



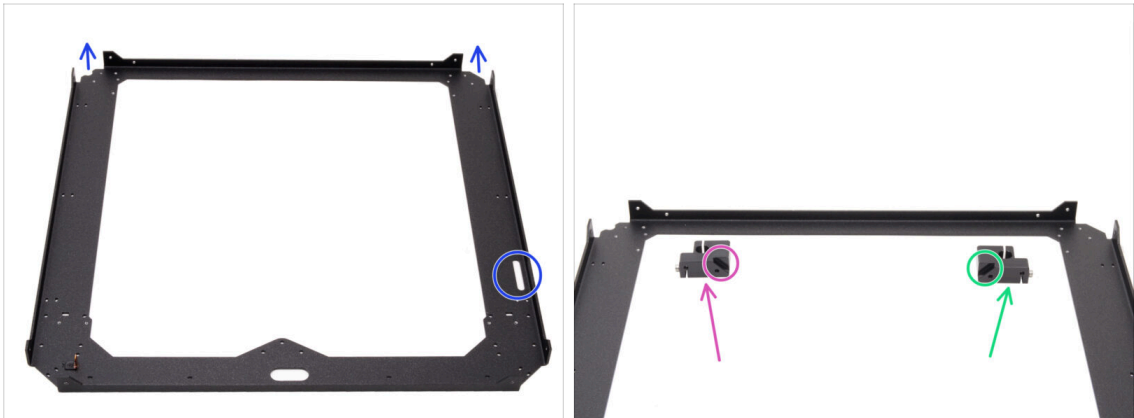
- **For the following steps, please prepare:**
- Rod holder left (1x) *found in the CORE XY parts + hinges + HB set package*
- Rod holder right (1x) *found in the CORE XY parts + hinges + HB set package*
- Rod holder rear (2x) *found in the CORE XY parts + hinges + HB set package*
- Vite M3x10 (6x)
- Vite M3x6 (4x)
- CoreXY plate (1x) *found in the Metal parts 1/3 package*

PASSO 3 Assembling the rod holders



- Insert two M3x10 screws into the Rod holder left and two into the Rod holder right.
- **Do not tighten them completely**, a few turns are enough for now.
- Insert one M3x10 screw into each Rod holder rear. Insert from the **side with the screw head hole**.
- **Do not tighten them completely**, a few turns are enough for now.

PASSO 4 Preparing the front rod holders



- Place the CoreXY plate as shown - the **bent parts of the plate must point upwards**.
- Divide the Rod holder left and the Rod holder right into the sides of the front:
 - ⚠ **Ensure you are preparing the correct part for the correct side. Use the chamfers on both parts as a reference for alignment.**
 - **Supporto barra sinistra**
 - **Supporto barra destra**

PASSO 5 Installing the front rod holders



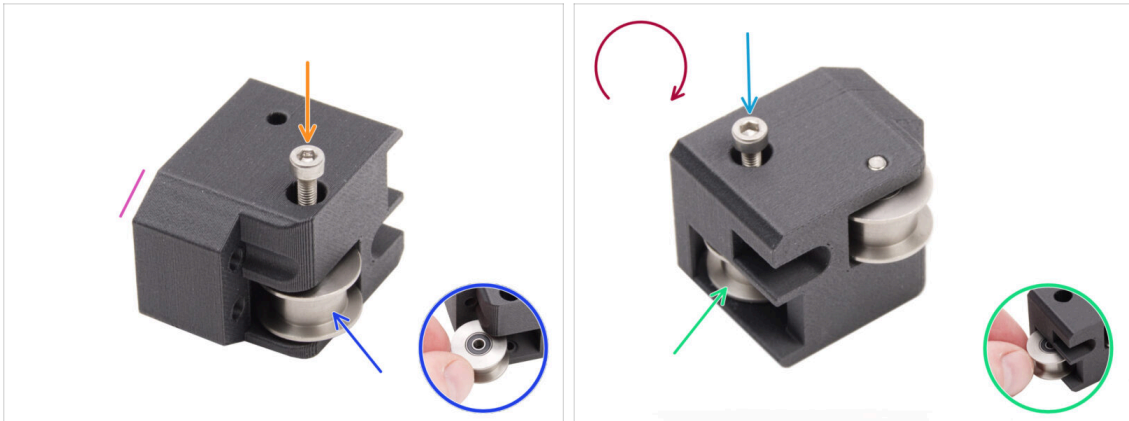
- Place the Rod holder left to the left front corner on the corresponding threaded holes.
- Secure it with two M3x6 screws.
- Place the Rod holder right to the right front corner on the corresponding threaded holes.
- Secure it with two M3x6 screws.

PASSO 6 XY carriage: parts preparation



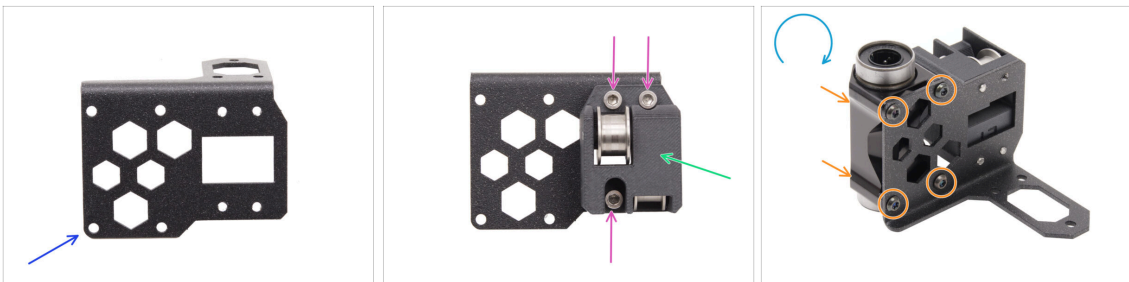
- For the following steps, please prepare:
- Linear holder left (1x) found in the Metal parts 1/3 package
 - Linear holder right (1x) found in the Metal parts 1/3 package
 - XY-carriage (2x) found in the Printed parts package
 - LM10LUU linear bearing (2x) found in the CORE XY parts + hinges + HB set package
 - GT2-20 Idler pulley (4x) found in the Electronics & Fasteners package
 - M3x8rT black screw (8x)
 - Vite M3x18 (10x)

PASSO 7 Montaggio dei carrelli XY



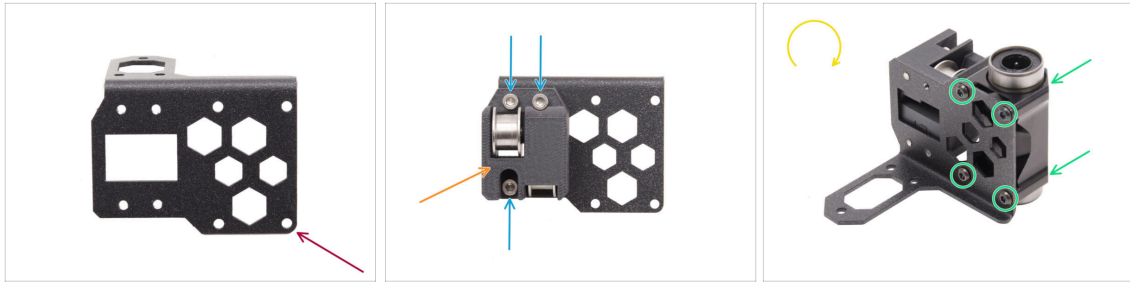
- ◆ Take one of the XY-carriage and orient it as shown. Use the beveled side as a guide.
- ◆ Insert the GT2-20 Idler pulley into the XY-carriage.
- ◆ Push one M3x18 screw through the pulley and tighten it completely down.
- ◆ Turn the part upside down.
- ◆ Insert another GT2-20 Idler pulley into the XY-carriage.
- ◆ Secure it with the M3x18 screw. Tighten it completely down.
- ◆ Repeat the same procedure with the second XY-carriage.

PASSO 8 Assembling the linear holder left



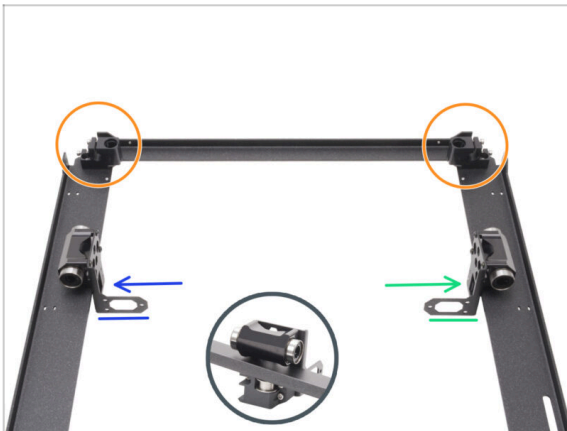
- ◆ Prepare the Linear holder **left** and position it as in the picture.
- ◆ Attach one of the XY-carriages to the Linear holder.
- ◆ Installalo sul supporto lineare con tre viti M3x18.
- ◆ Turn the Linear holder upside down.
- ◆ From the XY-carriage side, attach the LM10LUU linear bearing to the holder and secure it with four M3x8rT screws.

PASSO 9 Assembling the linear holder right



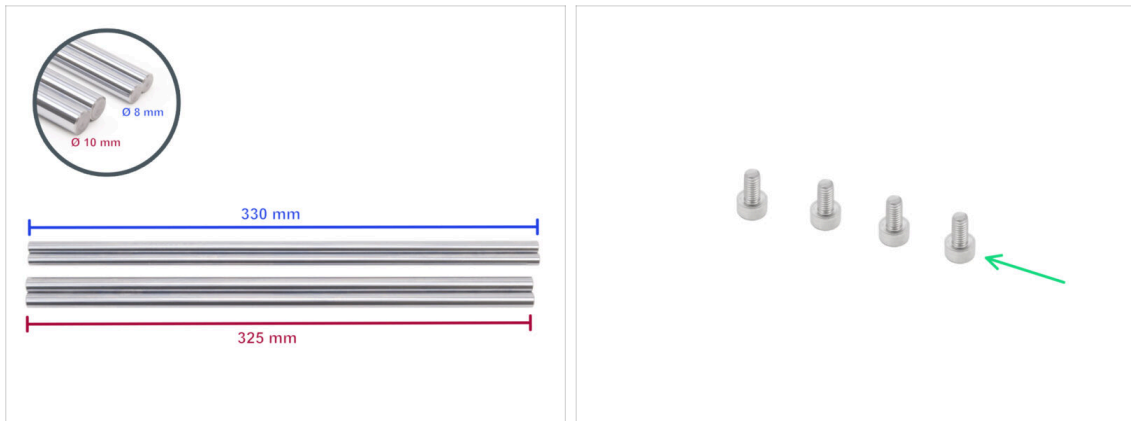
- Prepare the Linear holder **right** and position it as in the picture.
- Attach one of the XY-carriages to the Linear holder.
- Installalo sul supporto lineare con tre viti M3x18.
- Turn the Linear holder upside down.
- From the XY-carriage side, attach the LM10LUU linear bearing to the holder and secure it with four M3x8rT screws.

PASSO 10 Attaching the linear holder assemblies



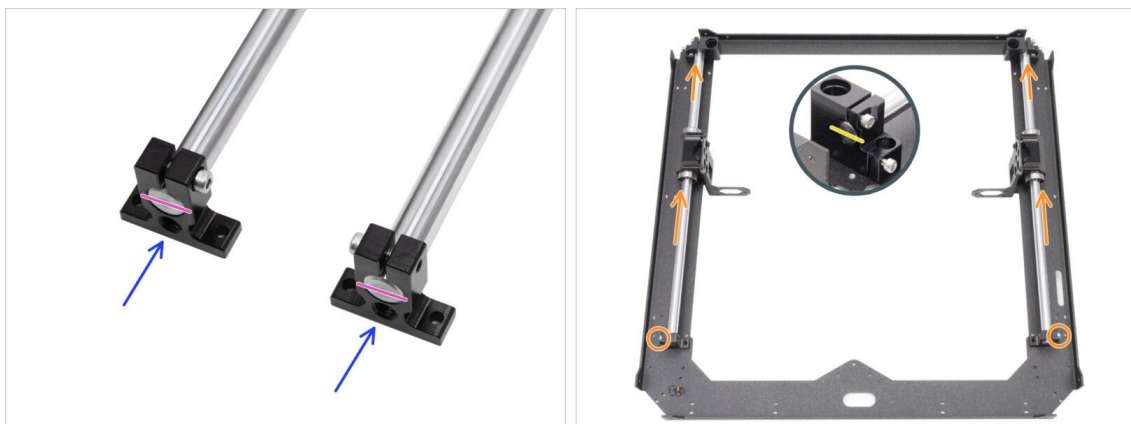
- Position the CoreXY plate as shown in the picture, ensuring the front rod holders are facing up.
- Slightly lift the CoreXY plate and from the plate's inner side loosely attach the Linear holder of the assemblies.
- **Supporto lineare sinistro**
- **Supporto lineare destro**
- ① The linear holders are now only loosely seated.

PASSO 11 Barre lisce INFO



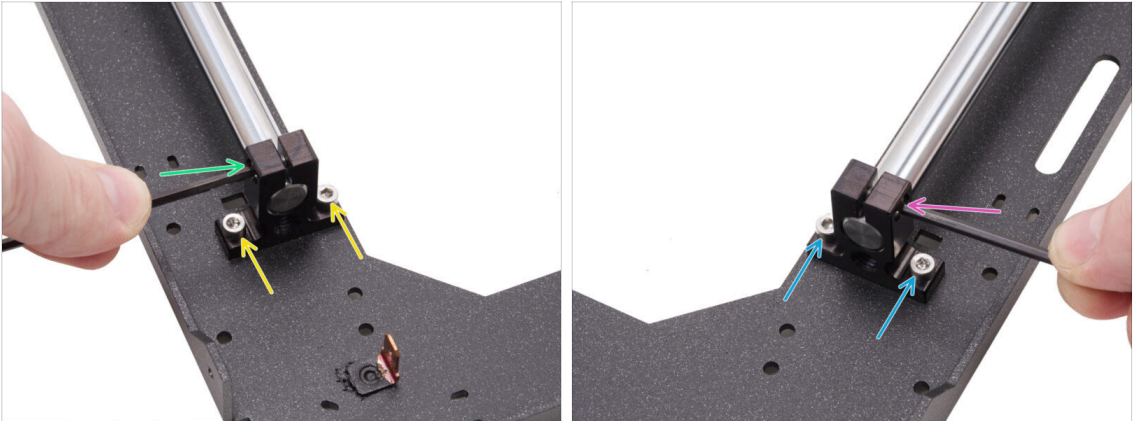
- The printer requires different smooth rod sizes. Ensure you have the correct ones:
 - Smooth rod 330 x 8 mm (2x)
 - Smooth rod 325 x 10 mm (2x)
originally from the Z-axis,
are needed for the following steps.
- **Prepara anche:**
 - Vite M3x6 (4x)

PASSO 12 Mounting the smooth rods



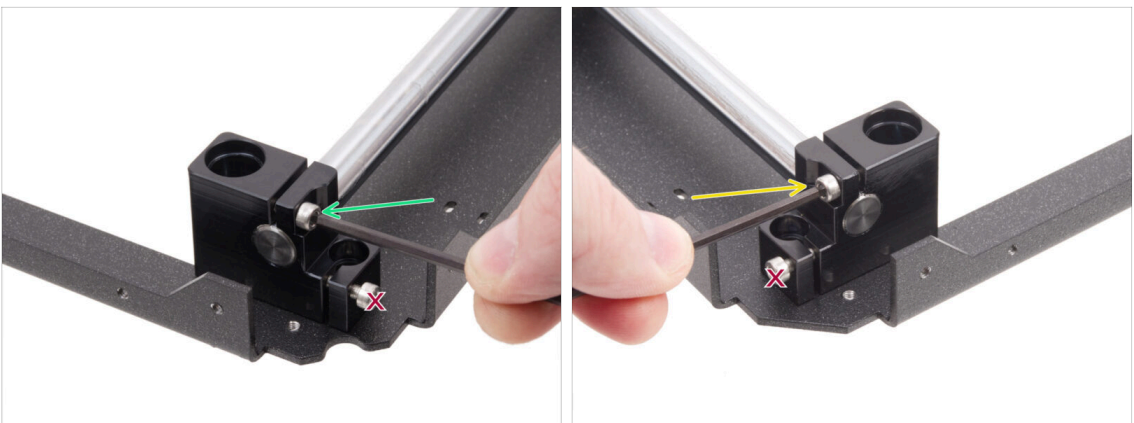
- Slide both rear rod holders onto both 10mm smooth rods.
- Line up the ends of the rods with the holders.
- Push both 10mm smooth rods through the LM10LUU bearing to the front rod holders.
- Make sure the screws on the rear rod holders are pointing out of the frame.
- Line up the front end of the 10mm smooth rods with the front rod holders.

PASSO 13 Securing the rear rod holders



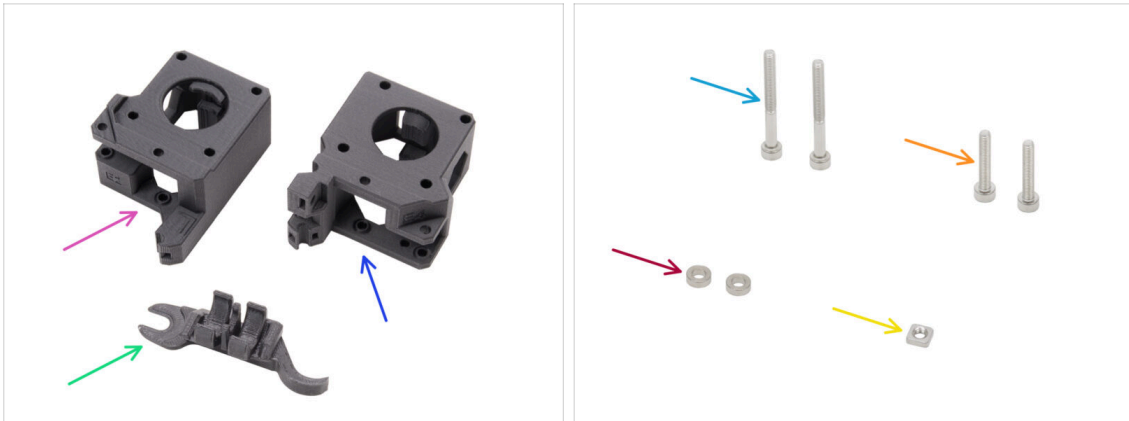
- Line up the left rear rod holder with the threaded holes in the plate.
- Fix it with two M3x6 screws.
- Firmly tighten the screw in the rod holder.
- Line up the right rear rod holder with the threaded holes in the plate.
- Fix it with two M3x6 screws.
- Firmly tighten the screw in the rod holder.

PASSO 14 Securing the front rod holders



- Focus on the front left holder (now on the right) and secure the rod by tightening the screw in the holder.
- ⚠ **Do not tighten the bottom screw.**
- Focus on the front right holder (now on the left) and secure the rod by tightening the screw in the holder.
- ⚠ **Do not tighten the bottom screw.**

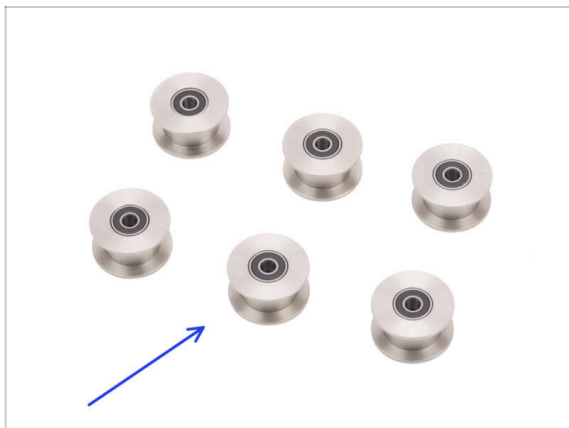
PASSO 15 Motor mounts: parts preparation



● **For the following steps, please prepare:**

- XY-motor-mount-left (1x) *found in the Printed parts package*
- XY-motor-mount-right (1x) *found in the Printed parts package*
- Assembly-multi-tool (1x) *you already used*
- Vite M3x30 (2x)
- Vite M3x18 (2x)
- Spacer 3.2/6x2 (2x) *found in the Electronics & Fasteners package*
- Dado M3nS (1x)
- ❗ The list continues in the next step...

PASSO 16 Motor mounts: part preparation



- GT2-20 Idler pulley (6x) *found in the Electronics & Fasteners package*

PASSO 17 Assembling the XY-motor-mount-right I.



- ✿ Inserisci una puleggia nella posizione inferiore dello strumento Assembly-multi-tool.
- ✿ Insert the spacer 3.2 on the pulley.
- ✿ Inserisci la seconda puleggia nello strumento Assembly-multi-tool.
- ✿ Insert the whole assembly into the XY-motor-mount-right.
 - ⬛ Position the part according to the picture. Note the beveled corner.
- ✿ Align holes in both parts and secure it with the M3x30 screw.
 - 🔩 La parte in plastica non ha filettatura pre-tagliata, quindi la vite la creerà man mano che la stringi. È prevista una leggera resistenza.
- ✿ Rimuovi lo strumento Assembly-multi-tool.

PASSO 18 Assembling the XY-motor-mount-right II.



- ✿ Insert another pulley into the XY-motor-mount-right.
- ✿ Secure it with M3x18 screw.
 - ⓘ La parte in plastica non ha filettatura pre-tagliata, quindi la vite la creerà man mano che la stringi. È prevista una leggera resistenza.
- ✿ Insert the M3nS nut into the XY-motor-mount-right.

PASSO 19 Assembling the XY-motor-mount-left I.



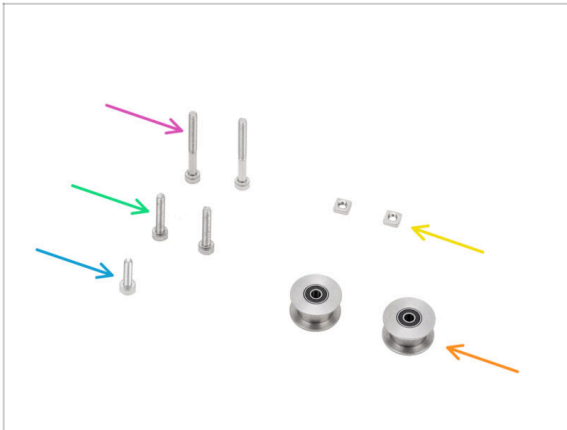
- ✦ Inserisci una puleggia nella posizione inferiore dello strumento Assembly-multi-tool.
- ✦ Insert the spacer 3.2 on the pulley.
- ✦ Inserisci la seconda puleggia nello strumento Assembly-multi-tool.
- ✦ Insert the whole assembly into the XY-motor-mount-left.
 - ⬛ Position the part according to the picture. Note the bevel next to the screw hole.
- ✦ Align holes in both parts and secure it with the M3x30 screw.
 - ⓘ La parte in plastica non ha filettatura pre-tagliata, quindi la vite la creerà man mano che la stringi. È prevista una leggera resistenza.
- ✦ Rimuovi lo strumento Assembly-multi-tool.

PASSO 20 Assembling the XY-motor-mount-left II.



- ✦ Insert another pulley into the part.
- ✦ Secure it with M3x18 screw. **Do not overtighten the screw.**
 - ⓘ La parte in plastica non ha filettatura pre-tagliata, quindi la vite la creerà man mano che la stringi. È prevista una leggera resistenza.

PASSO 21 Belt tensioners: parts preparation I.



For the following steps, please prepare:

GT2-20 Idler pulley (2x) *you have removed from the MK4S*

Vite M3x30 (2x)

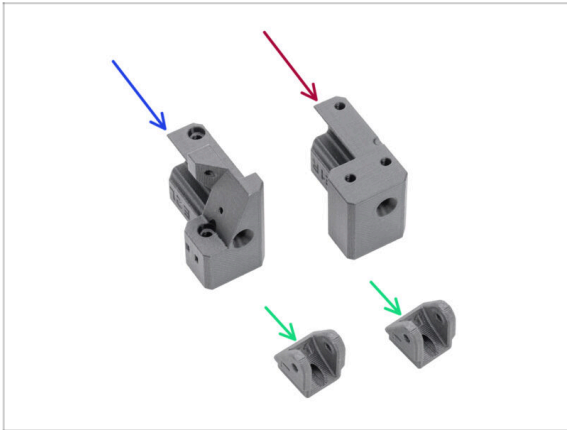
Vite M3x18 (2x)

Vite M3x12 (1x)

Dado M3nS (2x)

i The list continues in the next step...

PASSO 22 Belt tensioners: parts preparation II.



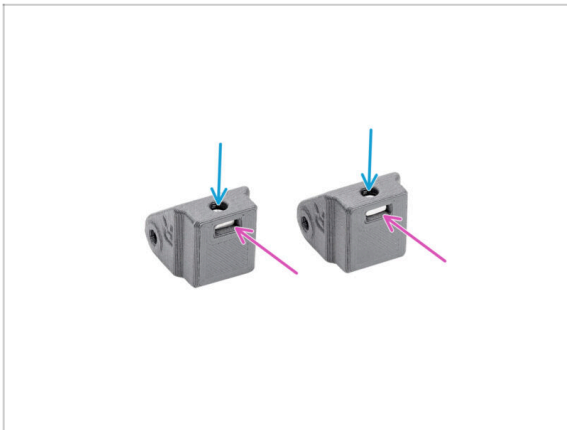
For the following steps, please prepare:

Belt-tensioner-left (1x) *found in the Printed parts package*

Belt-tensioner-right (1x) *found in the Printed parts package*

Belt-tensioner-pulley (2x) *found in the Printed parts package*

PASSO 23 Preparazione delle pulegge del tenditore



- ✦ Insert one M3nS nut into each Belt-tensioner-pulley.
- ✦ Assicurati che i dadi siano inseriti bene nei pezzi. I fori nei dadi e nei pezzi **devono essere allineati**.
- ✦ Tieni entrambe le parti in questa posizione.

PASSO 24 Assembling the belt tensioner left I.



- ✦ Metti un po' di lubrificante Prusa sulla punta di entrambe le viti M3x30.
- ✦ Metti il lubrificante in modo uniforme su tutta la filettatura.
- ⓘ Suggerimento: usa la punta di una fascetta per spalmare il lubrificante.
- ✦ Slide the Belt-tensioner-**left** onto the Belt-tensioner-pulley.
- ✦ **Ensure the parts are oriented correctly**, as shown.
- ✦ Insert the M3x30 screw through the Belt-tensioner-left into the Belt-tensioner-pulley. **Do not tighten completely!** 3-4 turns are sufficient.

PASSO 25 Assembling the belt tensioner left II.



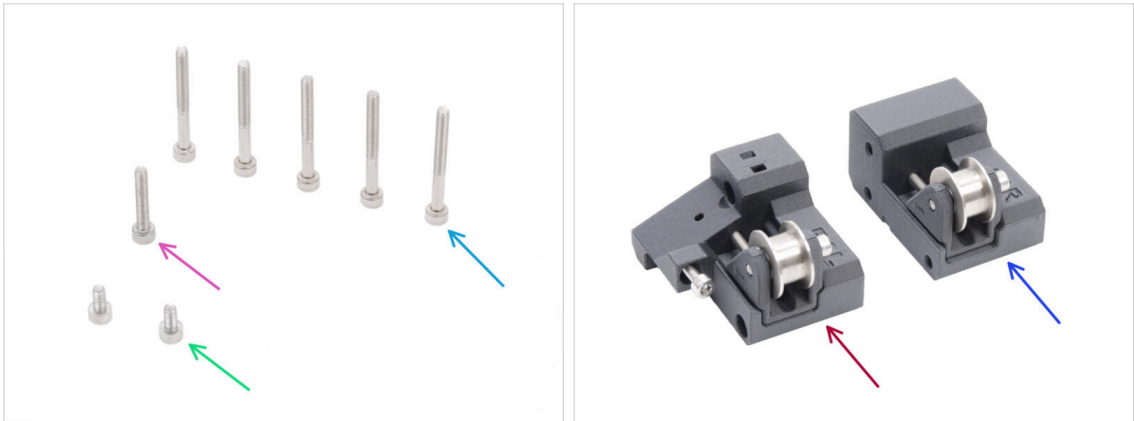
- ◆ Insert the GT2-20 Idler pulley into the Belt-tensioner-pulley.
- ◆ Secure it with the M3x18 screw.
 - i La parte in plastica non ha filettatura pre-tagliata, quindi la vite la creerà man mano che la stringi. È prevista una leggera resistenza.
- ◆ Insert the M3x12 screw into the Belt-tensioner-left. Tighten slightly—five turns are enough. It must not protrude through the other side.
 - i Note: This screw, referred to as the tensioning screw, will later be used to adjust the door sensor.

PASSO 26 Assembling the belt tensioner right



- ◆ Slide the Belt-tensioner-**right** onto the Belt-tensioner-pulley.
 - ◆ **Ensure the parts are oriented correctly**, as shown.
- ◆ Insert the M3x30 screw through the Belt-tensioner-right into the Belt-tensioner-pulley. **Do not tighten completely!** 3-4 turns are sufficient.
- ◆ Insert the GT2-20 Idler pulley pulley into the Belt-tensioner-pulley-right.
- ◆ Secure it with the M3x18 screw.
 - i La parte in plastica non ha filettatura pre-tagliata, quindi la vite la creerà man mano che la stringi. È prevista una leggera resistenza.

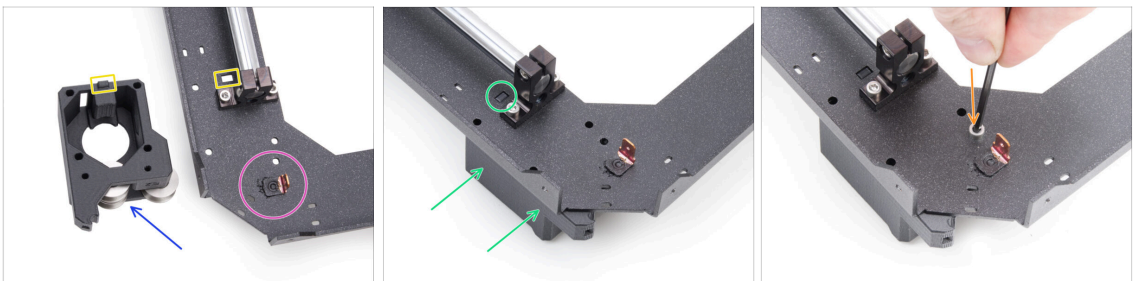
PASSO 27 Installing the belt tensioners: parts preparation



● For the following steps, please prepare:

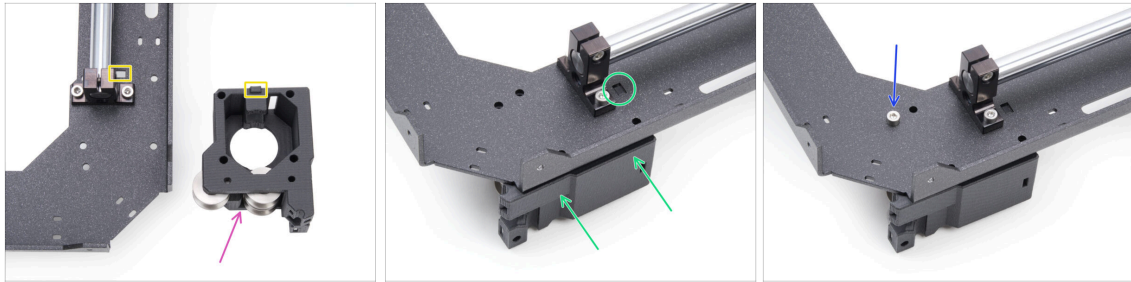
- Vite M3x30 (5x)
- Vite M3x18 (1x)
- Vite M3x6 (2x)
- Belt tensioner left assembly (1x) *you assembled earlier*
- Belt tensioner right assembly (1x) *you assembled earlier*

PASSO 28 Installing the motor mount left



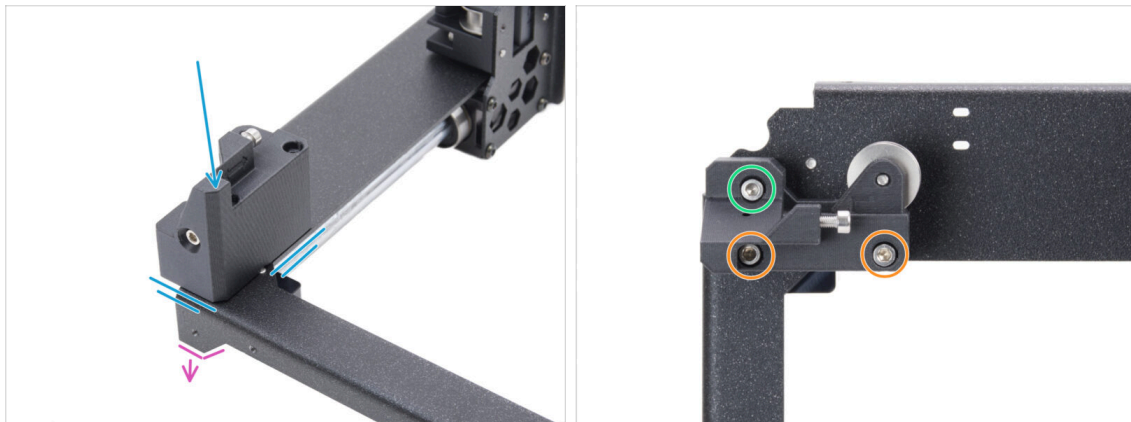
- Locate the corner of the CoreXY plate with the Faston connector on it. It is on the underside of the assembly.
- Position the motor-mount-**left** on the CoreXY plate as shown in the picture.
- Note the rectangular protrusion on the motor-mount-left and the rectangular cutout on the CoreXY plate.
- Fai scorrere il supporto motore sinistro sotto la piastra CoreXY, assicurandoti che la sporgenza rettangolare si inserisca nella fessura.
- Align the holes in both parts and secure them with an M3x6 screw in the designated hole

PASSO 29 Installing the motor mount right



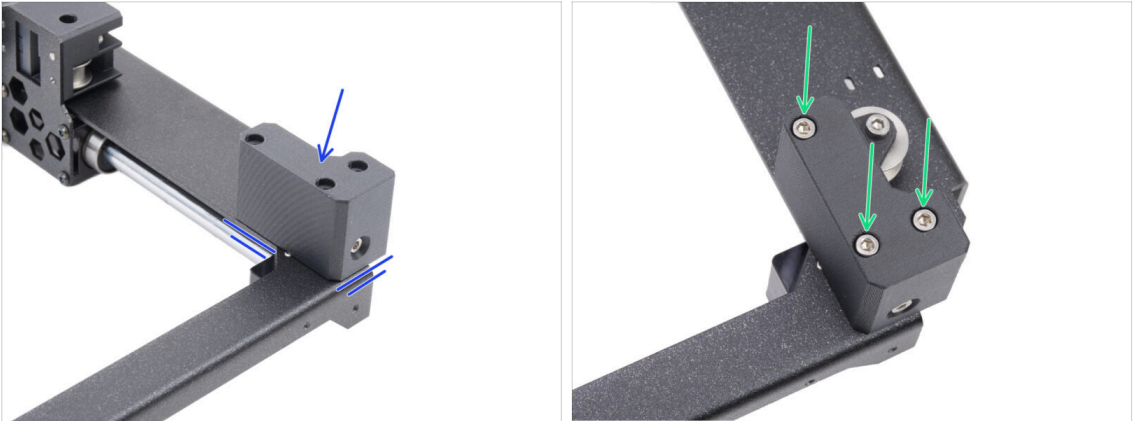
- ✦ Position the motor-mount-**right** on the CoreXY plate as shown in the picture.
- ✦ Fai attenzione alla sporgenza rettangolare sul supporto motore destro e al ritaglio rettangolare sulla piastra CoreXY.
- ✦ Fai scorrere il supporto motore destro sotto la piastra CoreXY, assicurandoti che la sporgenza rettangolare si inserisca nella fessura.
- ✦ Align the holes in both parts and secure them with an M3x6 screw in the designated hole

PASSO 30 Installazione del tenditore belt-tensioner-left



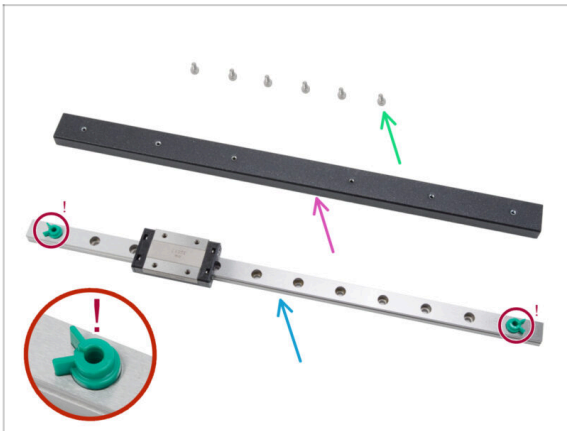
- ✦ Turn the CoreXY assembly upside down so that the bent parts face downward. Focus on the front left corner on the assembly.
- ✦ Place the belt-tensioner-**left** assembly in the front left corner of the CoreXY plate. Align it with the front and inner side edges.
 - ✦ Line up the holes in both parts.
 - ✦ Secure the part with two M3x30 screws.
 - ✦ Insert and tighten one M3x18 screw.

