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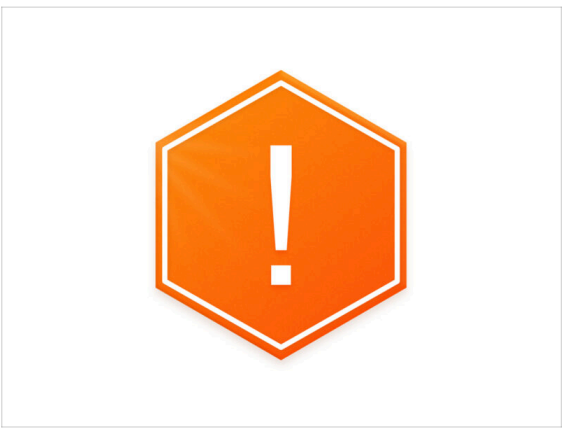
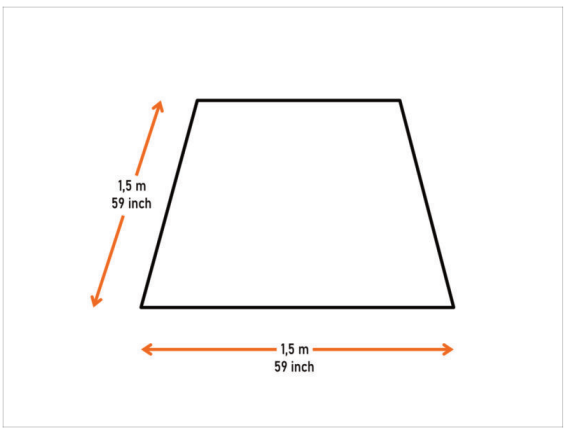
1. Introduction

PASO 1 Introduction

- This guide will take you through the **upgrading your Original Prusa XL to XL+.**
- **Do not discard any parts unless instructed to do so.**
  - This also applies to the fasteners; you will reuse some of them later again.

PASO 2 General information

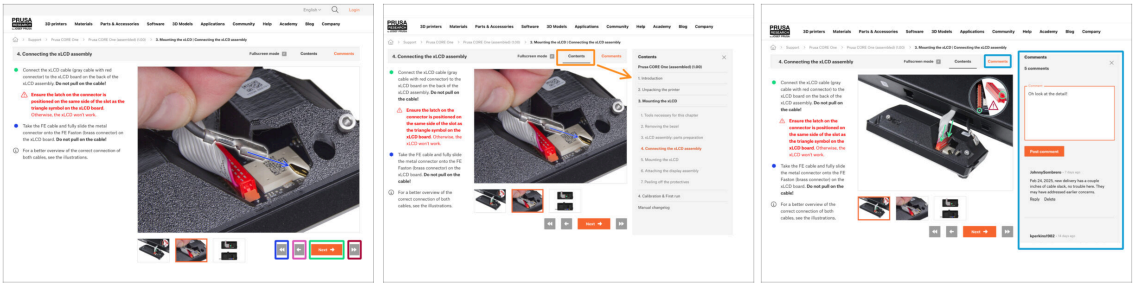




- Para el montaje, **prepara un banco de trabajo limpio con un espacio de al menos 1,5 m x 1,5 m (59 in x 59 in).**
- Recomendamos una luz brillante sobre su banco de trabajo. Algunas piezas del interior de la impresora son oscuras y una luz inadecuada hacer más difícil el montaje.

⚠ In some of the pictures throughout this guide, the toolheads **have been removed** to provide a clearer view of the assembly. Don't worry if your printer currently has them installed! Whenever the toolheads are important for a specific step, they will be **clearly visible** in the illustrations.

PASO 3 Cómo navegar por el manual



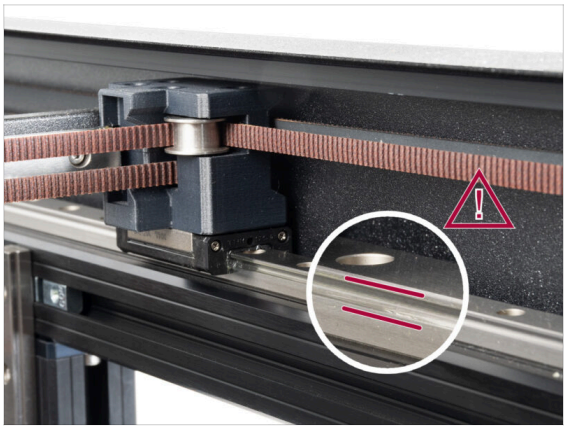
- Utiliza los botones gráficos de navegación de la esquina inferior derecha o las teclas de flecha del teclado:
  - **Botón siguiente / Tecla de flecha derecha** - Pasa a la siguiente imagen, o al siguiente paso si es la última imagen del paso.
  - **Botón de flecha izquierda / Tecla de flecha izquierda** - Se mueve a la imagen anterior, o al paso anterior si es la primera imagen del paso.
  - **Botón de reproducción hacia atrás / Flecha arriba** -Va al paso anterior.
  - **Botón de reproducción hacia adelante (Siguiente) / Tecla de flecha abajo** - Se mueve al siguiente paso.
- Haz clic en **Contenidos** para ampliar la lista completa de pasos de esta guía. Esto te permite saltar a cualquier paso independientemente de la secuencia.
- Haz clic en **Comentarios** para abrir el debate sobre un paso concreto y dejar tu opinión.

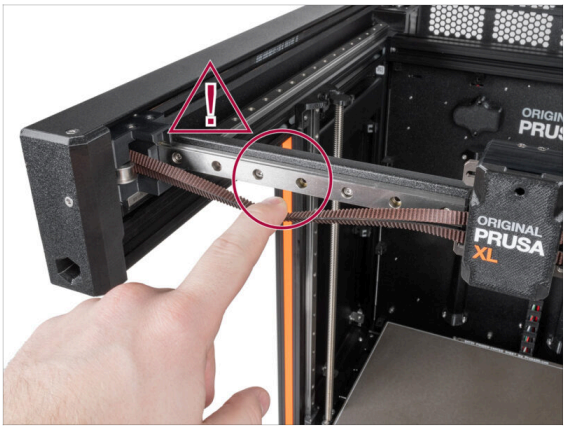
PASO 4 Labels guide

ⓘ Todas las cajas y bolsas que contienen las piezas necesarias para el montaje están etiquetadas.

- La bolsa LCD Fasteners incluye un repuesto extra de cada pieza contenida en la bolsa. La cantidad de piezas de repuesto está escrita en la etiqueta. Esta cantidad se incluye en el número total de cada tipo de pieza.

PASO 5 CAUTION: Lubricant Handling

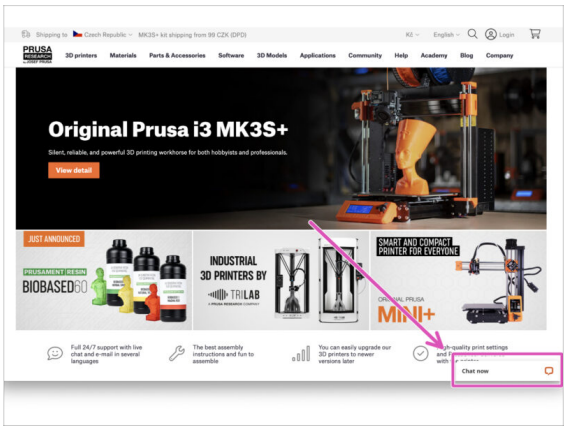


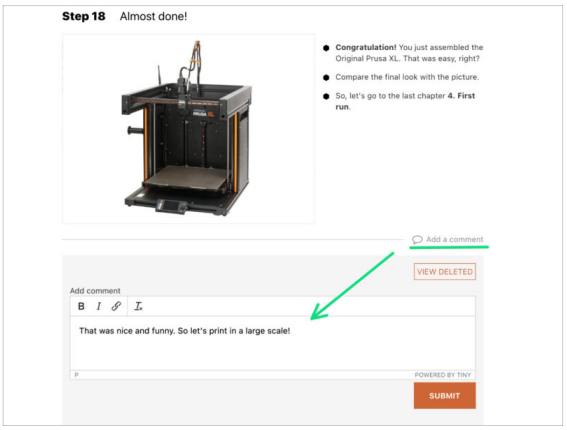


⚠ **PRECAUCIÓN: Evita el contacto directo de la piel con el lubricante utilizado para las guías lineales< de esta impresora. Si se produce un contacto,lávate las manos inmediatamente. Especialmente antes de comer, beber o tocarte la cara.**

- El lubricante se acumula en los rodamientos de la impresora, principalmente en los canales de las guías lineales.

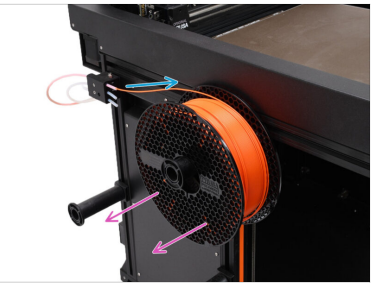
PASO 6 ¡Estamos aquí para atenderte!





- ¿Perdido en las instrucciones, te falta algún tornillo o se ha roto alguna pieza? **¡Háznoslo saber**
- Puedes contactar con nosotros empleando los siguientes medios:
  - Comentarios de cada paso.
  - Nuestro chat en vivo 24/7 en shop.prusa3d.com
  - Escribiendo un correo electrónico a info@prusa3d.com

PASO 7 Preparing the printer

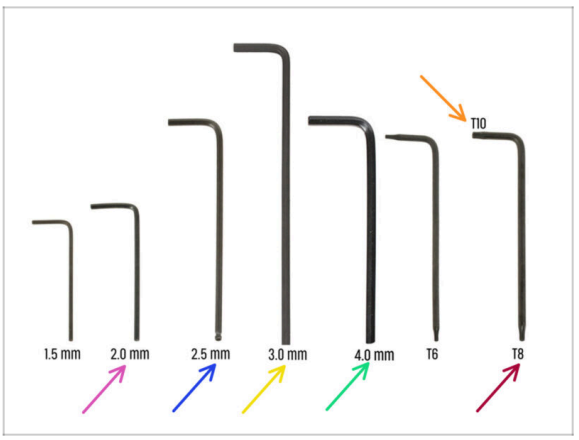


- **Before you begin:**
- Perform an **Auto Home**. Go to **Menu** -> **Control** -> **AutoHome**.
  - ⓘ This will move the heatbed to the top position, providing easier access to its underside.
- Unload all filaments from the printer. No filament must remain loaded in any print head.
- Remove all filament spools from the spool holders.
- Make sure all tools are parked in their docks. Go to **Menu** -> **Control** -> **Pick/Park tool** -> **Park Current Tool** and repeat for each tool if necessary.

⚠ Before proceeding, **make sure the printer has cooled down to room temperature**. Go to **Menu** -> **Preheat** -> **COOLDOWN** and wait approximately 10 minutes for the temperature to stabilize.

- **Turn off and unplug the printer.**

PASO 8 Necesarry tools I.



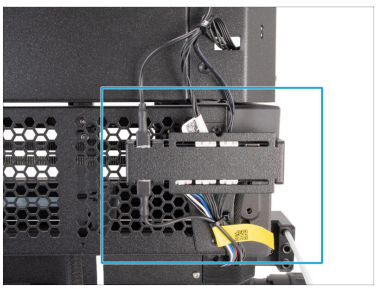
For this guide, please prepare:

- 2.0mm Allen key
- 2.5mm Allen key
- 3.0mm Allen key
- 4.0mm Allen key
- T8 Torx key
- T10 Torx key
  - ⓘ You can also use a T10 screwdriver, which is included in the package.

PASO 9 Necesarry tools II.

- **Para esta guía, prepara:**
- Needle-nose pliers
- T10 Torx screwdriver
- Universal wrench
- Wrench 13-16
- Side cutters *for cutting zip ties*

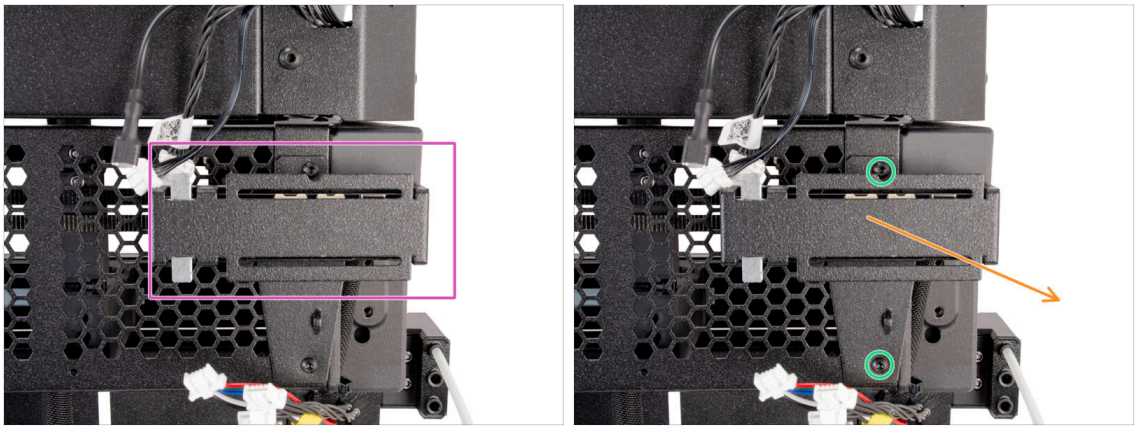
PASO 10 Enclosure removing



ⓘ The following instructions are only relevant if you have an installed enclosure on your Original Prusa XL. If not please proceed to the next chapter -> Toolhead upgrade.

- From the back of the printer:
- Locate the connection box.

PASO 11 Connection box unplugging



- Unplug all the cables from the connection box.

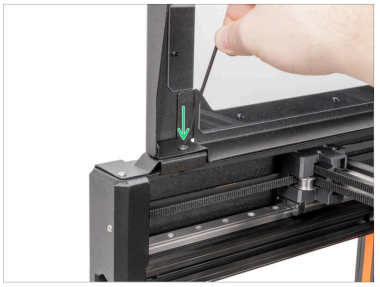
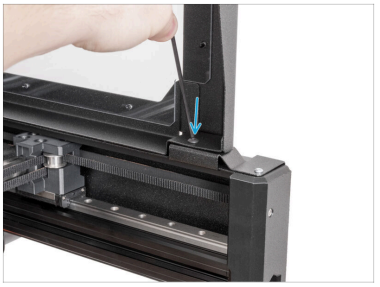
⚠ There are safety latches that need to be pressed before unplugging the inner cables. You can use an Allen key to press them through the hole in the connection box.

- Remove the two M3x10rT screws. **Keep them for future reinstalling.**
- Remove the XL Enclosure board cover.

PASO 12 Rear side releasing

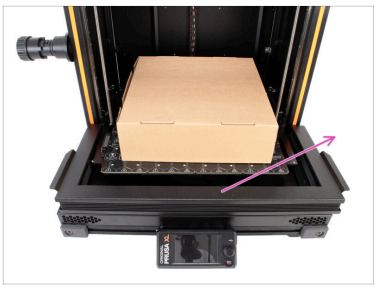
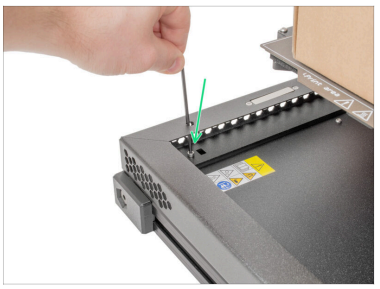
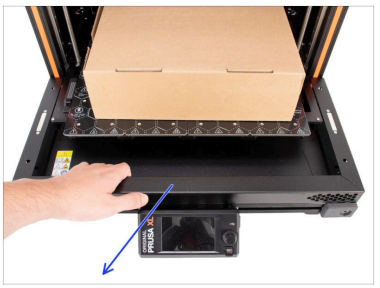
- From the rear side of the printer:
- Unscrew the M4x8r screw from the fixing-bracket-back-right. **Keep it for future reinstalling.**
- Unscrew the M4x8r screw from the fixing-bracket-back-left. **Keep it for future reinstalling.**

PASO 13 Front side releasing

- Turn the print around and open the lid.
- Unscrew the M4x8r screw from the fixing-bracket-front-left. **Keep it for future reinstalling.**
- Unscrew the M4x8r screw from the fixing-bracket-front-right. **Keep it for future reinstalling.**
- Remove the enclosure.

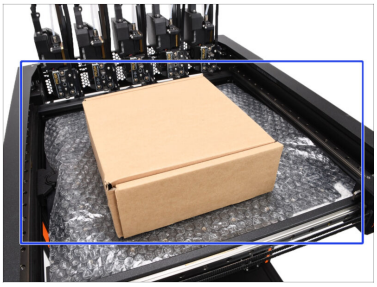
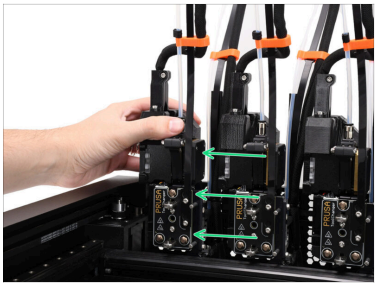
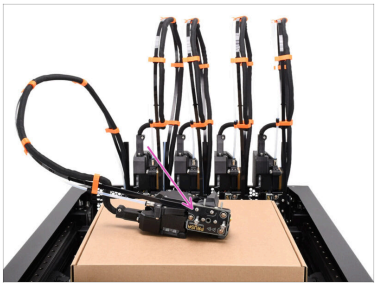
PASO 14 Lower bellows holder removing

- Remove the bellows from the lower bellows holder.
- Remove all four M3x6 screws that attach the lower bellows holder to the base extrusions. **Keep them for future reinstalling.**
- Remove the lower bellows holder.
- Now proceed with the XL+ upgrade.

2. Toolhead upgrade

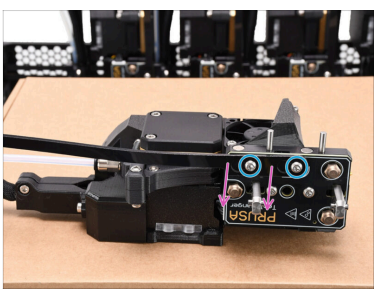
PASO 1 Releasing the tool

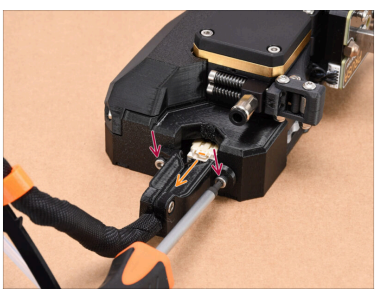




- **Turn the printer so that the front side is facing you.**
- It is highly recommended to place a soft protective layer (e.g., bubble wrap) on the heatbed.
  - Then place an empty cardboard box on top of it.
- Pull the first tool (from the left) out to the left to release it.
- Place the released tool on the cardboard box.

⚠ Check whether your toolhead has the older **black PETG idler** or the newer **gray PCCF idler**. To safely use the full high-temperature capabilities of the XL+, the **gray PCCF idler is required**. If your printer still has the black PETG version, contact our support via live chat at prusa3d.com or email info@prusa3d.com to arrange a replacement.

PASO 2 Disconnecting the tool

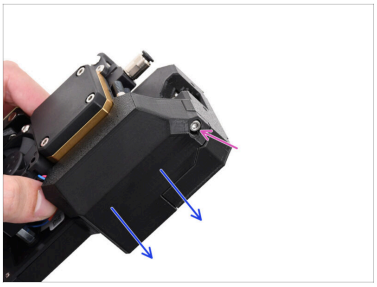
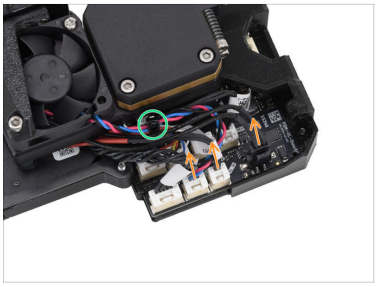
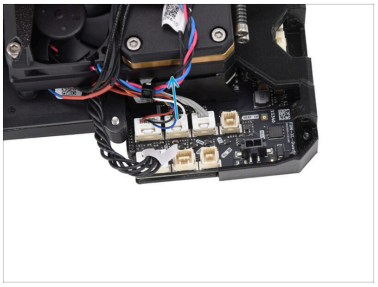




- Release, but do not remove two screws securing the flexible plate. 2-3 turns are enough.
- Unhook the flexible plate from the screws.
- Push the black collet on the fitting in to unlock the PTFE tube.
- Pull off the PTFE tube from the fitting.
- Loosen the two screws securing the main cable connector cover.
- Unplug the main cable from the Nextruder.

  ⚠ Warning: The connector has a safety latch that must be pressed to release the cable.
- Remove the Nextruder from the box and place it on the workbench. Repeat the same procedure for the remaining tools.

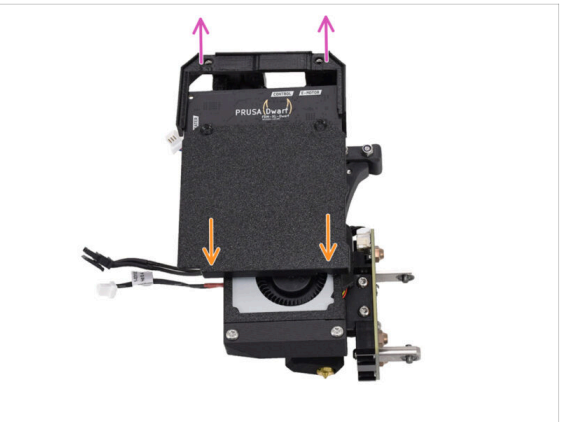
PASO 3 Uncovering the Nextruder cables

ⓘ The following steps describe the upgrade process for one tool only. **Repeat the same procedure for all remaining tools.** It is recommended to **fully complete one tool before continuing with the next**.

- Quita el tornillo que sujeta la Dwarf-cover-door.
- Retira la Dwarf-cover-door y deshazte de ella. Ya no la necesitarás.
- Corta con cuidado la brida que sujeta los cables del Nextruder. **Evita cortar los cables**.
- Desconecta los tres cables de la fila derecha de conectores.
- Desconecta el cable del ventilador del disipador térmico y el cable del termistor del hotend de la fila izquierda de conectores.