PASSO 31 Installazione del tenditore belt-tensioner-right



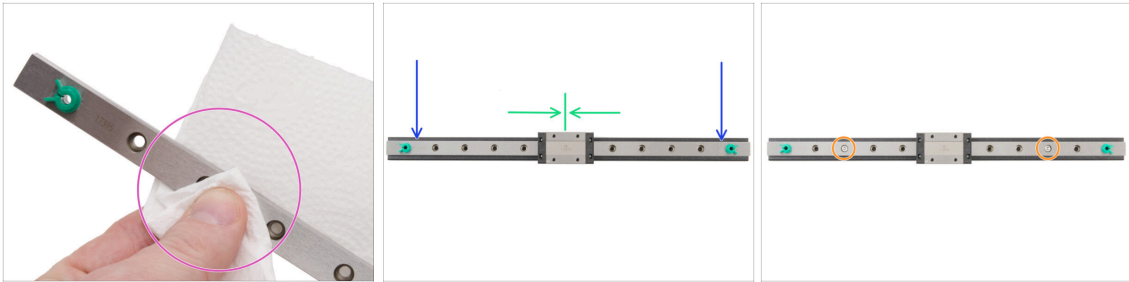
- Place the belt-tensioner-**right** assembly in the front right corner. Align it with the front and inner side edges.
- Line up the holes in both parts.
- Secure the part with three M3x30 screws.

PASSO 32 Linear rail: parts preparation



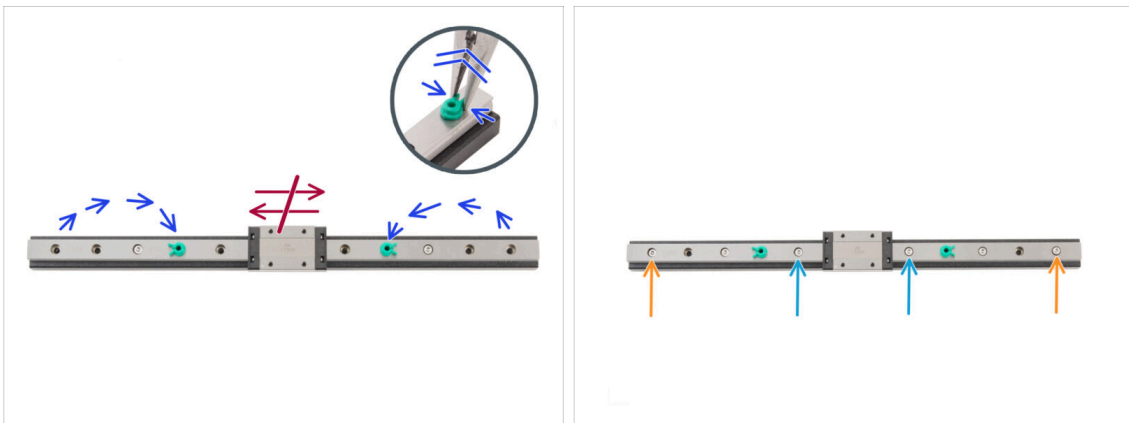
- For the following steps, please prepare:
 - Vite M3x6 (6x)
 - Linear rail beam (1x) *found in the Metal parts 3/3 package*
 - Linear rail (1x) *found in the Electronics & Chamber parts package*
- ⚠ **Under no circumstances remove the green anti-ejection safety pins.** Wait for the prompt in the instructions.
- Piece of cloth or a paper towels to wipe the preservative lubricant from the linear guide.

PASSO 33 Attaching the linear rail



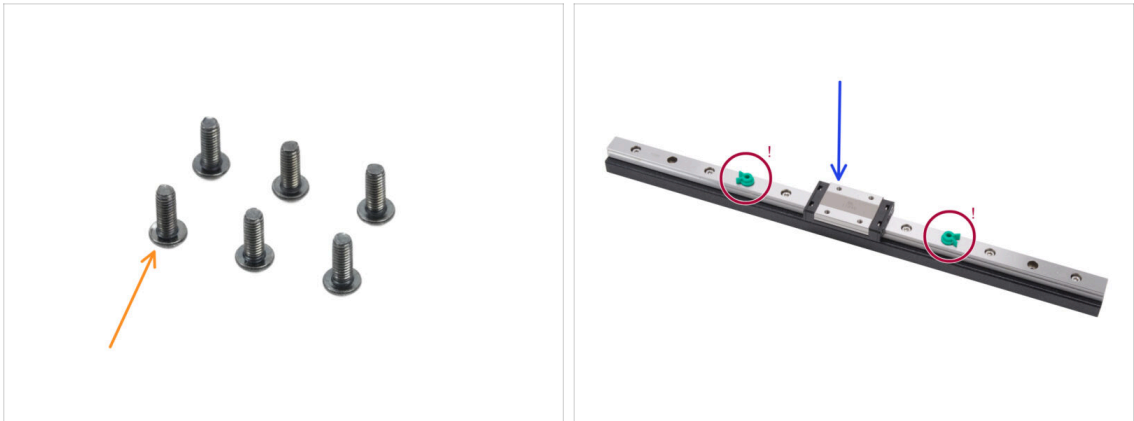
- ⚠ Under no circumstances remove the green anti-ejection safety pins. Wait for the prompt in the instructions.**
- 🟪 Immediately after removing the linear guide from the package, wipe off the preservative lubricant with a paper towel.
 - 🟦 Place the linear rail on the linear rail beam and line up the holes in both parts.
 - 🟡 Insert and slightly tighten two M3x6 screws into the third holes from both ends.
 - 🟢 Move the linear carriage approximately to the center of the rail.

PASSO 34 Securing the linear rail



- ⚠ Do not move the linear carriage in any way in this step.**
- 🟦 Relocate the safety pins from each end to the fourth holes from the ends of the linear rail.
 - 🔧 Gently squeeze the safety pin with needle-nose pliers and pull it out.
 - 🟢 Insert two M3x6 screws into the fifth holes from the ends of the rail. **Tighten just slightly.**
 - 🟡 Insert two M3x6 screws into the first holes in the rail. **Tighten just slightly.**
- ⚠ Do not remove the safety pins from the rail.**

PASSO 35 Installing the linear rail: parts preparation



● For the following steps, please prepare:

● Vite M3x8rT (6x)

ⓘ There are both M3x8rT and M3x8 screws in the kit. Make sure you have prepared the correct ones.

● Linear rail assembly (1x) *you assembled earlier*

⚠ **Do not remove the safety pins.**

PASSO 36 Installing the linear rail assembly



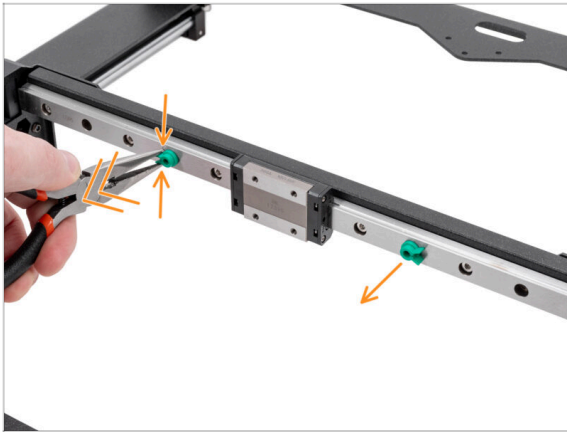
● Position the assembly with the motor mounts facing you.

● Move both linear holders approximately to the center of the Y-axis.

● Attach the linear rail assembly to the holders from the front side of the assembly.

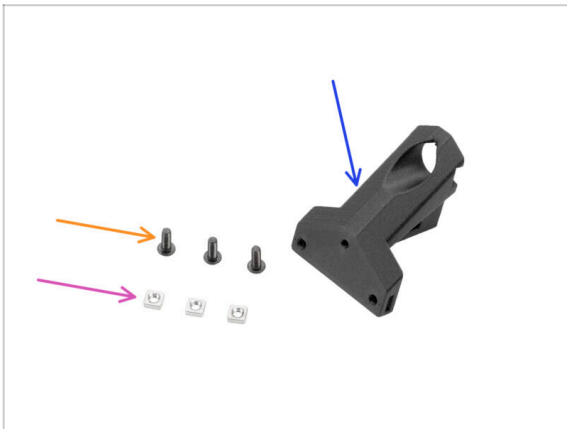
● Secure it with three M3x8rT screws from the back side on both the left and right sides.

PASSO 37 Linear rail: removing the safety pins



- Gently squeeze both safety pins with needle-nose pliers and pull them out of the linear rail.
- i You can discard the safety pins as they are no longer needed.

PASSO 38 Finecorsa del piano: preparazione dei componenti



- **For the following steps, please prepare:**
- Bed-stop-rear (1x) *found in the Printed parts package*
- Dado M3nS (3x)
- Vite M3x8rT (3x)

PASSO 39 Assemblare il finecorsa del piano



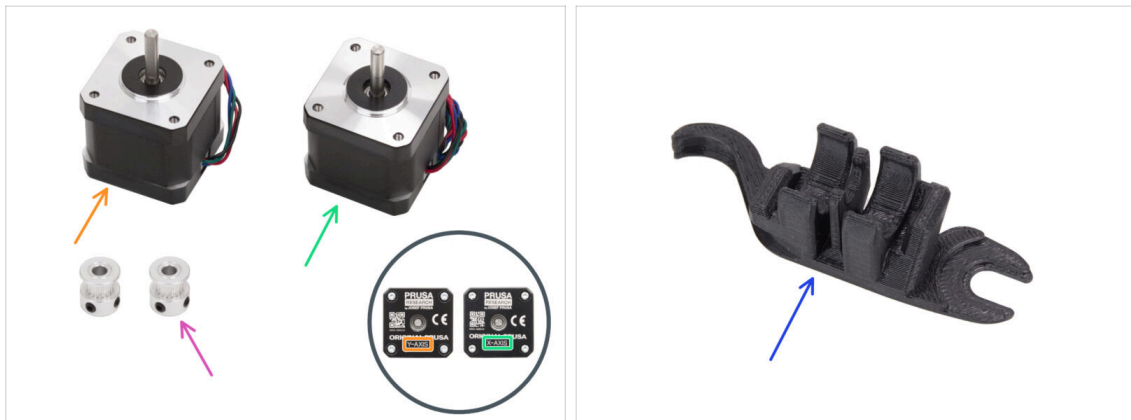
- Insert two M3nS nuts into the bed-stop from one side.
- Insert one M3nS nut into the bed-stop from the other side.

PASSO 40 Montare il finecorsa del piano



- ◆ Position the CoreXY assembly as shown, ensuring the motor mounts face upwards.
- ◆ Focus on the triangle protrusion on the metal part.
- ◆ Insert the bed-stop-rear **under** the protrusion at the back of the CoreXY plate.
- ◆ Align all three holes in both parts.
- ◆ Secure both parts together with three M3x8rT screws.
- ⓘ The upper screw is screwed into plastic with no pre-cut thread. It cuts the thread as it's tightened. Slight resistance is expected.

PASSO 41 X&Y motors: parts preparation



- ◆ For the following steps, please prepare:
- ◆ Motore asse Y (1x)
- ◆ Motore asse X (1x)
- ⓘ Note that the motors are marked as X and Y-axes in order to distinguish between them. We will continue to follow this marking.
- ◆ Puleggia T16-2GT (2x)
- ◆ Assembly-multi-tool (1x) *you already used*

PASSO 42 Installing the X-axis pulley



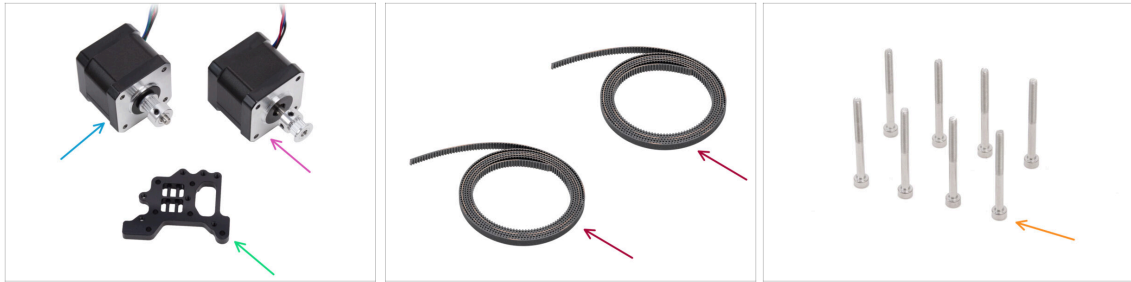
- Prepare the **X-axis** motor.
- Note the flat part on the motor shaft.
- ⚠ Slide the Pulley on, **note the CORRECT orientation.**
- Rotate the motor shaft with the flat part facing you.
- Using the fork on the Assembly-multi-tool set a gap between the pulley and the motor.
- Push the pulley on the tool and firmly tighten the screw against the flat part on the shaft.
- Rotate the pulley and firmly tighten the second grub screw.
- ⚠ **Ricontrolla l'orientamento della puleggia. Il lato dentato della puleggia deve essere sul lato del motore.**

PASSO 43 Installing the Y-axis pulley



- Prepare the **Y-axis** motor.
- Note the flat part on the motor shaft. Rotate the motor shaft with the flat part facing you.
- ⚠ Inserisci la puleggia e **nota l'orientamento CORRETTO. L'orientamento della puleggia dell'asse Y è DIVERSO da quello dell'asse X.** Assicurati che i denti della puleggia siano rivolti nella direzione opposta al motore. Usa il gancio più largo dello strumento di assemblaggio.
- Utilizzando l'uncino dello strumento di montaggio (Assembly-multi-tool), metti la parte curva più spessa tra la puleggia e il motore.
- ⚠ **Non provare ad agganciarlo all'albero.** Appoggia semplicemente lo strumento contro il motore e assicurati che la punta del gancio scivoli tra il motore e la puleggia.
- Push the pulley on the tool and firmly tighten the screw against the flat part on the shaft.
- Rotate the pulley and firmly tighten the second grub screw.
- ⚠ **Ricontrolla l'orientamento della puleggia. I denti devono essere rivolti nella direzione opposta al motore.**

PASSO 44 XY belts: parts preparation



● For the following steps, please prepare:

- X-axis motor assembly (1x) you assembled earlier
- Y-axis motor assembly (1x) you assembled earlier
- XY belt (2x) found in the CORE XY parts + hinges + HB set package
- Nextroder holder (1x) found in the CORE XY parts + hinges + HB set package
- Vite M3x35 (8x)

PASSO 45 INFO Cinghie XY



❗ The next steps cover belt installation and guiding on the core XY assembly. Before starting, refer to the illustration for an overview and better understanding of each belt's path.

- X-axis belt - at the **top position**
- Y-axis belt - at the **bottom position**

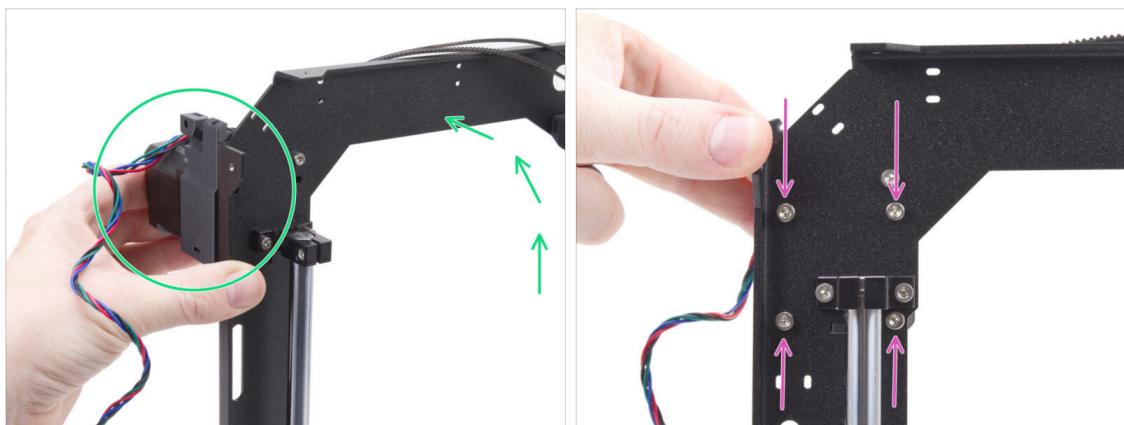
● Let's guide the belts step by step...

PASSO 46 Y belt guiding: Y motor pulley



- From the back of the CoreXY, focus on the motor-mount on the **left** side.
- Create a loop anywhere on the belt so the **belt teeth are pointing inside** the loop.
- Push this loop through the space between the lower pulleys inside the motor mount.
- Push through enough to make the loop follow the top round hole of the motor-mount as closely as possible.
- Insert the **Y** motor into the motor holder, the pulley must be in the middle of the belt loop.
- Insert the Y motor pulley into the motor mount, ensuring the pulley is centered within the belt loop.
Fully attach the motor to the motor-mount with the motor cable facing you.
- Pull lightly on the belt loop to encircle the pulley.

PASSO 47 Securing the Y-axis motor



- Firmly grasp the Y-axis motor assembly and position the CoreXY assembly vertically. **Do not drop the motor!**
- ⚠ Be careful not to pull the entire belt out of the motor.
- Keep holding the motor with one hand. With the other hand, secure the motor using four M3x35 screws on the underside of the frame. **Tighten firmly.**
- Place the CoreXY assembly back into the horizontal position.

PASSO 48 Y belt guiding: Y motor mount



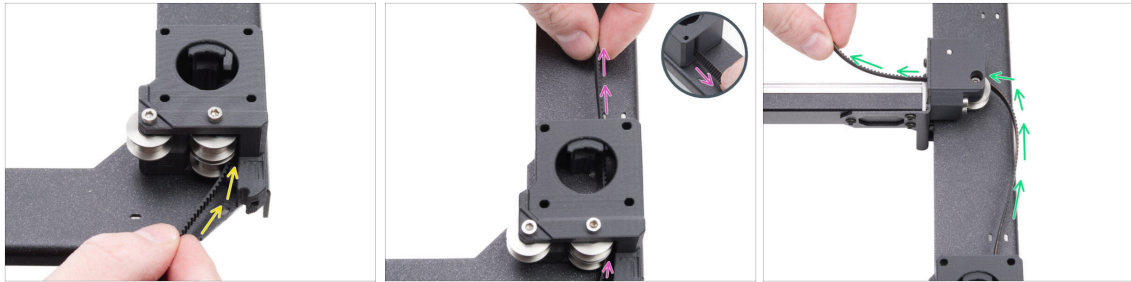
- 🟠 Guide the left end of the belt around the lower left pulley.
- 🟡 Push the belt through the part and guide it to the front of the CoreXY plate.
- ⚠️ **Don't pull too long so you don't pull the whole belt out.** Remember that the other end is loose. The whole process would then have to be repeated.

PASSO 49 Y belt guiding: belt tensioner



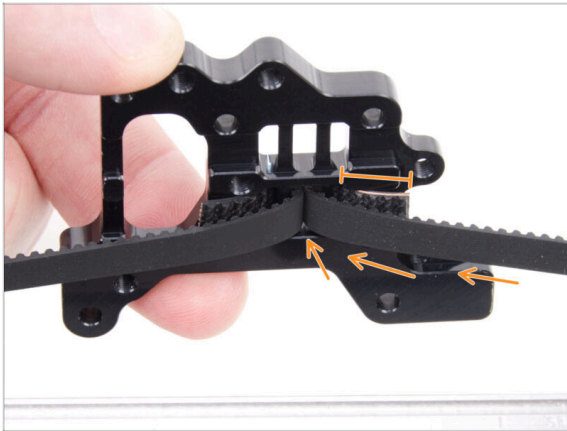
- 🟠 Guida la cinghia intorno alla puleggia del tendicinghia.
- 🟡 Push the belt around the front pulley in the linear assembly.
- 🟢 Prepare the Nextruder holder in the same orientation as in the picture. Note the holes for securing the belts.
- 🟠 Push the end of the belt through the middle hole into the left hole in the bottom row - leave 4-5 teeth sticking out.
- 📄 The belt is secured on this end. You can leave it free for now.

PASSO 50 Y belt guiding: X motor mount



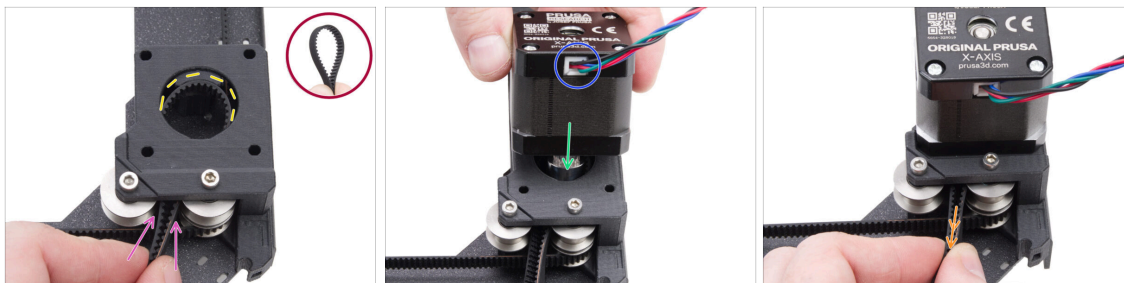
- Back to the other end of the Y belt.
- Take the other end of the belt and guide it around the lower pulley in the X motor mount.
- Push it through the motor mount to the front.
- Route the belt around the lower right pulley in the linear rail holder.

PASSO 51 Y belt guiding: securing the belt



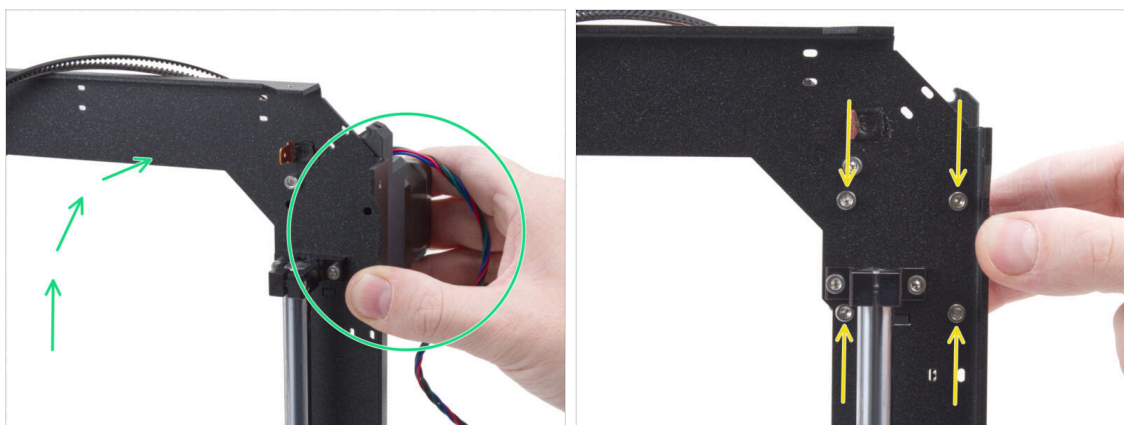
- Push the end of the belt through the middle hole to the right hole in the bottom row of the Nextruder holder - leave 4-5 teeth sticking out.
- ⓘ If it's difficult to reach the Nextruder holder with the belt, you can loosen the belt tensioner screw on the front of the assembly.
- 📌 Don't forget to adjust it back after securing the belt.

PASSO 52 X belt guiding: X motor pulley



- From the back of the CoreXY, focus on the motor-mount on the **right** side.
- Create a loop anywhere on the second belt so the belt teeth are pointing inside the loop.
- Push this loop through the space between the upper pulleys inside the motor mount.
- Push through enough to make the loop follow the top round hole of the motor-mount as closely as possible.
- Insert the **X** motor pulley into the motor mount, ensuring the pulley is centered within the belt loop.
- Ensure the motor cable is facing you (rear).
- Pull lightly on the belt loop to encircle the pulley.

PASSO 53 Securing the X-axis motor



- Afferra saldamente il gruppo motore X e posiziona il CoreXY in verticale. **Non far cadere il motore!**
- ⚠ Be careful not to pull the entire belt out of the motor.
- Keep holding the motor with one hand. With the other hand, secure the motor using four M3x35 screws on the underside of the frame. **Tighten firmly.**
- Place the CoreXY assembly back into the horizontal position.

PASSO 54 Y belt guiding: X motor mount



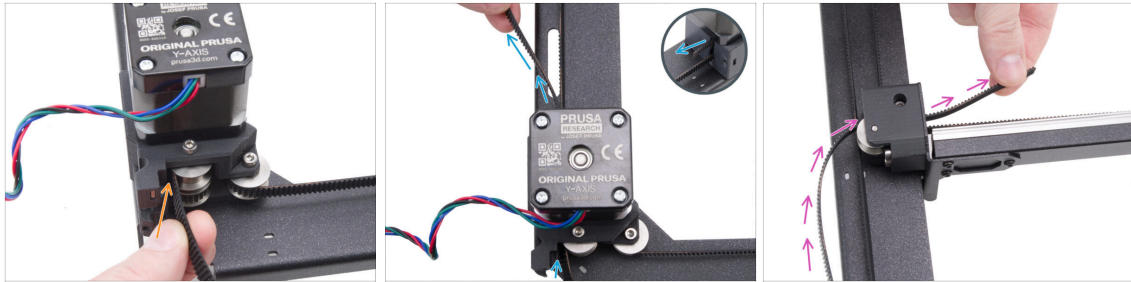
- Guide the right end of the belt around the upper right pulley.
- Push the belt through the part and guide it to the front of the CoreXY plate.
- ⚠ **Don't pull too long so you don't pull the whole belt out.** Remember that the other end is loose. The whole process would then have to be repeated.

PASSO 55 X belt guiding: belt tensioner



- Guida la cinghia intorno alla puleggia del tendicinghia.
- Push the belt around the front upper pulley in the linear assembly.
- Route the end of the belt through the middle hole into the right hole - leave 4-5 teeth sticking out.
- ⓘ The belt is secured on this end. You can leave it free for now.

PASSO 56 X belt guiding: Y motor mount



- Take the other end of the belt and guide it around the upper pulley in the Y motor mount.
- Push the belt through the motor mount.
- Route the belt around the upper front pulley in the linear rail holder.

PASSO 57 X belt guiding: securing the belt



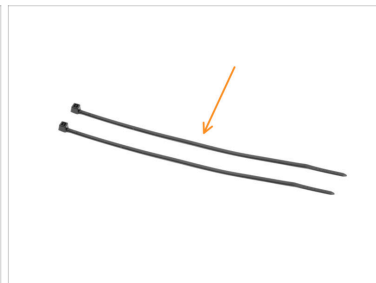
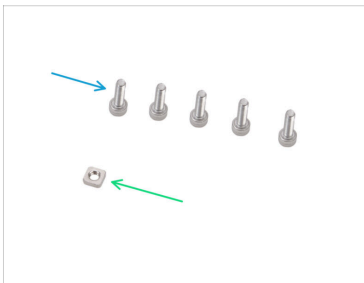
- Push the end of the belt through the middle hole to the left hole in the upper row of the Nextruder holder - leave 4-5 teeth sticking out.

PASSO 58 Checking the belt guidance



Before proceeding, recheck the belt routing according to the illustration.

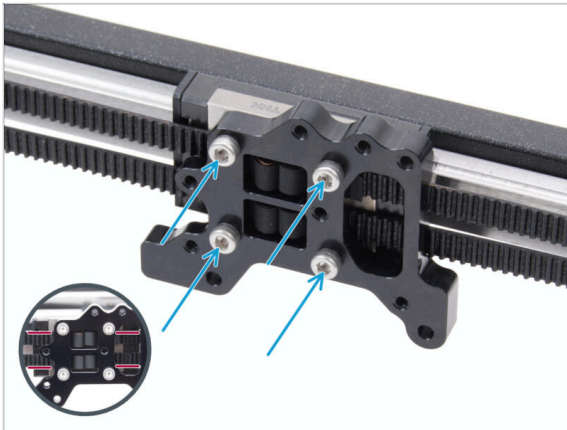
PASSO 59 Bowden guide: parts preparation



● For the following steps, please prepare:

- Bowden-guide (1x) *found in the Printed parts package*
- Vite M3x10 (5x)
- Dado M3nS (1x)
- Fascetta (2x)

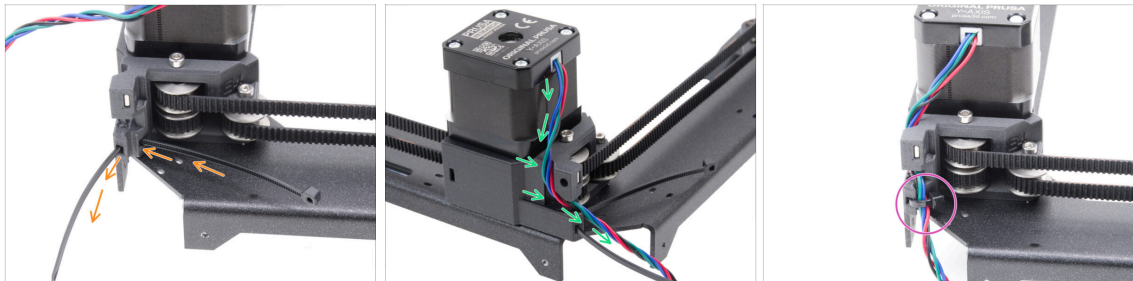
PASSO 60 Securing the Nextruder holder



- Attach the Nextruder holder to the linear rail carriage and secure it using four M3x10 screws.