PASO 4 Removing the dwarf covers



- Quita los dos tornillos que sujetan la Dwarf-cover-back.
- Desliza la Dwarf-cover-base (la parte superior) para sacarla del Nextruder.
- Desliza la Dwarf-cover-back hacia abajo y retírala del Nextruder.

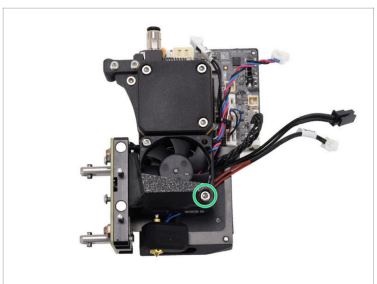
PASO 5 Info: Dwarf board version

- **Comprueba la versión de la placa Dwarf. Algunas versiones requieren su sustitución.**
- La versión de la placa está impresa en el reverso de la placa.

  ⓘ Normalmente, versiones como 08|2024–12|cMC, etc. **Los dos primeros dígitos** (08) indican la versión de la placa.
- **Las versiones 07 y anteriores de la placa Dwarf no son compatibles** con la actualización XL+.
  - If this version is installed, replace the Dwarf board using the dedicated guide How to replace a Dwarf board (XL multi-tool).

  ⓘ Follow only the steps required for the board replacement. The Nextruder has already been partially disassembled.
  - After replacing the Dwarf board, return to this guide and continue from this step.

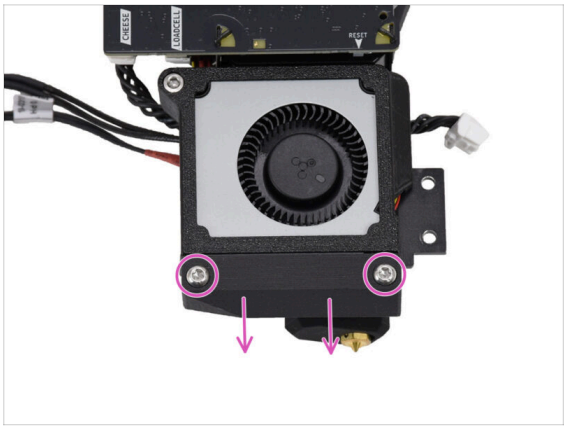
PASO 6 Releasing the Tool changer

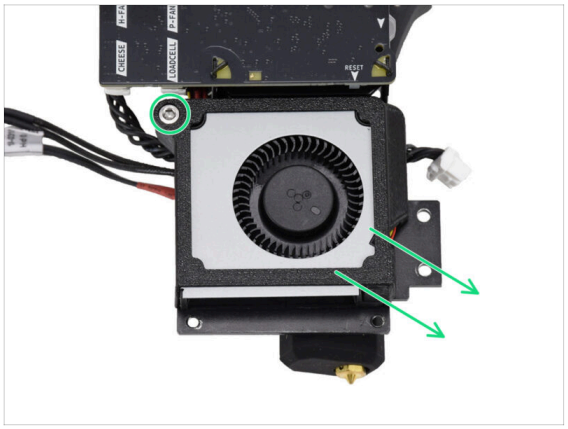


- Unscrew the M3x30 screw attaching the Tool changer to the heatsink fan.
- From the opposite side of the Nextruder, remove two screws securing the Tool changer.
- Disconnect the tool changer cable from the Tool changer.

  ⚠ Warning: The connector has a safety latch that must be pressed to release the cable.

PASO 7 Retirar el ventilador de capa

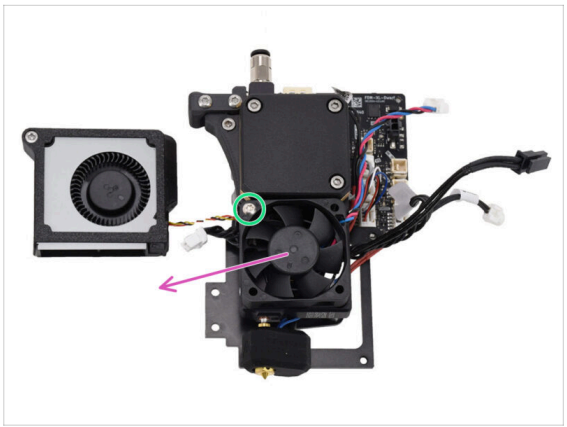


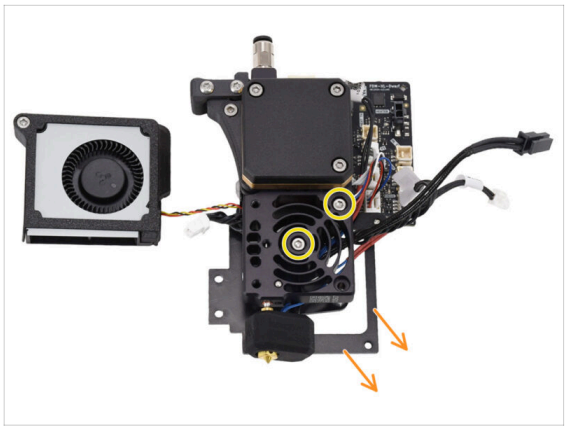


- Unscrew two screws securing the fan-shroud and remove it from the Nextruder.
- Remove the screw securing the print fan, then move the print fan aside.

ⓘ The print fan will be fully removed in the following steps. Removing now would resolve in damaging the print fan cable.

PASO 8 Removing the heatsink fan

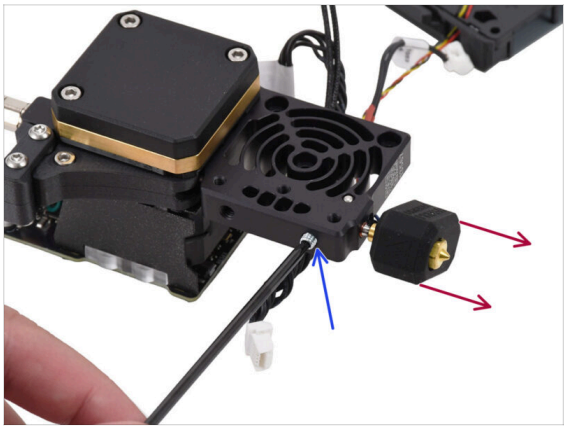


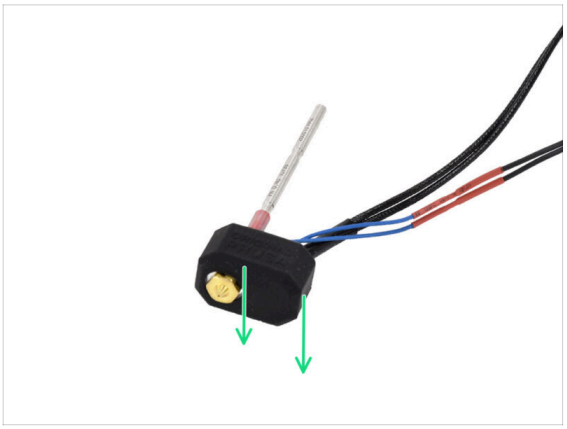


- Loosen the screw securing the heatsink fan.
- Remove the heatsink fan from the Nextruder.
- Release two screws holding the extruder plate (metal sheet).
- Remove the extruder.

ⓘ This part will no longer be needed.

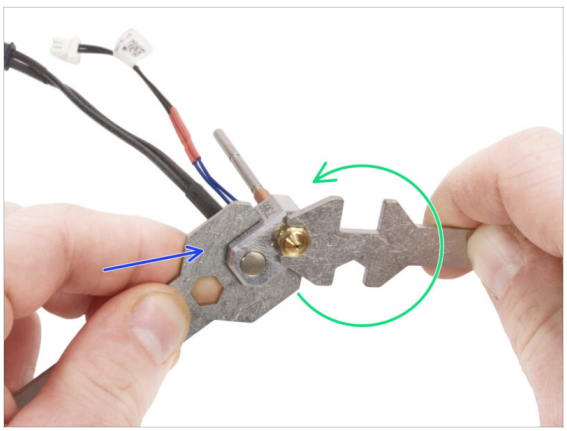
PASO 9 Removing the hotend

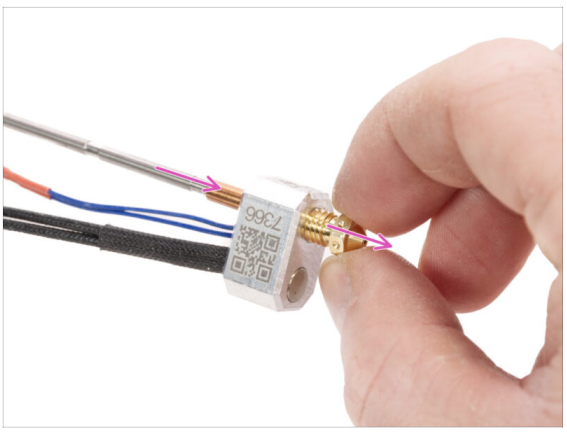




- From the heatsink side, loosen the set screw securing the hotend. **Do not remove it completely**; 2–3 turns are sufficient.
- Carefully slide the hotend assembly out of the heatsink.
- If a silicone sock is installed on the hotend, remove it.

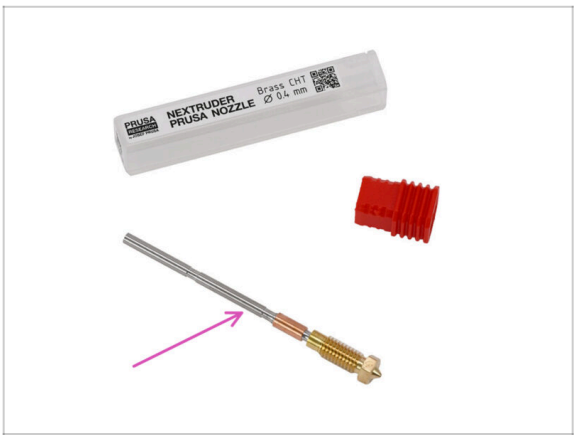
PASO 10 Retirando la boquilla Prusa





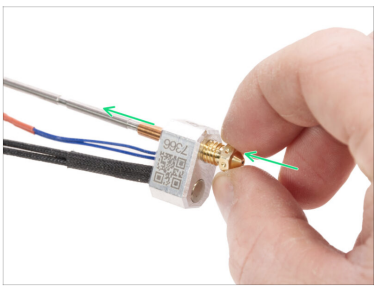
- Using the wrench 13-16 grasp the heaterblock.
- Using the 7mm cutout in the universal wrench, grasp the nozzle and loosen it.
- Manually release and remove the Prusa Nozzle from the hotend assembly.

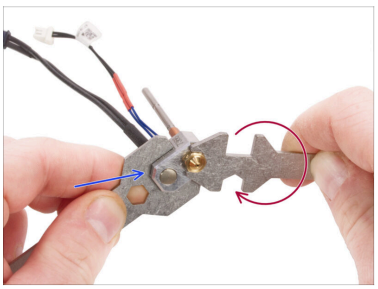
PASO 11 Instalando la boquilla Prusa: preparación de las piezas



- For the following steps, please prepare:
- New Prusa Nozzle CHT (1x)

PASO 12 Instalando la boquilla Prusa

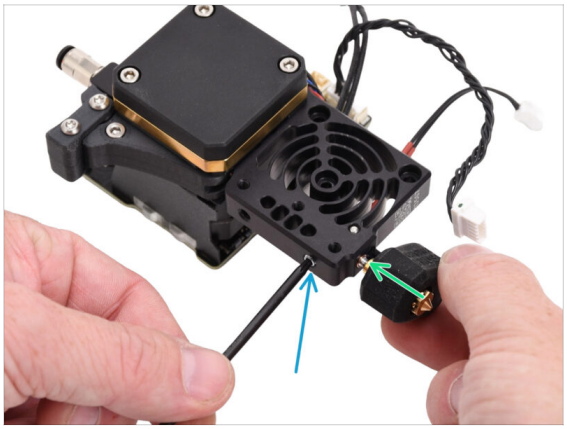


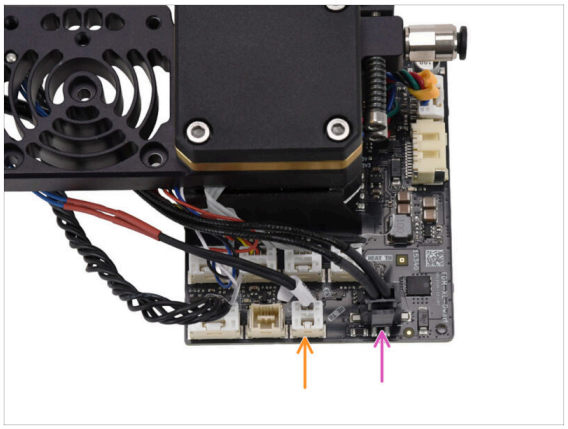


- Inserta la boquilla completamente en el bloque calefactor hasta que la boquilla toque la superficie del bloque calefactor.
- Sujeta el bloque calefactor con la llave 13-16.
- Utilizando el corte de 7 mm de la llave universal, aprieta la boquilla contra el bloque calefactor. ¡No ejerzas ninguna fuerza adicional!

  ⓘ El valor de par especificado es 1.5 Nm (13.3 lb-in).
- Vuelve a colocar el calcetín de silicona en el hotend.

PASO 13 Inserting the hotend

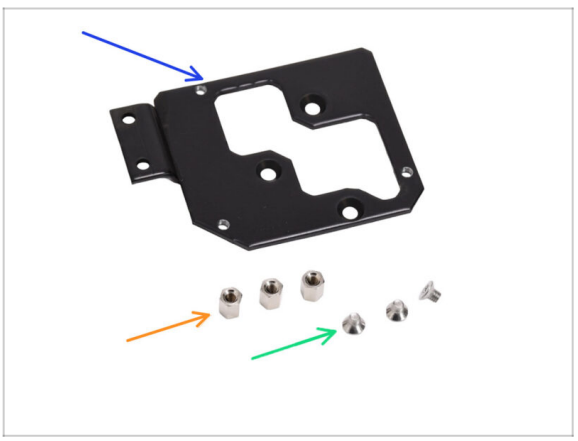




- Introduce completamente el conjunto del hotend en el disipador de calor.
- Aprieta ligeramente el tornillo de fijación para sujetar el hotend.

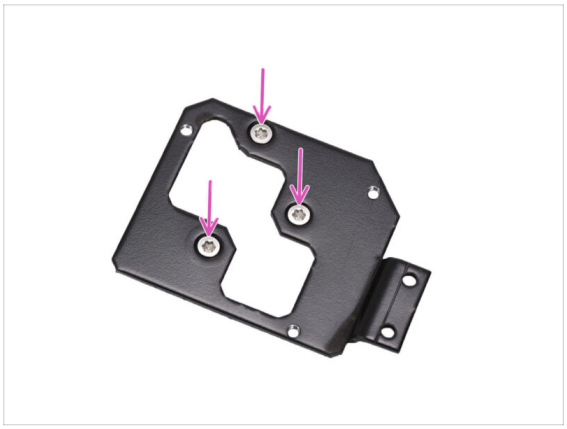
  ⚠ **No aprietes del todo el tornillo de fijación.** El hotend debe poder seguir girando. Se apretará por completo más adelante.
- Conecta el termistor del hotend al conector etiquetado como HE HT.
- Conecta el calentador del hotend al conector negro de la derecha.

PASO 14 New extruder plate: parts preparation



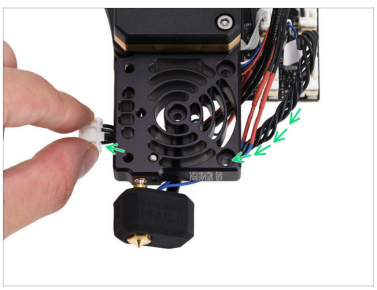
- For the following steps, please prepare:
- Nueva extruder plate (1x)
- Espaciador M3x6 (3x) *asegúrate de que estás utilizando la pieza nueva,* ***no la antigua***
- M3x4rT screw (3x)

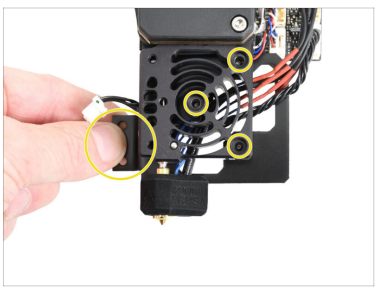
PASO 15 Assembling the extruder plate

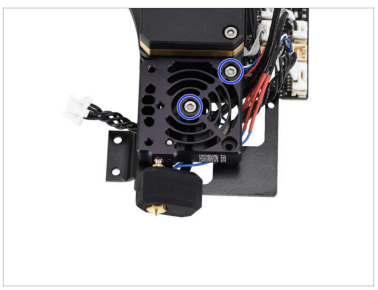


- Inserta tres tornillos avellanados M3x4rT en la extruder plate.
- From the opposite side, screw three M3x6 spacers onto the screws. Tighten them using a T10 screwdriver and a universal wrench.

PASO 16 Installing the extruder plate

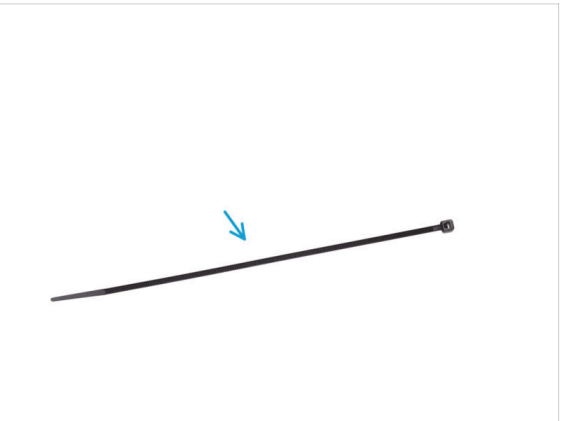






- Route the tool changer cable under the heatsink.
- From the underside of the heatsink, place the assembled extruder plate with the spacers facing the heatsink.
  - Align the part with the holes. Make sure the orientation is correct by checking the two-holes side tab.
- Fix it using two M3x10 screws.

PASO 17 Ventilador de impresión: preparación de las piezas



- **Para los siguientes pasos, por favor prepara:**
- Print fan (1x)
- New fan-case (1x)
- New fan-shroud (1x)
- M3x14 screw (3x)
- M3x8rT screw (1x)
- M3nS nut (1x)
- Zip-tie (1x)

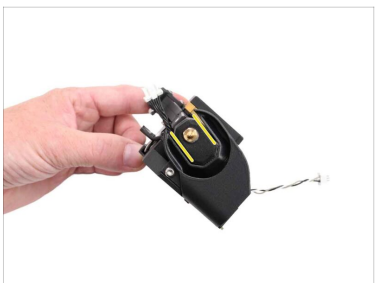
PASO 18 Assembling the print fan

- Insert the print fan into the xls-fan-case.
- Guide the print fan cable through the cutout in the case.
- Route the cable in the cable channel.
- Insert one M3nS nut into thexls-fan-case.

PASO 19 Mounting the fan shroud

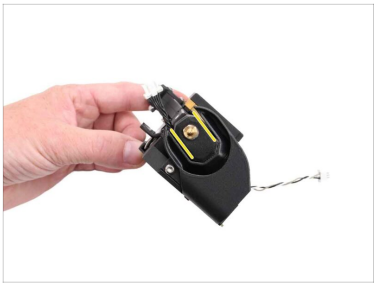
- Align the **tab on the case** with the **slot on the fan-shroud**.
- Hook the fan-shroud onto the tab on the case.
- Close the fan-shroud.
- Secure it with one M3x8rT screw.

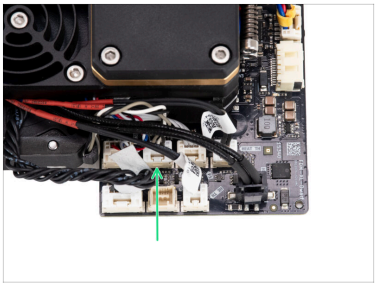
PASO 20 Instalando el ventilador de impresión



- Turn the Nextruder so the rear side is facing up and align it with the print fan assembly.
- Warning: Ensure the fan-shroud fits correctly onto the hotend. If needed, rotate the hotend to achieve proper alignment.
- When inserting, make sure the cut-out aligns with the Nextruder sheet metal.
- Fix the parts using three M3x14 screws.

PASO 21 Securing the hotend



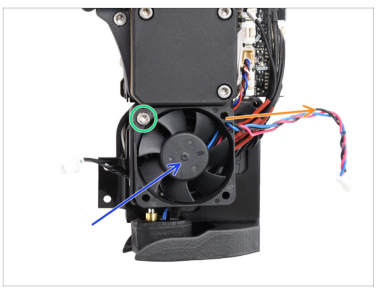
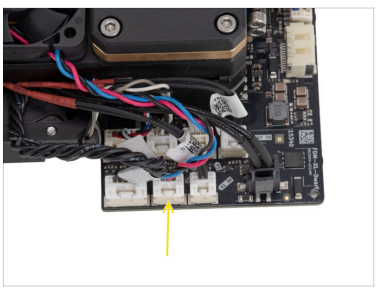
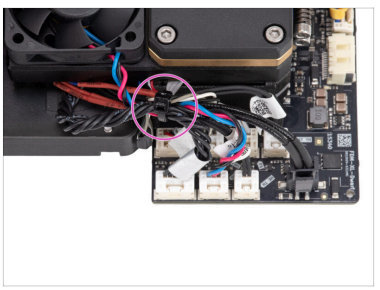


- Finally adjust the hotend orientation so it matches the shape of the fan-shroud.
- Keep the hotend in the same orientation and **push it fully in**.

⚠ **The brass collar of the nozzle core must be barely visible.**

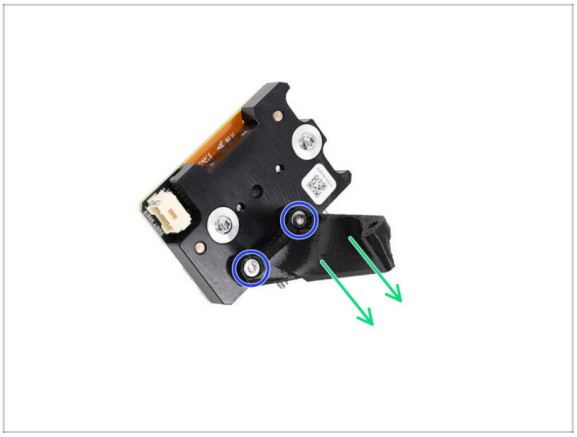
- Secure it by fully tightening the set screw.
- Connect the print fan cable to the second connector in the left row on the Dwarf board.

PASO 22 Installing the heatsink fan

- Place the heatsink fan on the extruder plate so the cable is in the upper right corner.
- Make sure the fan is positioned so the cable is coming from the upper right corner.
- Secure it with one M3x20rT screw in the upper left corner.
- Plug the heatsink fan into the remaining free connector in the right row on the Dwarf board.
- Using a zip-tie, bundle the cables together and cut off the excess plastic.

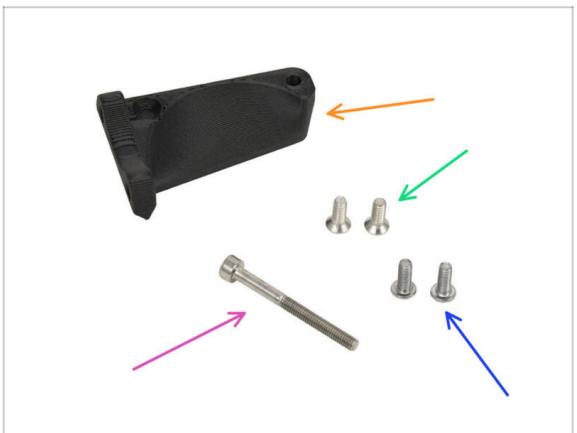
PASO 23 Removing the old hotend fan shield



- Remove the two M3x8bT screws.

  Make sure to keep the screws close for the next step.
- Remove the old hotend fan shield.

PASO 24 New hotend fan shield: parts preparation

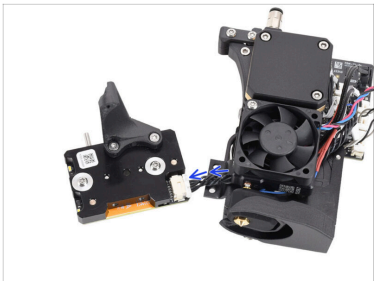
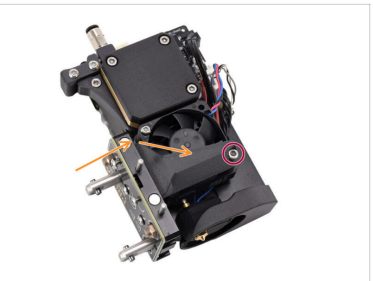


- **Para los siguientes pasos, por favor prepara:**
- New hotend fan shield (1x)
- M3x8bT screw (2x)
- M3x8rT screw (2x)
- M3x30 screw (1x)

PASO 25 Installing the new hotend fan shield

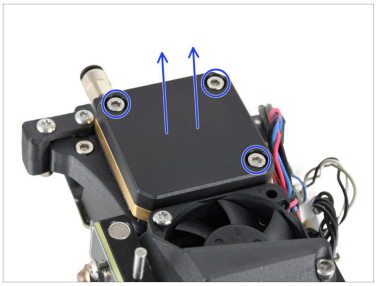
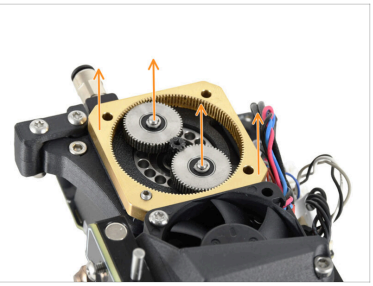
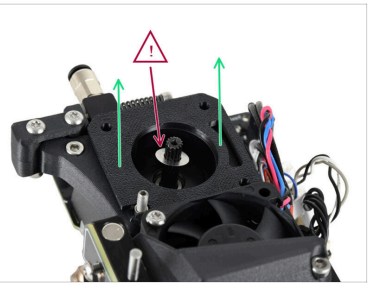
- Align the holes of the hotend fan shield with the holes on the Tool changer.
- Secure with two M3x8bT screws.

PASO 26 Installing the Tool changer

- Plug the Tool changer cable to the Tool changer.
- Place the Tool changer on the Nextruder.
- Secure it with the M3x30 screw.
- From the opposite side of the Nextruder, secure the Tool changer using two M3x8rT screws.

PASO 27 Removing the old main plate

- Remove the three M3x25 screws and the Extruder front case.
- Carefully lift up the G assembly out of the old main plate.
- Remove the old main plate.

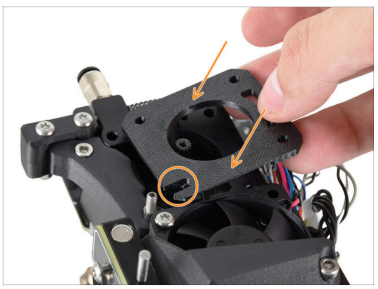
  ⚠ Locate the **metal washer** that should be between the gearbox and the motor. It might be stuck to the PG assembly.

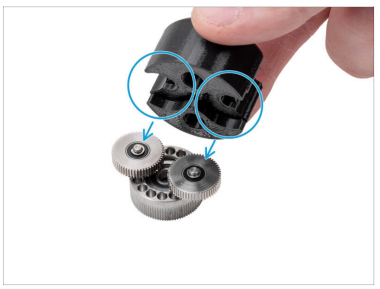
  - Reseat the washer / spacer on the motor shaft, in case it has come off the shaft.

PASO 28 New main plate : parts preparation

- **Para los siguientes pasos, por favor prepara:**
- PG-assembly-adapter (1x)
- New main-plate (1x)

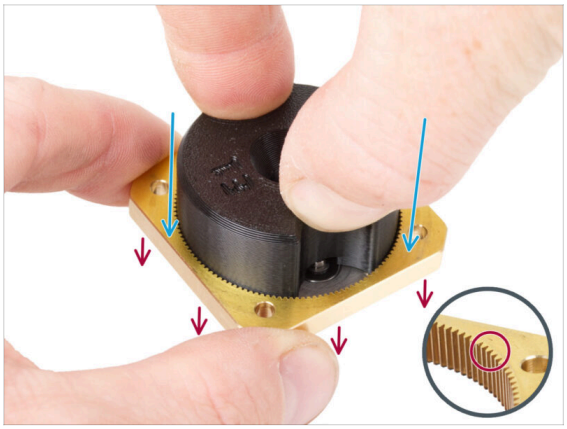
PASO 29 Installing the new main plate





- Coloca la main-plate en el disipador. Observa la orientación de la pieza. Utiliza el recorte como guía.
- Coloca el PG-assembly-adapter en el PG-assembly. Observa las cavidades para los engranajes en el adaptador.
  - Achieve better understanding and successful assembly by watching the video alongside the guide: prusa.io/PG-assembly.

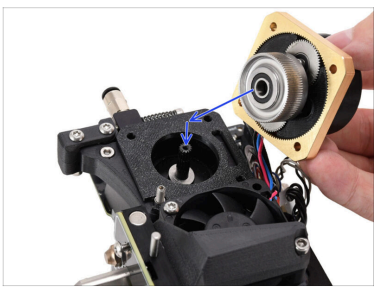
PASO 30 Assembling the PG ring

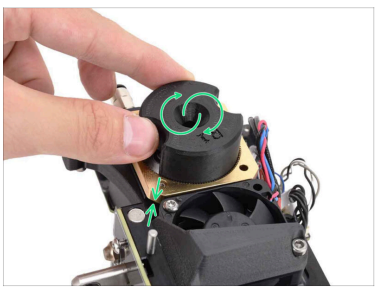


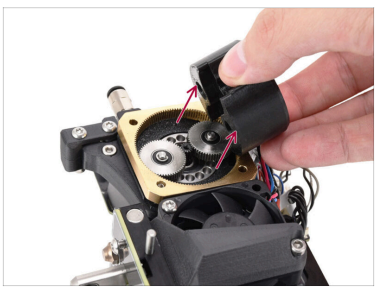
⚠ **No monte la caja de cambios sin el PG-assembly-adapter.** Esta herramienta está destinada a garantizar que los engranajes encajen correctamente.

- Slide the PG-ring onto the adapter.
- Note there is a chamfer on one side of the PG-ring teeth. This side must be facing down (to the PG-assembly).
- 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.

PASO 31 Assembling the PG-assembly



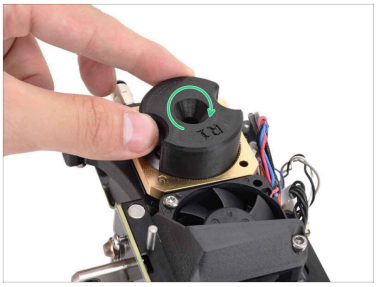
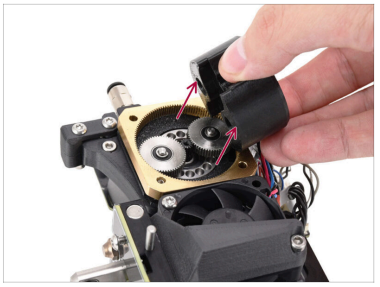
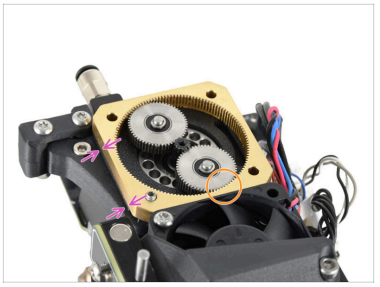




⚠ **Procede con mucho cuidado en este paso.**

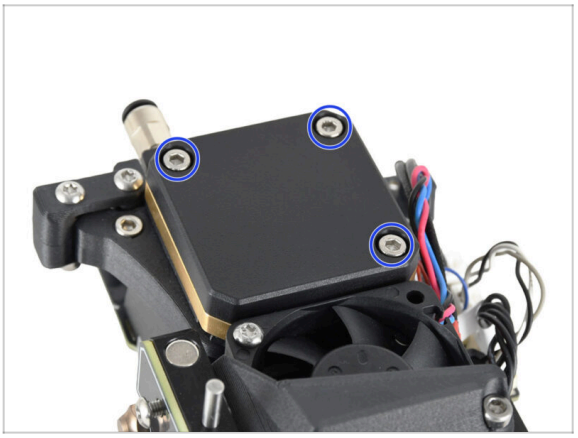
- Maintain the position of the PG-assembly and attach it on to extruder motor shaft.
- Very gently and freely wiggle with the whole PG assembly (PG-assembly-adapter, PG-assembly and PG-ring) until it drops down so that there is no gap between the assembly and the main-plate. Do not push on the assembly.
- Remove the PG-assembly-adapter.

PASO 32 Checking the 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.**
- Remove the PG-adapter and keep it aside for the other toolheads.
- 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.

PASO 33 Cubriendo los engranajes planetarios



- Coloca la tapa frontal en la caja de engranajes y fíjala con tres tornillos M3x25. **No los apriete completamente** en este momento.

  ⓘ The screws on the front case will be completely tightened during the self-test in the final chapter.

PASO 34 New dwarf cover : parts preparation

- **Para los siguientes pasos, por favor prepara:**
- New dwarf-cover-base (1x)
- New dwarf-cover-back (1x)
- New dwarf-cover-door (1x)
- M3x8bT screw (2x)
- M3x16 screw (1x)
- M3nS nut (4x)
- M3nN nut (1x)

PASO 35 Assembling the new dwarf cover base

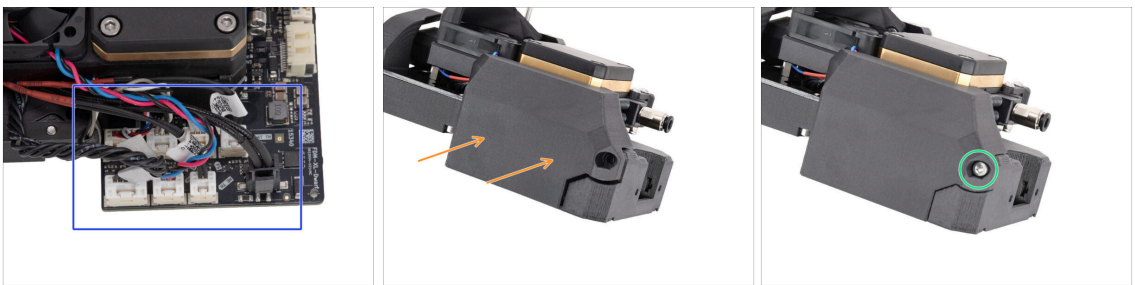
- Insert two M3nS nuts into the designated openings.
- Insert the other two M3nS nuts into these designated openings.
- Insert the M3nN nut into the dwarf cover base side.

ⓘ We recommend using the screw pulling technique.

PASO 36 Covering the Dwarf board

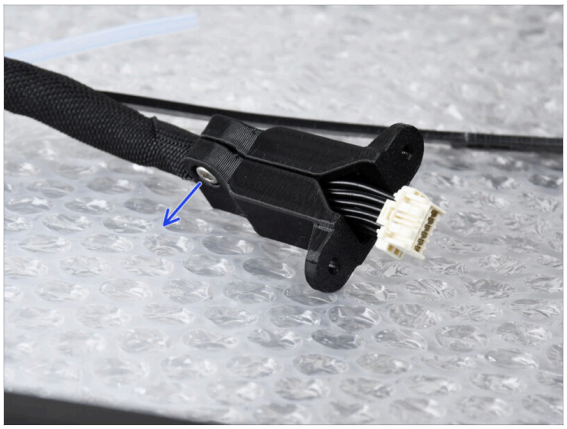
- In the correct orientation, slide the dwarf-cover-base onto the Dwarf board. Insert it into the rails.
- Place the dwarf-cover-back onto the Dwarf board, slide it upward, and align the holes.
- Fix it using two M3x6rT screws.

PASO 37 Covering the Dwarf cables



- Before closing the electronics cover, ensure all cables are correctly connected and not protruding from the compartment.
- Attach the dwarf-cover-door to the Nextruder and ensure it sits flush all around.
- Secure it with an M3x16 screw. **Do not overtighten it**; the cover must remain easy to open.

PASO 38 Removing the old dwarf cover connector

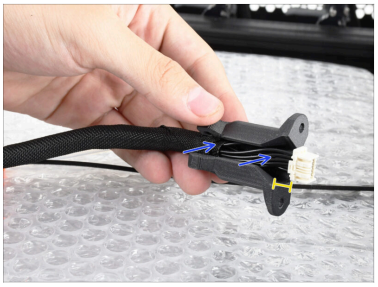
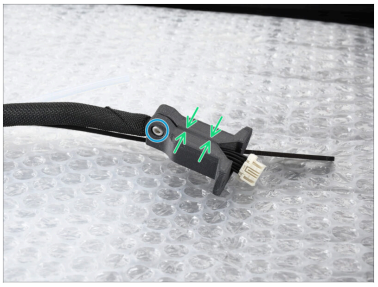


- Remove the M3x10 screw from the top of the dwarf cover connector.
- Remove the dwarf cover connector by pulling the sides of it apart.

PASO 39 New main cable assembly: parts preparation

- **Para los siguientes pasos, por favor prepara:**
- New cable-clip-click (5x)
- New dwarf cover connector
- M3x10 screw (3x)
- M3nN nut (1x)

PASO 40 Installing the new dwarf cover connector

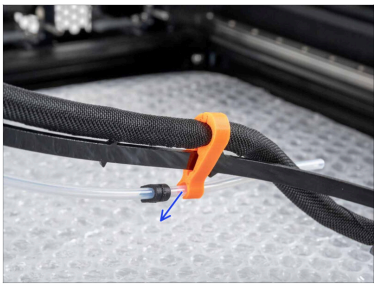
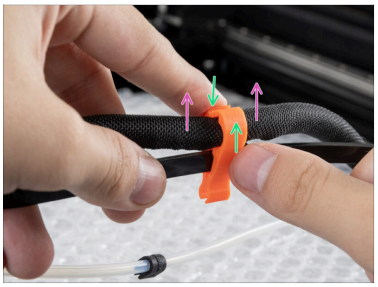
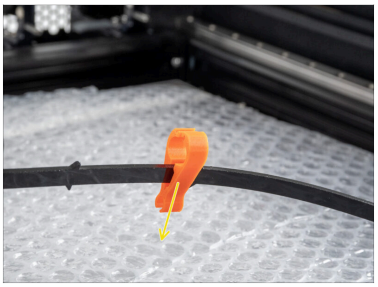
- Insert the M3nN nut into the hexagonal opening of the dwarf connector
- Insert the main cable into the Dwarf cover connector.

  Pay attention to the **orientation** of the plastic part.

  - Leave a little bit of extra length on the main cable outside the dwarf cover connector.
- Carefully push the two halves of the Dwarf cover connector together.

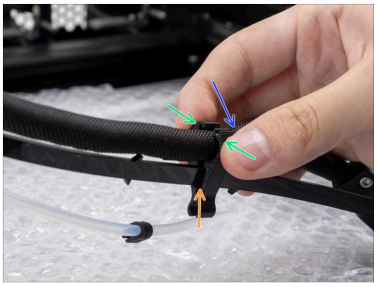
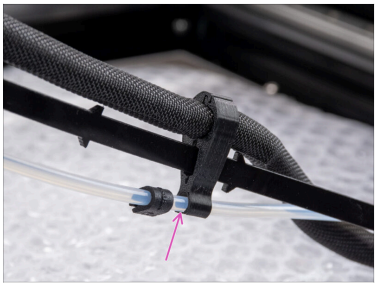
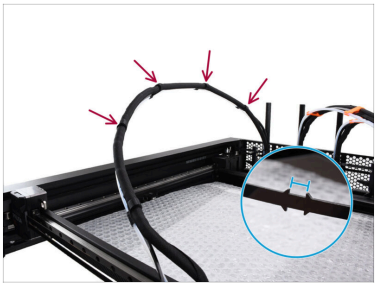
  Pay close attention not to pinch any cables between the plastic parts before you tighten the screw!
- Secure the parts together by tightening the M3x10 screw.

PASO 41 Removing the old cable-clip-click

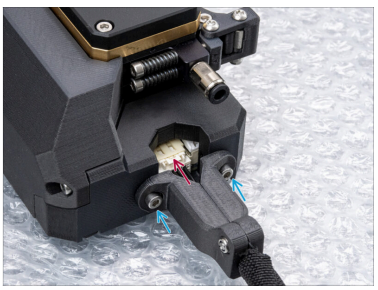
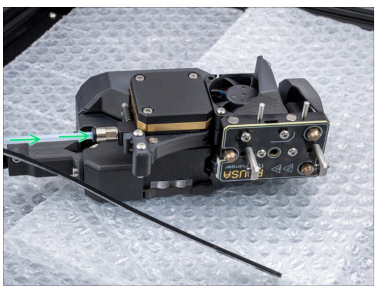
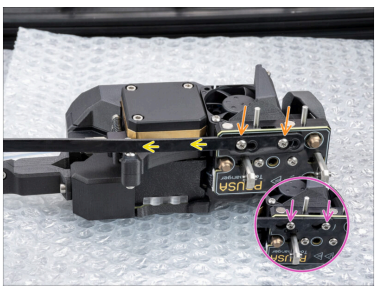
- Pull the PTFE tube out of the cable-clip-click
- Open the clip by pushing on each side of the clip in opposite directions
- Remove the main cable from the cable-clip-click
- Remove the old cable-clip-click

PASO 42 Installing the new cable-clip-click

- Attach the new cable-clip-click onto the flexible plate.
- Insert the main cable into the cable-clip-click.
- Close the clip by pressing both sides together until they snap into place.
- Push the PTFE tube into the designated groove on the cable-clip-click.
- Repeat the entire removal and installation procedure for the four remaining clips. Always replace them one at a time.
  - Always install the cable-clip-click inside the notches on the flexible plate.

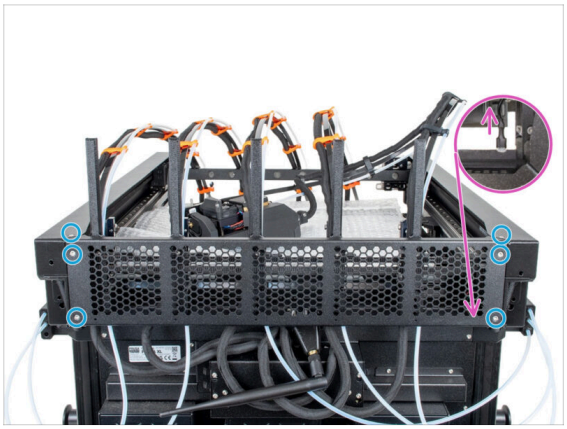
PASO 43 Connecting the tool

- Place the Nextruder assembly back onto the printer box.
- Connect the main cable to the Nextruder.
- Secure the connector with two M3x10 screws.
- Fully insert the PTFE tube into the fitting as far as it will go.
- Hook the flexible plate onto the pre-installed screws on the tool changer.

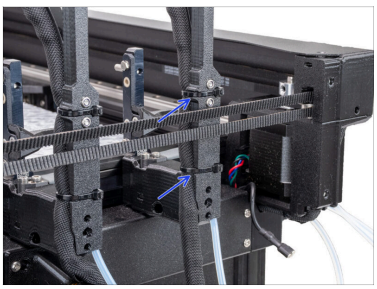
  ⚠ Make sure the flexible plate is not twisted.
- Gently pull the flexible plate to properly hook it onto the screws.
- Fully tighten the screws.

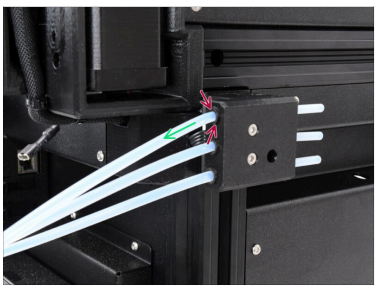
PASO 44 Uncovering the back

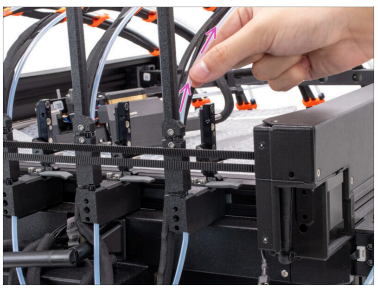


- Remove the six M3x8bT screws from the back metal plate.
- Carefully unplug the PE faston connector from the inside of the back metal plate.
- Slide the corners of the back metal plate out from under the side metal plates to remove it completely.