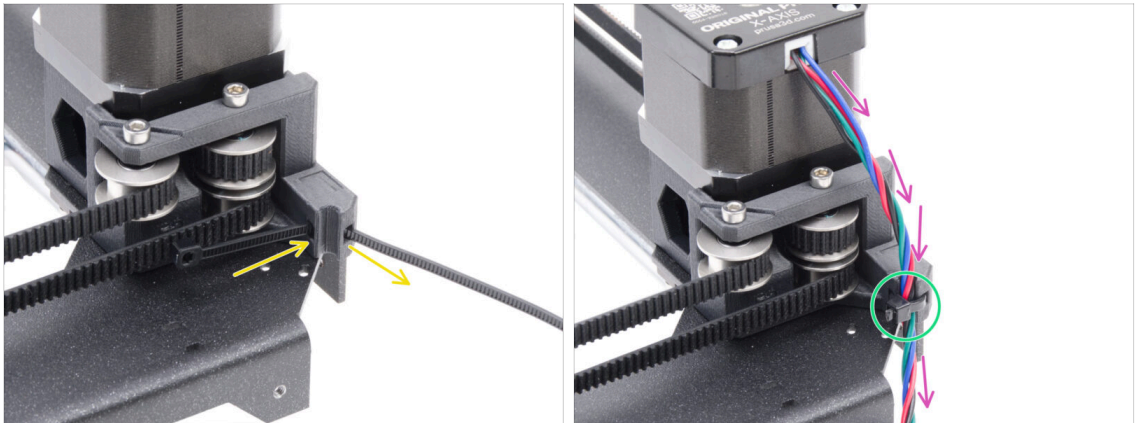
CAUTION: Ensure no belt obstructs the screw. Avoid screwing through the belt!

PASSO 61 Securing the Y motor cable



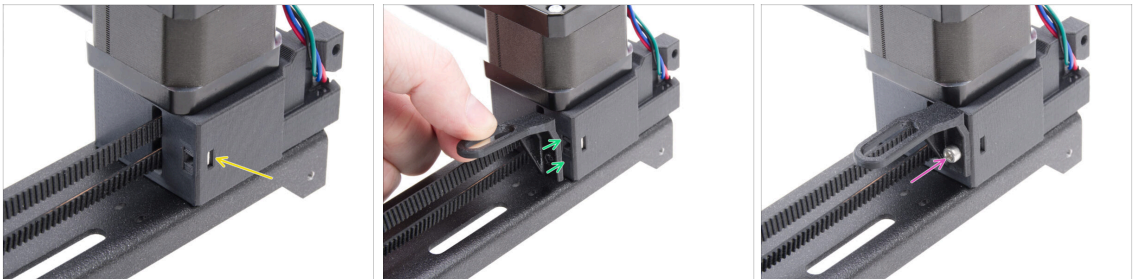
- Fai passare la fascetta attraverso il supporto motor-mount-right (Motore asse Y).
- Route the Y motor cable through the cable channel in the motor-mount-right and over the zip tie.
- Secure the cable with a zip tie and trim the excess.

PASSO 62 Securing the X motor cable



- ✦ Fai passare la fascetta attraverso il supporto motor-mount-left (Motore asse X).
- ✦ Route the X motor cable through the cable guide in the motor-mount-right and over the zip tie.
- ✦ Secure the cable with a zip tie and trim the excess.

PASSO 63 Installing the bowden guide



- ✦ Inserisci il dado M3nS nel supporto motor-mount-right (motore asse Y).
- ✦ Attach the bowden-guide to the motor-mount-right.
 - ⚠ Note the correct orientation of the part.
- ✦ Fix the bowden-guide in place using the M3x10 screw.

PASSO 64 White LED strip: parts preparation



● For the following steps, please prepare:

● White LED strip (1x) found in the *Electronics & Fasteners* package

● CoreXY strut (1x) found in the *Metal parts 1/3* package

ⓘ The part is inserted in a foam cutout and may not be immediately visible at first glance.

● Vite M3x4rT (2x)

PASSO 65 Sticking the White LED strip



● Carefully peel off the protective (paper) layer from the White LED strip.

⚠ After removing the protective layer, the LED strip is adhesive.

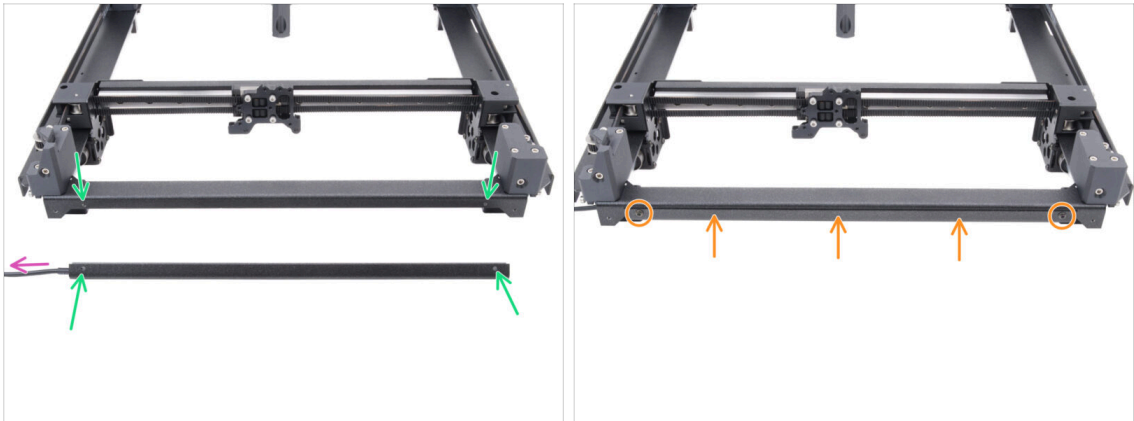
● Position the White LED strip near the CoreXY strut to check alignment, but **do not attach it yet**.

⚠ Note the rectangular cutout on the strut, orient the strip cable to the same side.

● Stick the White LED strip evenly to the strut - on the side with the rectangular cutout.

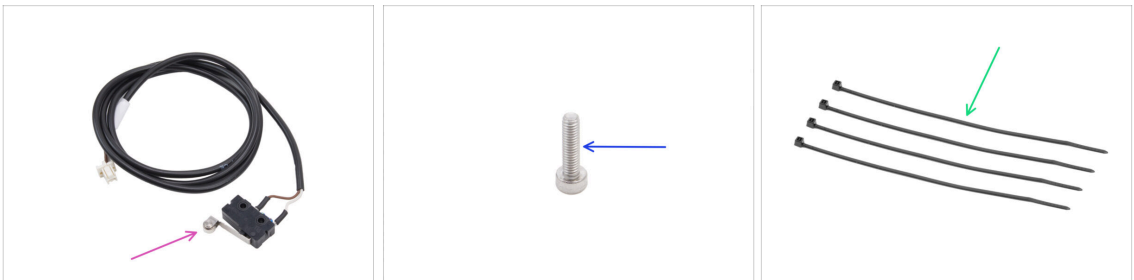
● After sticking, press lightly on the blank areas of the strip to ensure adhesion. **Do not touch LEDs and resistors!**

PASSO 66 Installing the white LED assembly



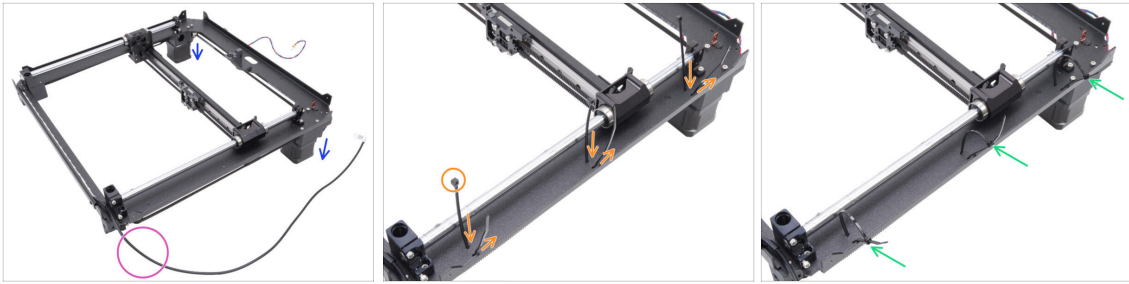
- Take the white LED assembly and attach it to the front of the CoreXY assembly. Align the holes of both parts.
- **The white LED strip cable must point to the left.**
- Attach the LED assembly to the CoreXY plate and secure it with two M3x4rT screws.

PASSO 67 Door sensor & White LED strip: parts preparation



- **For the following steps, please prepare:**
- Door sensor (1x) *found in the CORE XY parts + hinges + HB set package*
- M2.5x10 screw (1x) *silver*
- Fascetta (4x)

PASSO 68 Inserting the zip ties



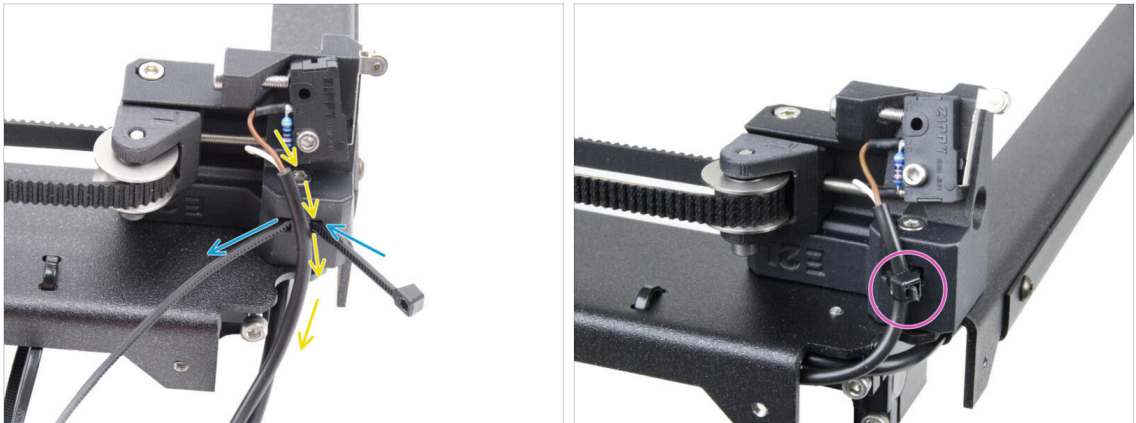
- ◆ Flip the CoreXY assembly upside down and rest it on the motors.
- ◆ Position it with the white LED strip cable facing toward you.
- ◆ Thread three zip ties through the CoreXY plate, ensuring the zip tie heads point inward.
- ◆ Partially tighten the zip ties—just enough to catch the first few teeth.
- ⚠ **Do not fully secure them yet, as we will route cables through them later.**
- ◆ Flip the assembly back with the motors facing upwards.

PASSO 69 Installing the door sensor



- ◆ Place the door sensor on the left belt tensioner. The lever of the door sensor must face forward.
- ◆ Secure the door sensor with the M2.5x10 screw.
- ◆ Tighten the bolt fully and then loosen 1/4 turn. The sensor must be allowed to move.
- ◆ From the rear of the belt tensioner, tighten the M3x12 screw so that it touches the door sensor.

PASSO 70 Securing the door sensor cable



- ◆ Push the zip tie through the hole in the left belt tensioner.
- ◆ Guide the door sensor cable through the zip tie.
- ◆ Tighten the zip tie to secure the door sensor cable. Cut off the excess.

PASSO 71 Guiding the cables: LED and door sensor



- ◆ Prepare a cardboard box. You can use any box from the kit. *The box used in the picture is for illustrative purposes only.*
- ◆ Flip the CoreXY assembly upside down, positioning the smooth rods on top.
- ◆ Slightly lift and support the front side of the CoreXY assembly with the cardboard box.
- ⚠ **Be careful not to damage the door sensor.**
- ◆ Route the white LED strip cable and the door sensor cable through the zip ties.
- ◆ Tighten all the zip ties to secure the cables. Cut off the excess zip ties.
- ◆ **Cables must be slightly taut and straight.** Excess slack or bends may cause collisions with the Y-axis and lead to damage.

PASSO 72 Smooth rods: parts preparation



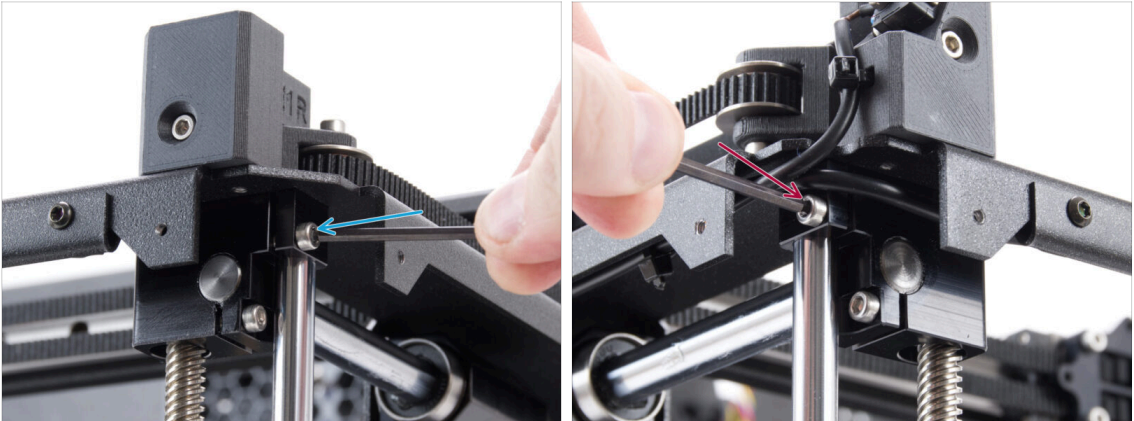
- For the following steps, please prepare:
- Smooth rod 330 x 8 mm (2x) *originally from the Y-axis.*
- Vite M3x8rt (1x)

PASSO 73 Installing the CoreXY assembly



- Carefully insert both smooth rods through the heatbed assembly bearings and into the rod mount part in the base assembly.
- ⚠ **It is a requirement to insert the smooth rod in the axis with the bearing very slowly to prevent the balls from shooting out of the bearing.**
- Temporarily hang the cables from the cooling fans over the rear panel. **There must be a space between the cables and the back panel pocket.**
- Exercise extreme caution when placing the assembly on the smooth rods and back panel assembly.
- ⚠ **Ensure that no cables are pinched.**
- Ensure both smooth rods are properly seated in the rod holders.
- The threaded rod of the rear Z motor must pass through the bed-stop-rear part.
- ⚠ **WARNING: When handling the printer, DO NOT lift it by the CoreXY assembly. Always lift it by the base of the entire assembly.**

PASSO 74 Securing the smooth rods

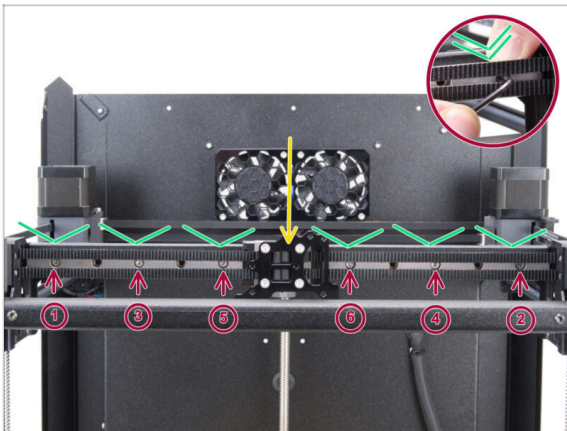


⚠ Check that both smooth rods are seated correctly in the holders.

🔵 Firmly tighten the right M3x10 screw to secure the smooth rod.

🔴 Firmly tighten the left M3x10 screw to secure the smooth rod.

PASSO 75 Aligning the linear rail

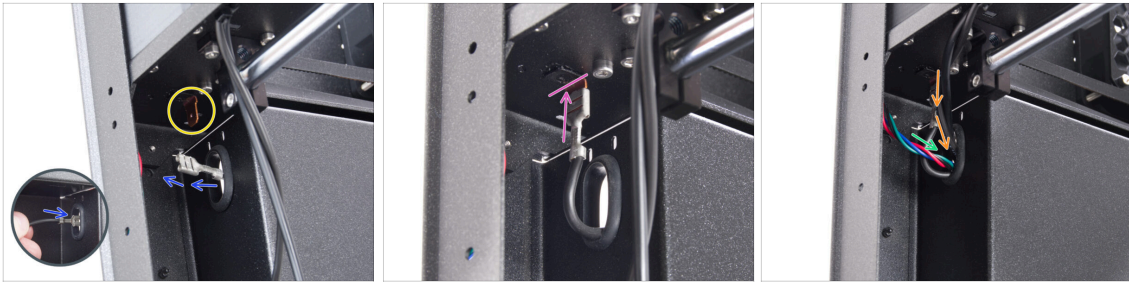


🟡 Move the linear rail carriage to the center.

⚠ Firmly tighten all screws in the order shown in the picture.

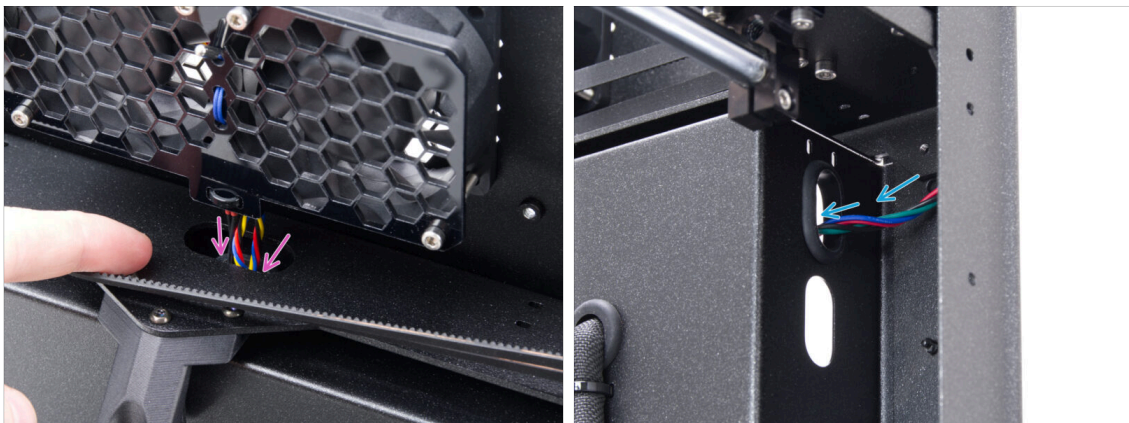
🟢 Push the linear rail down while tightening.

PASSO 76 Guiding the corexy cables



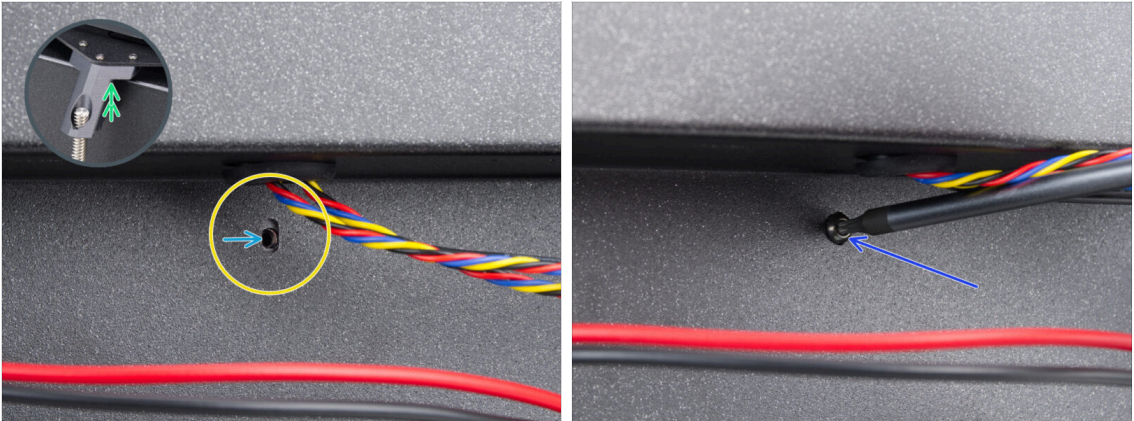
- From the back of the printer, push the FE connector through the oval hole.
- Locate the FE cable connector (number 5) in the rear left corner - under the CoreXY assembly.
- Plug the FE connector onto the Faston on the underside of the CoreXY plate.
- On the same side, push the X motor cable through the oval hole in the back panel.
- Push the White LED strip and Door sensor cables through the oval hole in the back panel.

PASSO 77 Guiding the cooling fan cables



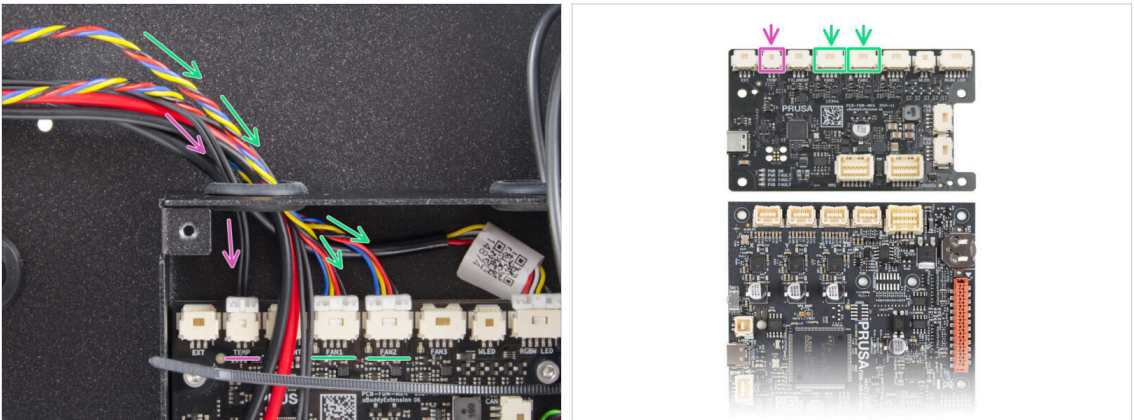
- Push the cooling fan and thermistor cables through the oval hole in the back panel.
- On the right back corner, locate the Y motor cable and push it through the upper oval hole in the back panel.

PASSO 78 Fissare il finecorsa del piano



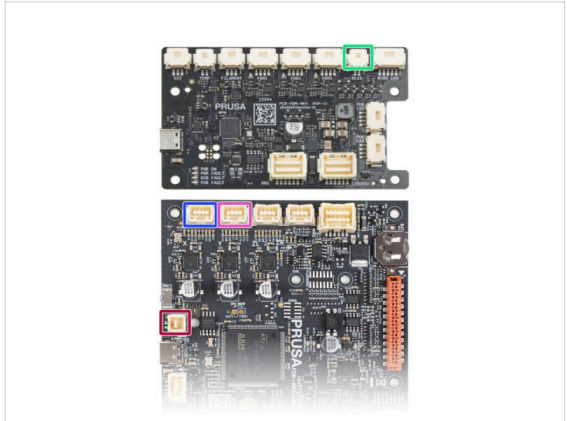
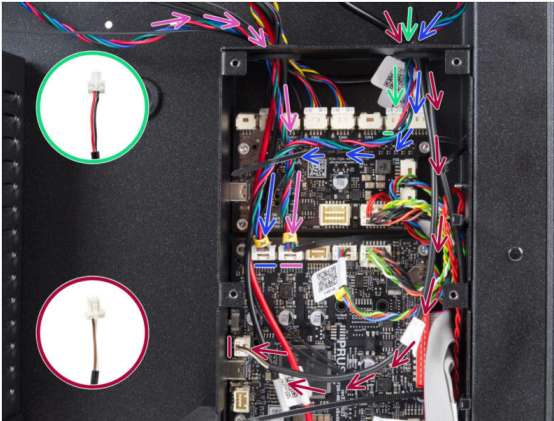
- ✦ From the back side, locate the oval screw hole under the cooling fans.
- ✦ The oval hole must be flush with the hole in the bed-stop part on the opposite side.
- ✦ To compensate, slightly raise the rear of the CoreXY assembly - just a few millimeters.
- ✦ After aligning the holes, secure them with an M3x8rT screw.

PASSO 79 Connecting the cooling fans cables



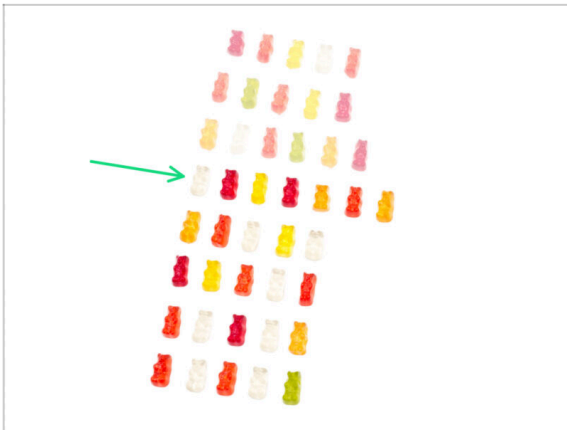
- ✦ Route the cooling fan cables through the left hole in the xBuddy box and plug them into the fourth and fifth slots on the xBuddy extension board labeled FAN 1 and FAN 2.
- ❗ The connection order does not matter, both cables are the same.
- ✦ Guide the chamber thermistor cable together with the cooling fan cables.
- ✦ Connect it to the second slot from the left on the xBuddy extension board labeled TEMP.

PASSO 80 Connecting the corexy cables



- Guide the X motor cable through the right hole in the xBuddy box. Connect it to the first slot from the left on the xBuddy board.
- Guide the door sensor cable through the right hole in the xBuddy box. Connect it to the lower slot on the left side of the xBuddy board.
- Guide the white LED strip cable through the right hole in the xBuddy box. Connect it to the second slot from the right on the xBuddy extension board.
- Guide the Y motor cable through the left hole in the xBuddy box. Connect it to the second slot from the left on the xBuddy board.

PASSO 81 È l'ora delle Haribo!



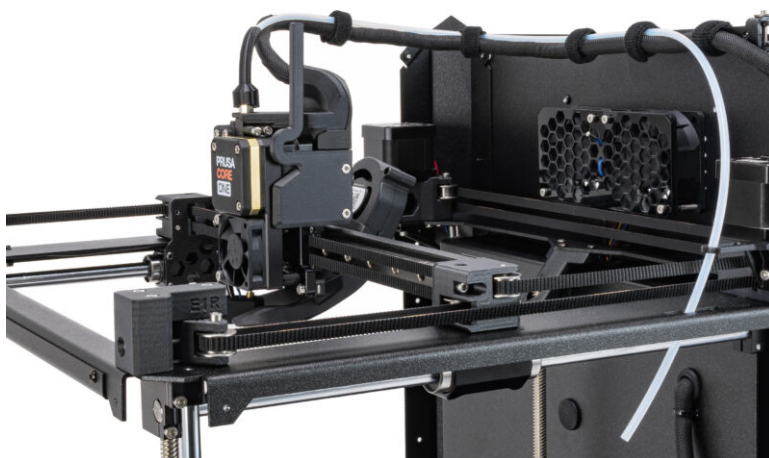
- Think it's snack o'clock again.
- You deserve to eat the whole bag, but keep... Eat just the fourth row.

PASSO 82 Fatto

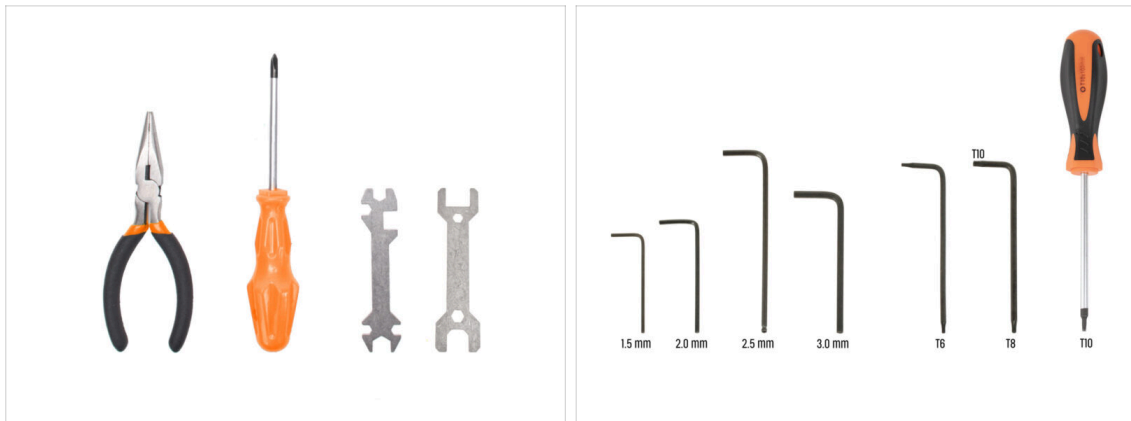


- ◆ Congratulations! You have just assembled and installed the CoreXY assembly.
- ◆ Let's go to the next chapter.

6. Gruppo Nextruder



PASSO 1 Tool necessary for this chapter



● **For this chapter, please prepare:**

- Chiave universale
- Chiave a brugola da 1.5mm
- Chiave a brugola da 2.5mm
- Chiave Torx T6
- T10 torx key / T10 torx screwdriver

PASSO 2 Nextruder idler assembly: parts preparation



● **For the following steps, please prepare:**

- Idler-lever-a (1x) *found in the Electronics package*
- Idler-lever-b (1x) *si trova nella confezione Electronics*
- Bearing 693 2RS (2x) *found in the Electronics package*
- Pin 2.9x8.5 (2x) *found in the Electronics package*
- Vite M3x6 (1x)
- Tubular spacer 13.2x3.8x0.35 (1x) *found in the Electronics package*

PASSO 3 Assembling the extruder idler



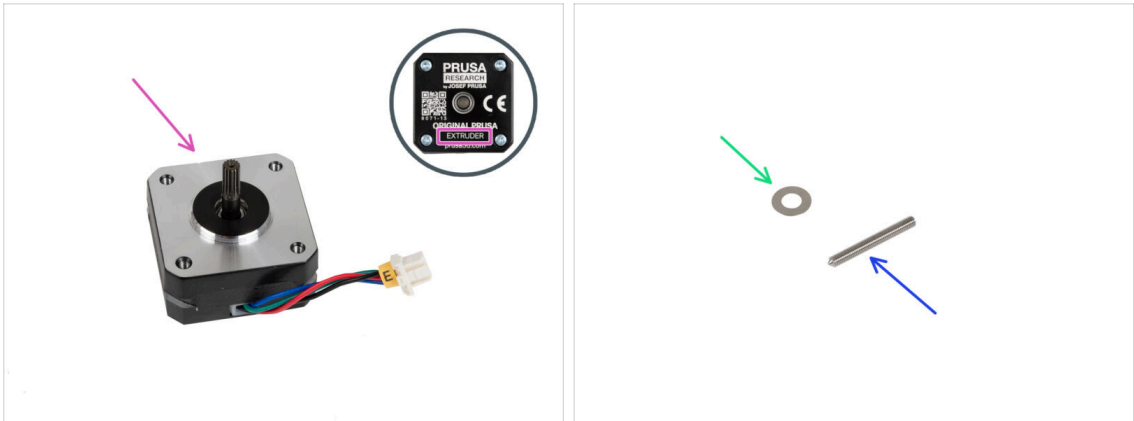
- Place both bearings into the Idler-lever-a.
- Insert the pin 2.9x8.5 into each bearing 693 2RS, as seen in the picture.
- Chiudilo con la leva del tenditore Idler-lever-b e fissalo con la vite M3x6. **Non stringere troppo la vite.** Entrambi i cuscinetti devono essere in grado di ruotare senza incontrare una resistenza significativa.
- From the same side, push the tubular spacer into the assembly. The "bottom" of the tubular spacer must be flush with the bottom part of the Idler assembly.

PASSO 4 Assembling the extruder: parts preparation I.



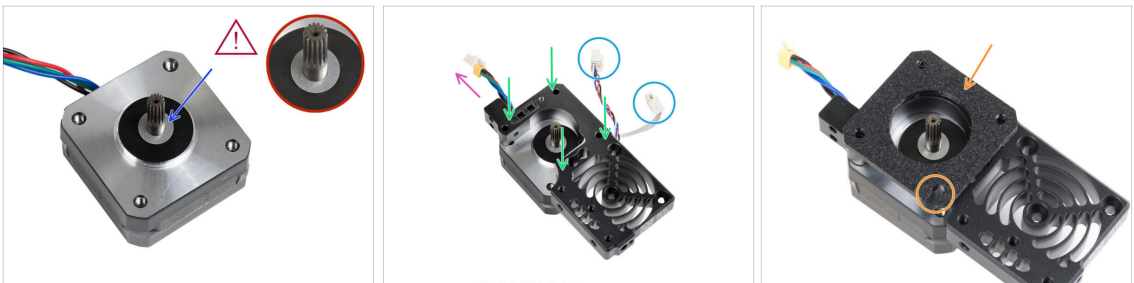
- **For the following steps, please prepare:**
- PG-assembly (1x) *found in the Electronics package*
- Gruppo Dissipatore (1x) *si trova nella confezione Electronics*
- Main-plate (1x) *found in the Electronics package*
- PG-ring (1x) *found in the Electronics package*
- PG-assembly-adapter (1x) *found in the Electronics package*
- ① The list continues in the next step...

PASSO 5 Assembling the extruder: parts preparation II.