PASO 45 Removing the Tool dock assembly I.



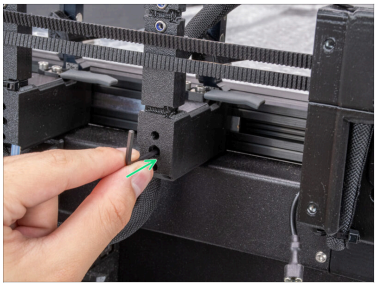
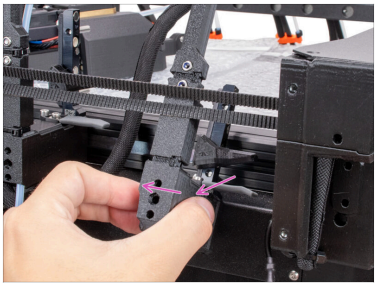




- **Carefully** cut the zip ties on the dock-cable-router.

  ⚠ **Pay close attention not to cut any cables!**
- Push the black collet on the filament sensor **in** to unlock the PTFE tube.
- Pull off the PTFE tube from the black collet.
- Pull the PTFE tube completely out of the dock-cable-router.

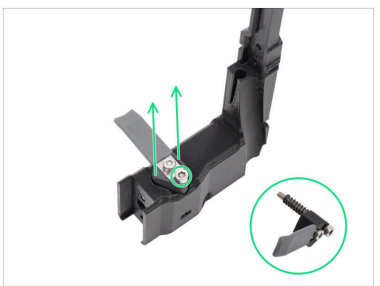
PASO 46 Removing the Tool dock assembly II.

- Remove the two M3x14 screws from the dock-cable-router to free the flexible plate.
- Using the 2.5mm allen key, fully loosen the M3xbT screw from the middle hole.
- Carefully remove the Tool dock assembly from the rest of the printer.

⚠ Make sure to **avoid causing any harm** to the printer's frame.

PASO 47 Dissasembling the Tool dock assembly



- Using the TX8 torx key, fully loosen the two M3x12bT screws inside the holes.
- Pull the dock plate away from the rest of the assembly.
- Fully loosen the M3x30 screw and remove the entire nozzle seal assembly.

⚠ Make sure you are loosening the right screw (as shown in the picture).

We recommend keeping the nozzle seal assembly together for easier assembly afterwards.

PASO 48 Dissasembling the dock plate

- Remove the M3x12bT screw from the dock-plate assembly.
- Remove the old nozzle parking-tool-finger-guide. from the dock plate.

PASO 49 New Tool dock assembly: parts preparation

- **Para los siguientes pasos, por favor prepara:**
- New dock-cable-router (1x)
- New parking-tool-finger-guide (1x)
- M3x12bT screw (3x)
- M3x14 screw (1x)
- M3x8rT screw (2x)
- M3nS nut (1x)
- M3nN nut (2x)

⚠ In you kit there is an extra component, dock cable router single tool adapter, that is only used if you have the single-head version of the printer. You may keep it as spare or discard it.

PASO 50 Assembling the new dock plate

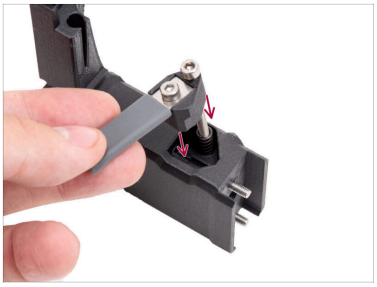
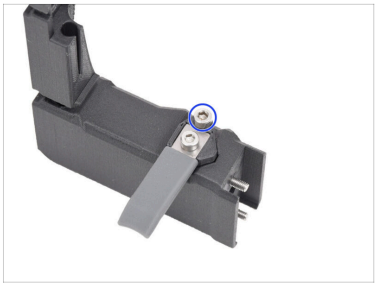
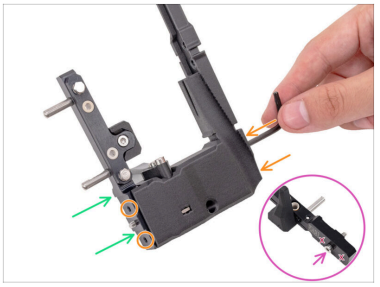
- Align the dock plate with the slot on the new parking-tool-finger-guide.
- Secure the two parts together using an M3x12bT screw.

PASO 51 Assembling the new dock-cable-router

- Insert the M3nS nut into the slot on the dock-cable-router.
- Insert two M3nN nuts into the two slots.

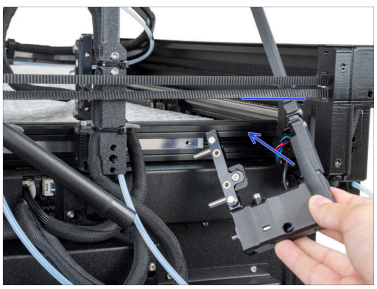
  We recommend using the screw pulling technique.
- Push two M3x12bT screws through the front of the new dock-cable-router:
  - Insert the upper screw through the hole on the top.
  - Insert the lower screw through the hole on the side.

PASO 52 Assembling the new Tool dock assembly

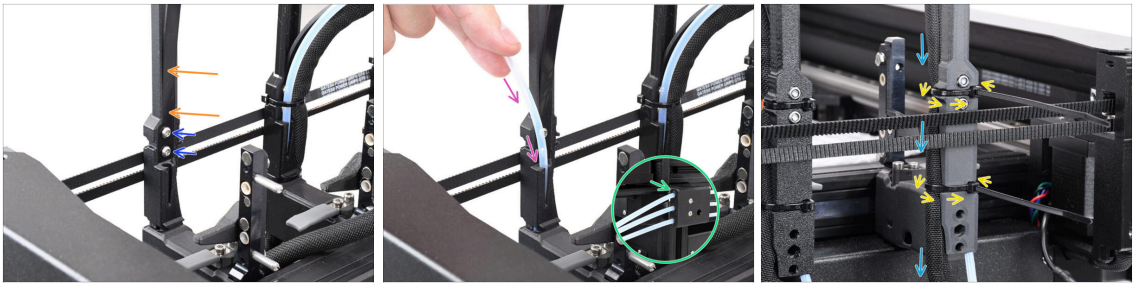
- Insert the entire parking-plate assembly into the dock-cable-router. Pay close attention to the correct orientation!
- **Lightly** tighten the M3x30 screw.
- Push the M3x14 through the middle hole in the bottom of the tool-changer.
- Press the tool-changer firmly against the dock-cable-router.
- Fully tighten the two M3x12bT screws using the **TX8 torx key**.

PASO 53 Installing the tool dock assembly I.



- Slide the Tool dock assembly under the belts.
- Align the M3x14 screw with the hole on the metal plate.
- Fully tighten the M3x14 screw using the 2.5mm allen key.

PASO 54 Installing the new tool dock assembly II.



- Place the flexible plate into the groove of the dock-cable-router.
- Secure the flexible plate with two M3x8rT screws.
- Insert the PTFE tube through the opening on the dock-cable-router.
- Push the PTFE into the black collet fitting in the filament sensor as far as possible.
- Route the main cable through the groove on the dock-cable-router.
- Secure the main cable with two zip ties.

⚠ **Pay attention to the correct orientation of the zip tie!**

PASO 55 Attaching the tool

- Place the tool from the left onto the first dock. Align the two pins with the dock holes, then insert them to park the tool.

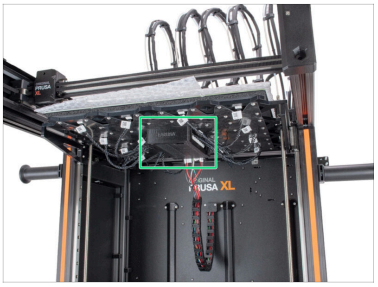
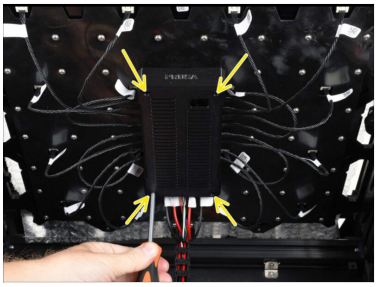
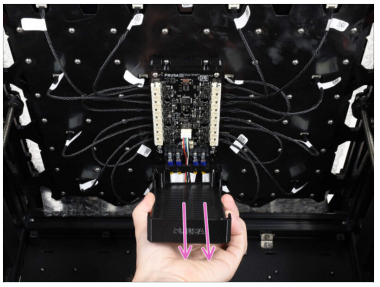
ⓘ This will snap the tool into place, allowing you to release it.

PASO 56 It's done

- Repeat the steps for all the heads.
- Compare the final look of the assembly with the picture.
- Let's continue to the next chapter: **Heatbed upgrade**.

3. Heatbed upgrade

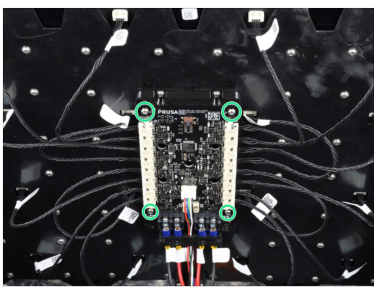
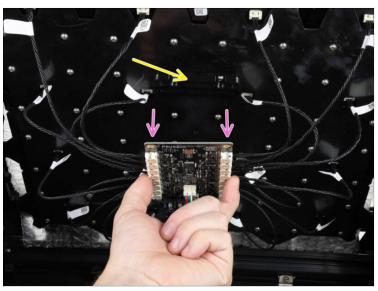
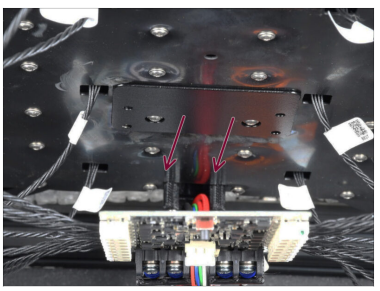
PASO 1 Uncovering the heatbed controller

- Locate the plastic electronics box on the underside of the heatbed.
- Using the T10 screwdriver, unscrew four M3x20rT screws and remove the cover.
- Remove the electronics cover.

⚠ **Avoid damaging the electronics.**

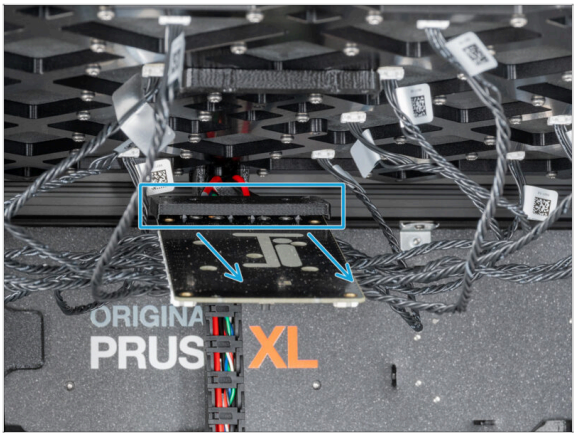
PASO 2 Removing the modular bed board

- Using the T10 screwedriver, unscrew four M3x10rT screws securing the modular bed board.
- Carefully release the modular bed board and let it hang freely on the cables of the individual heatbed tiles.
- Remove the XL-bed-controller-mount-front from either the underside of the heatbed or the electronics board.
- Remove the Modular Bed PCB shield from either the underside of the heatbed or the electronics board. **Keep it aside, as you will reuse it later.**

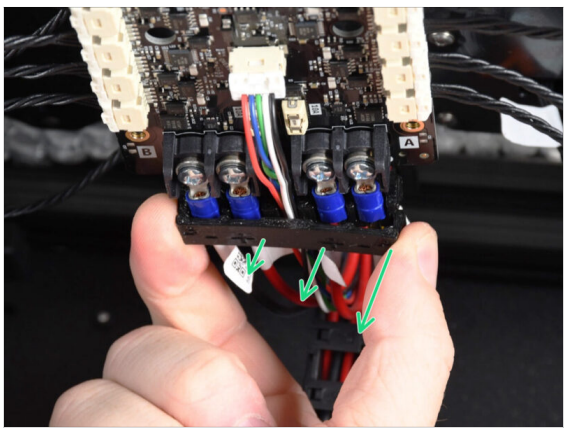
  Note: The Modular Bed PCB shield may not be present on all printers, as it was added in a later hardware update. If you do not have it, please contact our Tech Support.

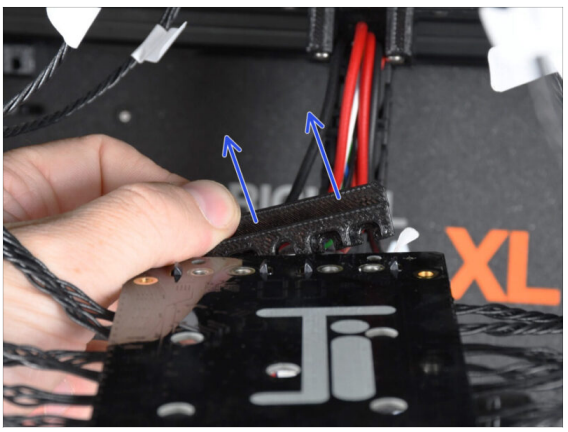
PASO 3 Removing the bed-controller-mount-rear



- Remove the XL-bed-controller-mount-rear (printed part) from the top of the board.

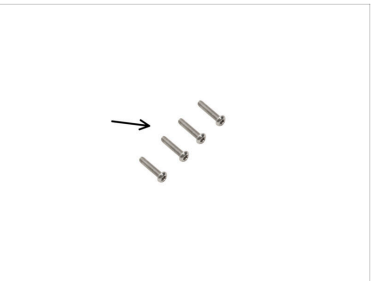
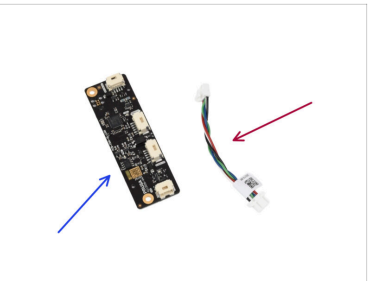
PASO 4 Unlatching the cables





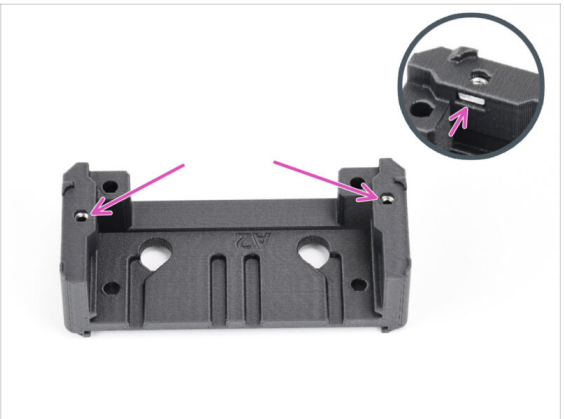
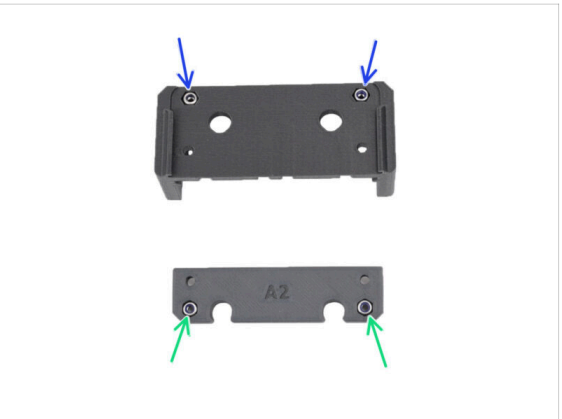
- On the underside of the board, pull the lower part of the power cable guide.
- From the top side, remove the upper part of the cable guide.

PASO 5 New bed controller mounts: parts preparation

- **Para los siguientes pasos, por favor prepara:**
- New bed-controller-mount-rear (1x)
- New bed-controller-mount-front (1x)
- M3nN nut (4x)
- M3nS nut (2x)
- M3x8rT screw (2x)
- M3x12rT screw (4x)
- XL-CAN board (1x)
- XL+ Modular bed CAN cable (1x)

PASO 6 Assembling the bed-controller-mounts I.

- Insert two M3nS nuts into the bed-controller-mount rear from the inner sides.
- Turn the bed-controller-mount-rear over and insert two M3nN nuts.
- Insert two M3nN nuts into the bed-controller-mount-front.

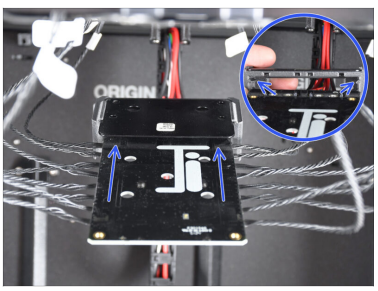
Ensure the M3nS nuts are fully inserted so their threads align with the holes in the printed part.

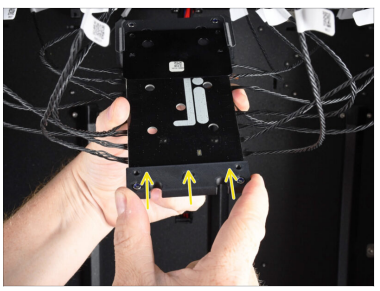
PASO 7 Assembling the bed-controller-mounts II.

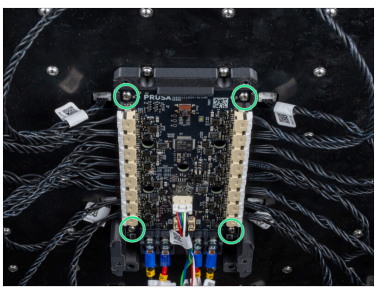
The Modular Bed PCB shield is reused from the printer.

- Insert the Modular Bed PCB shield into the slots in the bed-controller-mount-rear.
  - Insert it so far that the holes align.

PASO 8 Attaching the bed-controller-mount-rear

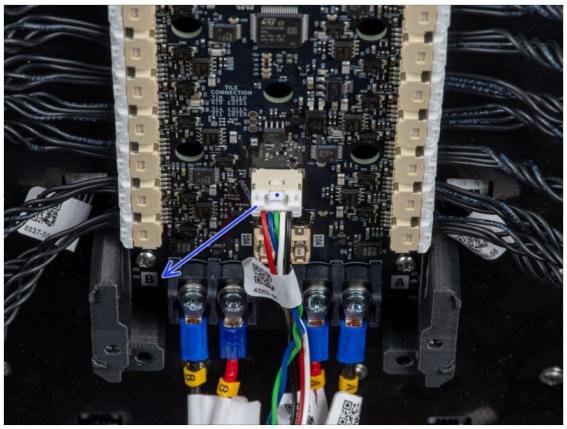


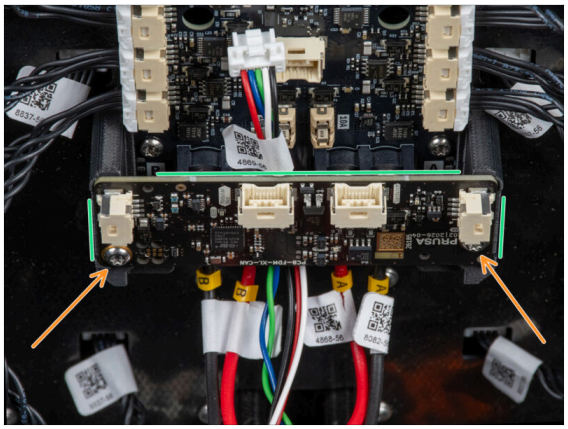




- Slide the bed-controller-mount-rear onto the Modular Bed Controller Board using the grooves, and push it in fully until seated.
- Slide the bed-controller-mount-front onto the front side of the Modular bed controller board.
- Position the Modular Bed Controller assembly at the center of the underside of the heatbed and secure it with four M3x12rT screws.

PASO 9 Mounting the XL-CAN board



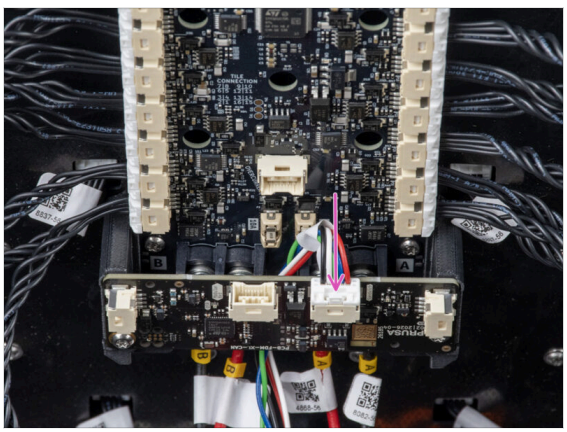


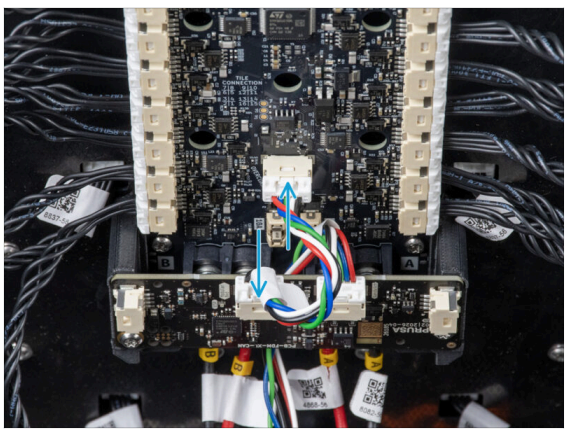
- Disconnect the Modular bed controller cable.

⚠ Be careful: the connector has a **safety latch** that must be pressed while disconnecting.

- Position the XL-CAN board onto the bed-controller-mount-rear and align it.
- Secure it with two M3x8rT screws.

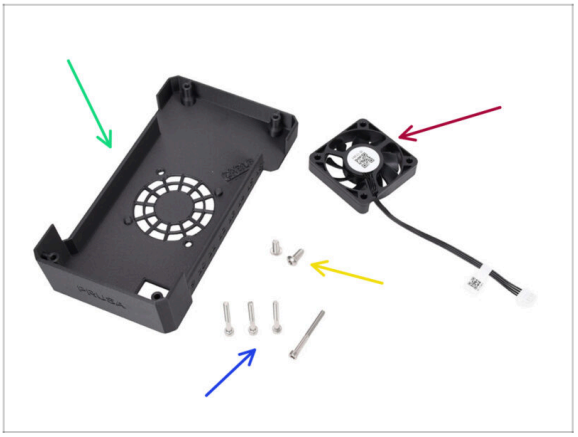
PASO 10 Connecting the XL-CAN cables





- Connect the Modular Bed Controller cable to the **right slot**.
- Connect the Modular Bed Controller board to the XL-CAN board using the XL+-ModularBed-CAN cable and the marked connectors.

PASO 11 Modular bed controller fan: parts preparation

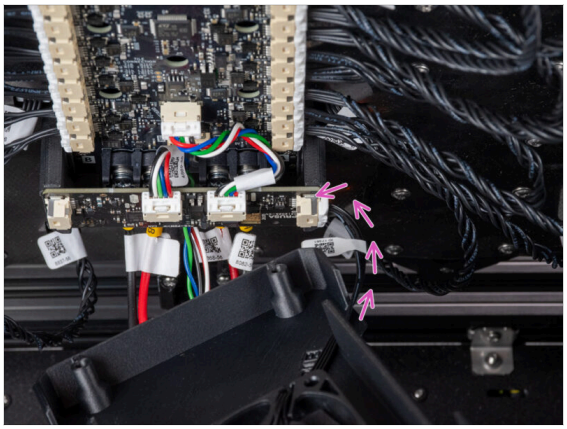


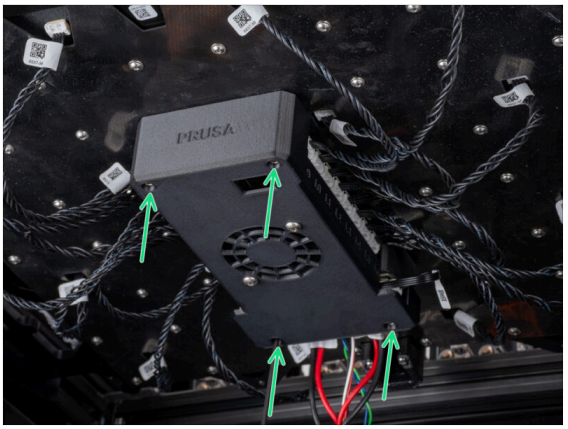
- **Para los siguientes pasos, por favor prepara:**
- New bed-controller-case (1x)
- Bed controller fan (1x)
- M4x10r screws (2x)
- M3x30 screws (4x)

PASO 12 Installing the bed controller fan

- Position the fan on the inner side of the XL+-bed-modular-case.
- **Ensure correct orientation:**
  - The sticker faces up.
  - The fan cable is routed to the left toward the rear (lower) side.
- Hold the fan in place, flip the assembly over, and fasten it with two M4x10r screws.

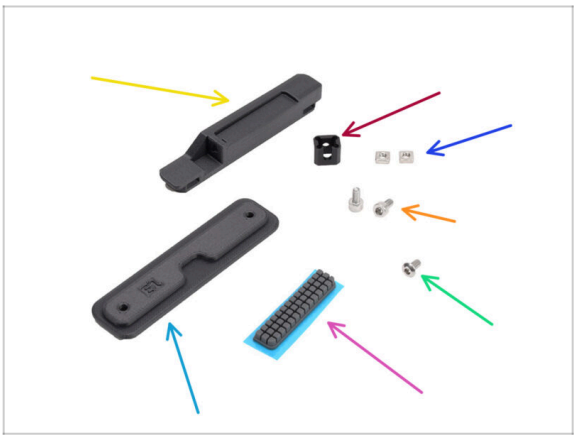
PASO 13 Covering the Modular bed controller





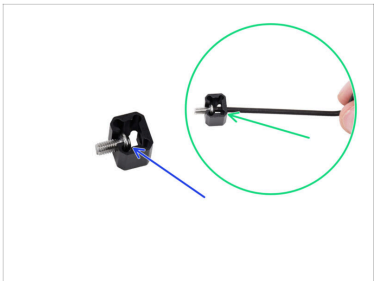
- Connect the fan to the right connector on the XL-CAN board.
- Cover the Modular bed controller with the new bed-controller-case and secure it with four M3x30 screws.

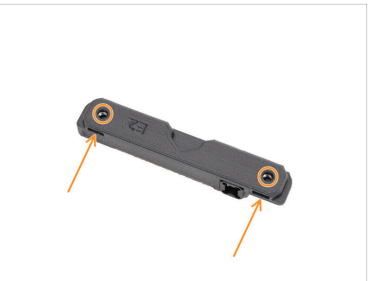
PASO 14 Nozzle wiper assembly: parts preparation



- **For the following steps, please prepare:**
- Bed-wiper-top (1x)
- Bed-wiper-bottom (1x)
- Silicone nozzle brush (1x)
- Expansion joint (1x)
- M3nS nut (2x)
- M3x6 screw (2x)
- M3x6r screw (1x)

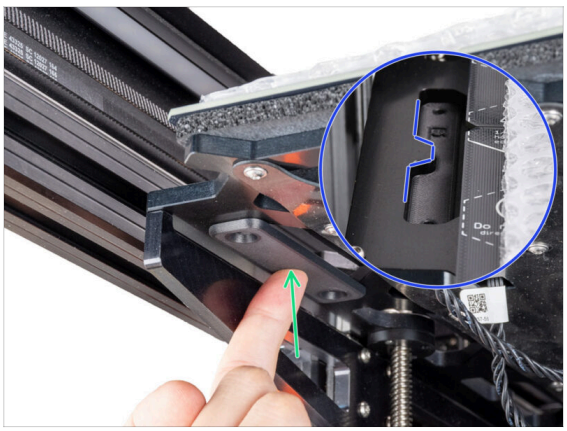
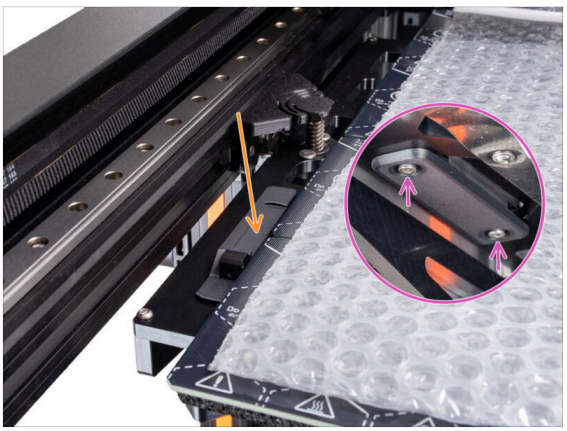
PASO 15 Assembling the nozzle wiper





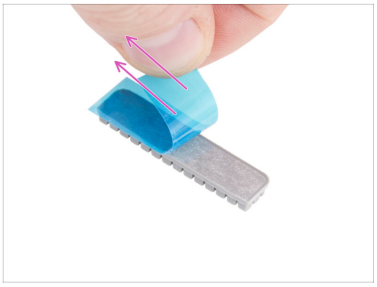
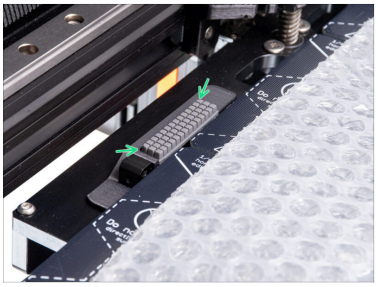
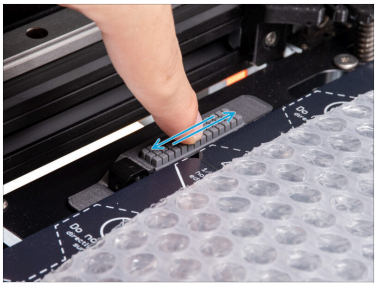
- Insert the M3x6r screw into the expansion joint with the screw head first.
- Insert a 2.0 mm Allen key through the threaded hole to reach the screw.
- Attach the expansion joint to the Bed-wiper-top and tighten the screw. Do not overtighten it.
- Insert the two M3nS nuts into the designated holes.

PASO 16 Mounting the nozzle wiper assembly

- Insert the bed-wiper-bottom into the designated space of the bed frame.
  - Make sure it is aligned correctly matching the frame's shape.
- Place the bed-wiper-top in the designated space on top of the frame.
- Secure the two bed wiper parts together with two M3x6 screws.

PASO 17 Installing the silicone wiper

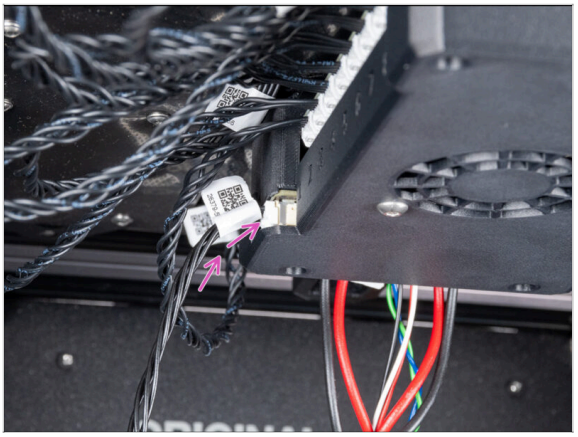




- Peel off the protective layer from the nozzle wiper pad.
  - ⓘ The pad is adhesive underneath the protective layer. **Avoid touching the adhesive surface.**
- Insert the nozzle wiper pad into the matching recess in the nozzle wiper assembly.
- Run your finger over the entire surface of the nozzle wiper pad several times to ensure it is evenly adhered and fully seated.

PASO 18 Offset sensor: parts preparation

- **For the following steps, please prepare:**
- Offset sensor (1x)
- Offset sensor cable (1x)

PASO 19 Conectando el cable del sensor del offset

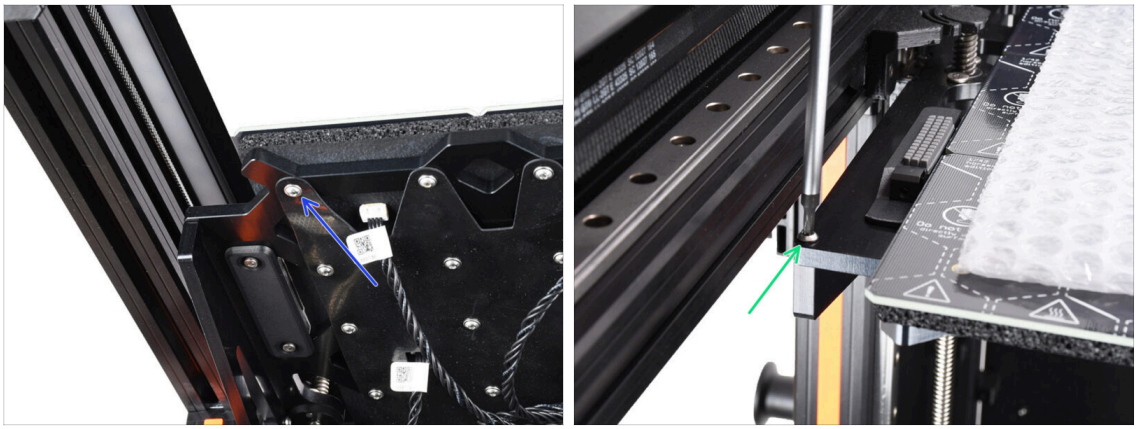


- Plug the offset sensor cable to the left connector on the XL-CAN board.
- Leave the other end of the cable hanging freely.

PASO 20 Frame-holder-cnc: parts preparation

- **Para los siguientes pasos, por favor prepara:**
- Frame-holder-cnc (1x)
- M3x12rT screw (2x)

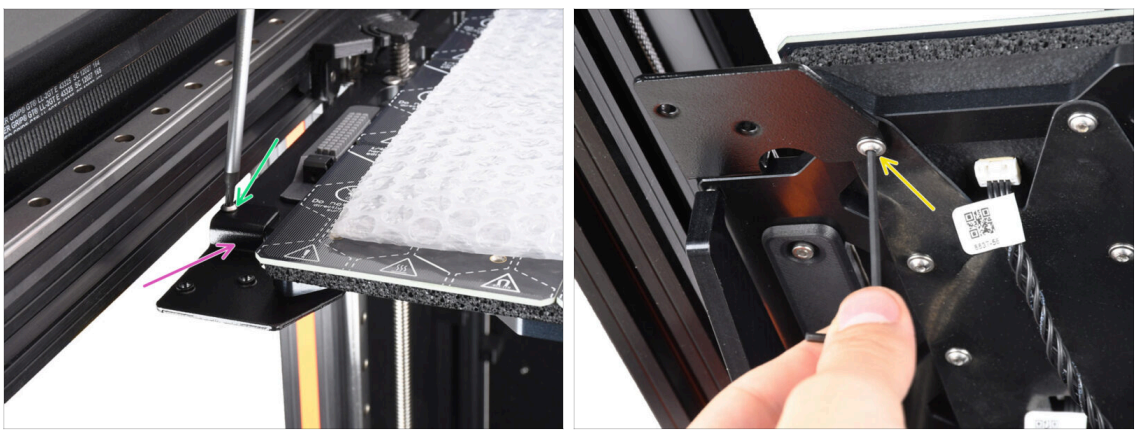
PASO 21 Removing the screws



- From the underside of the heatbed frame, use a 2 mm Allen key to remove the front-left screw.
- From the top side, remove the front screws on the left side of the heatbed frame.

Keep the screws. They will be reused later.

PASO 22 Mounting the frame-holder-cnc

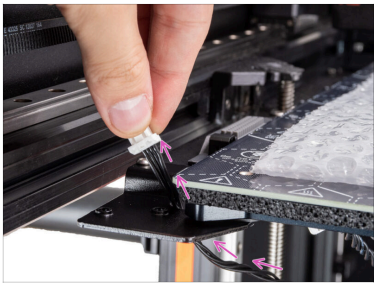
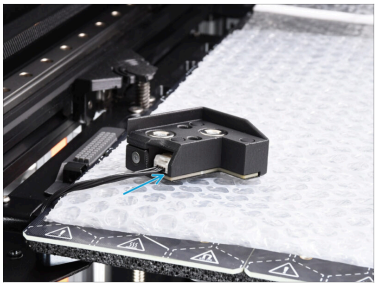
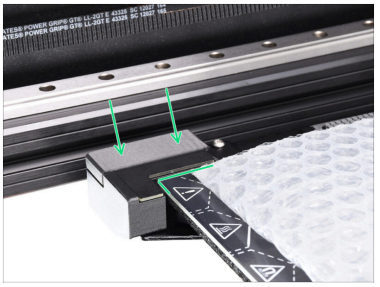


- Position the Frame-holder-cnc on the left side of the heatbed frame.

Note the correct orientation of the part.

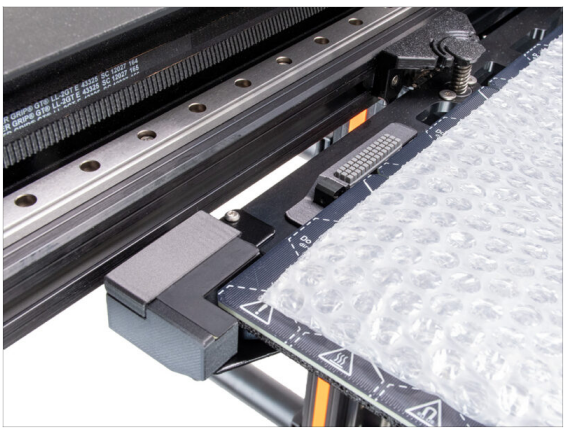
- Secure it using the M3x12rT screw removed earlier.
- From the underside, secure the part with the second M3x12rT screw removed earlier.

PASO 23 Attaching the offset sensor

- Route the offset sensor cable from the underside of the heatbed through the opening next to the Frame-holder-cnc.
- Plug the offset sensor cable to the Offset sensor.
- Attach the offset sensor to the Frame-holder-cnc using the magnets.
  - Make sure it is correctly seated, following the edge of the heatbed frame **without touching it**.

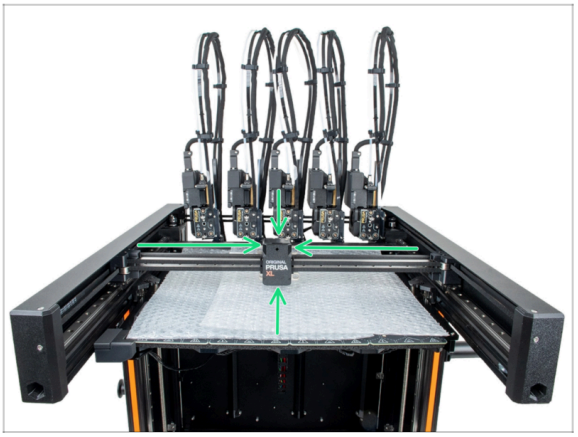
PASO 24 It's done



- Compara el aspecto final del ensamblaje con la imagen.
- Let's continue to the next chapter: **Printed parts and back cover upgrade**.

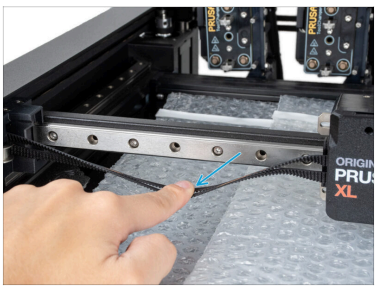
4. Piezas impresas y mejora de la cubierta trasera

PASO 1 Printer preparation



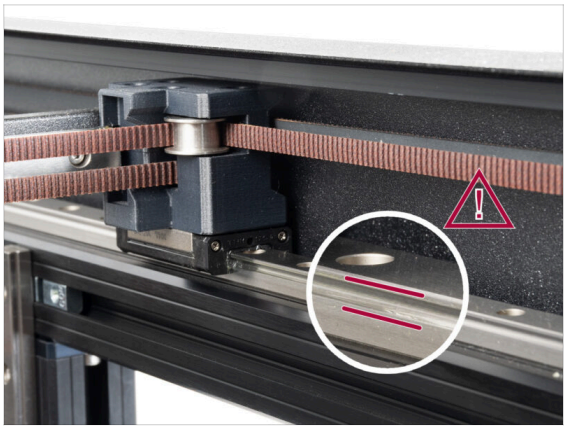
- Move the x-carriage into the center of the printer frame.

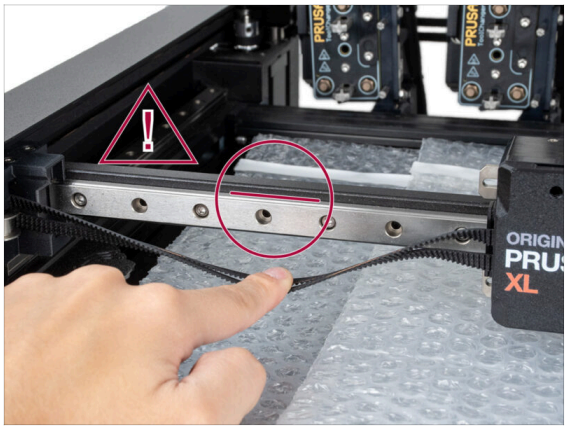
PASO 2 Releasing the belts



- On the front side of the printer:
- Using a 2.5mm Allen key, release the M3 screw holding the right CoreXY tensioner. Do not remove the screw completely.
- Using a 2.5mm Allen key, release the M3 screw holding the left CoreXY tensioner. Do not remove the screw completely.
- Gently tension the belt with your finger. If the belt has a similar degree of looseness as shown in the picture, proceed to the next step.

PASO 3 CAUTION: Lubricant Handling

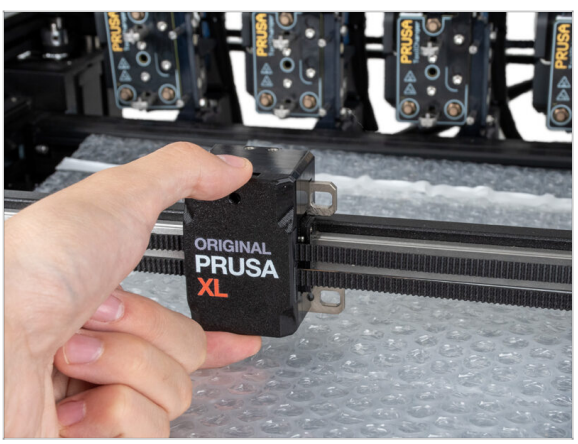




⚠ **CAUTION: Avoid direct skin contact with the lubricant used for the linear rails in this printer. If a contact occurs, wash your hands immediately. Especially before eating, drinking, or touching your face.**

- Lubricant accumulates mainly in the linear rail channels on the linear sides.

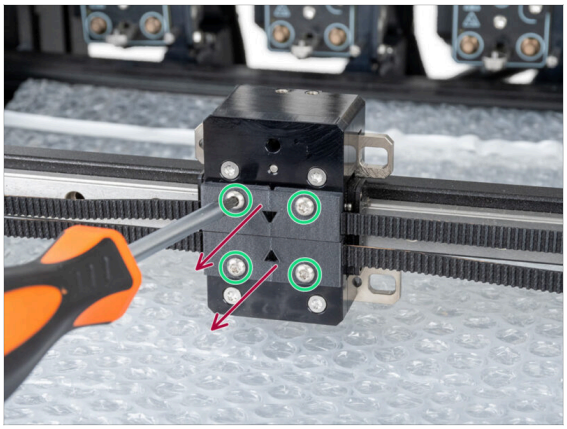
PASO 4 X-carriage cover removing

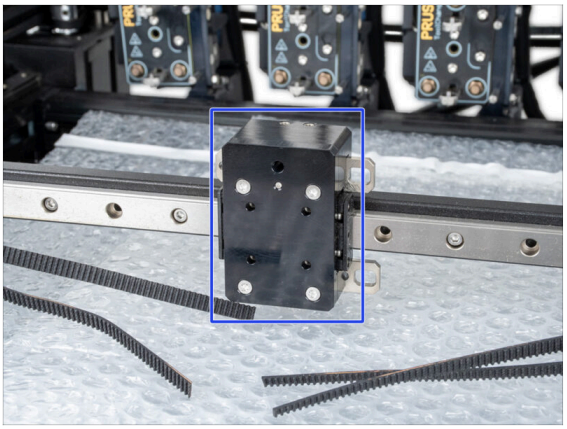


- Remove the X-carriage cover.

ⓘ You can throw this part away.

PASO 5 Belt clamps removing





- Using the T10 Torx screwdriver, remove four M3x12rT screws holding the belt-clamps.