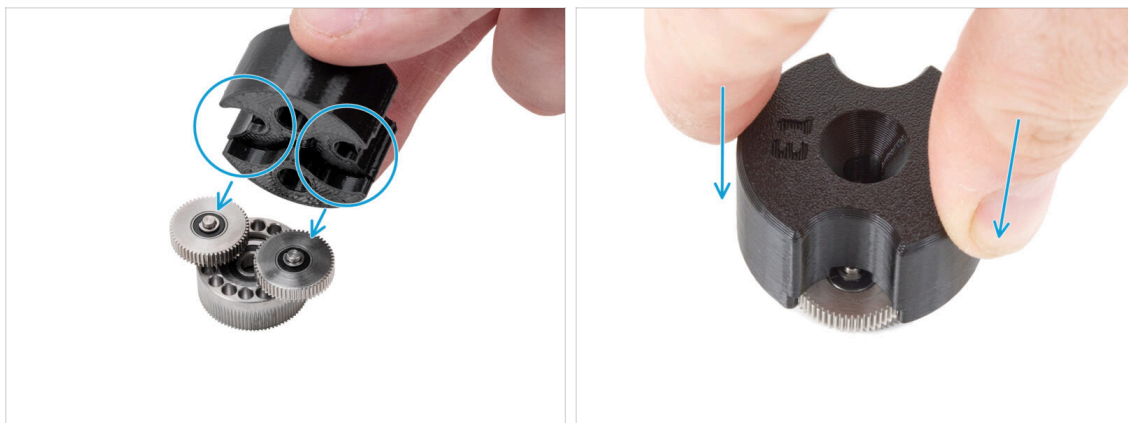
- ◆ Extruder motor (1x) *found in the Motors package*
- ◆ Spacer 5x10x0.1 mm (1x) *found in the Electronics package*
- ◆ Vite senza testa M3x25 (1x) *contenuta nella confezione di Electronics & Fasteners*

PASSO 6 Assemblare l'estrusore



- ◆ Place the 5x10x0.1 spacer over the shaft on the extruder motor.
 - ◆ Place the heatsink on the extruder motor. Note the orientation of both parts.
 - ◆ Il cavo del motore deve essere rivolto verso l'alto.
 - ◆ The heatsink cables must be on the right side.
 - ◆ Place the main-plate on the heatsink. Note the orientation of the part. Use the cutout as a guide.
- ⚠ **Before proceeding to the next step, make sure that the 5x10x0.1 spacer is placed on the extruder motor.**

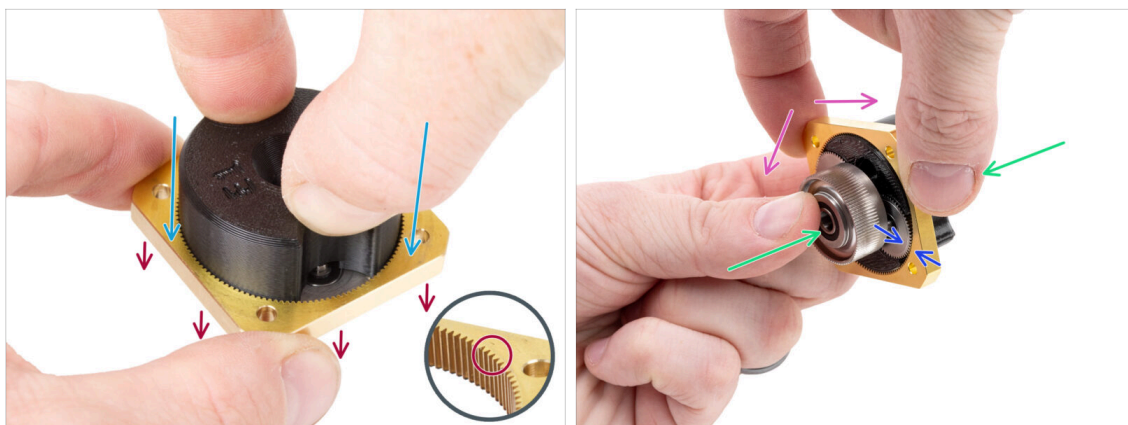
PASSO 7 Assemblaggio del riduttore



i The following instructions need to be done correctly and carefully. Achieve better understanding and successful assembly by watching the video alongside the guide: prusa.io/PG-assembly

- After watching the video, follow the steps in this guide.
- Monta l'adattatore PG-assembly-adapter sul gruppo PG. Nota le tasche per gli ingranaggi nell'adattatore.

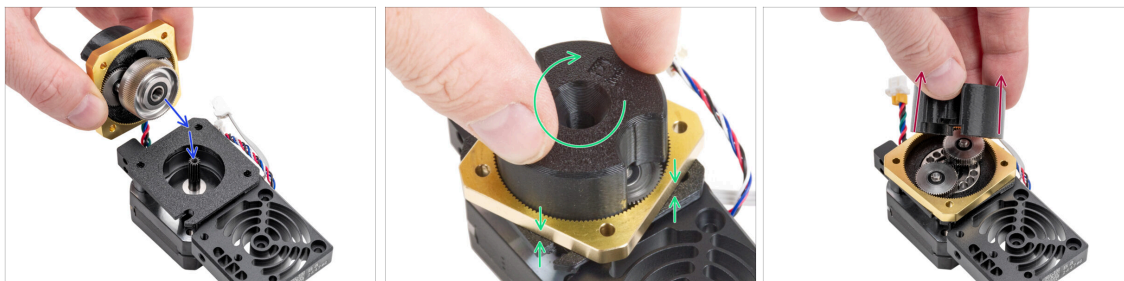
PASSO 8 Assemblare l'anello PG-ring



⚠ Do not assemble the gearbox without the PG-assembly-adapter. This tool is intended to ensure that the gears are correctly fit together.

- Slide the PG-ring onto the adapter.
- Nota che c'è uno smusso su un lato dei denti dell'anello PG-ring. Questo lato deve essere rivolto verso il basso (verso il gruppo PG).
- Grasp the entire assembly in one hand so that it can be rotated with the PG-ring.
- With the other hand, slide the PG-ring onto the PG assembly in a wobbling motion (move the PG-ring left and right repeatedly) - a quarter turn is enough.
- Stop when the surfaces of the gears are approximately flush with the surface of the PG ring.

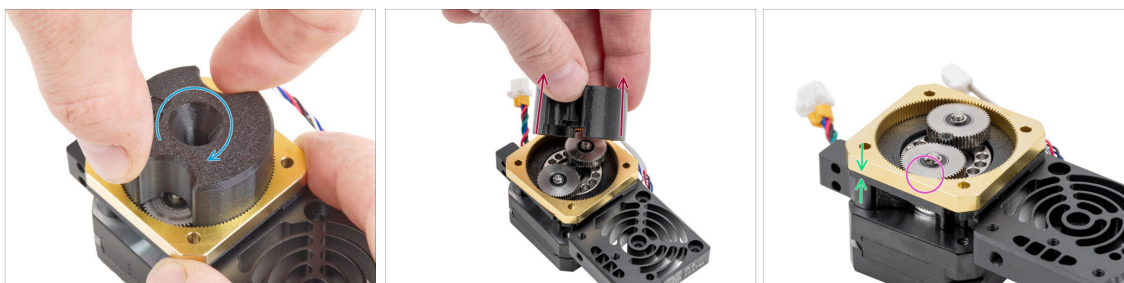
PASSO 9 Assemblare il gruppo PG-assembly



 **Proceed very carefully in this step.**

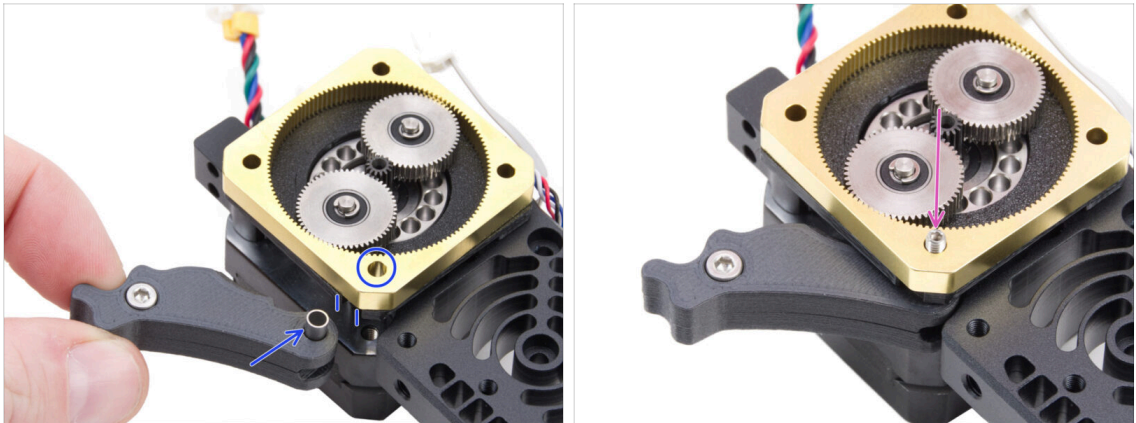
-  Maintain the position of the PG-assembly and attach it on to extruder motor shaft.
-  Ruota molto delicatamente e liberamente l'intero gruppo PG (PG-assembly-adapter, PG-assembly e PG-ring) fino a farlo abbassare in modo che non ci sia spazio tra il gruppo e la piastra principale. **Non spingere il gruppo.**
-  Rimuovi il PG-assembly-adapter.

PASSO 10 Controllo del gruppo PG-assembly



-  Attach the PG-assembly-adapter back on the PG-assembly again to verify that all parts are properly seated.
-  Rotate with the PG-assembly-adapter. **The PG assembly must be easy to rotate without having to exert much force.**
-  Rimuovi l'adattatore PG. Non ti servirà più durante l'assemblaggio. Ti consigliamo di conservarlo per la manutenzione.
-  Ensure that the PG-assembly is not sticking out above the PG-ring. It should be positioned lower than the level of the PG-ring's surface or at the same level as the ring.
-  Ensure that the gap between the PG-ring and the Main-plate is minimal. If a significant gap is observed, disassemble the planetary gear assembly and reposition it.

PASSO 11 Assembling the Nextruder idler



- Insert the idler assembly between the PG-ring and the extruder motor. There is a cutout for the spacer in the main-plate. Line up the idler spacer with the hole in the PG-ring.
- Secure both parts with the socket set screw 3x25. **Do not overtighten the screw! The screw protrudes from the PG-ring after tightening.**

PASSO 12 Gear lubrication: parts preparation



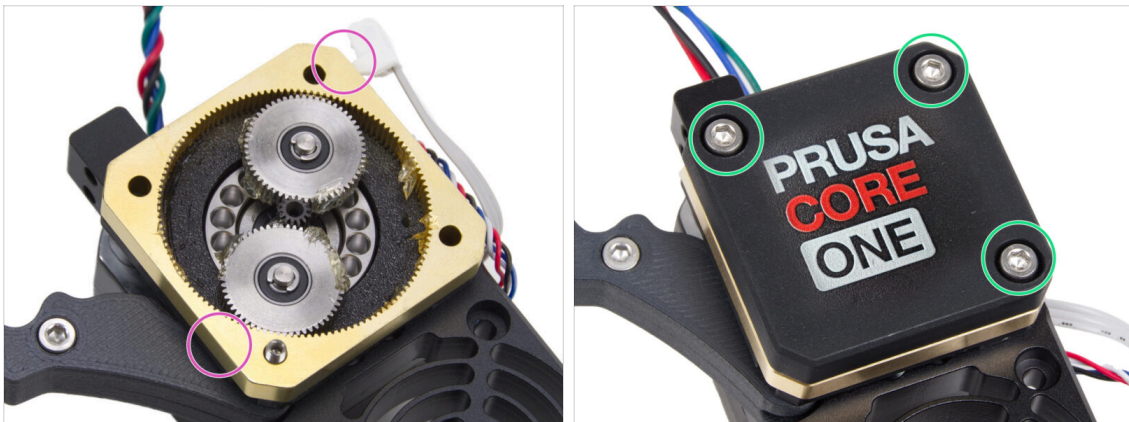
- **For the following steps, please prepare:**
- Front Case (1x) *found in the Printed parts package*
 - ① Il logo sulla parte frontale del Nextruder rimarrà **PRUSA CORE ONE**.
- Vite M3x25 (3x)
- Lubricant (1x) *found in the Electronics & Fasteners package*
- Several paper towels to wipe grease from your hands.

PASSO 13 Lubrificazione degli ingranaggi



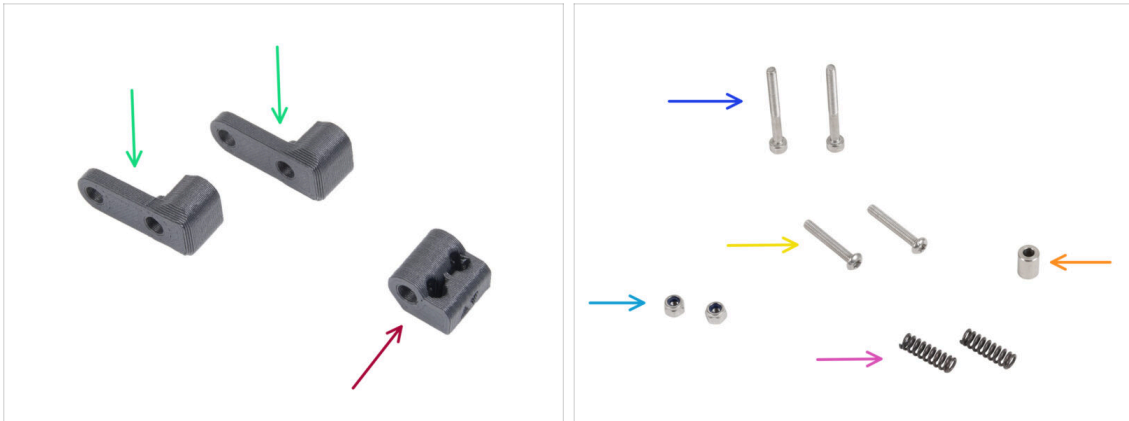
- Remove the cap from the lube. Use the spike on the opposite side of the cap to pierce a hole in the lube tube opening.
- Squeeze a small amount of lubricant onto the tip of the zip tie, then spread it over the gears.
- Applica una piccola quantità di lubrificante Prusa **tutto intorno** sull'anello PG-ring e ai denti del gruppo PG-assembly.
- Close the lubricant; it is no longer needed for the assembly.

PASSO 14 Covering the planetary gear



- Using the paper towel, wipe off the lubricant residue from the face surface of the PG-ring.
- Place the front case onto the gearbox and secure it with three M3x25 screws. **Do not tighten them completely** at this moment.
- ① The screws on the front case will be completely tightened during the self-test in the final chapter.

PASSO 15 Assembling the Idler-swivel: parts preparation



For the following steps, please prepare:

- Idler-swivel (2x) found in the Electronics package
- Idler-nut (1x) found in the Electronics package
- Vite M3x30 (2x)
- Vite M3x20rT (2x)
- Dado M3nN (2x)
- Spring 15x5 (2x) found in the Electronics package
- Spacer 6x3.1x8 (1x) found in the Electronics package

PASSO 16 Assemblare l'Idler-swivel



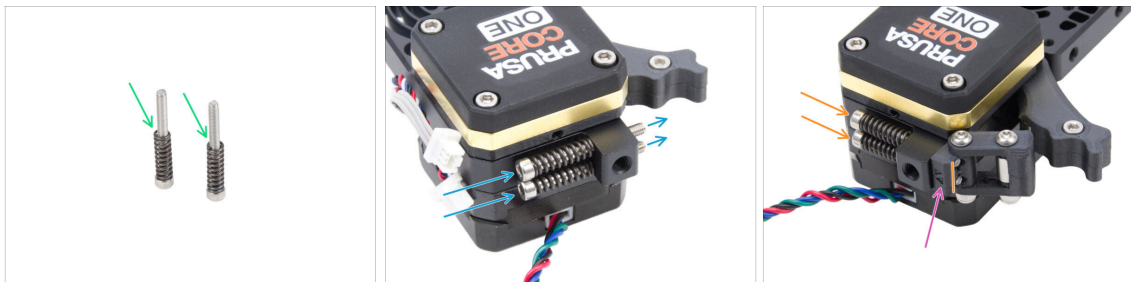
- Push the M3x20rT screw all the way through one of the idler-swivel.
- Slide the spacer onto the screw.
- Place the second idler-swivel from the opposite side on the screw.
- From the other side, attach the M3nN nut onto the screw. Hold the nut using the universal wrench and tighten the screw. **Tighten just lightly!** The spacer must rotate freely.

PASSO 17 Assemblare il dado del tenditore (Idler-nut)



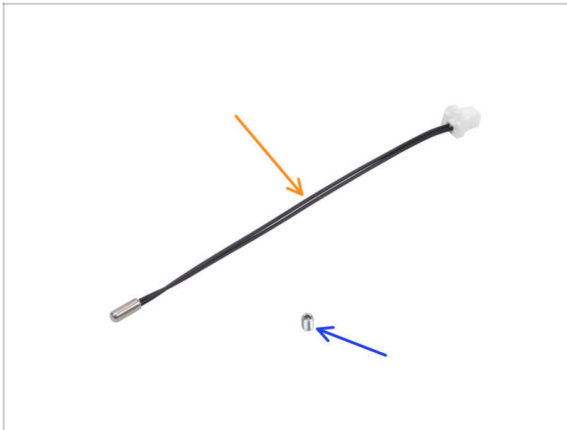
- ✚ Insert the Idler-nut into the Idler-swivel assembly. Make sure that both parts are oriented correctly according to the picture.
- ✚ Secure both parts together by inserting the M3x20rT screw from the same side, like the first screw.
- ✚ Secure the screw with M3nN nut. **Do not overtighten the nut.** It must be possible to move with the Idler-swivel on the Idler-nut.

PASSO 18 Mounting the Idler-swivel assembly



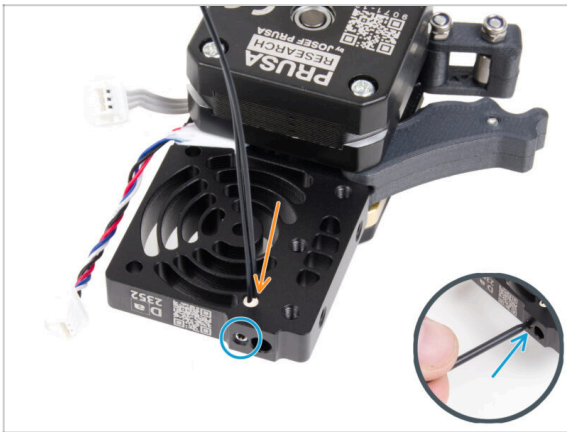
- ✚ Attach the spring 15x5 on both M3x30 screws.
- ✚ Push the two screws with the springs through the holes in the protrusion on the heatsink. There are no threads inside.
- ✚ Attach the Idler-swivel assembly on the screws. See the correct orientation of the Idler-nut. The side with version marking must be visible. See the picture.
- ✚ Tighten both screws. **Stop tightening as soon as the screw tips reach the front face of the idler nut.**

PASSO 19 NTC thermistor: parts preparation



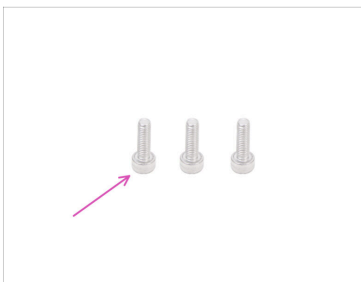
- For the following steps, please prepare:
- NTC thermistor 90 mm (1x) *found in the Electronics package*
- M3x4T grub screw (1x)

PASSO 20 Assembling the NTC thermistor



- On the **extruder motor side**, insert the NTC thermistor into the hole in the heatsink.
- Secure it with the M3x4T grub screw. Screw it all the way in. **Tighten gently, but firmly** using two fingers and the short side of the T6 Torx key. Applying more force may cause permanent damage to the thread.

PASSO 21 Mounting the Nextruder: parts preparation



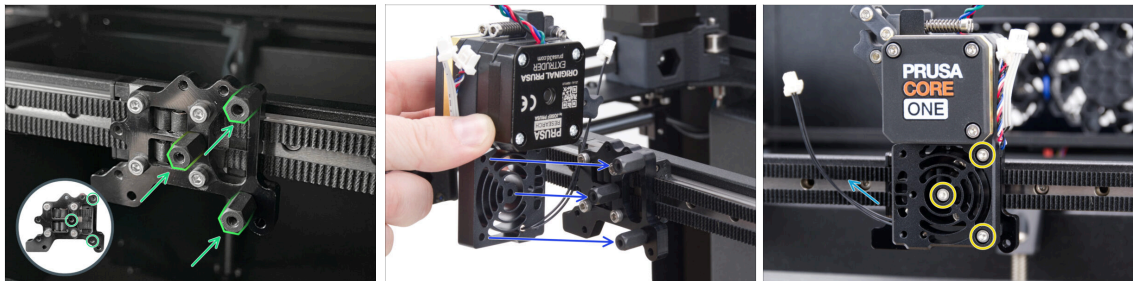
- For the following steps, please prepare:
- Nextruder spacer (3x) *found in the Electronics & Fasteners package*
- Vite M3x10 (3x)
- Cardboard box (1x) *used as temporary heatbed protection*
- ❗ Hint: You can use any cardboard box from the kit package.

PASSO 22 Proteggere il piano riscaldato



- Place an empty cardboard box on the heatbed, ensuring it covers as much of the surface as possible.
- i** This will protect the heatbed from falling parts.

PASSO 23 Montare il Nextruder



- Screw three Nextruder spacers to the Nextruder holder. Tighten the spacers firmly.
- Place the Nextruder assembly on the spacers.
- Align the holes in the Nextruder with the spacers and secure it with three M3x10 screws. **Do not overtighten the screws.**
- Ensure the NTC cable is pointing to the left.

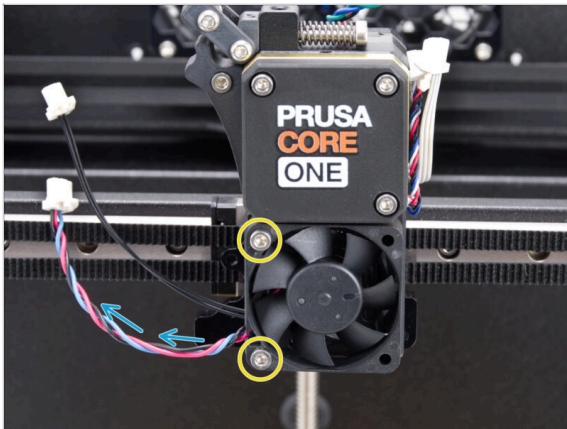
PASSO 24 Ventola Hotend: preparazione dei componenti



● For the following steps, please prepare:

- Hotend fan (1x) *found in the Electronics package*
- Hotend-cable-clip (1x) *found in the Printed parts package*
- Vite M3x4rT (2x)
- Vite M3x18 (2x)

PASSO 25 Installare la ventola dell'Hotend

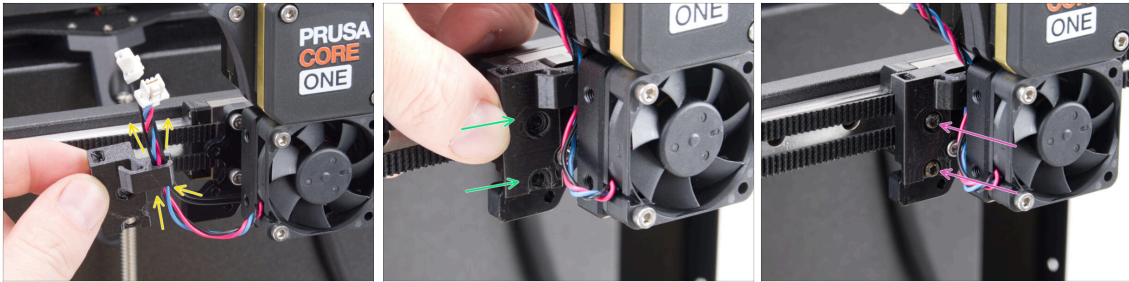


- Attach the hotend fan onto the heatsink with two M3x18 screws on the left side. **Tighten the screw gently, but firmly, otherwise the plastic housing may crack.**

⚠ There is a sticker on the hotend fan, the sticker must be on the rear side of the fan - not visible.

- The cable must be pointing towards the lower-left corner.

PASSO 26 Guidare i cavi della ventola dell'Hotend



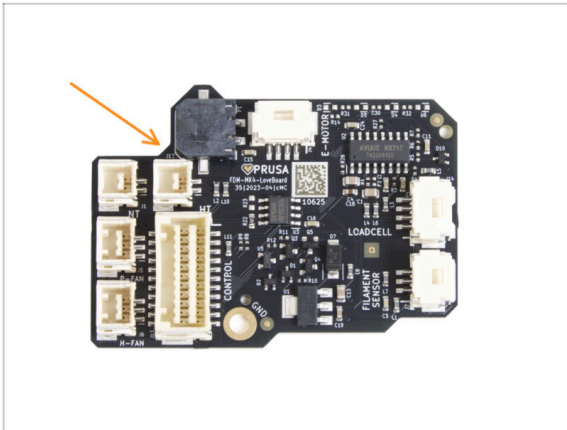
- ✦ Take the Hotend-cable-clip in the same position as shown and guide the **heatsink fan cable** together with the **NTC thermistor cable** through the right cable hook.
- ✦ Attacca la clip del cavo Hotend al supporto Nextruder.
- ✦ Secure it using two M3x4rT screws.

PASSO 27 LoveBoard: parts preparation I.



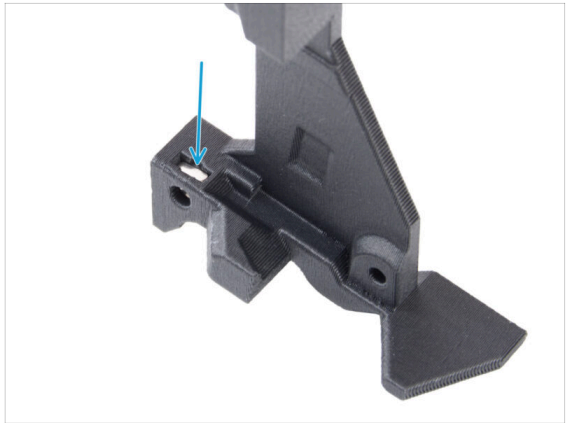
- ✦ **For the following steps, please prepare:**
- ✦ Printhead-cover (1x) *si trova nella confezione Printed parts*
- ✦ Loveboard-mount (1x) *found in the Printed parts package*
- ✦ Main cable (1x) *found in the Electronics & Fasteners package*
- ⓘ Note: Cable color may vary depending on the batch. This does not affect the procedure.
- ✦ Vite M3x10 (4x)
- ✦ Vite M3x8rt (1x)
- ✦ Dado M3nS (5x)
- ⓘ The list continues in the next step...

PASSO 28 LoveBoard: parts preparation II.



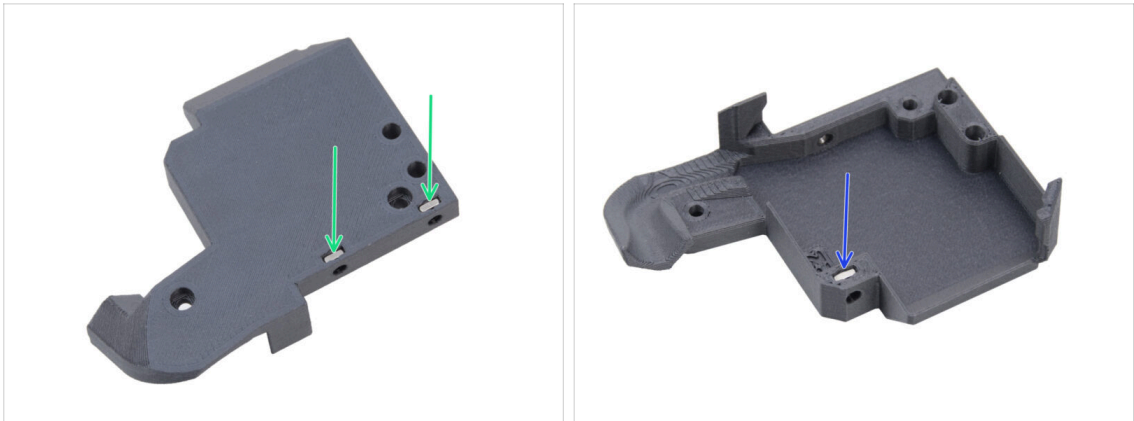
- For the following steps, please prepare:
- LoveBoard (1x) si trova nella confezione Electronics

PASSO 29 Assemblare il supporto Loveboard-mount



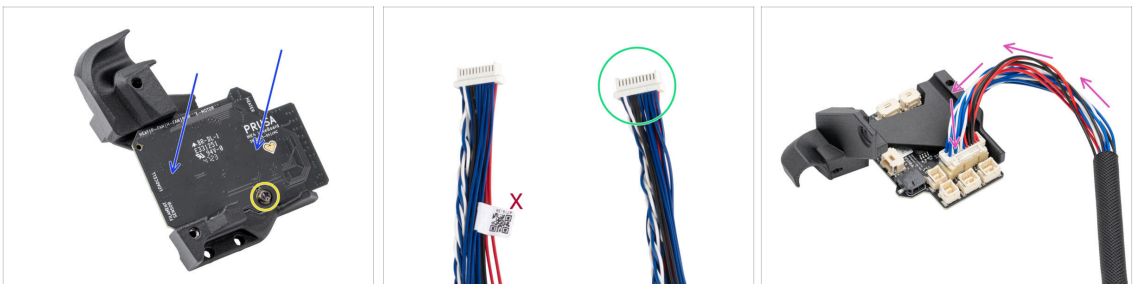
- Locate the U-shaped cable channel on the Loveboard-mount and insert an M3nS nut into the nearby hole.
- Usa la Chiave a brugola da 2.5mm per spingere il dado fino in fondo.
- On the opposite side of the part, insert an M3nS nut and push it into place.

PASSO 30 Montaggio della copertura Printhead-cover



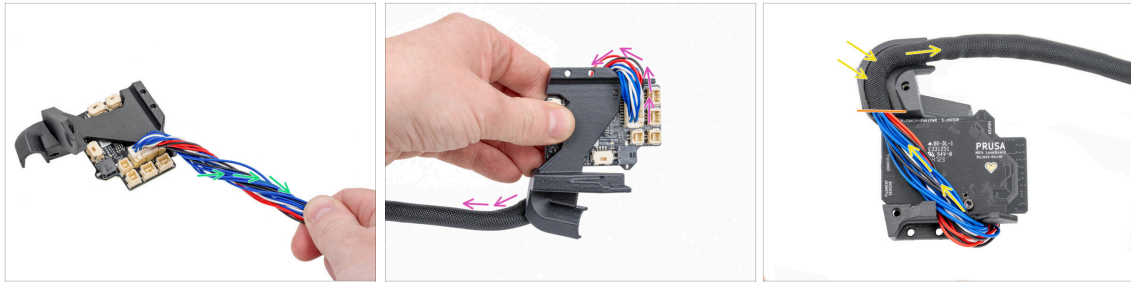
- From the back of the printhead-cover, insert two M3nS nuts into the part.
- Dall'altro lato della copertura printhead-cover, inserisci un dado M3nS nella parte.

PASSO 31 Assemblare la LoveBoard



- Place the LoveBoard to the Loveboard-mount. Note the correct orientation - the connectors must be facing downwards.
- Allinea i fori con entrambe le parti e fissa la scheda con la vite M3x8rT. **Non stringerla troppo** per non danneggiare il pezzo.
- Take the end of the extruder main cable without the white label.
- Turn the Loveboard-mount upside down and connect the Main cable to the LoveBoard.

PASSO 32 Guiding the main cable



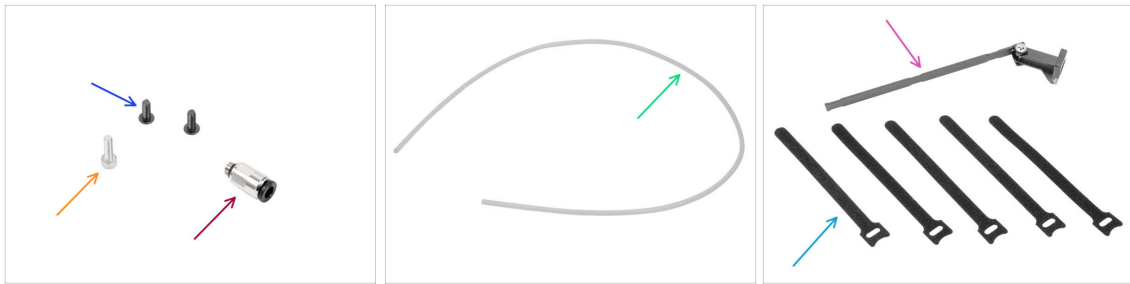
- ✚ Twist the main cable half a turn.
- ✚ Piegare il cavo principale sopra la LoveBoard verso il lato opposto.
- ⬛ Turn the LoveBoard assembly upside down.
- ✚ Guide the main cable over the LoveBoard through the cable channel in the Loveboard-mount.
- ✚ L'estremità della guaina in tessuto deve essere allineata con il bordo della parte in plastica.

PASSO 33 Coprire la LoveBoard



- ✚ Insert two M3x10 screws into the Loveboard-holder.
⚠ **Assicurati di inserire le viti dal lato corretto. Usa il logo LoveBoard sulla scheda come riferimento.**
- ✚ Cover the LoveBoard with the Printhead-cover.
⚠ **Avoid pinching any wires in the main cable.**
- ✚ Fix both parts together using two M3x10 screws.
- ✚ Check that there is no large gap or pinched textile sleeve between the parts.

PASSO 34 Swingarm: parts preparation I.



● For the following steps, please prepare:

- Viti M3x8rT (2x)
- Vite M3x10 (1x)
- Fitting M5-4 (1x) *found in the Electronics & Fasteners package*
- PTFE tube 710 x 4 x 2.5 (1x) *found in the CoreXY parts + Hinges set package*
- Swingarm assembly (1x) *found in the Metal parts 3/3 package*
- Cable tie (5x) *found in the Electronics & Fasteners package*
- ① Packed in a stack and must be separated.
- ① The list continues in the next step...

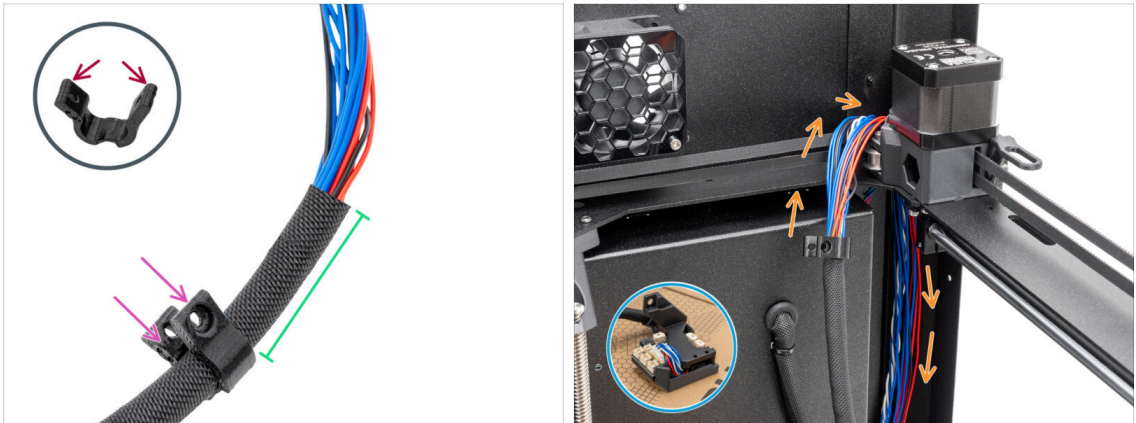
PASSO 35 Swingarm: parts preparation II.



● For the following steps, please prepare:

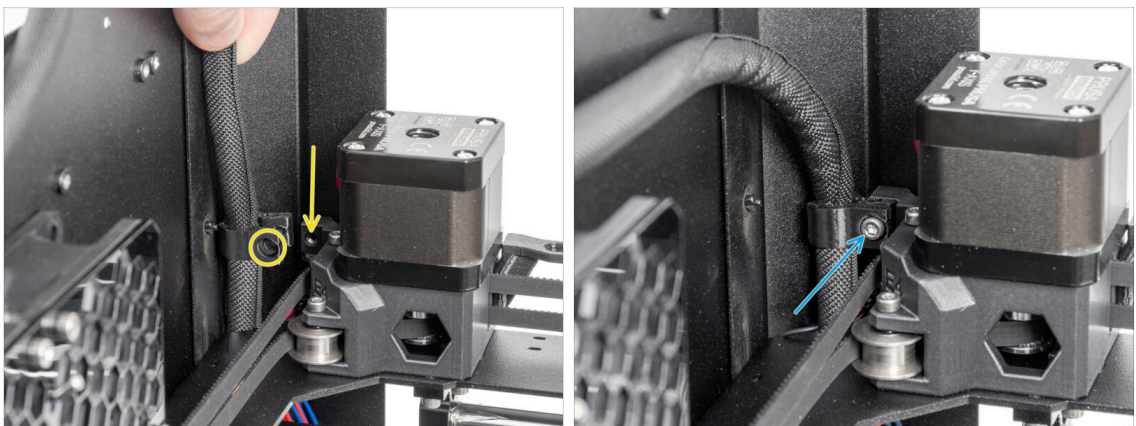
- Raccordo Bowden-bend (1x) *si trova nella confezione Printed parts*
- Main-cable-clip (1x) *found in the Printed parts package*

PASSO 36 Guiding the main cable



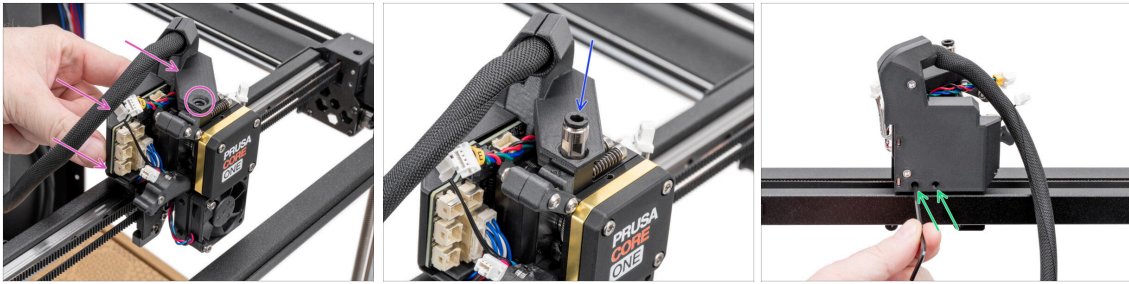
- Carefully open the Main-cable-clip. Be careful not to crack the part.
- Inserisci il cavo principale nella clip principale (Main-cable-clip).
- Posiziona la clip del cavo principale a circa 5 - 15 cm dall'estremità della guaina in tessuto e chiudi la clip.
- Place the LoveBoard assembly on the cardboard box on the heatbed.
- Push the main cable behind the CoreXY assembly in the right rear corner.

PASSO 37 Mounting the main cable



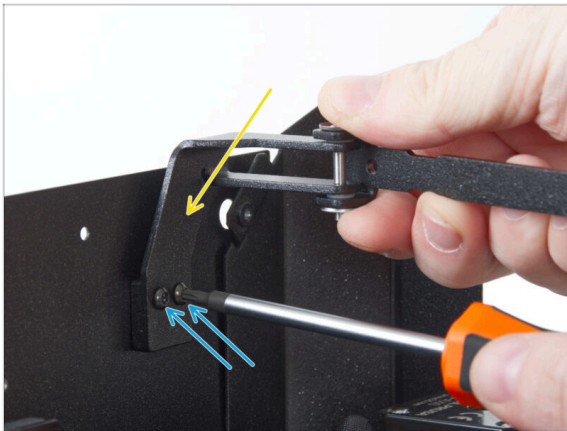
- In the right corner of the printer on the Y motor assembly, locate the hole in the plastic part and align it with the main-cable-clip.
- Fissa il cavo e la clip main-cable-clip sul foro utilizzando la vite M3x10.

PASSO 38 Attaching the LoveBoard assembly



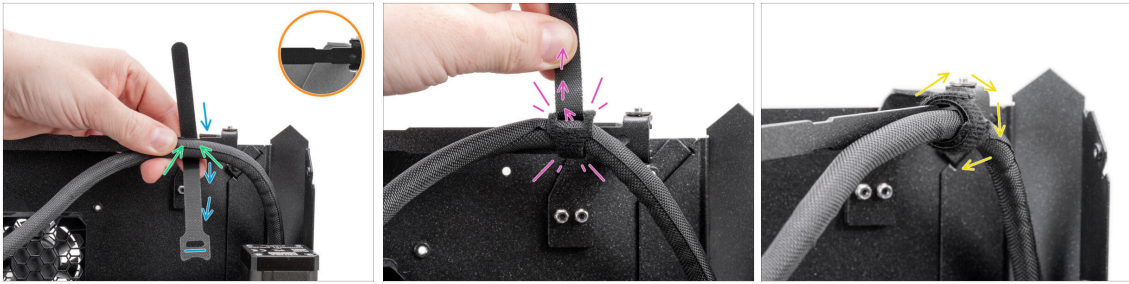
- ◆ From the back of the Nextruder, attach the LoveBoard assembly to the Nextruder.
- ◆ Allinea il foro del supporto Loveboard con il foro filettato nella parte superiore del dissipatore (Nextruder).
- ◆ Insert and tighten the fitting M5-4 to the heatsink. Use the universal wrench.
- ◆ From the back of the Nextruder, tighten the two M3x10 screws to secure the LoveBoard assembly.

PASSO 39 Montaggio del braccio oscillante



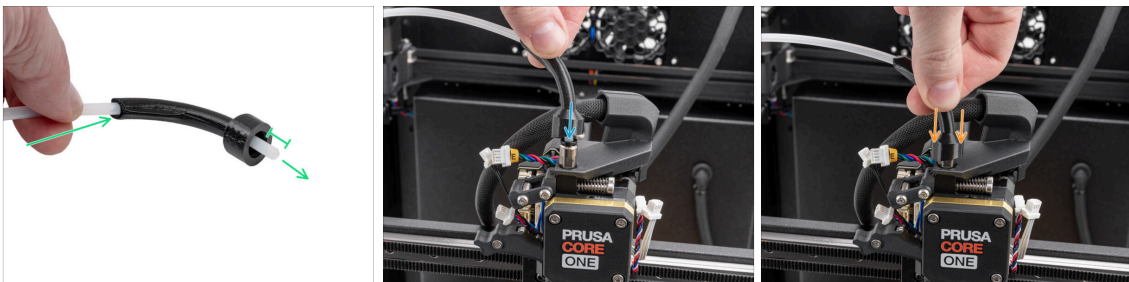
- ◆ Attach the swingarm assembly to the pair of threaded holes on the back panel near the top right corner.
- ◆ Fissalo con due viti M3x8rT.
- ⚠ Do not overtighten the screws, as this may strip the threads.

PASSO 40 Attaching the main cable



- 🟠 Notice the cutouts on the swingarm.
- 🟢 Posiziona il cavo principale sul primo intaglio del braccio oscillante.
- 🟡 Place one cable tie behind the first cutout on the swingarm, ensuring the correct orientation of the zip strip.
- 🟣 Thread the cable tie through its eyelet, wrapping it around the swingarm and main cable.
- ⬛ Tighten the cable tie as much as possible.
- 🟡 Wrap the cable tie around.

PASSO 41 Inserting the PTFE tube



- 🟢 Push one end of the PTFE tube through the bowden-bend and keep protruding at least 1 cm (0.39 in) of the tube.
- 🟡 Inserisci il tubo in PTFE nel raccordo M5-4 sul Nextruder. Spingilo fino in fondo.
- 🟠 Slide bowden-bend down to cover the fitting M5-4.

PASSO 42 Securing the PTFE tube



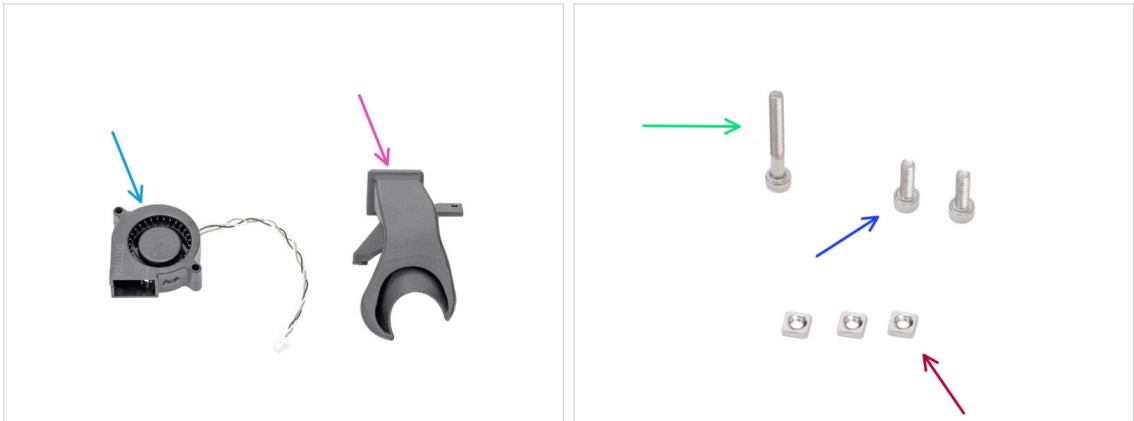
- ◆ Route the PTFE tube in parallel with the main cable, ensuring the PTFE tube stays above the main cable.
- ◆ Fissa il tubo in PTFE e il cavo principale al braccio oscillante utilizzando due fermacavi nei restanti fori.
- ⚠ **Do not pass the PTFE tube through the first cable tie on the swingarm.**
- ◆ Push the free end of the PTFE tube through the Bowden guide and CoreXY plate downward. Leave the end hanging freely.
- ◆ Merge the PTFE tube and main-cable with the remaining two cable ties, leaving a 10 cm (3.94 in) distance between them.

PASSO 43 Controllo del movimento



- ◆ Manually move the XY axes to their end positions several times and ensure that:
 - ◆ Il cavo principale non sia troppo teso e che non tiri indietro il Nextruder.
 - ◆ Il cavo principale non forma un arco eccessivamente ampio.
 - ◆ Se il cavo è troppo teso o forma un arco troppo ampio, allentare leggermente la vite sul fermacavo principale e tirare il cavo verso l'alto o verso il basso di alcuni millimetri. Quindi, serrare la vite e riprovare.

PASSO 44 Print fan: parts preparation



● For the following steps, please prepare:

- Ventola di stampa (1x) si trova nella confezione Electronics
- Fan-shroud (1x) found in the Printed parts package
- Vite M3x25 (1x)
- Vite M3x10 (2x)
- Dado M3nS (3x)

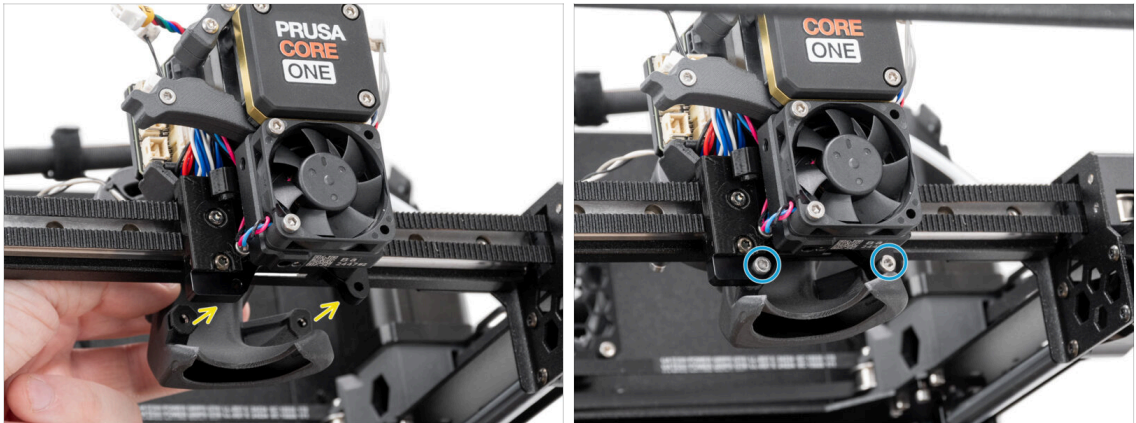
PASSO 45 Montaggio del coprimentello



- Insert two M3nS nuts from one side into the fan-shroud.
- Dall'altro lato, inserisci un dado M3nS nel coprimentello.
- Insert the print fan into the fan-shroud as shown. See the correct orientation of the parts.
- Secure both parts together with one M3x25 screw.

⚠ Do not overtighten the screws to avoid damaging the fan housing.

PASSO 46 Installing the print fan assembly



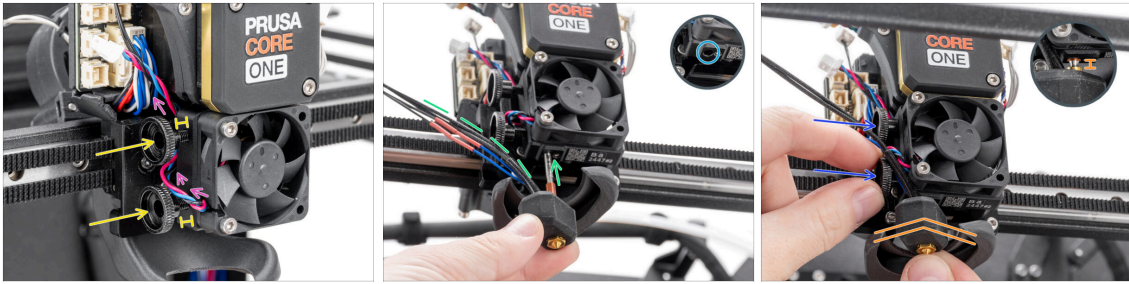
- Attach the print fan assembly to the back of the Nextruder.
- Allinea i fori della staffa Nextruder con i fori del copriventola.
- Secure the fan-shroud to the Nextruder holder using two M3x10 screws.

PASSO 47 Hotend: preparazione dei componenti



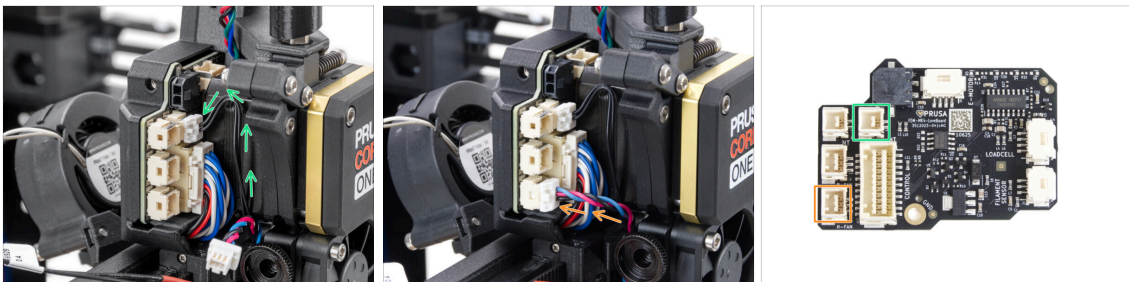
- **For the following steps, please prepare:**
- Vite a testa zigrinata (2x) *nella confezione Electronics*
- Prusa Hotend assembly (1x) *found in the Electronics package*

PASSO 48 Installare l'hotend



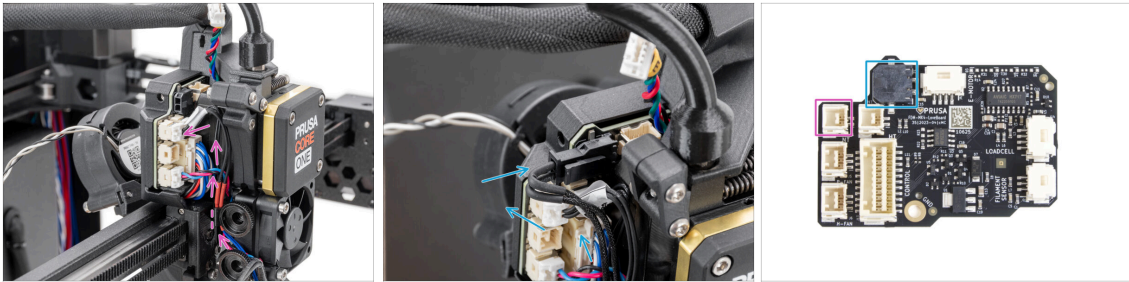
- ✿ Route the heatsink fan cable above the first threaded hole in the heatsink.
- ✿ Inserisci due viti a testa zigrinata nel dissipatore. **Non stringerle a fondo.** Due giri sono sufficienti per ora.
- ✿ Look closely at the underside of the heatsink and find the hole for the hotend assembly.
- ✿ Insert the hotend assembly tube in the hole and slide the whole thing into the heatsink.
- ✿ Point the cables to the left according to the photo.
- ✿ Push the hotend assembly all the way into the heatsink. There should be approximately a 2 mm (0.08 in) gap between the heatsink and the brass part of the nozzle.
- ✿ While pushing the hotend assembly in, **firmly tighten both thumb screws.**
- ⚠ **Avoid pinching any cable between the screws and the heatsink!**

PASSO 49 Connecting the heatsink cables



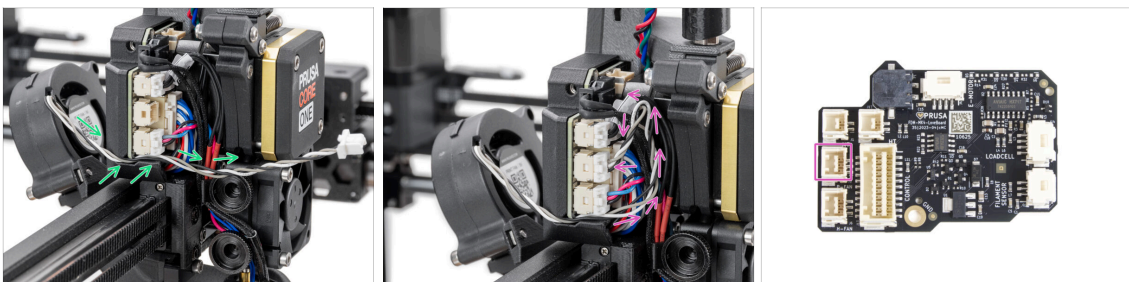
- ✿ Plug the NTC thermistor cable into the connector above the main cable on the LoveBoard.
- ✿ Inserisci il cavo della ventola dell'Hotend nel connettore inferiore della fila sinistra della LoveBoard.

PASSO 50 Connecting the hotend cables



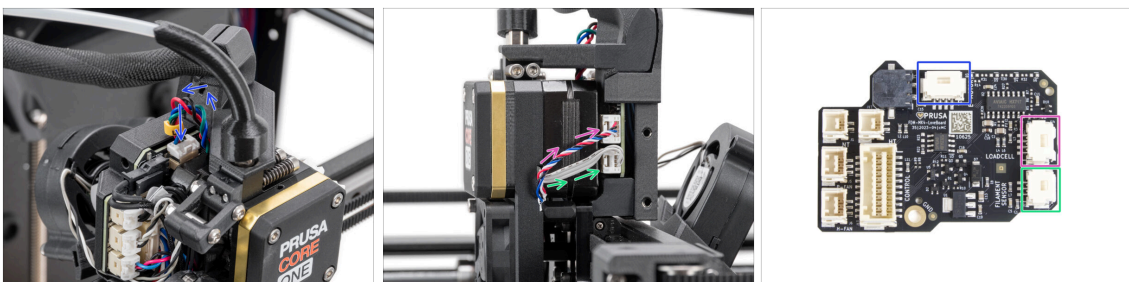
- ◆ Guide the hotend thermistor through the cable-clip on the Nextruder and connect it to the LoveBoard.
- ◆ Fai passare il riscaldatore dell'hotend attraverso la clip del Nextruder e collegalo alla LoveBoard.

PASSO 51 Connecting the print fan cable



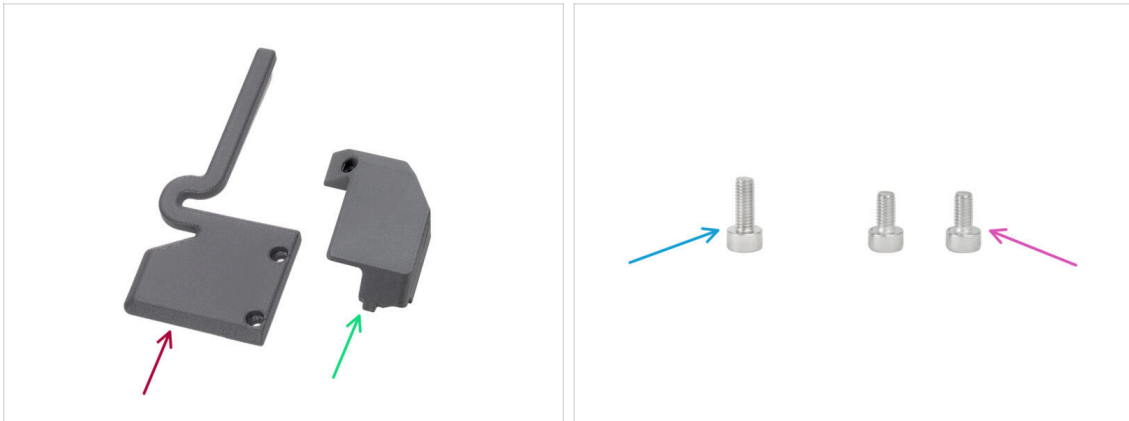
- ◆ Guide the print fan cable through the channel in the plastic cover.
- ◆ Crea un anello con il cavo della ventola di stampa nella zona dei cavi e collegalo al connettore centrale della LoveBoard.

PASSO 52 Collega il cavo del motore E



- ◆ Plug the Nextruder motor (labeled E) to the top-facing connector.
- ◆ Collega il cavo della cella di carico (cavo inferiore) al connettore superiore sul lato destro di Nextruder.
- ◆ Plug the filament sensor (upper cable) to the lower connector.

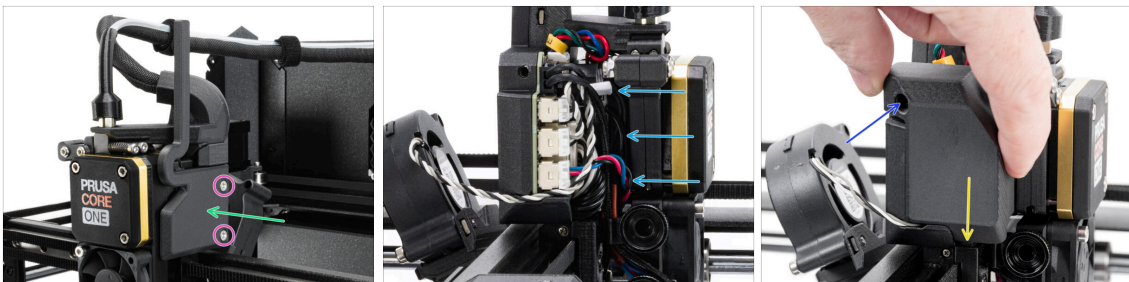
PASSO 53 LoveBoard covers: parts preparation



● **For the following steps, please prepare:**

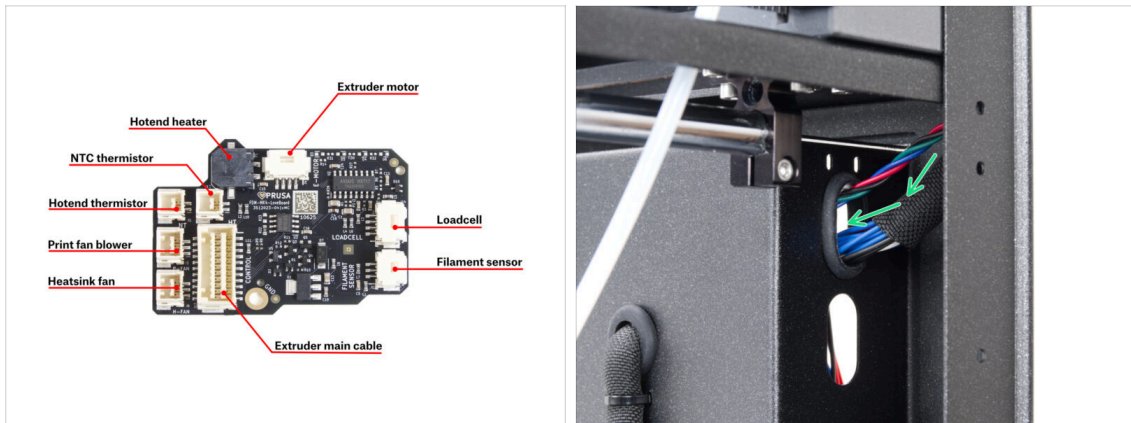
- Printhead-cover-right-lever(1x)
- Print-head-cover-right (1x) *found in the Printed parts package*
- Vite M3x10 (1x)
- Vite M3x6 (2x)

PASSO 54 Coprire la LoveBoard



- Posiziona la copertura con leva Printhead-cover-right-lever sul lato destro del Nextruder.
- ⚠ **Attento a non schiacciare i cavi!**
- Secure the cover with two M3x6 screws.
- Squeeze the wiring harness as far inward to the LoveBoard as possible so that it does not protrude out and interfere with the fitting of the cover.
- Attach the Print-head-cover-left on the left side of the Nextruder.
- **Note the protrusion on the underside of the cover - the protrusion must fit into the counterpart on the Nextruder.**
- Secure the cover with one M3x10 screw.

PASSO 55 LoveBoard: Controllo del cablaggio



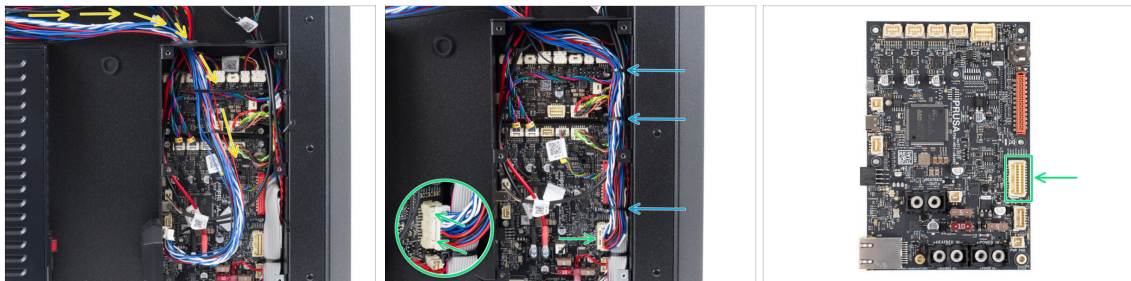
⚠ Before covering the electronics, check the connection of all cables.

i Clicca sull'immagine per aprirla nell'anteprima ad alta risoluzione.

🟢 Guide the main-cable through the upper hole on the right side of the back panel assembly.

⬛ Leave the end of the cable hanging freely for now.

PASSO 56 Guiding the main cable



⬛ Rotate the printer so that the backside faces you.

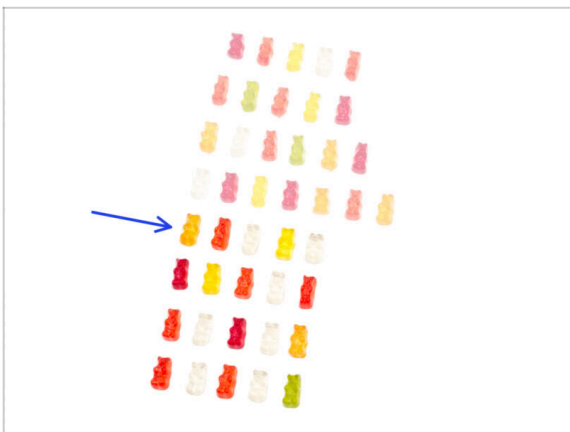
🟡 Fai passare il cavo principale attraverso il foro sinistro nella scatola xBuddy.

🟢 Plug the main-cable to the slot on the right side of the xBuddy board.

i If the cable does not reach the connector or is too tight, go back to step **Guiding the main cable** and pull the cable slightly downward from the main-cable-clip.

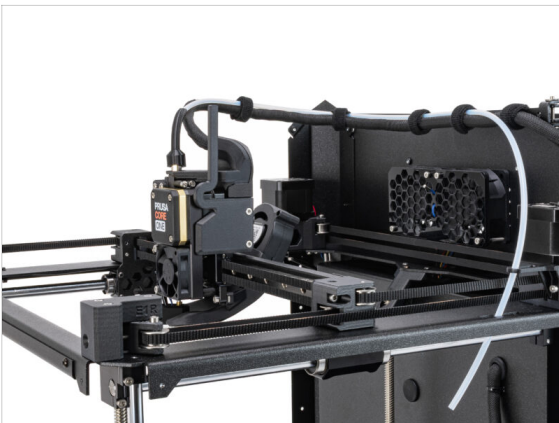
🟢 Fissa i cavi con la fascetta già inserita nella scatola di xBuddy. Taglia con attenzione l'eccesso, **evitando di tagliare i cavi**.

PASSO 57 È l'ora delle Haribo!



- Power up and push forward!
- Mangia la quinta fila.
- Non sei ancora sazio?

PASSO 58 Fatto

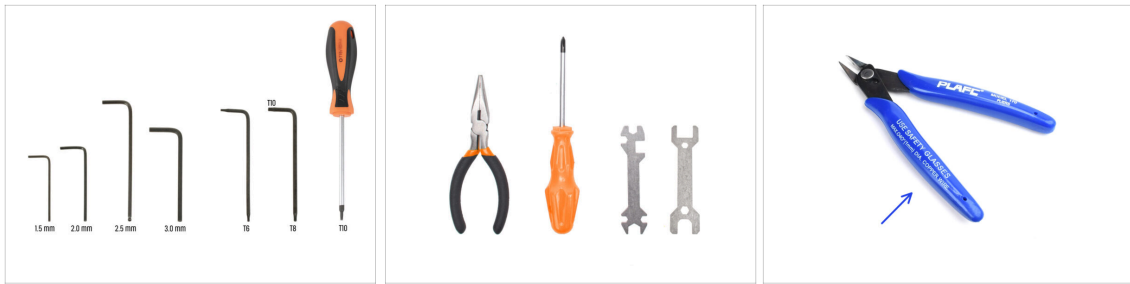


- Congratulations! You just successfully assembled the Nextruder.
- Passiamo al prossimo capitolo.