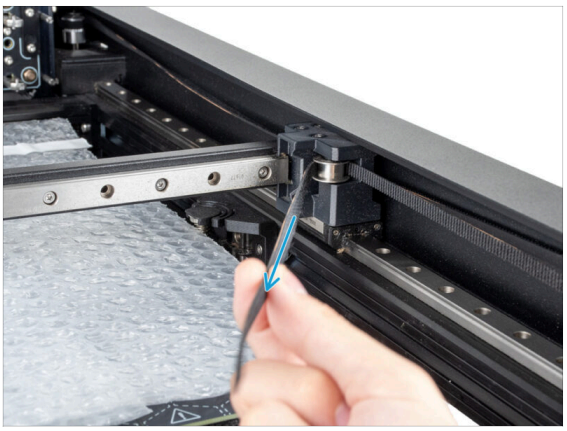
  Keep the screws aside

- Remove the belt clamps.

  You can throw them away.

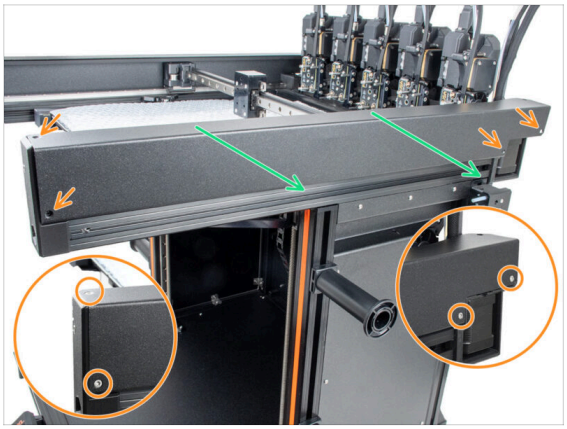
- With the belt-clamps removed, proceed to the next step.

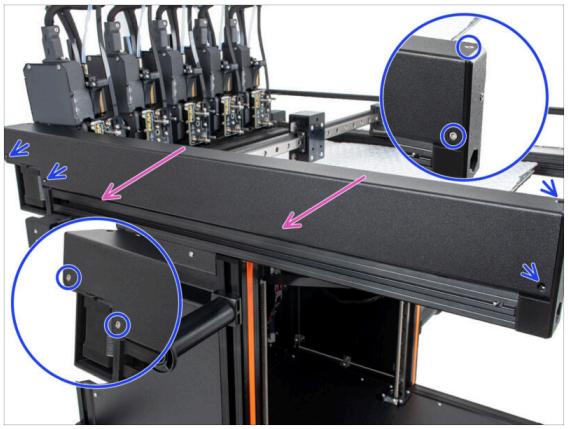
PASO 6 Belts removing



- Grasp the **bottom belt** on the **left side** of the CoreXY and pull the belt out of the printer.
- Grasp the **upper belt** on the **right side** of the CoreXY and pull the belt out of the printer.

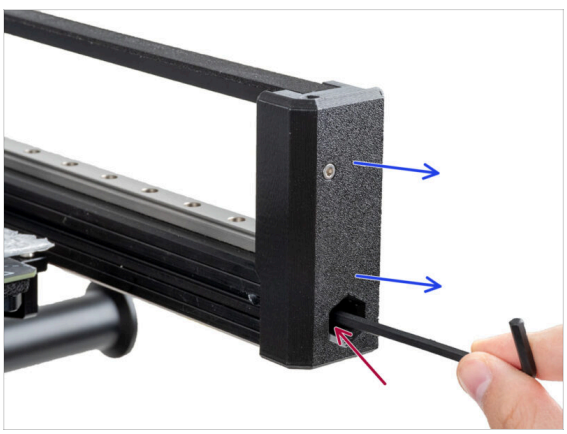
PASO 7 Removing the side metal plates

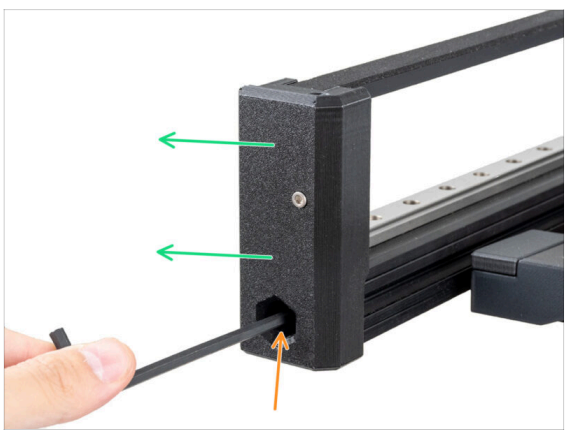




- Using the T10 Torx screwdriver, remove four M3x8bT screws from the right side metal plate.
- Carefully slide the right side metal plate out of the printer's frame.
- Turn to the other side.
- Using the T10 Torx screwdriver, remove four M3x8bT screws from the left side metal plate.
- Carefully slide the left side metal plate out of the printer's frame.

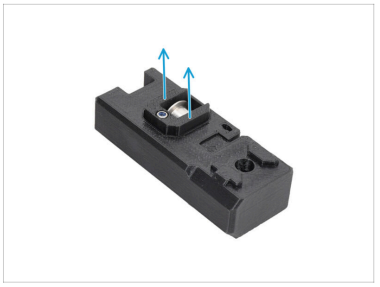
PASO 8 Removing CoreXY front parts





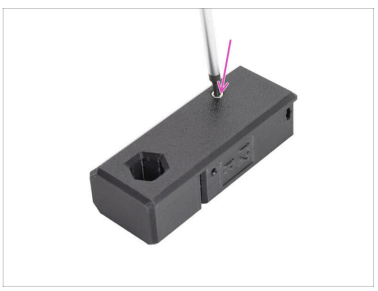
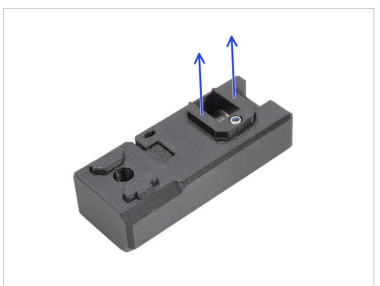
- Using a 4.0mm Allen key, release the M8x16 screw holding the CoreXY front right .
- Remove the CoreXY front right.
- Using a 4.0mm Allen key, release the M8x16 screw holding the CoreXY front left.
- Remove the CoreXY front left.

PASO 9 Disassembling the CoreXY front left assembly



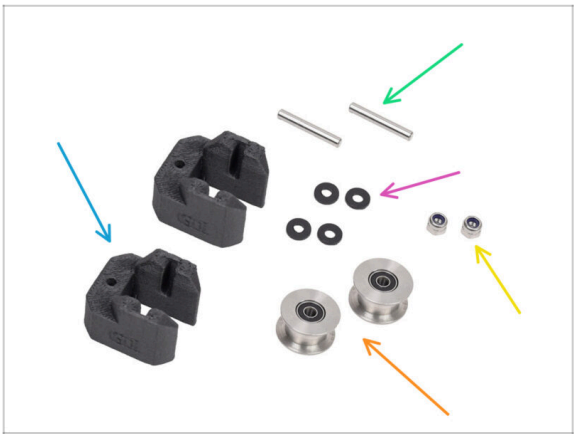
- Remove the M3x22 screw from the CoreXY front left.
- Remove the CoreXY tensioner assembly by pulling it up.
- Remove the pin with pulley and washers from the CoreXY tensioner by sliding it up.

PASO 10 Disassembling the CoreXY front right assembly

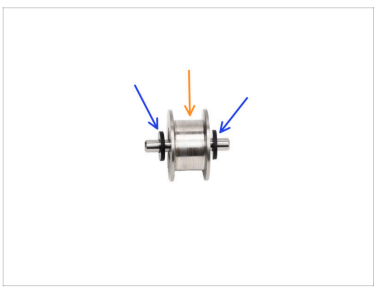
- Remove the M3x22 screw from the CoreXY front right.
- Remove the CoreXY tensioner assembly by pulling it up.
- Remove the pin with pulley and washers from the CoreXY tensioner by sliding it up.

PASO 11 New CoreXY tensioner assembly: parts preparation



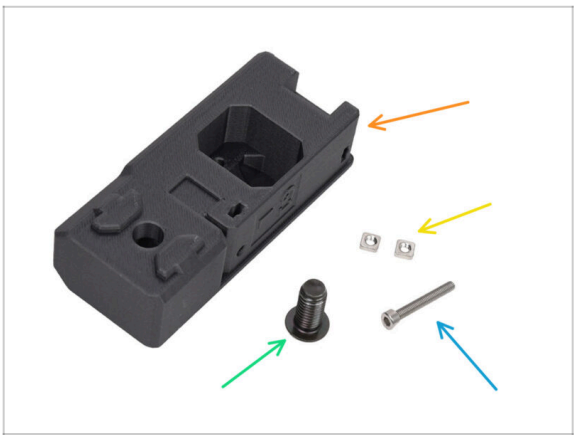
- **Para los siguientes pasos, por favor prepara:**
- New CoreXY tensioner (2x)
- Pin H8 2.9x20 (2x)
- GT2-20 pulley (2x)
- Washer 3x7x1 (4x)
- M3nN nut (2x)

PASO 12 Assembling the new CoreXY tensioner



- Slide the pulley onto the pin.
- Slide two washer on each side of the pulley.
- Push the whole assembly into the slots on the new CoreXY tensioner.
- Insert the M3nN nut into the designated hexagonal slot.
- Repeat this for the other CoreXY tensioner.

PASO 13 New CoreXY front left: parts preparation



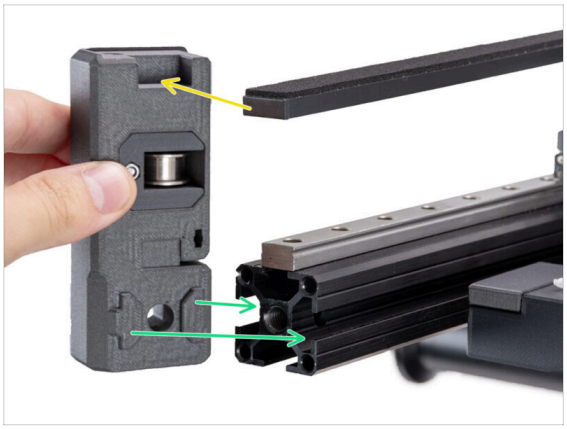
- **Para los siguientes pasos, por favor prepara:**
- New CoreXY front left (1x)
- M8x16 screw (1x)
- M3x22 screw (1x)
- M3nS nut (2x)

PASO 14 Assembling the new CoreXY front left

- Insert two M3nS nuts into the slots on the CoreXY front left **as far as possible**.
- Insert the CoreXY tensioner into the designated space in the CoreXY front left.

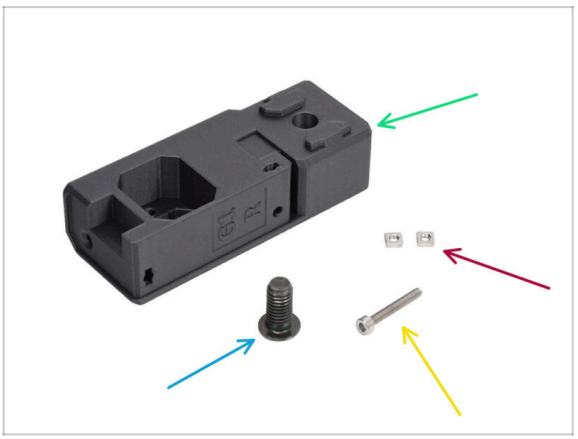
  ⚠ Watch out for the **correct orientation** of the CoreXY tensioner - it has to fully slide into the CoreXY front left.
- Turn the part around and insert the M3x22 screw. **Do not tighten it fully**, just few turns are enough.

PASO 15 Installing the CoreXY front left



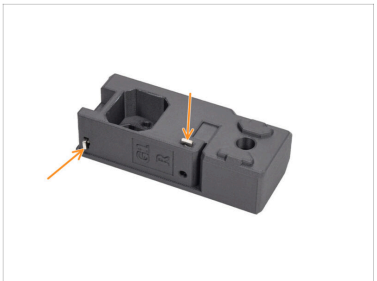
- Place the CoreXY front left over the frame so the notches on the printed part align with the slots on the metal frame.
- Insert the end of the light bar into the notch on the CoreXY front left.
- Secure the parts together using an M8x16 screw and the 4.0mm Allen key.

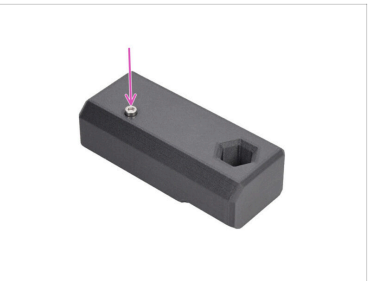
PASO 16 New CoreXY front right: parts preparation



- **For the following steps, please prepare:**
- New CoreXY front right (1x)
- M8x16 screw (1x)
- M3x22 screw (1x)
- M3nS nut (2x)

PASO 17 Assembling the new CoreXY front right

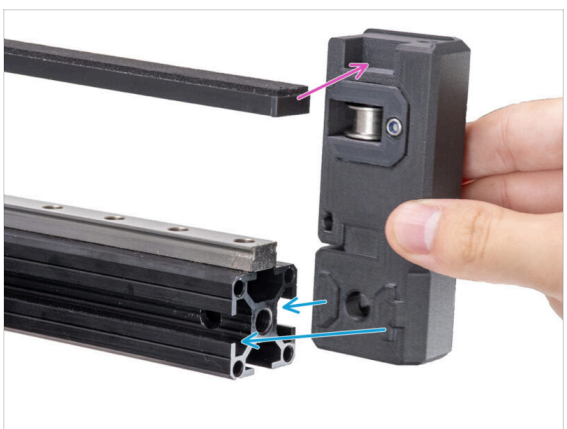




- Insert two M3nS nuts into the slots on the CoreXY front right as far as possible.
- Insert the other CoreXY tensioner into the designated space in the CoreXY front right.

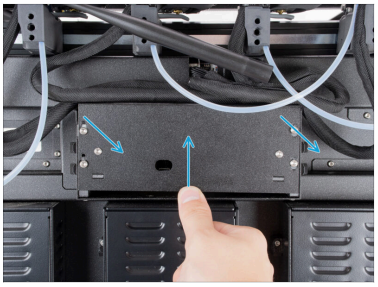
  ⚠ Watch out for the **correct orientation** of the CoreXY tensioner. It has to fully slide into the CoreXY front right.
- Turn the part around and insert the M3x22 screw. Do not tighten it fully, just few turns are enough.

PASO 18 Installing the CoreXY front right



- Place the CoreXY front right over the frame so the notches on the printed part align with the slots on the metal frame.
- Insert the end of the light bar into the notch on the CoreXY front left.
- Secure the parts together using an M8x16 screw and the 4.0mm Allen key.

PASO 19 Uncovering the electronics I.

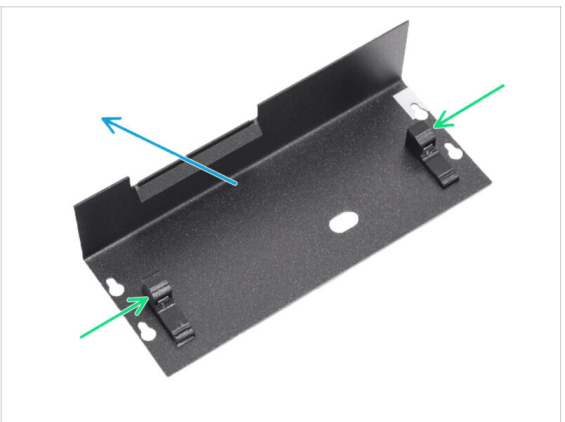


- Release, but do not remove four screws securing the cover.
- Slide the cover up and remove it.
- Disconnect the Wi-Fi cable from the Wi-Fi connector if needed.
- Locate the ejectors on both sides of the electronics box. From these, locate the upper pair.
- Desliza hacia fuera el XLSplitter. Empuja los eyectores para que la placa se desconecte de la placa Sandwich y, a continuación, desliza hacia fuera utilizando los raíles laterales.

  ⚠ **Touch any electronic board by its edges.** Avoid damaging the board components.

  Place it on safe anti-static surface, such as the anti-static bubble wrap from the XL-CAN board packaging.

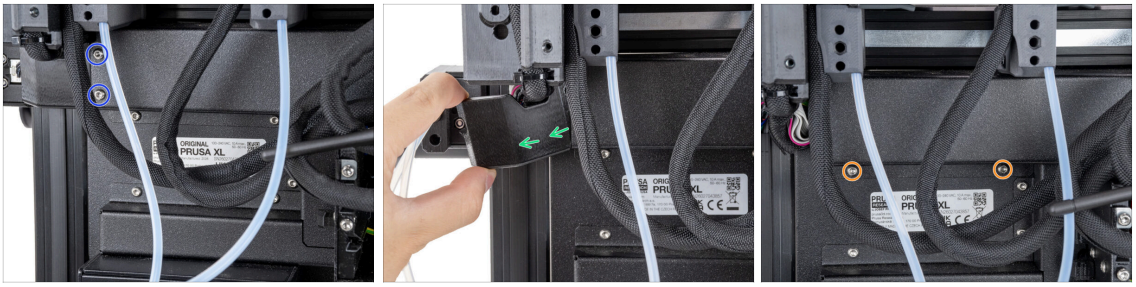
PASO 20 Disassembling the cover



- Release and remove two screw from the electronics cover.
- From the opposite side of the cover, remove two electronics-case-holders.

  Each part contains an embedded M3nS nut. Make sure the nut does not fall out, as the part will be reused later.
- Discard the electronics cover. It will no longer be needed.

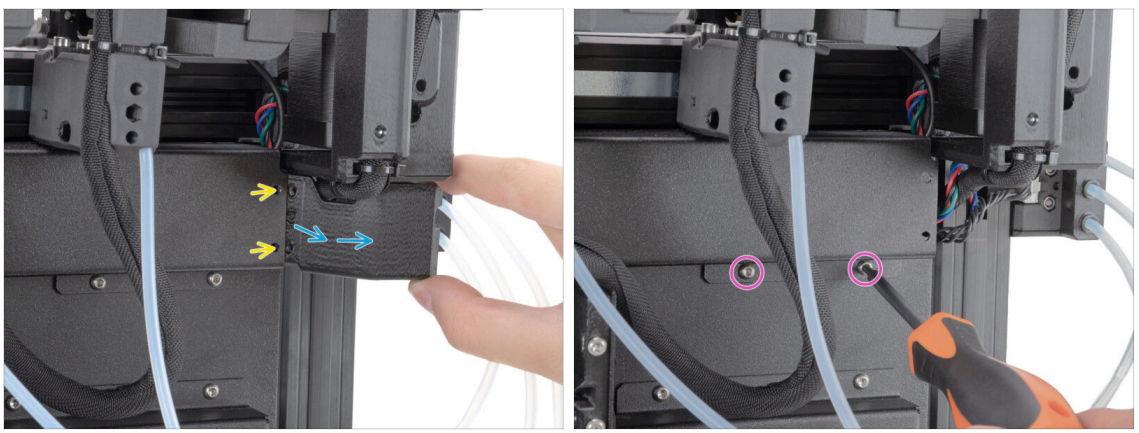
PASO 21 Uncovering the electronics II.



- Remove two M3x8rT screws from the left side on the back of the printer.
- Slide the cable cover cap left out of the metal electronics cover.

  ⚠ **Be careful not to damage any cables!**
- Remove two M3x5rT located at the bottom of the metal electronics cover.

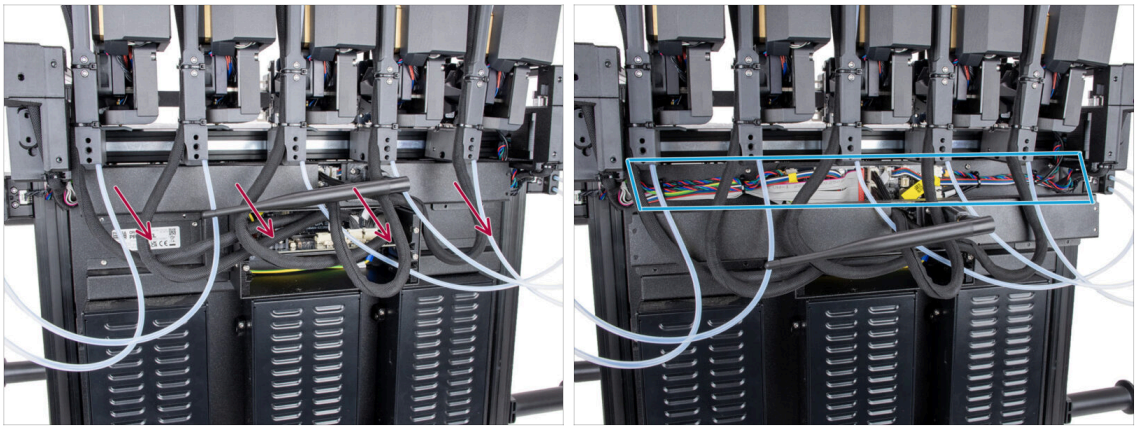
PASO 22 Uncovering the electronics III.



- Remove the other two M3x8rT screws from the right side on the back of the printer.
- Slide the cable cover cap right out of the metal electronics cover.

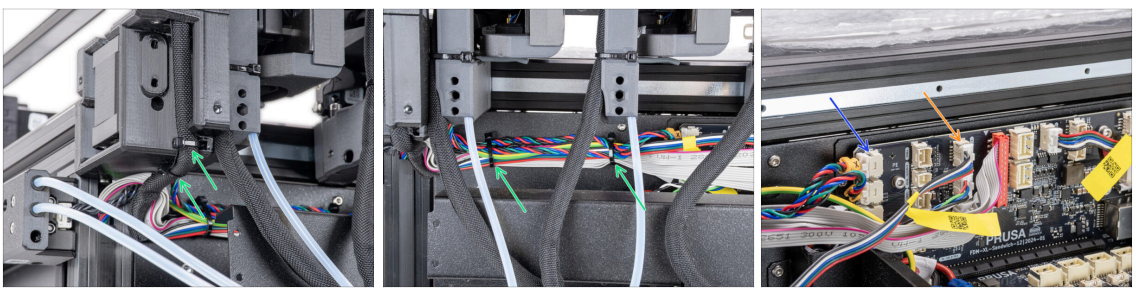
  ⚠ Be careful not to damage any cables!
- Remove two M3x5rT located at the bottom of the metal electronics cover.