7. Bodywork & Electronics



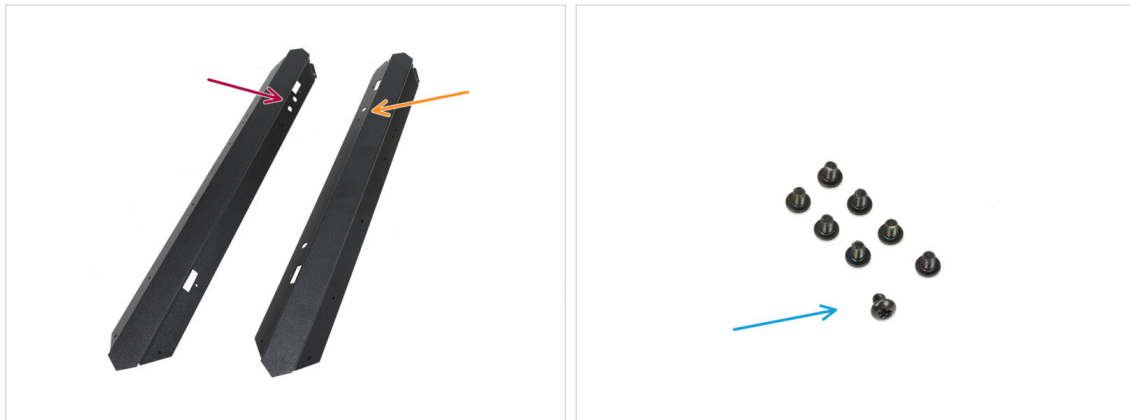
PASSO 1 Tools necessary for this chapter



● **For the following steps, please prepare:**

- Chiave a brugola da 2.5mm
- Chiave a brugola da 1.5mm
- Chiave Torx T10
- Pinza a becchi lunghi
- Tronchesi (opzionale)

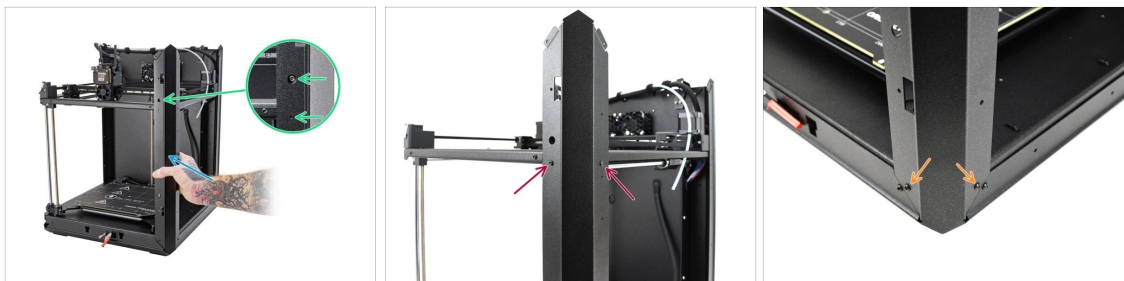
PASSO 2 Front profiles: parts preparation



● **For the following steps, please prepare:**

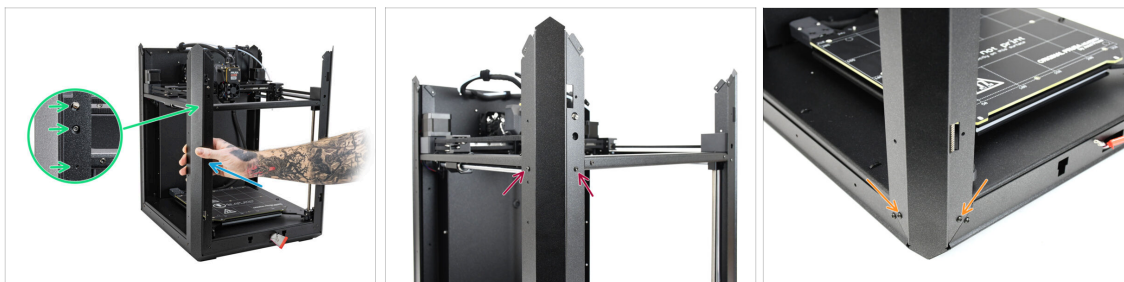
- Front Left Profile (1x) *found in the Metal parts 1/3 package*
 - ① The one with the two circular openings on top.
- Front Right Profile (1x) *found in the Metal parts 1/3 package*
 - ① The one with one circular opening on top.
- Vite M3x4rT (8x)

PASSO 3 Installing the front right profile



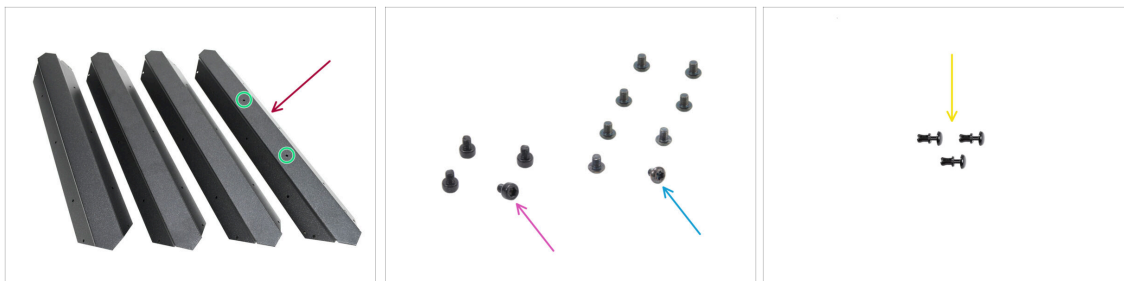
- Attach the Front Right Profile to the printer.
 - i Ensure you are using the correct profile—it should have **one large round opening** for the belt tensioning screw.
- Align the profile so that the calibration screw opening and the smaller bolt opening line up with the thread.
- Secure the profile to the CoreXY assembly using two M3x4rT screw
- Fix the profile at the bottom using the two M3x4rT screws.

PASSO 4 Installing the front left profile



- Attach the Front Left Profile to the printer.
 - i Ensure you are using the correct profile—it should have **two large round openings** for the door sensor and the belt tensioning screw.
- Align the profile so that the openings match. **Be careful not to bend the door sensor lever!**
- Secure the profile to the CoreXY assembly using two M3x4rT screw
- Fix the profile at the bottom using the two M3x4rT screws.

PASSO 5 Top profiles: parts preparation



- Top Profile (4x) *found in the Metal parts 1/3 package*
- Note that one of the profiles has two openings in the middle—this one belongs at the back.
- Vite M3x4rT (8x)
- M3x4 screw (4x) *with the different head type*
- Rivetto in nylon (3x)

PASSO 6 Assembling the top profiles I.



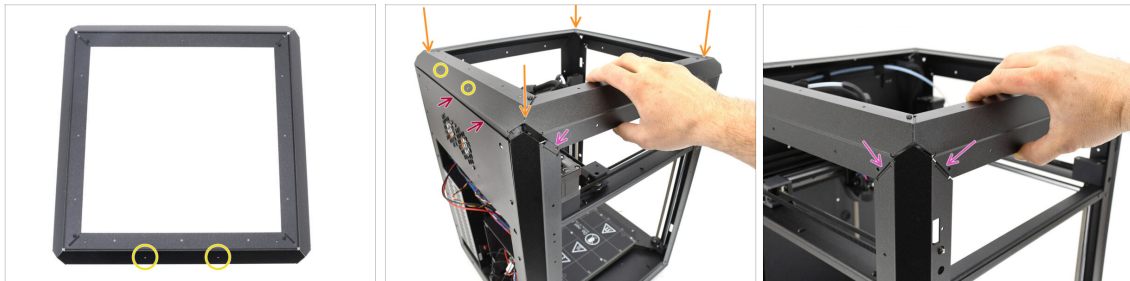
- ⚠ Be very careful when handling sharp sheet metal parts to avoid injury or damage.
- Come da immagine, posiziona il profilo superiore con due fori sul lato piatto.
- Orient the part according to the picture. **Use the flange as a guide.**
- Place any other of the top profiles on the left side. Orient the part according to the picture. **Use the flange as a guide.**
- Attach the two profiles together.
 - ⚠ The flange of the front plate (blue arrow) must be inserted **under** the left universal profile (green arrow), not on top of it.
- Align the holes in both parts and join both parts together with the M3x4 screw.
- Using the same procedure, join the other two profiles to form a corner, securing them with an M3x4 screw.

PASSO 7 Assembling the top profiles II.



- Attach the corner profile assembly to the first one, aligning the holes on the flanges with the holes in the profiles.
- ⚠ Assicurati che le flange siano posizionate **sotto** i profili.
- Join the both profile assemblies using two M3x4 screws.

PASSO 8 Aligning the top profiles



- Find the profile with **two openings in the middle**—this part should be positioned at the **rear of the printer**.
- Posiziona il gruppo dei profili superiori alla stampante, assicurandoti che i due fori siano posizionati sul retro.
- The protruding part of the rear profile must be positioned behind the back sheet metal plate.
- On the sides and front, the profiles must sit on top of the tabs with threaded openings.

PASSO 9 Installazione dei profili superiori



- Once all the top profiles are properly aligned, fix them in place using the remaining 8 M3x4rT screws in the corners.
- Fissa il pannello posteriore al profilo superiore con tre rivetti di nylon.

PASSO 10 Viti di fissaggio CoreXY: preparazione dei componenti



- For the following steps, please prepare:
- Vite M3x4rT (4x)

PASSO 11 Fissare il gruppo CoreXY



- Align the CoreXY assembly so the threaded holes match the screw openings in the rear profiles. You may need to push the assembly upward to align the holes.
- Fissa il gruppo CoreXY utilizzando le quattro viti M3x4rT nelle aperture contrassegnate.

PASSO 12 Base del sensore laterale: preparazione dei componenti



- **For the following steps, please prepare:**
- Filament-sensor-body (1x)
- Filament-sensor-lever (1x)
- Filament-sensor-switch (1x)
- Vite M3x10 (1x)
- 10x6x2mm magnet (2x) *found in the Electronics & Fasteners package*
- 7mm Ferromagnetic Ball (1x) *found in the Electronics & Fasteners package*
- Rondella M3w (1x)

PASSO 13 Montaggio della base del sensore laterale



- Insert one of the magnets into the dedicated opening in the Lever.
- Inserisci la sfera nell'apertura corrispondente all'interno della base del sensore.
- Insert the lever with the magnet into the Base.

ⓘ The part with the magnet should be positioned next to the ball.

Note that the ball will be attracted to the magnet—ensure it stays securely in place.

- Fissa la leva con la rondella M3w e la vite M3x10. Per ora avvitala solo un po', quanto basta per tenerla in posizione.

⚠ **Non stringere completamente la vite.** In caso contrario, la leva non si muoverà e il sensore non funzionerà!

PASSO 14 Testare la leva



- Verify the lever is able to move freely.
- Se la leva non si muove bene o non si muove per niente, allenta la vite di un quarto di giro e prova di nuovo a muoverla.

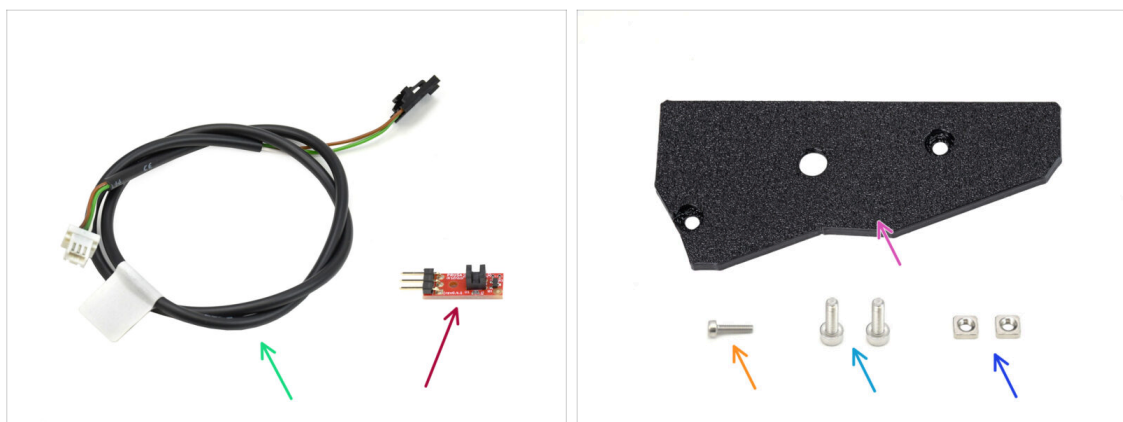
⚠ La vite **non deve essere avvitata fino in fondo**, altrimenti la leva non si muoverà liberamente.

PASSO 15 Assemblare l'interruttore



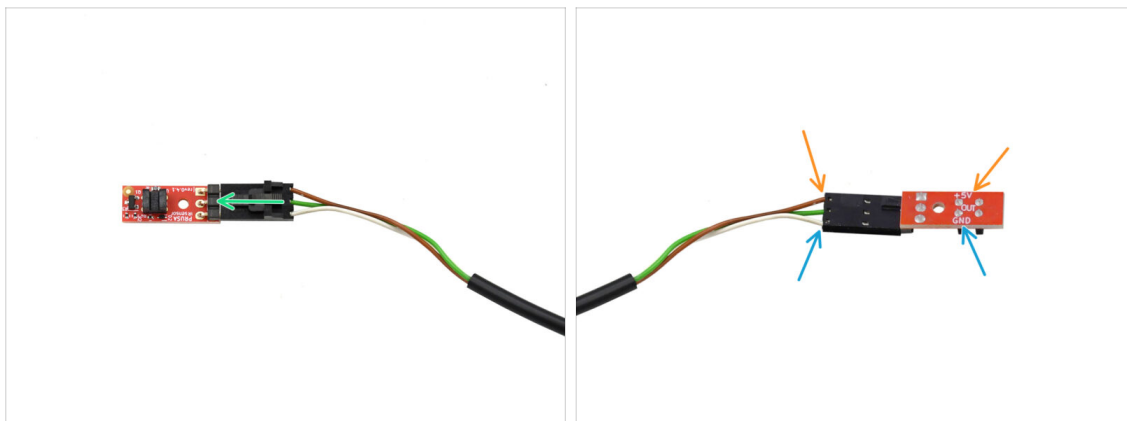
- Inserisci il secondo magnete 10x6x2 nel filament-sensor-switch.
- Installa l'interruttore filament-sensor-switch nel corpo filament-sensor-body.
- Sposta l'interruttore filament-sensor-switch alla posizione finale sinistra in modo che i magneti siano uno di fronte all'altro.
- Assicurati che **i magneti si respingano**: dovrebbero allontanarsi l'uno dall'altro.
- **Se si attraggono**, cioè si avvicinano: toglie il magnete dall'interruttore del sensore del filamento e cambia la sua polarità. Poi controlla di nuovo.
- ❗ *Pro tip: usa una delle chiavi esagonali sottili o delle chiavi Torx per togliere il magnete dall'interruttore del sensore del filamento.*

PASSO 16 Sensore IR: preparazione dei componenti



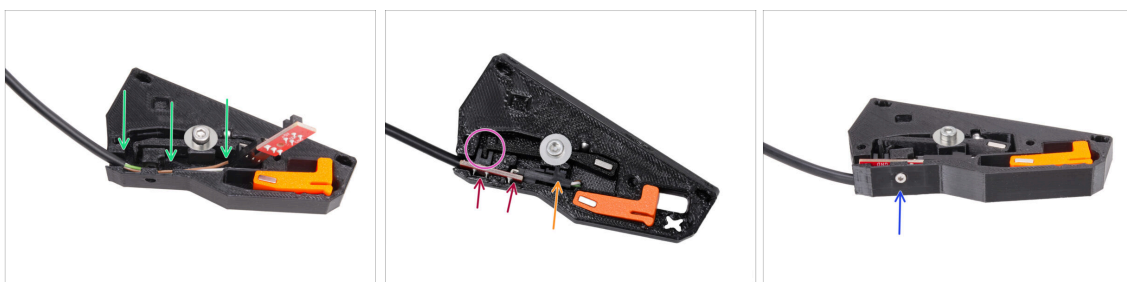
- **For the following steps, please prepare:**
- Cavo del sensore di filamento laterale (1x) *si trova nella confezione Electronics & Fasteners*
- IR Filament Sensor (1x) *found in the Electronics & Chamber parts package*
- Side Filament Sensor Cover (1x) *found in the Printed package*
- Vite M2x8 (1x)
- Vite M3x10 (2x)
- Dado M3nS (2x)

PASSO 17 Collegamento del sensore IR



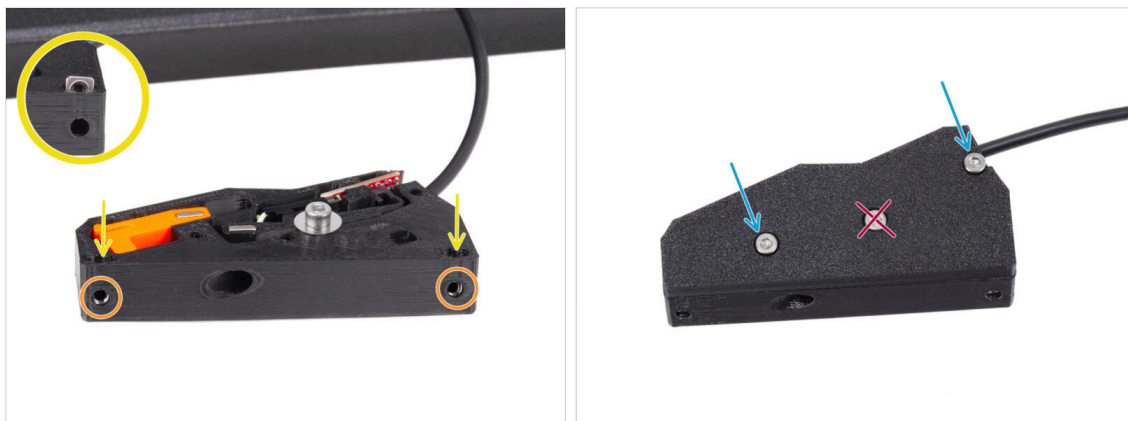
- Plug the cable into the IR filament sensor.
- ⚠ **Assicurati che il connettore sia orientato correttamente prima di collegarlo!**
- On CORE One, the brown cable must connect to the +5V pin.
- The white cable connects to the GND pin.

PASSO 18 Installazione del sensore IR



- First, insert the cable into the groove. The black connector should be approximately in the middle of the sensor base.
- Inserisci il sensore IR nella scanalatura dedicata.
- The lever must fit into the optical gate part of the sensor.
- Make sure neither the connector nor the cables touch the lever, as this could prevent the sensor from functioning correctly.
- Using the 1.5mm Allen key, fix the sensor in place with the M2x8 screw.

PASSO 19 Installazione della copertura del sensore laterale



- ✦ Insert the two M3nS nuts into the designated openings. Use a 1.5mm Allen key to **push them all the way in**.
 - ✦ Osserva lateralmente per verificare che le filettature dei dadi siano allineate con le aperture.
 - ✦ Add the cover part onto the assembly.
 - ✦ Fix the cover in place using two M3x8 screws on the sides.
- ⚠ **Non stringere la vite al centro! In caso contrario, il sensore smetterebbe di funzionare.**

PASSO 20 Sensore di filamento laterale: preparazione dei componenti



- ✦ **For the following steps, please prepare:**
- ✦ Gruppo sensore filamento laterale (1x) *che hai assemblato prima*
- ✦ Collet (1x) *found in the Electronics & Fasteners package*
- ✦ Fascetta (3x)

PASSO 21 Installazione del sensore di filamento laterale



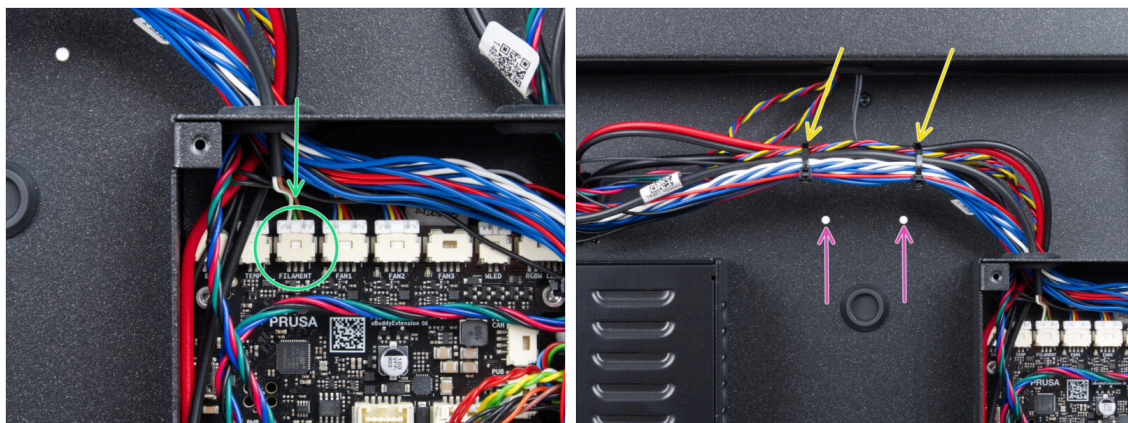
- Install one zip-tie into the marked openings. We will use it to attach a cable underneath the metal profile.
 - Inserisci il colletto nell'apertura contrassegnata sul gruppo sensore.
 - Attach the sensor assembly onto the PTFE tube in the printer.
- ⚠ Make sure to push the tube all the way in!

PASSO 22 Guida il cavo del sensore di filamento



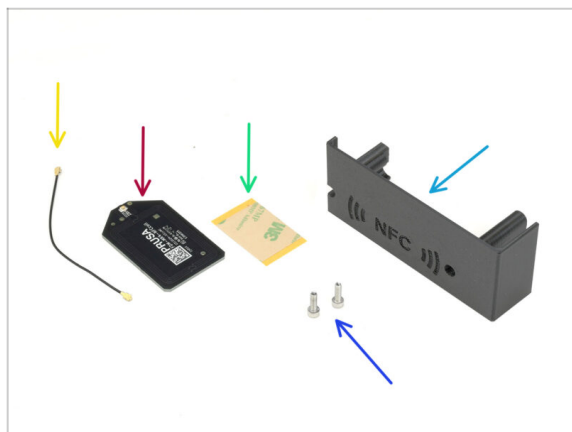
- Move the sensor assembly up, roughly to the middle of the printer's frame, to align the cable properly.
- Una volta posizionato, fissa il cavo sotto il profilo metallico con una fascetta. Stringi la fascetta moderatamente, in modo da poter regolare il cavo se necessario in un secondo momento. Taglia la parte di fascetta in eccesso.
- Guide the sensor cable through the dedicated opening to the back of the printer.
- On the back of the printer, guide the cable into the xBuddy box. Leave it hanging loosely for now.

PASSO 23 Collegamento del sensore di filamento laterale



- Connect the Side Filament Sensor cable into the connector labeled FILAMENT on top of the xBuddy extension board.
- i Puoi usare delle pinze a becchi lunghi per aiutarti, ma fai attenzione a non danneggiare i cavi.
- Use two zip-ties to clamp the cable bundle together in the marked area.
 - Secure the cables in the **highest possible position** to ensure they clear the two openings on the sheet metal below.
- ⚠ Do not over-tighten the zip ties or strain the cables too much!

PASSO 24 Antenna NFC: preparazione dei componenti



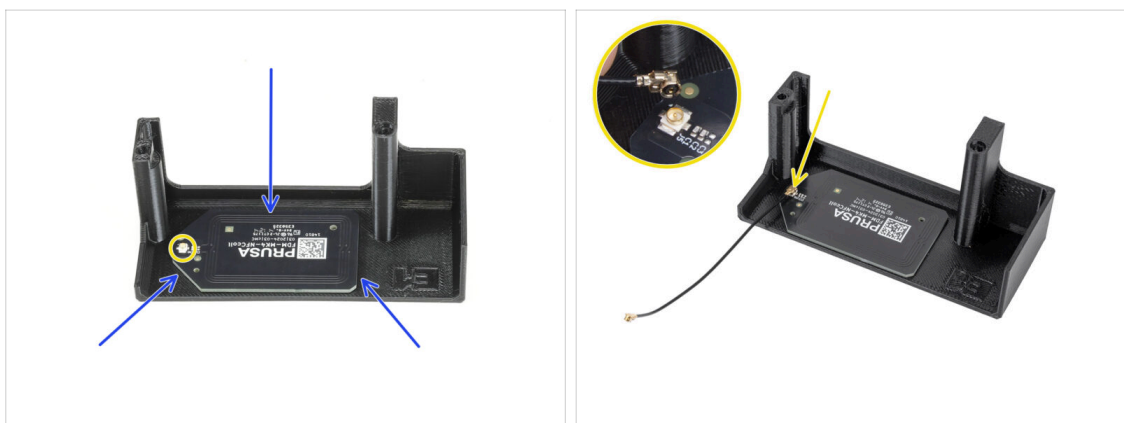
- For the following steps, please prepare:
- El-box-cover (1x) *si trova nella confezione Printed parts*
- Vite M3x10 (2x)
- NFCcoil (1x) *found in the Electronics & Chamber parts package*
- Adhesive film 32 x 25 mm (1x) *found in the Electronics & Chamber parts package*
- NFC coil cable (1x) *found in the Electronics & Chamber parts package*

PASSO 25 Applicazione della pellicola adesiva



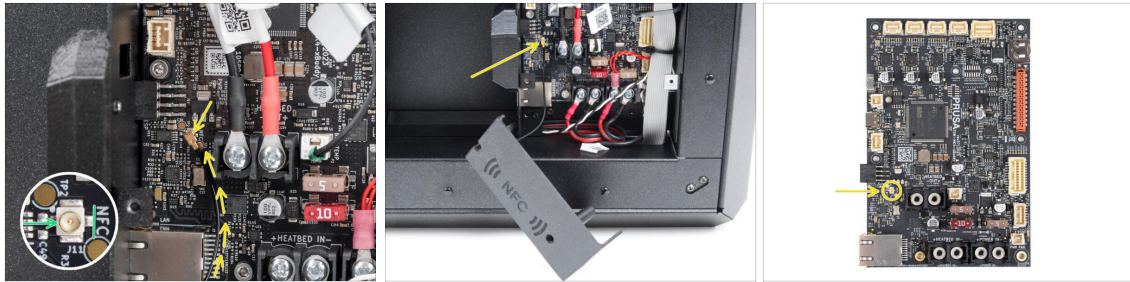
- Peel off the yellow protective film from the adhesive tape.
- Applica la pellicola sul lato piatto della bobina NFC, assicurandoti che aderisca correttamente.
- Peel of the remaining protective layer from the NFC coil.

PASSO 26 Installazione della bobina NFC



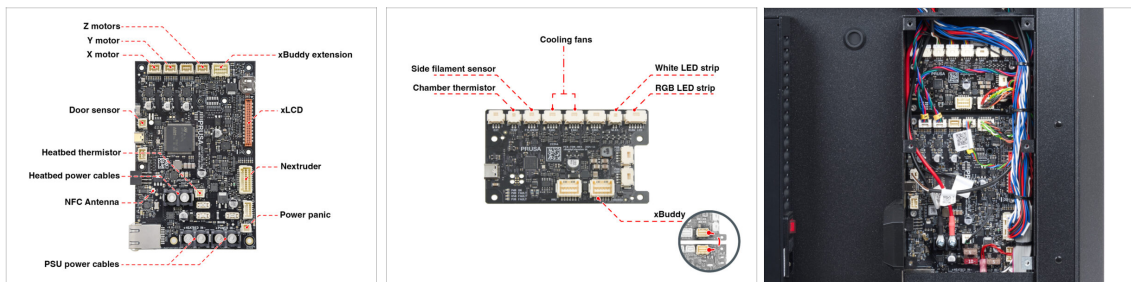
- Stick the NFC coil onto the inner side of the EI-box cover, approximately as shown in the picture.
- ① Il connettore rotondo piccolo deve essere posizionato più vicino al bordo della copertura.
- Connect the cable to the board by aligning the connectors and pressing lightly until you feel a click, ensuring a secure connection.
- ⚠ Be careful when connecting the NFC coil cable. Misalignment or excessive pressure can cause irreversible damage.

PASSO 27 Collegare la bobina NFC



- 🟢 Locate the small round connector labeled NFC on the bottom left side of the xBuddy board.
- 🟡 Connect the NFC coil cable to the board by aligning the connectors and pressing lightly until you feel a click.

PASSO 28 Controllo del cablaggio



- 🟡 Use the pictures as a reference to verify your electronics connections.
- ⚠️ **Make sure that all connectors are fully inserted and PSU cables properly tightened. Otherwise, there is a risk of damage to the printer!**

PASSO 29 Preparazione della copertura per l'elettronica



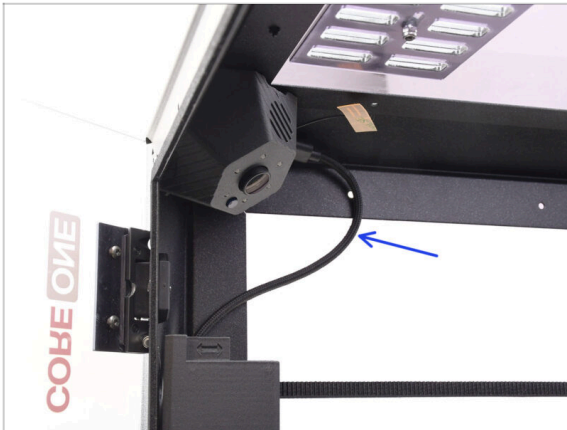
- Push two M3x10 screws through the EI-box-cover.

PASSO 30 Installazione della copertura dell'elettronica



- Ensure the threaded holes on the bottom of the xBuddy box are not obstructed by cables.
- If so, rearrange the cables to allow clear access.
- Align the cover with the opening in the xBuddy box and fix it in place by tightening the screws.
- Route the NFC cable through the space between the Ethernet connector and the PSU power cables.
- ⚠ Avoid running it through the Ethernet connector or the power cables. The cable may be damaged when covering the xBuddy box.**

PASSO 31 Note sulla Fotocamera Buddy3D



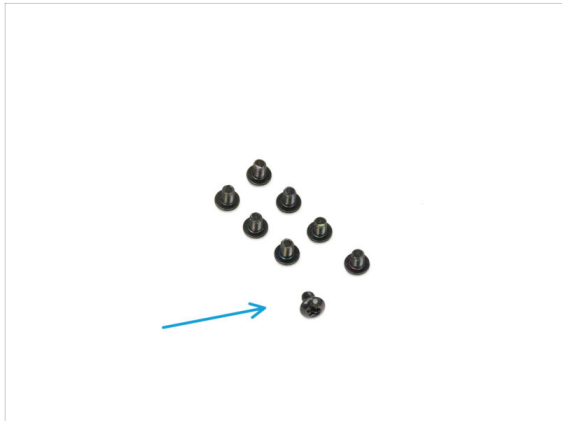
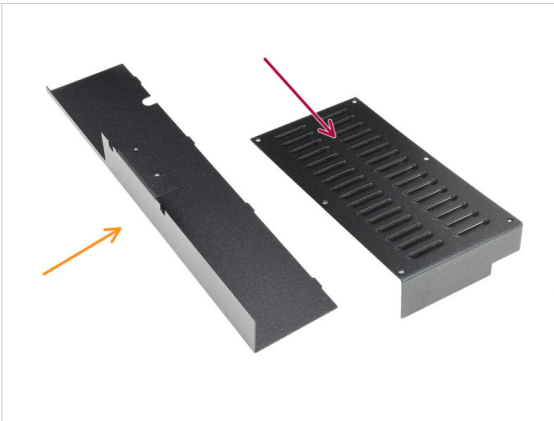
i For future Buddy3D Camera users:

Se prevedi di utilizzare la fotocamera Buddy3D, il cavo USB è già installato.



Per sapere come montare e collegare la fotocamera Buddy3D, dai un'occhiata a questa guida: **Installazione fotocamera Buddy3D per CORE One**

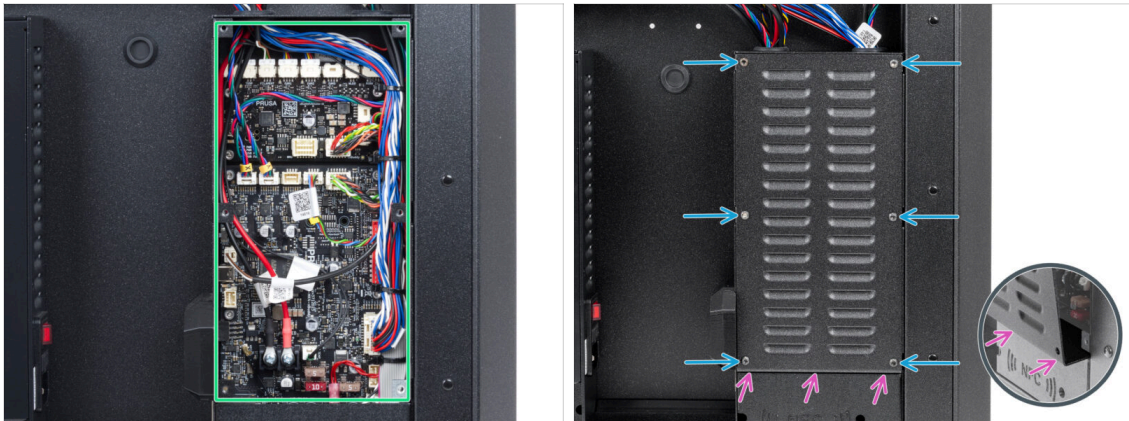
PASSO 32 xBuddy cover: parts preparation



For the following steps, please prepare:

- Sheet metal back cover (1x) found in the Metal parts 2/3 package
- xBuddy cover (1x) found in the Metal parts 3/3 package
- Vite M3x4rT (8x)

PASSO 33 Installing the xBuddy cover



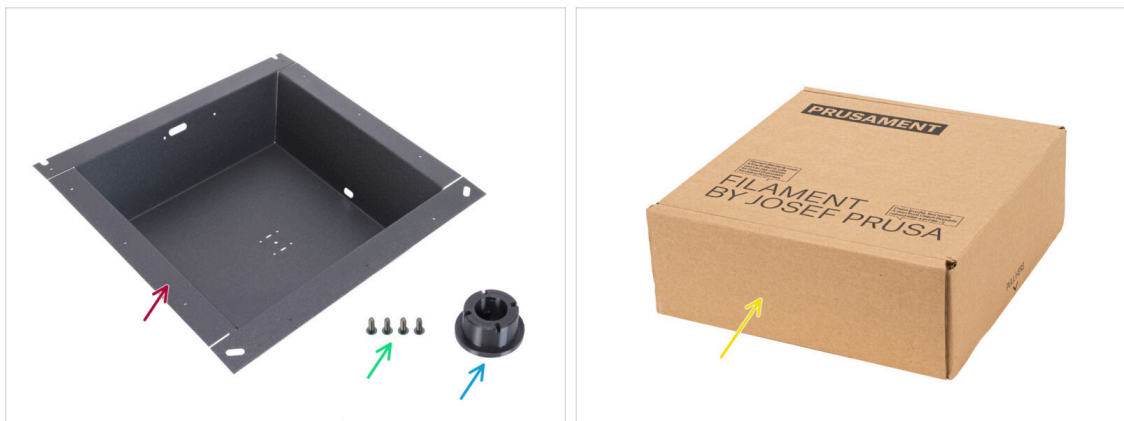
- Arrange the cables inside the xBuddy box as shown in the picture.
- Carefully cover the xBuddy box by first sliding the bent part of the cover into the box.
- ⚠ **Avoid pinching the cables. Double-check the NFC coil cable position.**
- Secure the xBuddy box cover using the six M3x4rT screws.

PASSO 34 Installing the rear cover



- Align the rear sheet metal cover so that the cables can run through the "tray".
- Place the rear sheet metal cover into the recess. Push it toward the printer, then move it upward to engage it.
- There are four tabs that should engage into the printer's chassis.
- Secure the rear cover in place using two M3x4rT screws from inside the printer.

PASSO 35 Right side: parts preparation



● For the following steps, please prepare:

● Right side sheet metal (1x) found in the Metal parts 2/3 package

⚠ The correct **right-side** piece can be easily identified by the screw openings in the middle.

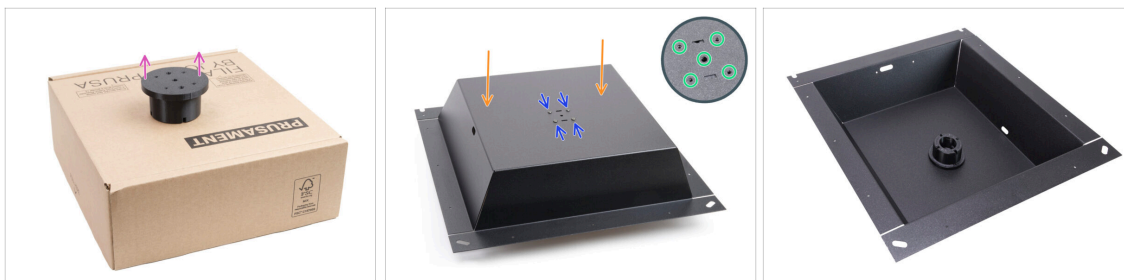
● Vite M3x8rT (4x) si trovano nella confezione Electronics & Fasteners.

● Puck-universal (1x)

● Una scatola di cartone (1x)

📌 Sugerimento: una scatola Prusament va benissimo.

PASSO 36 Installing the spoolholder puck



● Posiziona il cilindro Puck-universal sulla scatola di cartone in modo che i fori per le viti siano rivolti verso l'alto.

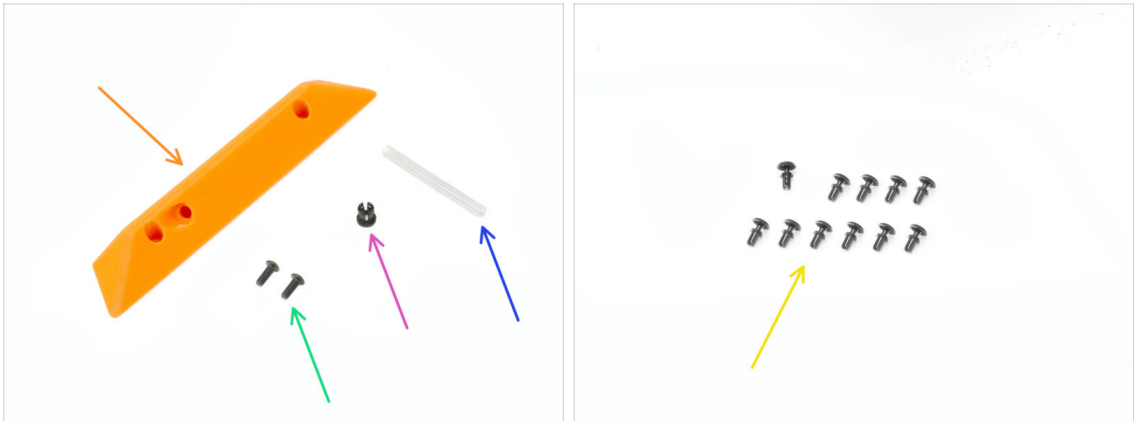
● Posiziona con cura il pannello destro sul Puck-universal, posizionandolo al centro della scatola.

● Allinea i fori del Puck-universal con quelli del pannello destro.

● Fissa il Puck-universal con quattro viti M3x8rT.

ⓘ Le viti possono opporre resistenza durante il serraggio, poiché incidono la propria filettatura all'interno del componente.

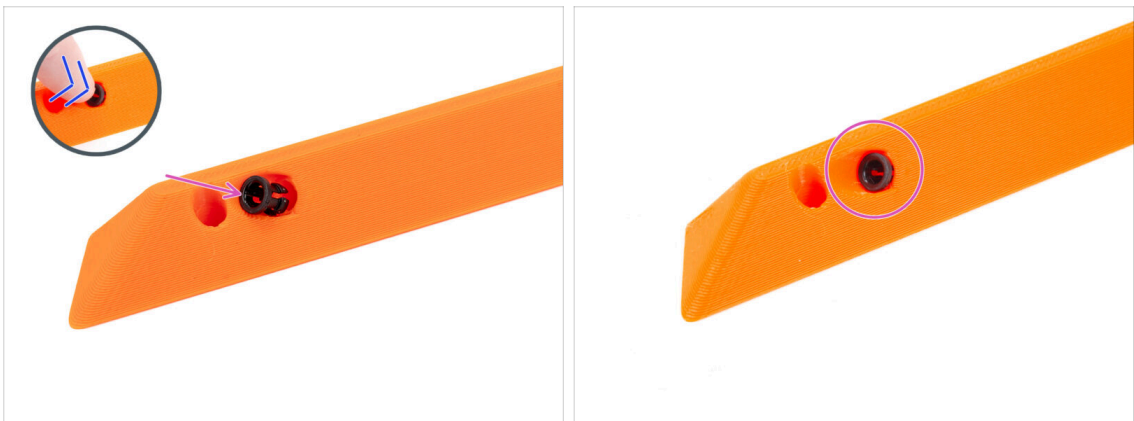
PASSO 37 Right handle: parts preparation



For the following steps, prepare:

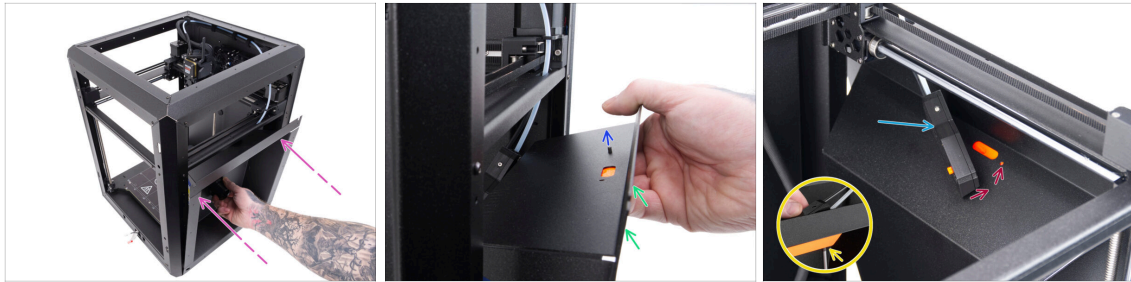
- Side Handle (1x) *found in the Printed parts package*
- Viti M3x8rT (2x)
- Collet (1x) *found in the Electronics & Fasteners package*
- PTFE Tube 4 x 2.5 x 45 mm (1x) *found in the CoreXY parts + Hinges set package (together with hinges parts)*
- Rivetto in nylon (11x)

PASSO 38 Installazione del colletto



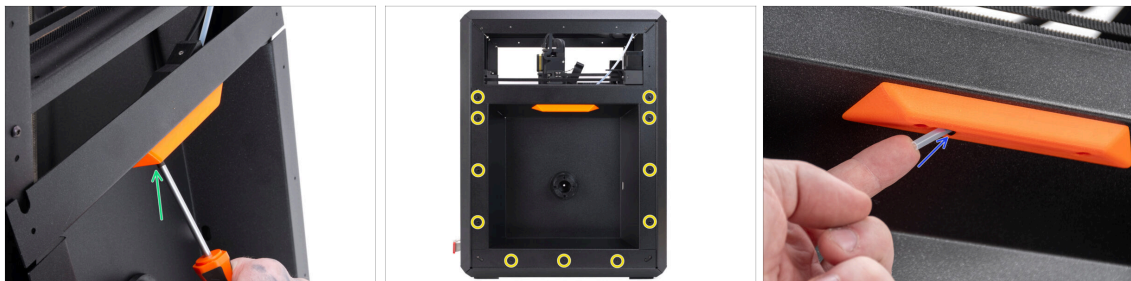
- Insert the collet into the handle.
- Push it all the way in.

PASSO 39 Montare la maniglia



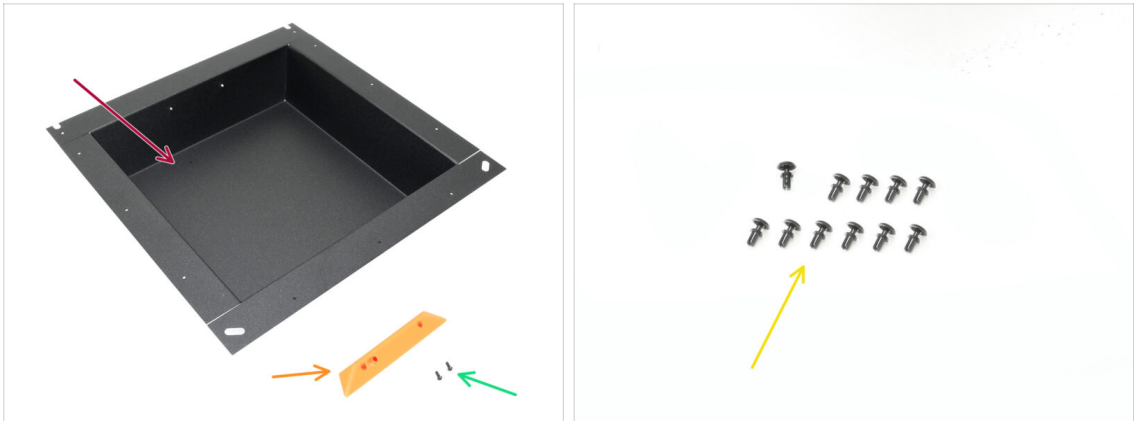
- ✿ Place the right-side metal sheet assembly on the right side of the printer. Ensure the U-shaped cutouts are facing upwards.
- ✿ Attach the right handle to the right metal sheet.
- ✿ Push one M3x8rT screw through the rear hole in the handle and the metal sheet.
- ✿ Attach the side filament sensor assembly on the screw.
- ⚠ **Do not pull the side sensor assembly too far; bring the right side metal sheet as close as possible.**
- ✿ Tighten the screw just slightly—the nut must remain free to move.
- ✿ Align the side filament sensor with the front screw hole in the metal sheet and the handle.

PASSO 40 Fixing the right side



- ✿ Using the second M3x8rT screw, secure the right handle and the side filament sensor to the right metal sheet.
- ✿ Secure the side sheet metal to the printer using the 11 Nylon rivets.
- ✿ Insert the short PTFE tube 4 x 2.5 x 45 into the collet. Push it all the way in.
- ⓘ Part of the PTFE tube will remain protruding from the handle.

PASSO 41 Left side: parts preparation



For the following steps, prepare:

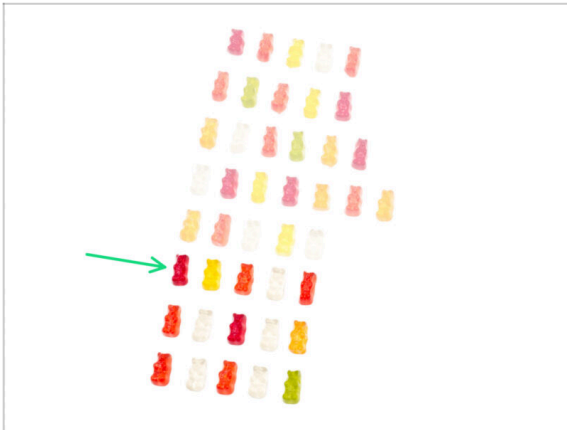
- Left side sheet metal (1x) *found in the Metal parts 2/3 package*
- Side Handle (1x) *found in the Printed parts package*
- Vite M3x5rT (2x)
- Rivetto in nylon (11x)

PASSO 42 Installing the left side



- Align the handle with the threaded openings in the sheet metal.
- Attach the handle using the two M3x5rT screws.
- Secure the side sheet metal to the printer using 11 nylon rivets.

PASSO 43 Momento Haribo



- Well done—fuel up for the next challenge!
- Eat the sixth row.
- So close! But **hands off those last gummies!**

PASSO 44 Fatto

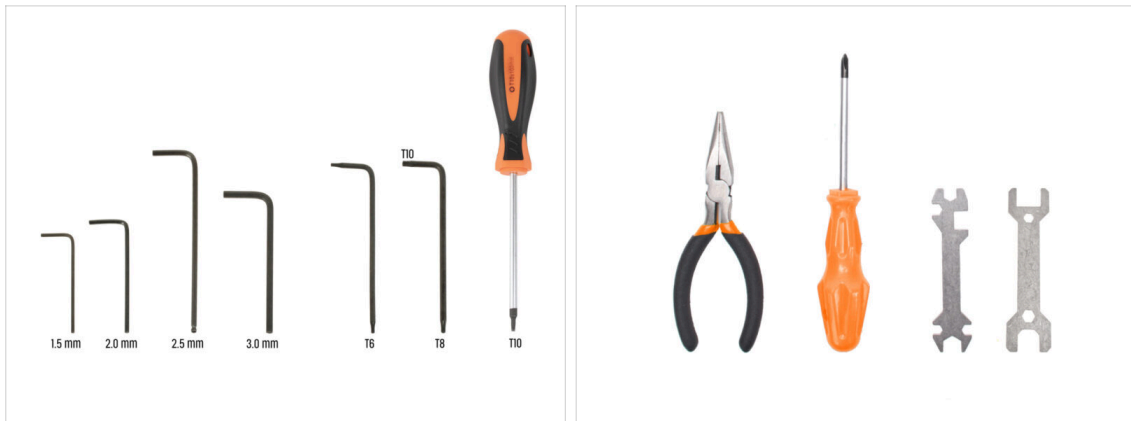


- Congratulations! You've successfully assembled the entire body.
- Let's move to the next chapter.

8. Trim, Door & xLCD



PASSO 1 Tools necessary for this chapter



● **For the following steps, prepare:**

- Chiave a brugola da 2.5mm
- Chiave Torx T10
- Pinza a becchi lunghi

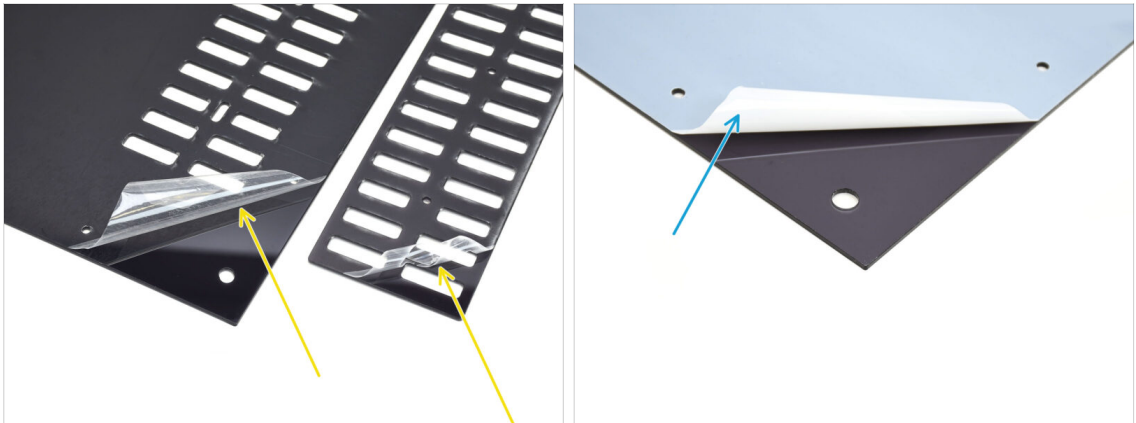
PASSO 2 Top cover: parts preparation



● **For the following steps, prepare:**

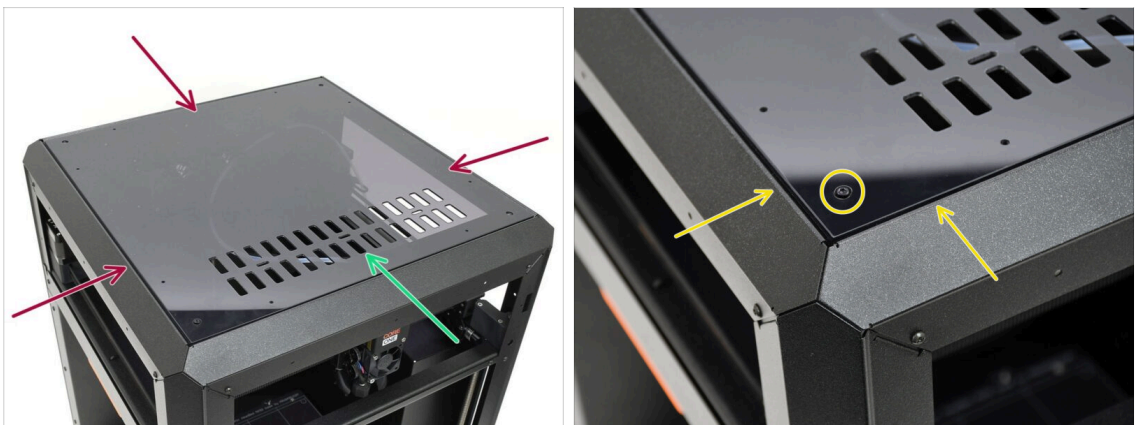
- Top cover (1x) *found in the Plexi set package*
- Vent cover (1x) *found in the Plexi set package*
- Dado M3nN (3x)
- Insulating insert (3x) *found in the Electronics & Fasteners package*
- ⓘ This part may come in either gray or black. However, the shape is identical, and it does not affect the procedure.
- Vite M3x12rT (3x)
- Rivetto in nylon (4x)
- Upg-vent-block

PASSO 3 Rimuovere la pellicola



- First, remove the protection foil from both the plastic sheets.
- Flip the parts around and remove the protective foil from the other sides.

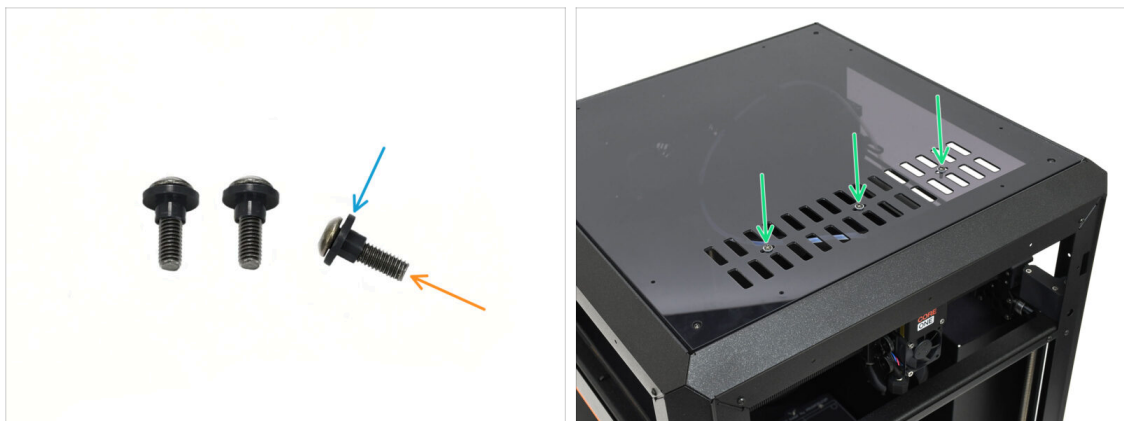
PASSO 4 Test-fitting the top cover



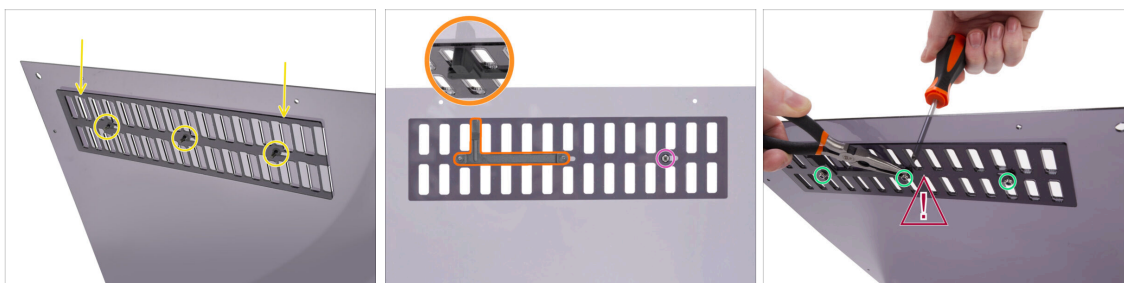
- Lay down the top cover onto the printer.
- The part with the vent openings should be oriented towards the front of the printer.
- If oriented correctly, the cover will align with the recess, and the bolt heads in the corners will fit into the cutouts.

i Se le aperture dei bulloni non sono allineate, capovolgi la copertura.

Spoiler: la copertura non è simmetrica!

PASSO 5 Assembling the top cover I.

- 🟠 Run all three M3x12rT screws through the insulating inserts.
- 🟢 Make sure the flanged part of the insert is oriented toward the screw head.
- 🟢 Insert the screws with the inserts through the three slot openings in the vent.

PASSO 6 Assembling the top cover II.

- 🟡 Align the vent cover with the screw ends on the bottom.
 - 🟡 Stringi a mano il dado M3nN più a destra sulla vite M3x12rT per fissare il coperchio.
 - 🟠 Monta la parte Upg-vent-block alla copertura della ventilazione. Assicurati che sia posizionata nel modo corretto.
 - 🟢 Fissa la parte Upg-vent-block sulla copertura della griglia di ventilazione con i dadi M3nN. Usa le pinze a becchi lunghi per tenere i dadi mentre stringi le viti.
- ⚠️ The screw must be tight enough just to remove the slack. It must remain loose, or the ventilation cover won't open and close properly.

PASSO 7 Testare la ventilazione



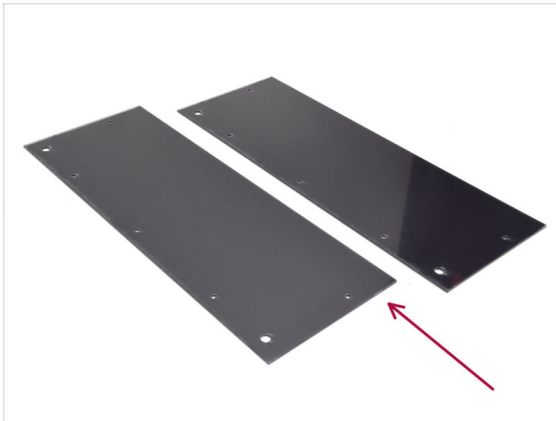
- ◆ Try moving one of the three screws with your hand.
- ⓘ The vent openings must open and close smoothly without effort.
- ⚠ If movement is difficult, loosen the screw that is restricting it.

PASSO 8 Installing the top cover



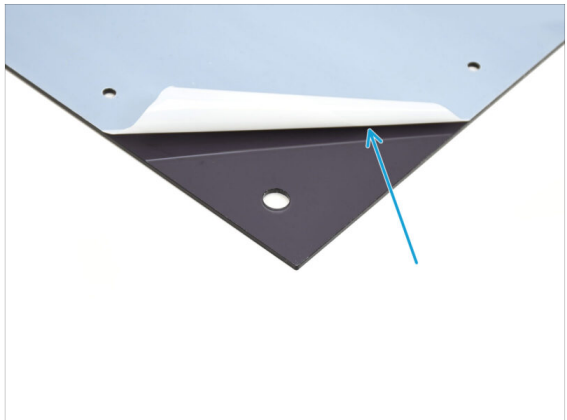
- ◆ Allinea la copertura con l'incavo sulla stampante, assicurandoti che la presa d'aria sia rivolta in avanti.
- ◆ Secure the cover to the frame using four nylon rivets in the marked openings.
- ⓘ There are eight openings, but four rivets should be sufficient.

PASSO 9 Side covers: parts preparation



- For the following steps, prepare:
- Side Cover (2x) found in the Plexi set package
- Rivetto in nylon (10x)

PASSO 10 Rimuovere la pellicola



- Remove the protective foil from both the side covers.
- Remove the protective foil from the other sides of both the side covers.

PASSO 11 Covering the left side



- Align the cover with the recess on the left side of the printer.
- The protruding screws on the printer must align with the larger openings in the cover.
- Secure the cover to the frame using five nylon rivets in the marked openings.

PASSO 12 Covering the right side



- Align the other cover with the recess on the right side of the printer.
- Secure the cover to the frame using five nylon rivets in the marked openings.

PASSO 13 xLCD: preparazione componenti



- For the following steps, prepare:
- xLCD (1x) found in the Electronics package
- xLCD Front Cover (1x) found in the Printed parts package
- xLCD Display-mount (1x) si trova nella confezione Printed parts
- Knob (1x) found in the Printed parts package
- Vite 3x8sT (4x)
- Faston connector (1x) found in the Electronics package

PASSO 14 Assembling the xLCD I.



- We recommend placing the front cover face down on a cardboard box edge or desk to create space for the encoder knob.
- Remove the protective foil from the xLCD.
- Insert the xLCD into the front cover.

PASSO 15 Assembling the xLCD II.



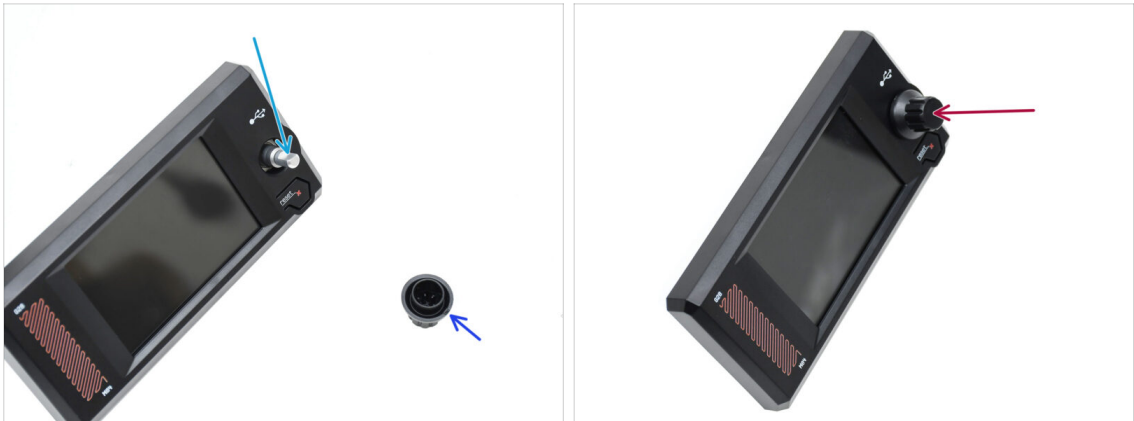
- Cover the assembly with the rear part.
 - If you have an older version of the printed rear cover, it must hook by the xLCD itself in the corner. With the up-to-date version, the rear part can be simply laid down.
 - Fix the parts together using **JUST THREE** 3x8sT screws in the marked openings.
 - ⚠ **Non mettere la vite nel quarto foro vicino alla fessura lunga per il connettore del display xLCD, che si vede attraverso il taglio. Lascialo vuoto per ora.**

PASSO 16 Installing the FE Faston connector



- Let's move on to the fourth screw opening—this is where we will attach the grounding faston connector.
 - Using needle-nose pliers, carefully maneuver the grounding faston connector over the screw opening, ensuring the holes line up.
 - Secure the connector in place using one 3x8sT screw, making sure it stays lined up as indicated.
 - ⚠ **Per evitare di danneggiare i componenti elettronici vicini, fai attenzione e assicurati che il connettore non giri mentre lo stringi.**

PASSO 17 Installing the LCD knob



- There is a flat part on the encoder shaft. Rotate the encoder so that the flat part is facing up.
- There is a small gate scar on the injection-molded knob, which can serve as an orientation mark.
- Attach the knob onto the shaft, making sure the mark on the knob is facing up.

PASSO 18 xLCD bezel: parts preparation



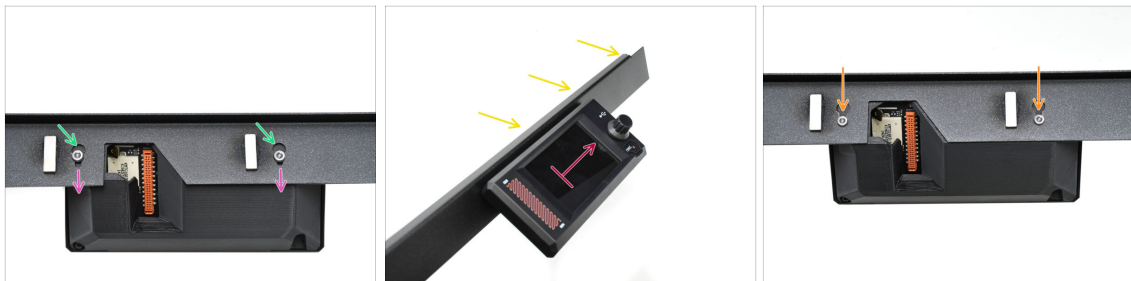
- **For the following steps, prepare:**
- xLCD (1x) *found in the Electronics package*
- Dado M3nS (2x)
- Vite M3x6 (2x)
- Bezel (1x) *found in the Metal parts 2/3 package*

PASSO 19 Mounting the xLCD I.



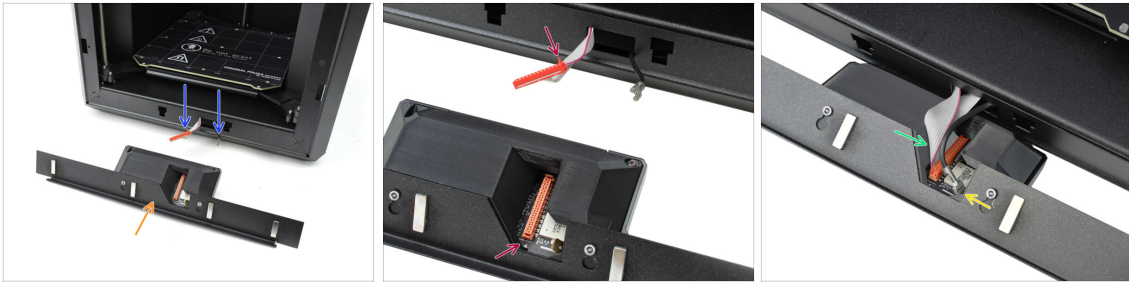
- Insert the two M3nS nuts into the dedicated openings on the back of the xLCD assembly,
- Push the nuts all the way in until the threads line up with the screw openings.
- Attach two M3x6 screws into the openings. Do not screw them all the way in.
- Lascia un po' di spazio sotto le teste delle viti.

PASSO 20 Mounting the xLCD II.



- Hook up the xLCD assembly onto the Bezel.
- Insert the screw heads into the keyhole openings.
- Slide the xLCD assembly so that the screw heads engage into the narrower parts of the keyholes.
- Se assemblato correttamente, il display LCD dovrebbe essere rivolto verso l'alto...
- ...While the bent lip on the Bezel is on top.
- Push the screws all the way into the narrow part of the keyhole on both sides. Then, tighten the screws.

PASSO 21 Installing the xLCD assembly



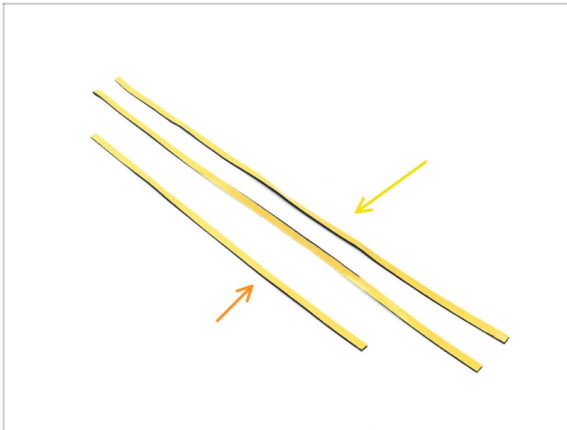
- ✦ Put the xLCD assembly in front of the printer, as pictured.
- ✦ Pull the appropriate cables out from the front of the printer to make connecting them easier.
- ✦ There is a small red tab on the main connector. This tab must be oriented towards the triangle symbol on the PCB.
- ✦ Collega il connettore principale al display xLCD.
- ✦ Connect the grounding faston connector.

PASSO 22 Securing the xLCD assembly



- ✦ Gently lift the xLCD assembly into the upward position.
⚠ Proceed carefully to ensure none of the cables get pinched or disconnected.
- ✦ Hook the tiny tab on the left side of the bezel behind the left vertical profile of the printer.
- ✦ Solleva delicatamente la parte inferiore del display xLCD per consentire un aggancio più agevole della linguetta e un maggiore spazio di movimento.
- ✦ Hook the tab on the right side into the printer's right profile.