PASO 23 Uncovering the electronics IV.



- Move the whole back metal plate back and down the printer.
  - Just enough to reveal the electronics.

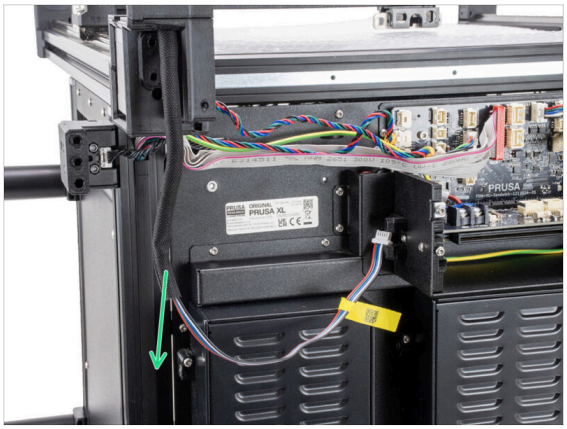
PASO 24 Freeing the cables: left side

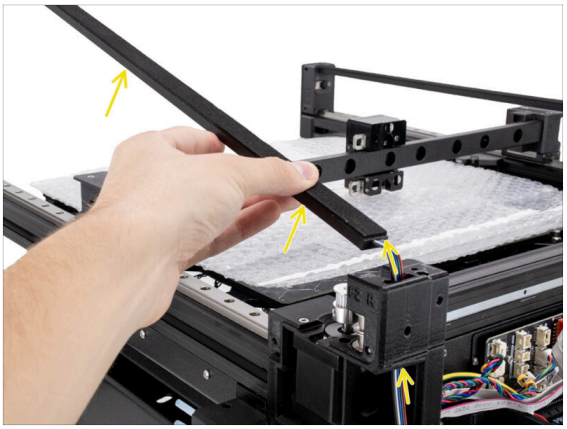


- Cut all four zipties on the left side to free the cables.
- Unplug the XY motor cable.
- Unplug the LED bar cable.

⚠ **Be careful**: the connectors have a **safety latch** that **must be pressed while disconnecting.**

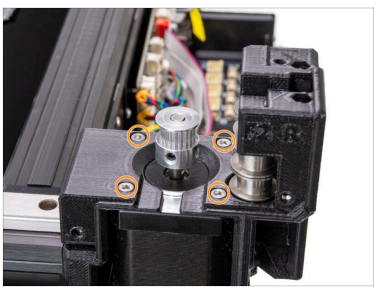
PASO 25 Removing the LED bar

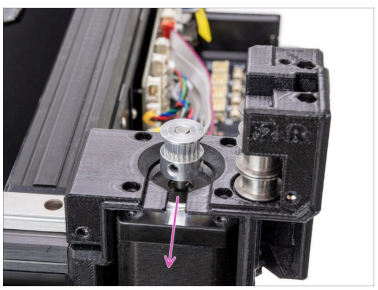


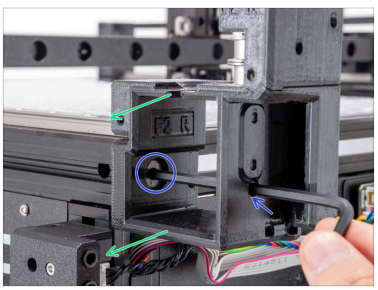


- Remove the textile sleeve from the LED bar cable.
- Remove the LED bar by lifting it up and carefully pulling the cable through the CoreXY back right assembly.

PASO 26 Removing the CoreXY back right assembly

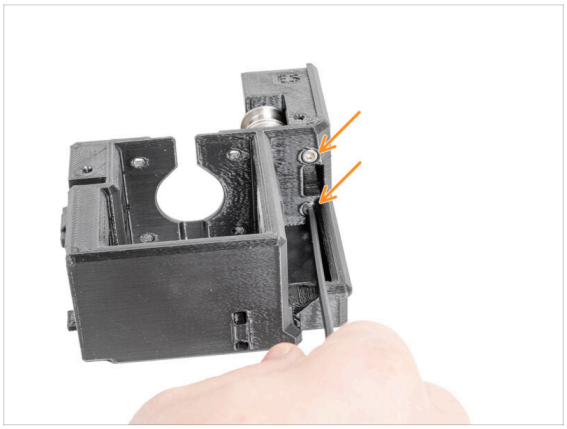


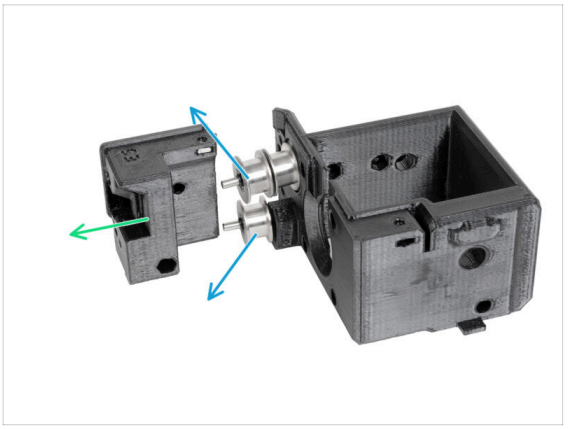




- Using the 2.5mm Allen key, remove four M3x10 screws.
- Remove the XY motor.
- Insert the 4mm Allen key through the hole and remove the M8x16 screw.
- Remove the CoreXY-back-right from the printer.

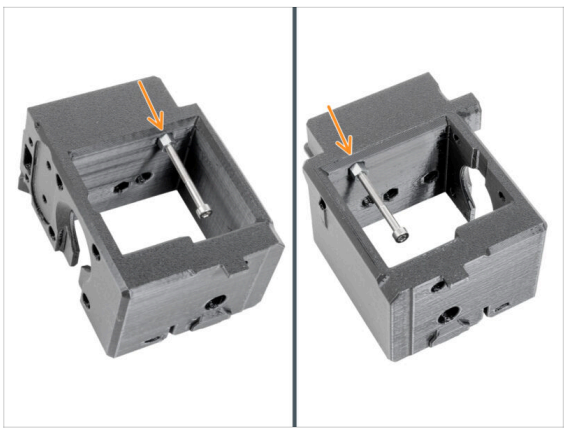
PASO 27 Dissasembling the CoreXY back right

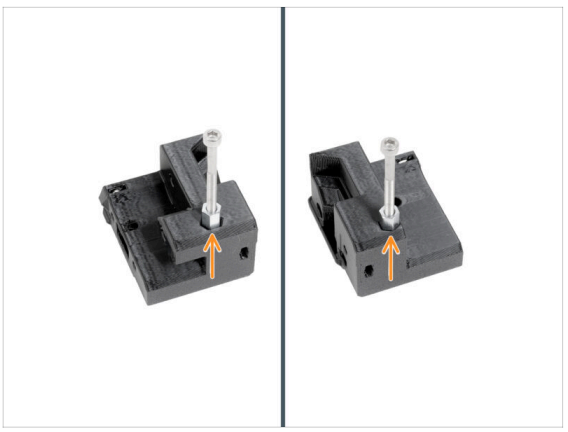




- Using a 2.5mm Allen key, remove two M3x35 screws.
- Remove the CoreXY-back-right-top from the CoreXY-back-right. Don't throw the parts away, we'll need some distance nuts.
- Remove the double pulley and the single pulley. Don't throw the parts away!

PASO 28 Spacers removing



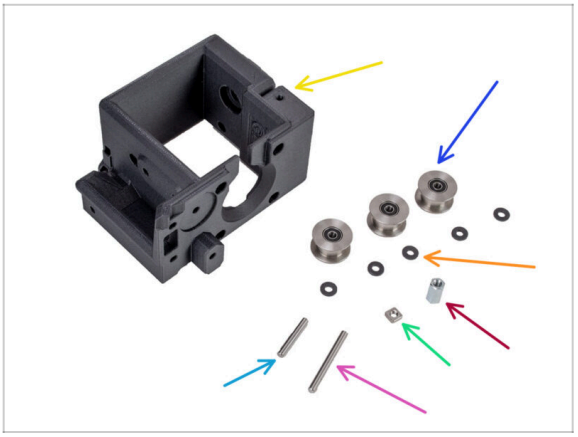


- Remove the M3x10 spacers from the CoreXY back right printed parts for the next steps.

Hint: You can use an M3x35 to remove the M3x10 spacer nut.

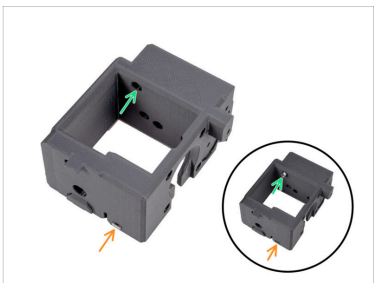
You can throw the printed parts away.

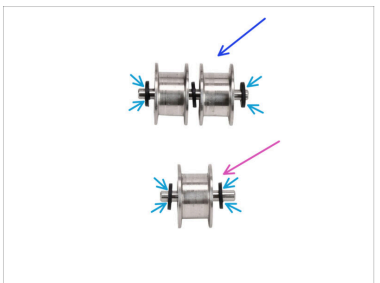
PASO 29 New CoreXY back right bottom: parts preparation

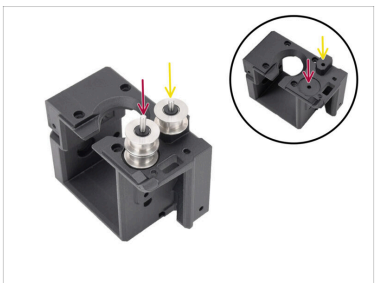


- **For the next steps, please prepare:**
- New CoreXY back right bottom (1x)
- GT2-20 pulley (3x) *removed in previous steps*
- Washer 3x7x1 (5x)
- Pin H8 2.9x20 (1x) *removed in previous steps*
- Pin H8 2.9x30 (1x) *removed in previous steps*
- M3nS nut (1x)
- Hex spacer M3x10 (1x) *removed in previous steps*

PASO 30 Assembling the CoreXY back right bottom

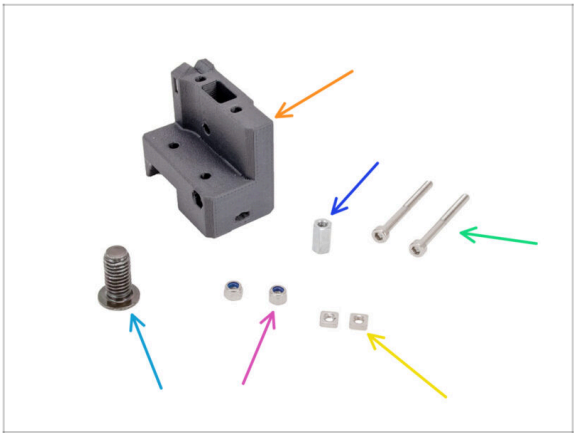






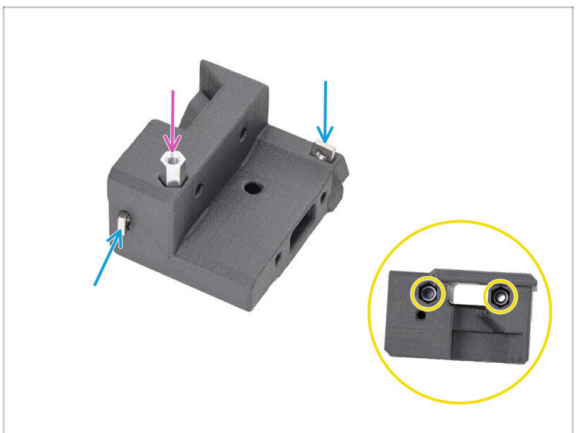
- Insert one M3nS nut into the CoreXY back right bottom as far as possible.
- Insert one M3x10 spacer nut into the CoreXY back right bottom as far as possible.
- ⓘ We recommend using the screw-pulling technique.
- Attach three washers and two pulleys on the longer pin in the order seen in the picture.
- Insert one pulley onto the shorter pin and attach two washer on both sides of the pulley.
- Push the washers and the pulleys together in the centre.
- Insert the prepared single pulley into the CoreXY back right bottom.
- Insert the prepared double pulley into the CoreXY back right bottom.

PASO 31 New CoreXY back right top: parts preparation



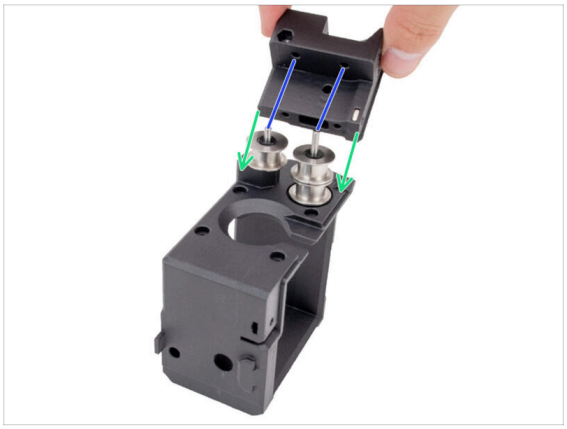
- **For the next steps, please prepare:**
- CoreXY back right top (1x)
- Hex spacer M3x10 (1x) *removed in previous steps*
- M3nS nut (2x)
- M3nN nut (2x)
- M3x35 screw (2x) *removed in previous steps*
- M8x16 screw (1x) *removed in previous steps*

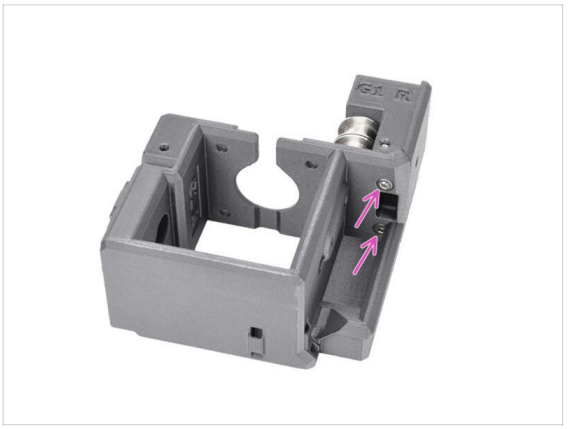
PASO 32 Assembling the CoreXY back right top



- Insert two M3nS nuts into CoreXY back right top as far as possible.
- Push the M3x10 hex spacer into the CoreXY back right top as far as possible.
- Insert two M3nS nuts into the CoreXY back right top.

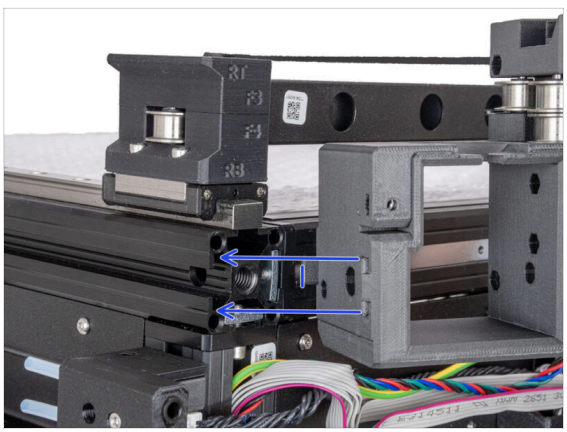
PASO 33 Assembling the CoreXY back right

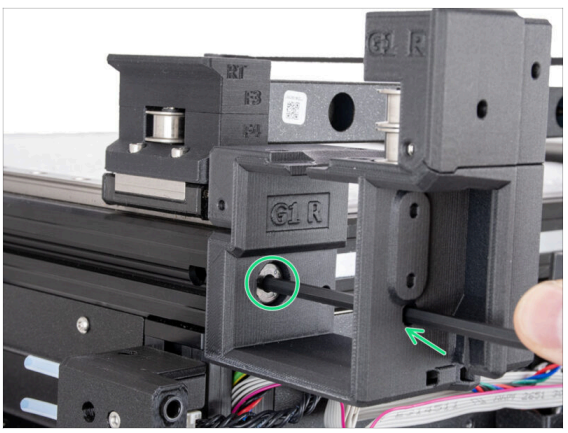




- Attach the CoreXY back left top onto the pulleys and the CoreXY back right bottom.
  - Make sure the pins align with the holes on the CoreXY back left top.
- Secure with two M3x35 screws.

PASO 34 Installing the CoreXY back right



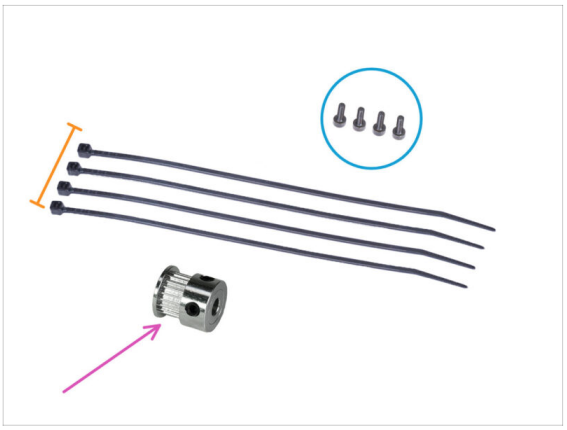


- Attach the CoreXY back right to the printer.
- Secure the CoreXY back right with an M8x16 screw using a 4.0 mm Allen key.

PASO 35 Disassembling the XY motor pulley

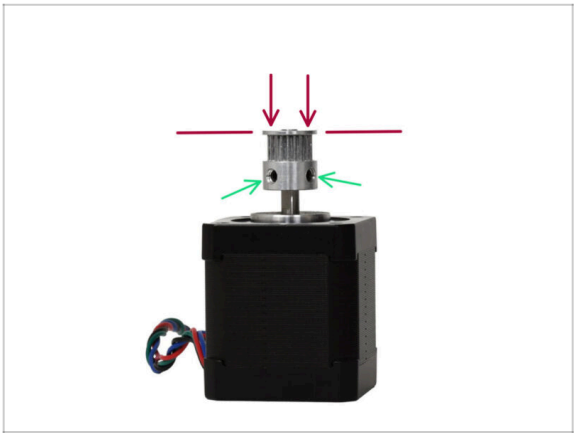
- Using the 2.0mm Allen key, loosen 2x set screws from the pulley 20t attached to the motor shaft.
- Slide out the pulley 20t from the motor shaft.

PASO 36 New motor pulley: parts preparation



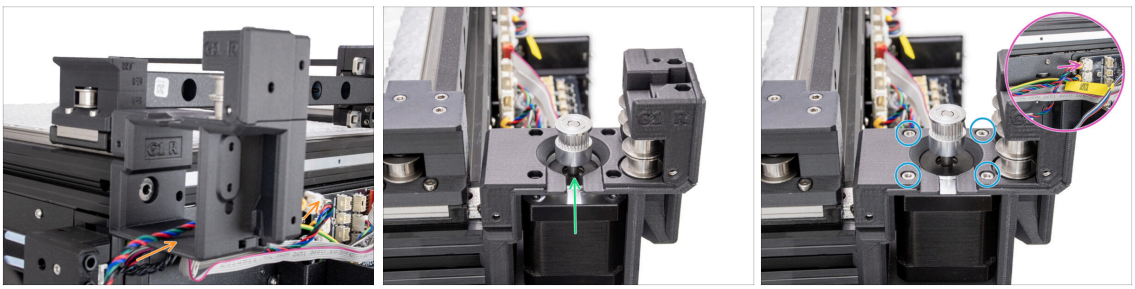
- **Para los siguientes pasos, por favor prepara:**
- XY motor (1x) *removed in previous steps*
- M3x8 screw (4x) *removed in previous steps*
- Zip tie (4x)
- **New** T27-1.5GT pulley (1x)

PASO 37 Assembling the new motor pulley



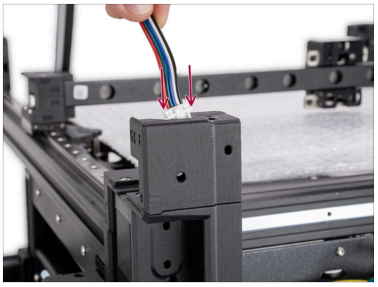
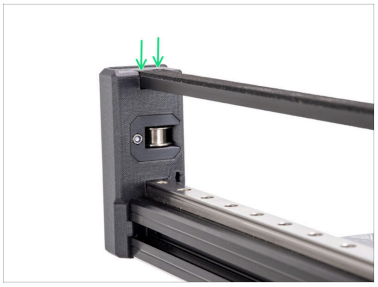
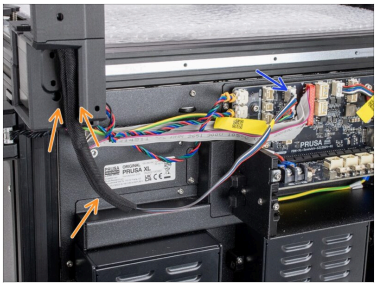
- Install the pulley flush with the top edge of the motor shaft.
- ⚠ Install the pulley so that one set screw is **aligned with the flat part** of the motor shaft.
- Tighten both set screws using the 2.0mm Allen key.

PASO 38 Installing the new motor



- Insert the cable through the CoreXY back right.
- Insert the motor into the CoreXY back right.
- Secure the motor with four M3x8 screws.
- Connect the XY motor cable to the XL sandwich board.

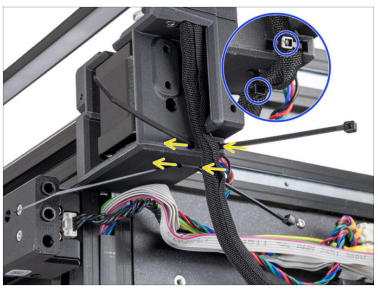
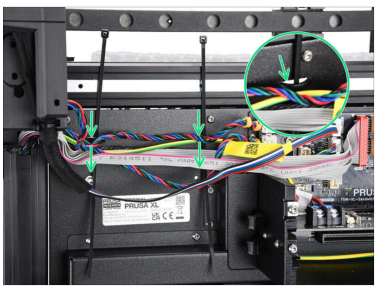
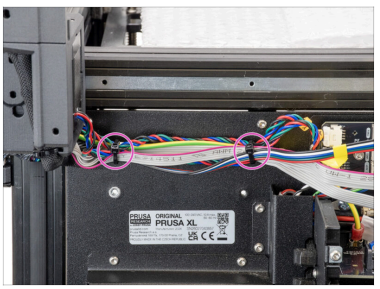
PASO 39 Installing the LED bar

- Pass the end of the LED bar cable through the hole in the CoreXY back right.