PASSO 23 Door seal: parts preparation

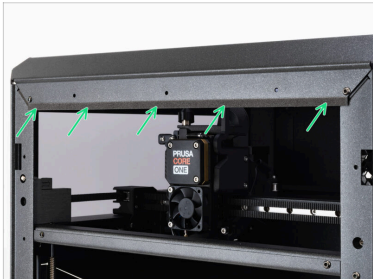
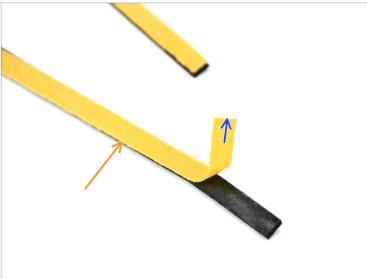


● For the following steps, prepare:

- Side door seal, a longer one (2x) found in the *Electronics & Fasteners* package
- Top door seal, a shorter one (1x) found in the *Electronics & Fasteners* package

ⓘ Il colore dello strato protettivo può variare.

PASSO 24 Attaching the top seal



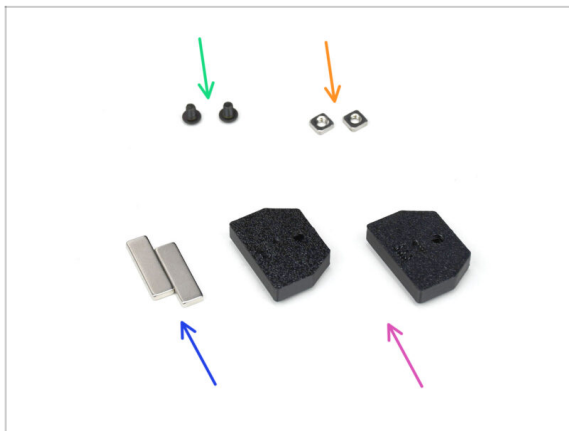
- Take the **SHORTER** seal.
- Peel off the start of the protective foil. No need to remove it entirely yet.
- ⓘ No need to remove it entirely yet. For easier installation, you can peel it off gradually as you go.
- Inizia ad applicare la guarnizione lungo il bordo superiore del telaio della stampante.
- Begin offset from the corner by a distance equal to the seal thickness.
- Apply the seal along the top edge, leaving the end offset from the corner, just like on the other side.

PASSO 25 Attaching the side seals



- Apply the longer door seal, starting from the end of the seal on top.
- Work your way from the top down.
- ① With needle-nose pliers, trim the excess.
- Con la stessa tecnica, applica la rimanente guarnizione lunga lungo il bordo sinistro del telaio della stampante.

PASSO 26 Magnet holders: parts preparation



- For the following steps, prepare:
- Vite M3x5rT (2x)
- Dado M3nS (2x)
- Magnete 20x6x2 (2x) *si trova nella confezione Electronics & Fasteners*
- ⚠ **Keep the magnets apart at a sufficient distance. They can break each other!**
- Magnet Holder (2x) *found in the Printed parts package*

PASSO 27 Assembling the magnet holders



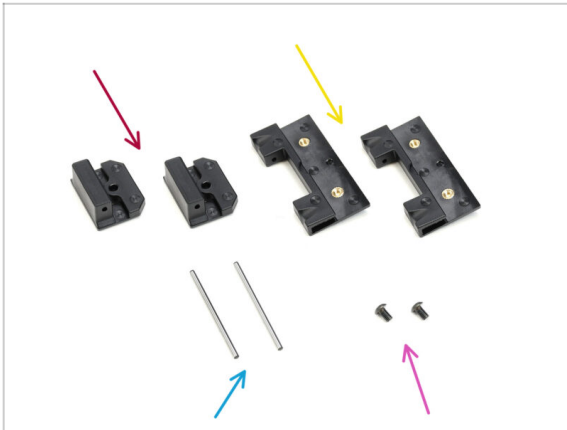
- 🟠 Insert the M3nS nuts into the corresponding openings in the magnet holders.
- 🔴 Push the nuts all the way in, until the thread aligns with the screw opening.
- 🟡 Insert the magnets into the corresponding pockets in the holders. Push them all the way in.
- 📄 ⓘ L'orientamento dei magneti non ha importanza.

PASSO 28 Installing the magnet holders



- 🟡 From the inside of the printer, insert the magnet holder assembly into the corresponding bottom opening in the right-side metal profile.
- ⚠️ Ensure the protruding rectangular pocket fits into the cutout.
- 🟢 Fissa il gruppo in posizione utilizzando la vite M3x5rT.
- 🟢 Con la stessa tecnica, installa l'altro supporto per magneti nell'apertura superiore sul lato destro.

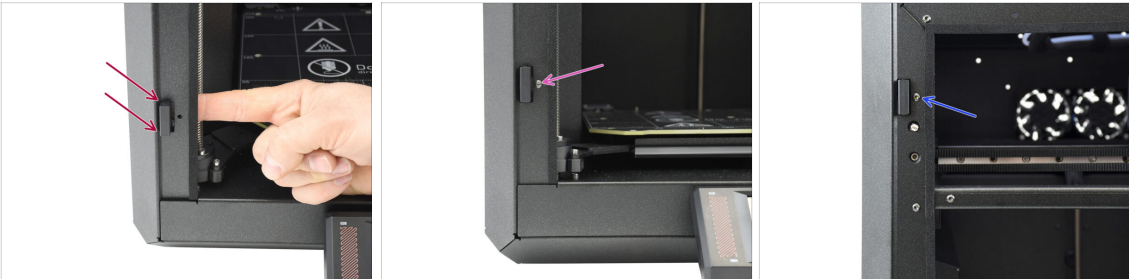
PASSO 29 Cerniere: preparazione dei componenti



For the following steps, prepare:

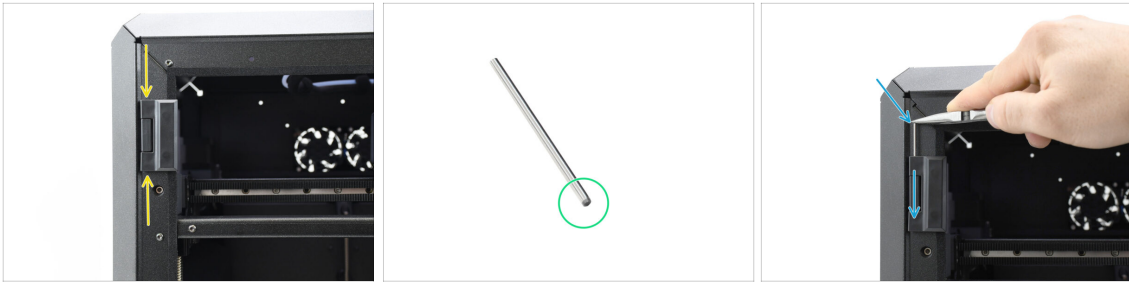
- Door-hinge-in (2x) found in the CoreXY + Hinges set package
- Door-hinge-out (2x) si trova nella confezione CoreXY + Hinges set
- Perno della cerniera 2 x 40 mm (2x) si trova nella confezione Electronics & Fasteners
- Vite M3x5rT (2x)

PASSO 30 Installing the door-hinge-in parts



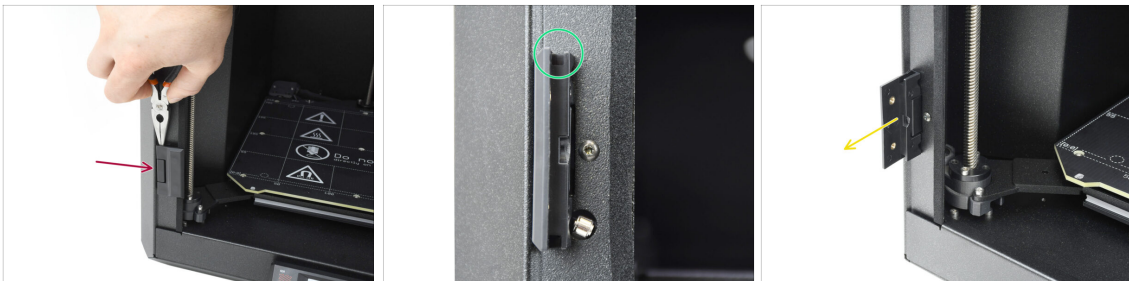
- From the inside of the printer, insert the door-hinge-in into the bottom rectangular opening in the left-side profile. The protruding part should pass through to the front.
- Fix the door-hinge-in in place using the M3x5rT screw.
- Utilizzando la stessa tecnica, installa l'altra door-hinge-in nell'apertura in alto.

PASSO 31 Installing the door-hinge-out I.



- ✦ Align the door-hinge-out with the door-hinge-in.
 - ✦ The chamfered end of the hinge pin should be inserted first to make assembly easier.
 - ✦ Inserisci il perno dalla parte superiore della cerniera dello sportello, guidandolo attraverso la cerniera dello sportello finché non è completamente inserito.
- ❗ Usa la punta delle pinze a becchi lunghi per premere il perno in modo sicuro.

PASSO 32 Installing the door-hinge-out II.

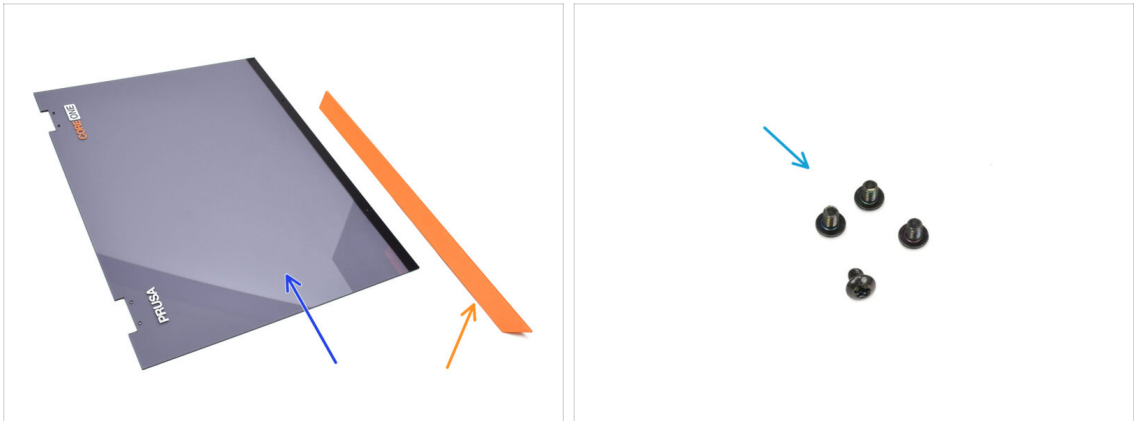


- ✦ Using the same technique, install the bottom door-hinge-out to complete the hinge assembly.
- ✦ Look into the grooves on the door-hinge-out parts and verify that the pins are fully inserted.

No part of the pin should be visible above the bottom surface in the groove.

- ✦ Apri entrambe le cerniere.

PASSO 33 Door panel: parts preparation



● **For the following steps, prepare:**

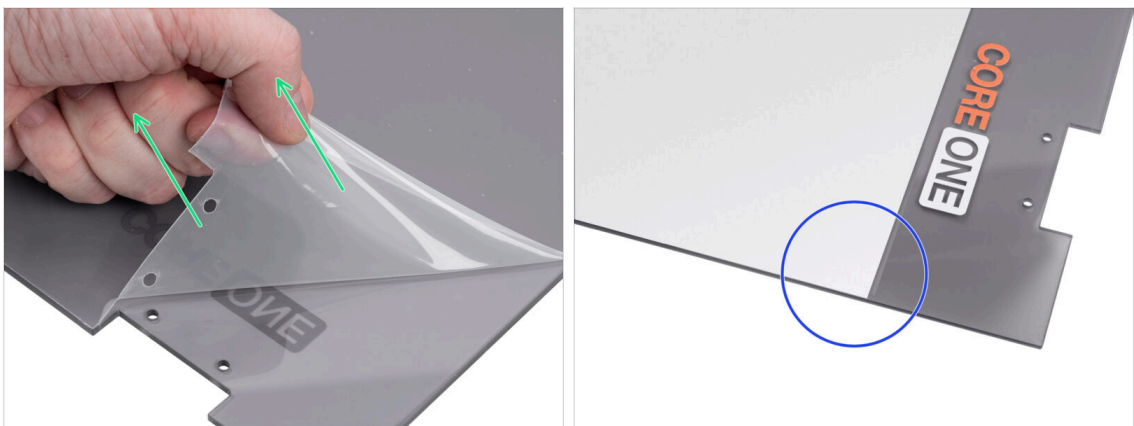
- Door (1x) *found in the Plexi set package*

❗ Il pannello dello sportello ha già la scritta **CORE ONE**. Non preoccuparti, è **normale!** Alla fine dovrai applicare l'adesivo + dell'aggiornamento.

- Door handle (1x) *found in the Metal parts 2/3 package*

- Vite M3x5rT (4x)

PASSO 34 Door panel: removing the protective film



- **The door panel has protective film on both sides.** One covers the entire surface, the other just the center area.

- Peel off the film covering the entire door; it's lightly transparent.

- Puoi rimuovere la pellicola protettiva centrale (bianca) subito o dopo aver montato il pannello per proteggere la superficie durante la manipolazione.

❗ This protective film does not interfere with the installation of the hinges or handle.

PASSO 35 Installing the door panel



- Align the door with the hinges. The cutouts on the door should fit into the grooves on top and bottom of the leaves.
- Make sure the door is oriented so that the signs on the door are pointing outward.
- Fai scorrere lo sportello fino in fondo in entrambe le cerniere.
- Fix the door to the hinges using four M3x5rT screws. Start with the top one. Then, do the bottom.

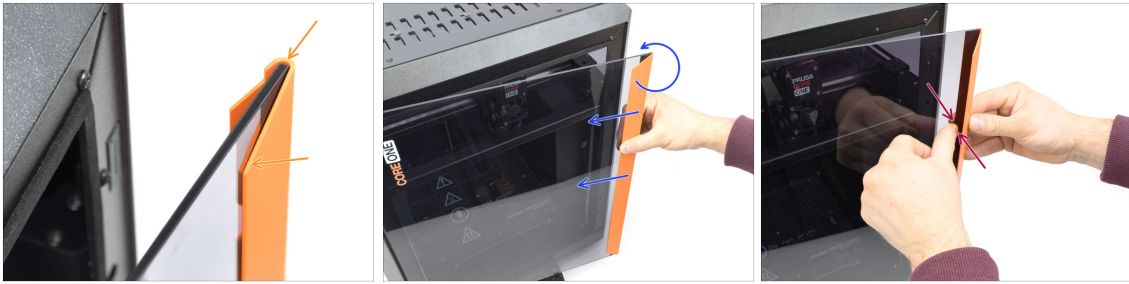
PASSO 36 Assembling the door handle



- Let's move onto the handle. Remove the protective foil from both the adhesive strips on the inside.
- The part with the adhesive strip will go onto the back of the door. But do not attach the handle yet!

⚠ Aspetta il prossimo passo! Prima dobbiamo allineare la maniglia!

PASSO 37 Securing the door handle



- ✦ Align the handle so that the front chamfered part is flat to the door. The top of the handle must be flush with the door.
- ✦ While pushing the handle against the door to keep it aligned, slowly rotate it counterclockwise until the adhesive strips bond to the door.
- ✦ Spingi con forza lo sportello e il manico nelle aree della striscia adesiva per garantire un fissaggio efficace.

PASSO 38 Applicare l'adesivo: preparazione dei componenti



- ✦ Per il seguente passo prepara:
 - ✦ Adesivo del plexiglass CORE One+
- ❗ L'adesivo del plexiglass CORE One+ è nella scatola CORE One+ Upgrade

PASSO 39 Come attaccare l'adesivo



- Togli l'adesivo dalla base blu.
- Metti l'adesivo in linea con il **ONE** e premi con delicatezza ma con decisione sull'adesivo.
- Togli con attenzione lo strato trasparente e assicurati che il + non si stacchi.

PASSO 40 È l'ora delle Haribo!



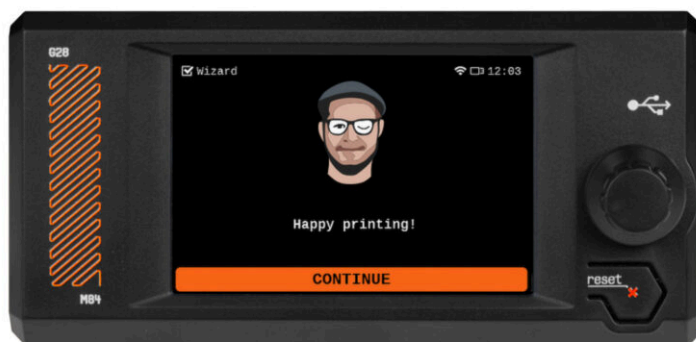
- Hard work deserves sweet results!
- Eat the seventh row.
- ⚠ Ma non mangiare ancora il resto.

PASSO 41 Fatto



- Congratulazioni! Hai montato correttamente la tua Prusa CORE One+.
- Let's move to the final chapter.

9. Calibration & First run



PASSO 1 Tensionamento della cinghia



- ❗ This chapter will guide you through calibrating and preparing the printer for its first run.
- ⬢ Calibrate the belt tension. See the following article for more info:
 - ⬢ [Adjusting belt tension \(CORE One\)](#)
- ⚠ Don't forget to come back here after adjusting the belts.

PASSO 2 Montaggio del porta bobina: preparazione dei componenti



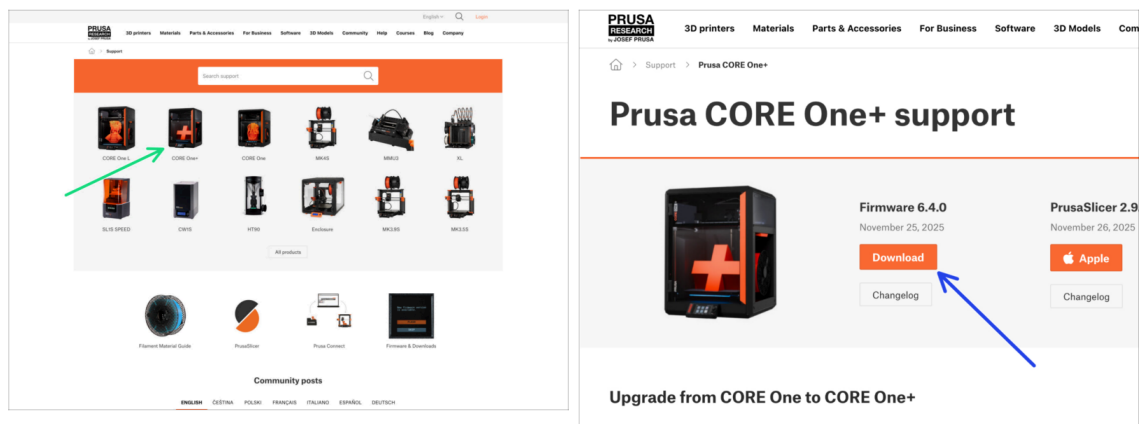
- ⬢ **Per il prossimo passo, prepara:**
 - ⬢ O-ring
 - ⬢ Spoolholder-static
- ❗ La parte Spool-holder-static e l'O-ring sono nella stessa busta.

PASSO 3 Montaggio della piastra di stampa e del porta bobina



- ⚠ **Make sure there is nothing on the heatbed.** The heatbed must be clean. Any dirt can damage the surface of both the heatbed and the print sheet.
- 🟡 **Attach the sheet by first aligning the rear cutout with the locking pins on the back of the heated bed.** Hold the sheet by the front two corners and slowly lay it down onto the heated bed - **watch your fingers!**
 - ⬛ Keep the **print sheet** clean for optimum performance.
 - ⬛ #1 cause of prints detaching from the print surface is a greasy print sheet. **Use IPA (Isopropyl alcohol) to degrease it** if you have touched its surface before.
- 🟡 Metti l'O-ring sulla parte del porta bobina Spoolholder-static.
- 🟡 Spingi la parte Spoolholder-static nella base Puck-universal e bloccalo girandolo in senso orario.

PASSO 4 Scaricare il Firmware



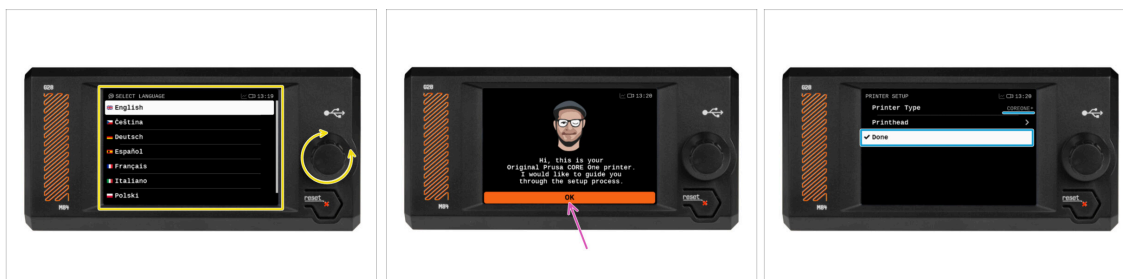
- ⬛ We will have to upgrade the firmware.
- 📄 La CORE One+ ha bisogno della versione firmware **6.4.0 o successivo**.
- 🟡 Visita la **pagina di supporto di Core One+ su help.prusa3d.com**.
- 🟡 Download the latest firmware file (.bbf).
Save the file onto a USB drive.

PASSO 5 Accendere la stampante



- ✿ Insert the USB drive included in your kit into your printer.
- ❗ The included USB drive contains the latest firmware file.
- ✿ Connect the power cable and plug the printer into a wall outlet.
- ✿ Turn the printer on using the switch on the back.
- ❗ The printer will now detect if a new firmware file is available on the USB drive.
- ✿ If the "New firmware available" screen appears, hit **FLASH** by pressing the rotary knob to upgrade to the latest firmware.
- ✿ If no such message appears, the printer is running the latest firmware already. Proceed to the next step.

PASSO 6 Setting up the printer: Intro



- ✿ The printer displays on the screen a prompt to select your language. Use the control knob or touchscreen to set your preference.
- ✿ After selecting your language, the printer will display the welcome screen. Hit **OK** to continue through the setup process.
- ✿ The next screen will prompt you to select your printer model **COREONE**. Hit **Done** to continue.

PASSO 7 Setting up the printer: Network setup



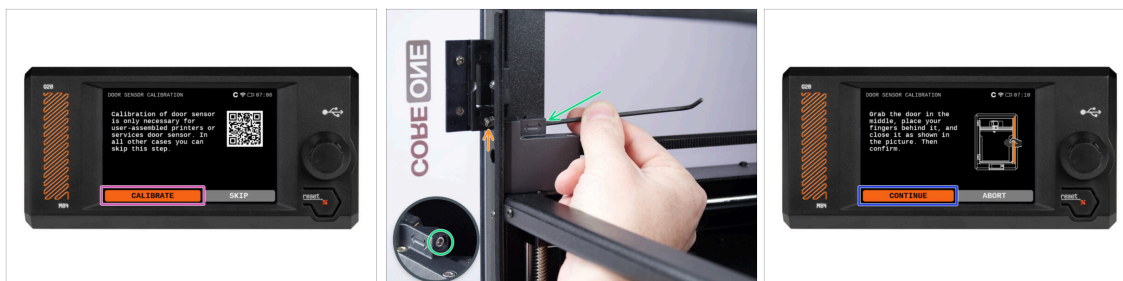
- The Network Setup screen will ask you to connect to a Wi-Fi network using our official Prusa mobile app.
- ① Read more on prusa.io/app.
- If you select **No**, the printer will show alternative ways to connect to Wi-Fi. This step is optional and can be done later.
- ① You can skip this screen and set up the network connection later.

PASSO 8 Configurazione guidata: Introduzione



- ① The printer will prompt you to run self-tests and calibrations for all important components. The entire process takes a few minutes, with some parts requiring direct user interaction.
- Hit **YES** to begin the self-test and follow the instructions on screen.
- ⚠ During the self-test, **keep the door closed** until you are prompted. Opening the door will interrupt the process.
- There are **HOT** and moving parts inside during the self-test.
- The printer will begin by testing all the fans. **Be aware—it can get quite noisy for a while!**

PASSO 9 Wizard: Door Sensor Calibration



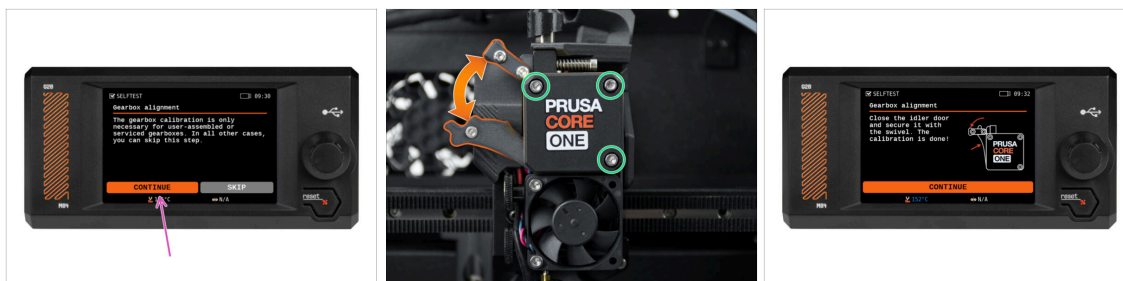
- ✿ The first part that requires your interaction is the door sensor calibration. To begin, hit **Calibrate** and follow the on-screen instructions.
- ✿ You'll be prompted to gradually tighten the sensor tension screw from its default loose position - usually in half-turn steps, possibly several times during calibration.
 - ✿ After each adjustment, observe the door sensor switch emerging from the front profile hole.
- ✿ Repeat the procedure until the door sensor is correctly adjusted - meaning it switches at a hand-gap distance. Then hit **Continue**.
- ❗ Once the sensor is properly calibrated, you should hear an audible click from the door sensor area when opening and closing the door.

PASSO 10 Configurazione guidata: Test della cella di carico



- ✿ 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 up** so that you can touch them. Hit **Continue**.
- ❗ Loadcell calibration requires the door to be open, as you must interact directly inside the printer.
 - ✿ Do not touch the nozzle yet, wait until prompted by the **Tap nozzle NOW** message.
 - ✿ Tap the nozzle from below. In case the Loadcell does not detect the touch, you will be prompted to repeat the step. Otherwise, you will see **Loadcell test passed OK** when it succeeds.
 - ✿ To allow the printer to continue with the Wizard, **close the door**.

PASSO 11 Configurazione guidata: Allineamento degli ingranaggi



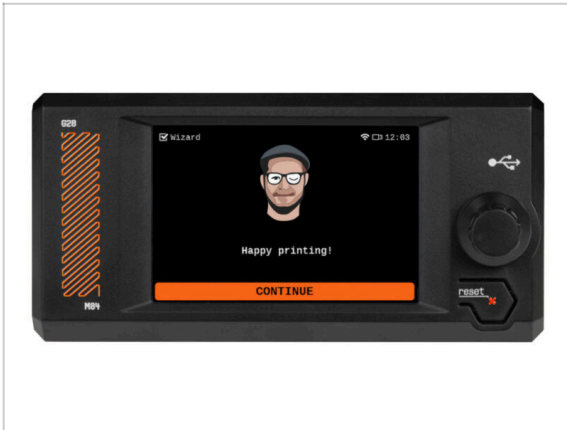
- ✦ Once you get to the Gearbox Alignment part, select **Continue** and follow the on-screen instructions.
- ✦ Make sure the idler lock (swivel) is unlocked from the idler door.
- ✦ Loosen the three screws on the front of the gearbox by 1.5 turns.
- ❗ The printer will go through the automatic gearbox alignment. This process can't be seen from the outside.
- ⬛ Once prompted, tighten the three screws in the pattern indicated on the screen.

PASSO 12 Wizard: Filament Sensor Calibration



- ✦ Controlla l'interruttore manuale sul sensore del filamento. **Assicurati che sia su ON.**
- ✦ During the filament sensor calibration, you will need to use a short piece of filament. Prepare the filament and select **Continue**.
- ❗ There should be no filament inside the extruder before the calibration process starts.
- ✦ Place a spool of filament onto the spool holder on the right side of the printer.
- ✦ When prompted, begin inserting the filament into the PTFE tube located beneath the right handle.
- ⬛ Remove the filament after the calibration finishes.

PASSO 13 Configurazione guidata completata



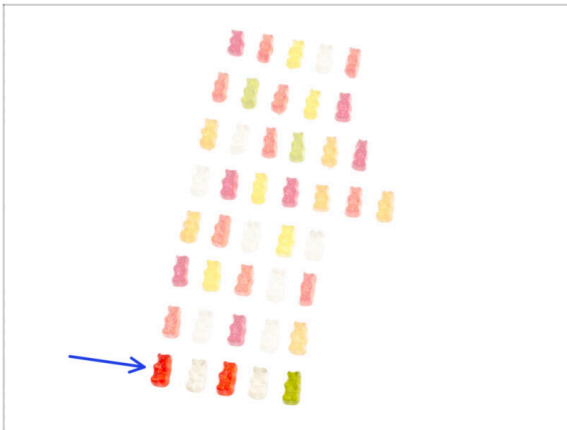
- ◆ Congratulations! The Wizard is complete. Now it's time to test some prints.

PASSO 14 Setting the printer up



- ◆ Per far aprire automaticamente la griglia superiore, vai su **Impostazioni -> Hardware -> Controllo presa di aria camera** e imposta su **Auto**.

PASSO 15 È l'ora delle Haribo!



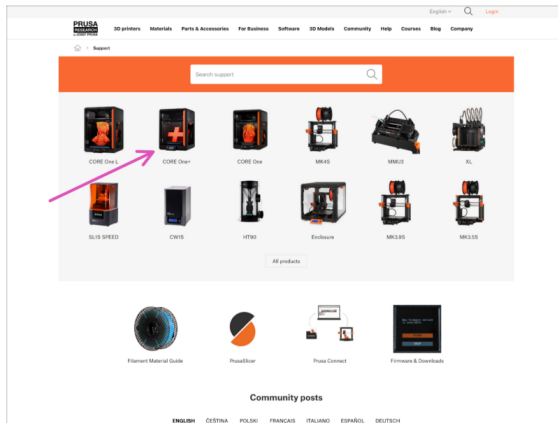
- 🛡️ Victory tastes like gummy bears!
- 🔵 Enjoy the rest. You've earned this.

PASSO 16 Manuale



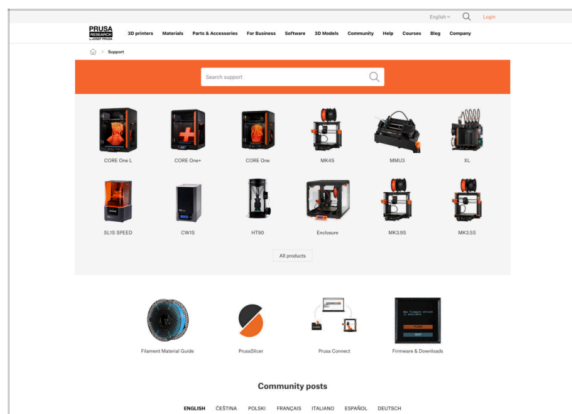
- 🛡️ Read the **3D Printing Handbook** dedicated to your printer and follow the instructions to set up the printer and prepare it for your first print.
- 📌 The latest version is always available at help.prusa3d.com.
- ⚠️ Read the **Disclaimer and Safety instructions** chapters.

PASSO 17 Aggiornamento Firmware



- ❗ Tutte le stampanti sono dotate di una chiavetta USB contenente il firmware più recente. Tuttavia, si consiglia di controllare e, se necessario, aggiornare la versione del firmware ogni poche settimane.
- 🛒 Visit the help.prusa3d.com page.
- 📄 Vai alla pagina della Prusa CORE One+.
- 📁 Save the firmware file (*.bbf*) onto the bundled USB drive.
- 🔌 Collega la chiavetta USB alla stampante. Poi, quando ti viene chiesto, scegli l'opzione FLASH sul display.

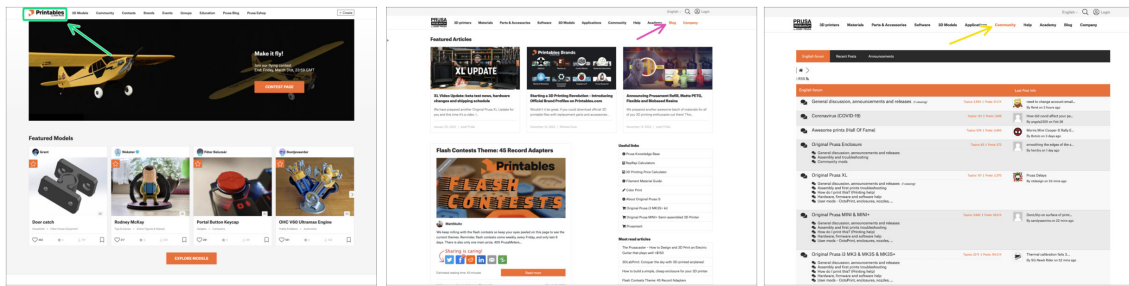
PASSO 18 Nozioni base Prusa



📌 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!

PASSO 19 Unisciti a 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](https://www.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 Prusa services share one user account.

Registro modifiche del manuale



PASSO 1 Storico versioni



- Versioni del manuale del Kit di Conversione a Prusa CORE One+:
- 11/2025 - Versione iniziale 1.00

[illegible]

This image shows a full page of blank, lined paper. It features approximately 20 evenly spaced horizontal grey lines across the entire width of the page, providing a guide for handwriting or typing. The background is a clean, solid white color.

This image shows a full page of blank, lined paper. It features approximately 20 evenly spaced horizontal grey lines across the entire width of the page, providing a guide for handwriting or typing. The background is a clean, off-white color.