  ⚠ **Be very careful not to damage any part of the cable!**
- Place the other end into the notch on the CoreXY front right.
- Install the textile sleeve onto the LED bar cable and move it up as far as possible.
- Connect the LED bar cable to the XL sandwich board.

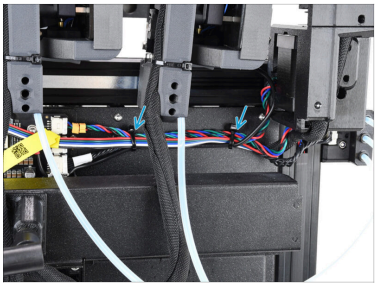
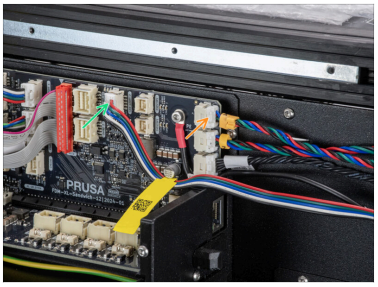
PASO 40 Securing the cables

- Route two zip ties through the holes in the CoreXY back right.
- Secure the LED bar cable by tightening the zip ties. **Do not overtighten the zip tie!**
- Push two zip ties through the perforations in the back plate and guide them under all the cables.
- Secure all the cables by tying the zip ties. **Do not overtighten the zip tie!**

Dont forget to cut the loose ends of the zip ties.

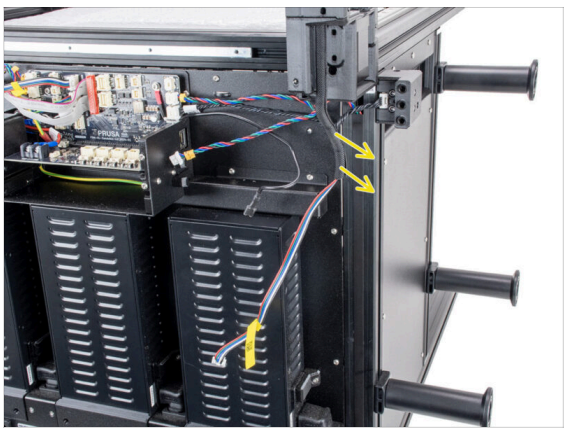
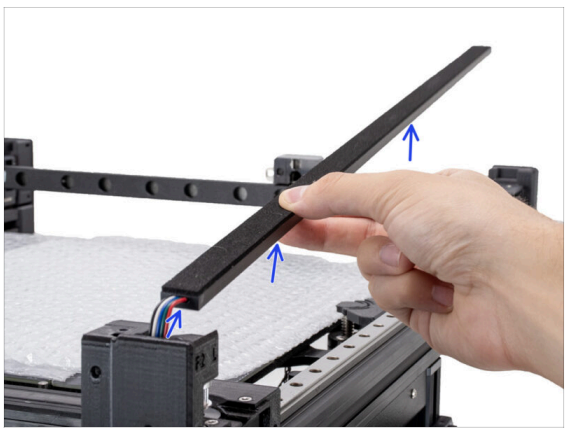
PASO 41 Freeing the cables: right side

- Move to the other side of the printer.
- Cut all four zipties on the right side to free the cables.
- Unplug the XY motor cable.
- Unplug the LED bar cable.

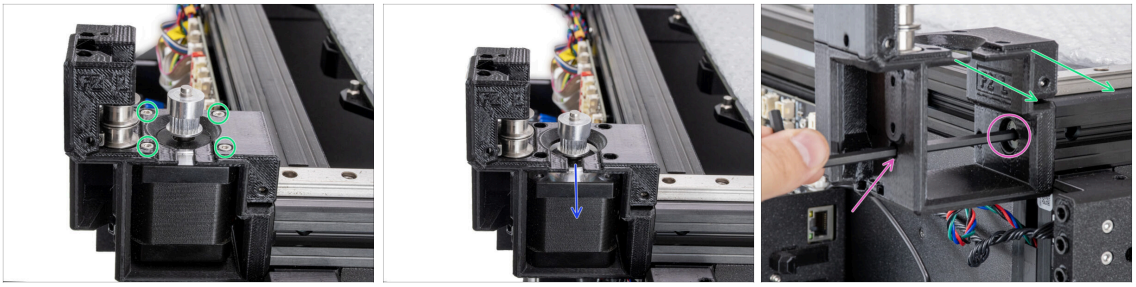
⚠ **Be careful**: the connectors have a **safety latch** that **must be pressed while disconnecting.**

PASO 42 Removing the LED bar

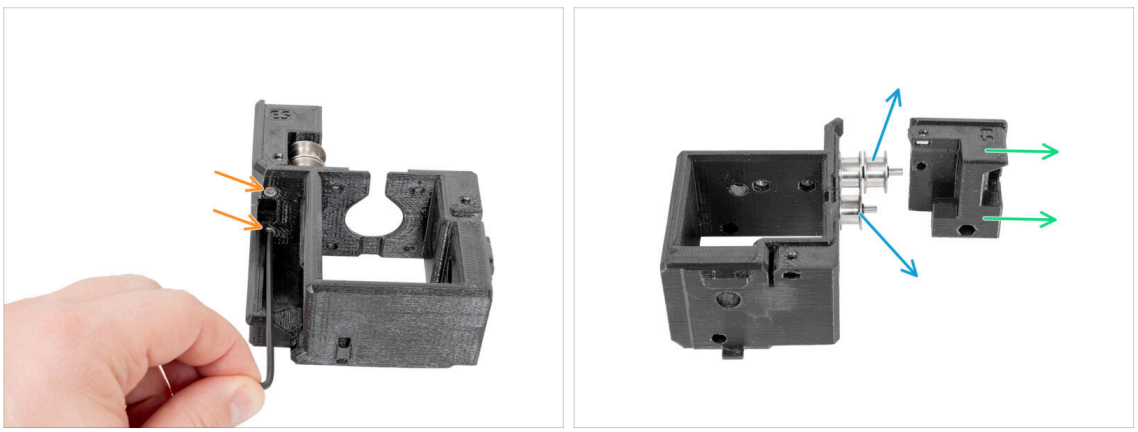
- Remove the textile sleeve from the LED bar cable.
- Remove the LED bar by lifting it up and carefully pulling the cable through the CoreXY back right assembly.

PASO 43 Removing the CoreXY back left assembly



- Using the 2.5mm Allen key, remove four M3x10 screws.
- Remove the XY motor.
- Insert the 4mm Allen key through the hole and remove the M8x16 screw.
- Remove the CoreXY-back-right from the printer.

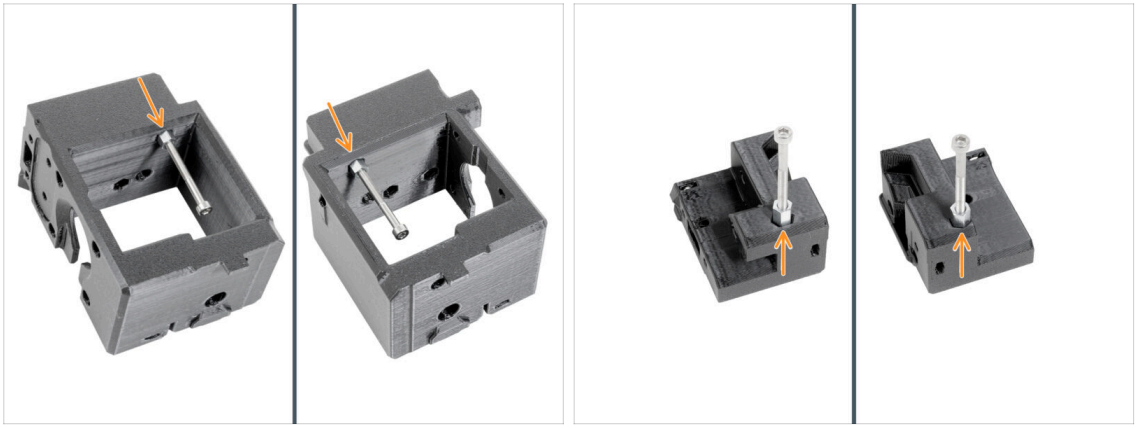
PASO 44 Dissasembling the CoreXY back left



- Using a 2.5mm Allen key, remove two M3x35 screws.
- Remove the CoreXY-back-right-top from the CoreXY-back-right.
- Remove the double pulley and the single pulley.

Don't throw any of the parts away!

PASO 45 Spacers removing

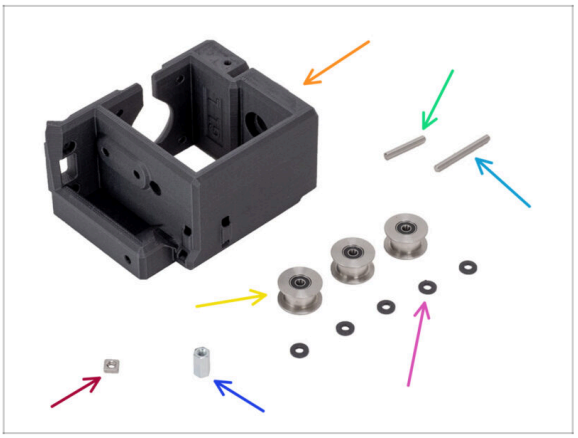


- Remove the M3x10 spacers from the CoreXY back left printed parts for the next steps.

Hint: You can use an M3x35 to remove the M3x10 spacer nut.

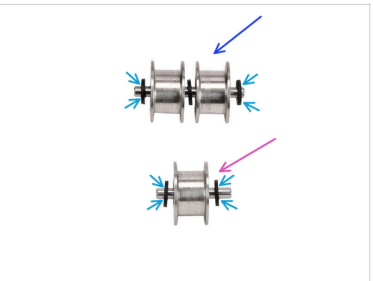
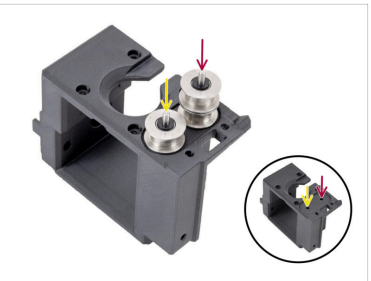
You can throw the printed parts away.

PASO 46 New CoreXY back left bottom: parts preparation



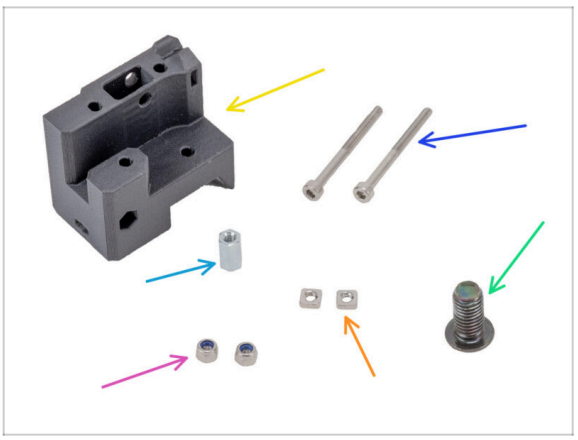
- **For the next steps, please prepare:**
- New CoreXY back left bottom (1x)
- Pin H8 2.9x20 (1x) *removed in previous steps*
- Pin H8 2.9x30 (1x) *removed in previous steps*
- GT2-20 pulley (3x) *removed in previous steps*
- Washer 3x7x1 (5x)
- *Hex spacer M3x10 (1x) removed in previous steps*
- M3nS nut (1x)

PASO 47 Assembling the CoreXY back left bottom

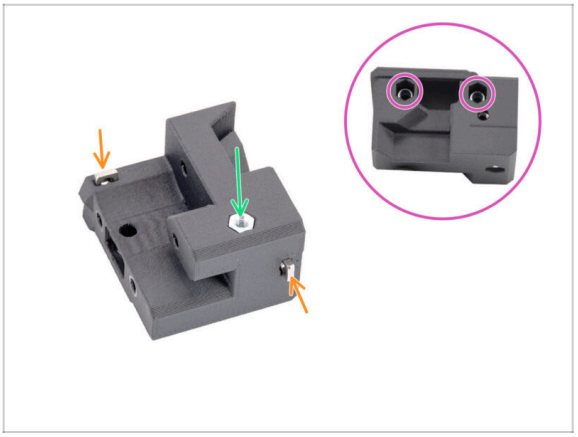
- Insert one M3nS nut into the CoreXY back left bottom as far as possible.
- Insert one M3x10 spacer nut into the CoreXY back left bottom as far as possible.
- We recommend using the screw-pulling technique.
- Attach three washers and two pulleys on the longer pin in the order seen in the picture.
- Insert one pulley onto the shorter pin and attach two washer on both sides of the pulley.
- Push the washers and the pulleys together in the centre.
- Insert the prepared single pulley into the CoreXY back left bottom.
- Insert the prepared double pulley into the CoreXY back left bottom.
- **Ensure the correct position of the pins!**

PASO 48 New CoreXY back left top: parts preparation



- **For the next steps, please prepare:**
- CoreXY back left top (1x)
- M3x35 screw (2x) *removed in previous steps*
- M8x16 screw (1x) *removed in previous steps*
- Hex spacer M3x10 (1x) *removed in previous steps*
- M3nS nut (2x)
- M3nN nut (2x)

PASO 49 Assembling the CoreXY back left top

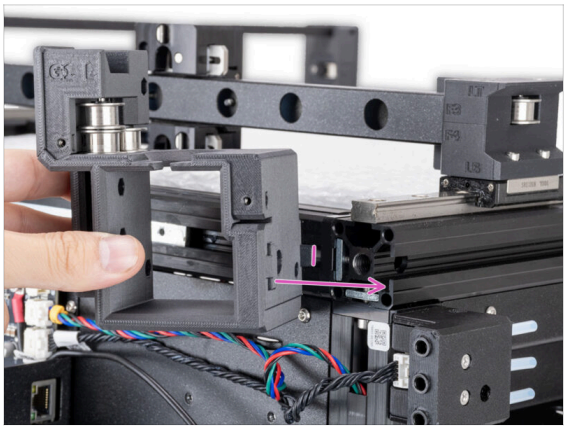


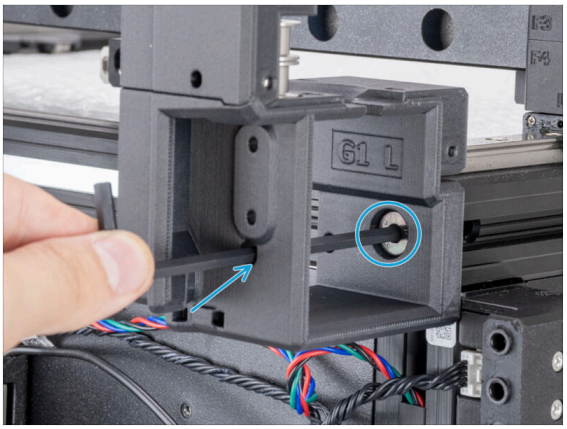
- Insert two M3nS nuts into CoreXY back left top as far as possible.
- Push the M3x10 hex spacer into the CoreXY back left top as far as possible.
- Insert two M3nS nuts into the CoreXY back right top.

PASO 50 Assembling the CoreXY back left

- Attach the CoreXY back left top onto the pulleys and the CoreXY back right bottom.
  - Make sure the pins align with the holes on the CoreXY back left top.
- Secure with two M3x35 screws.

PASO 51 Installing the CoreXY back left



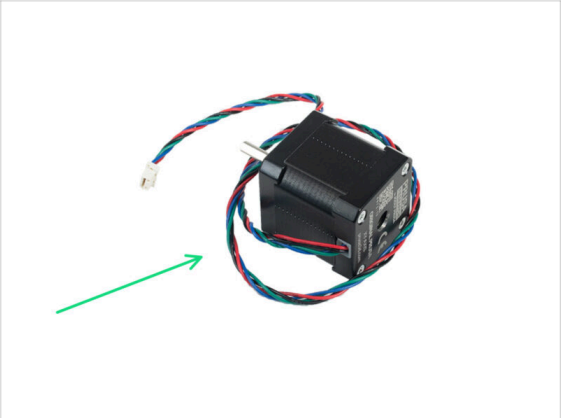


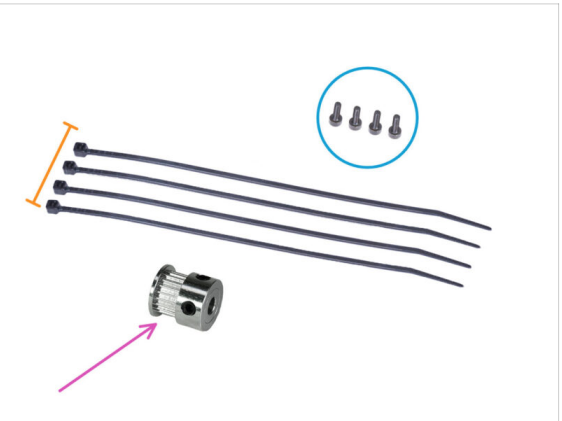
- Attach the CoreXY back left to the printer.
- Secure the CoreXY back left with an M8x16 screw using a 4.0 mm Allen key.

PASO 52 Disassembling the XY motor pulley

- Using the 2.0mm Allen key, loosen 2x set screws from the pulley 20t attached to the motor shaft.
- Slide out the pulley 20t from the motor shaft.

PASO 53 New motor pulley: parts preparation



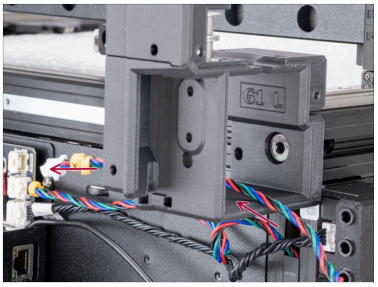
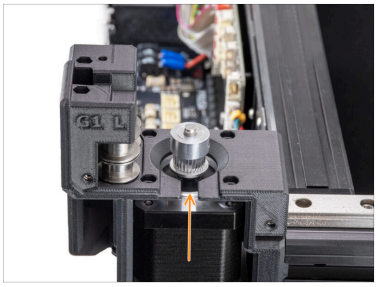
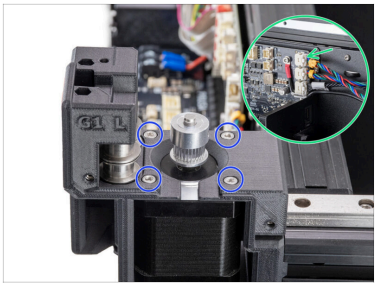


- **Para los siguientes pasos, por favor prepara:**
- XY motor (1x) *removed in previous steps*
- M3x8 screw (4x) *removed in previous steps*
- Zip tie (4x)
- **New** T27-1.5GT pulley (1x)

PASO 54 Assembling the new motor pulley

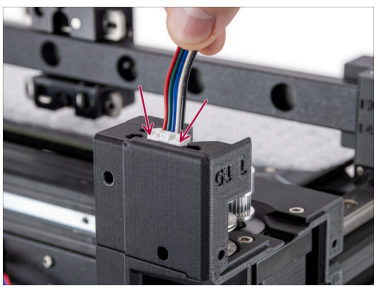
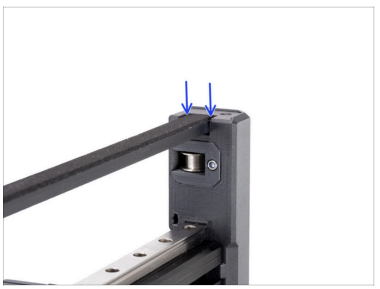
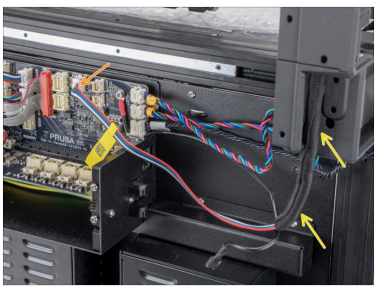
- Install the pulley 2.5mm higher than the start of the flat part of the motor shaft. Use the 2.5mm Allen key for reference.
- Alternatively, measure the distance between the beginning of the motor shaft and the pulley, 3.6mm.
- Note the orientation of the pulley. The teeth are below the set screws.
- Install the pulley so that one set screw is aligned with the flat part of the motor shaft.
- Tighten both set screws using the 2.0mm Allen key.

PASO 55 Installing the new motor

- Insert the cable through the CoreXY back left.
- Insert the motor into the CoreXY back left.
- Secure the motor with four M3x8 screws.
- Connect the XY motor cable to the XL sandwich board.

PASO 56 Installing the LED bar

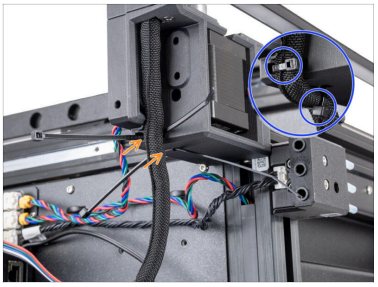
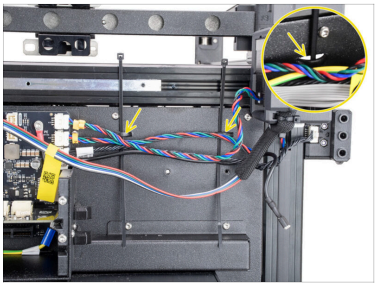
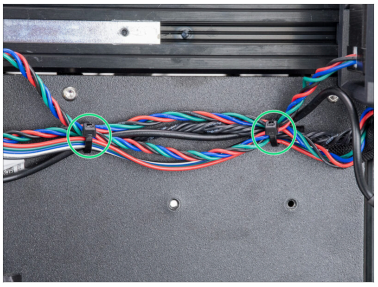




- Pass the end of the LED bar cable through the hole in the CoreXY back right.

⚠ **Be very careful not to damage any part of the cable!**

- Place the other end into the notch on the CoreXY front right.
- Install the textile sleeve onto the LED bar cable and move it up as far as possible.
- Connect the LED bar cable to the XL sandwich board.

PASO 57 Securing the cables

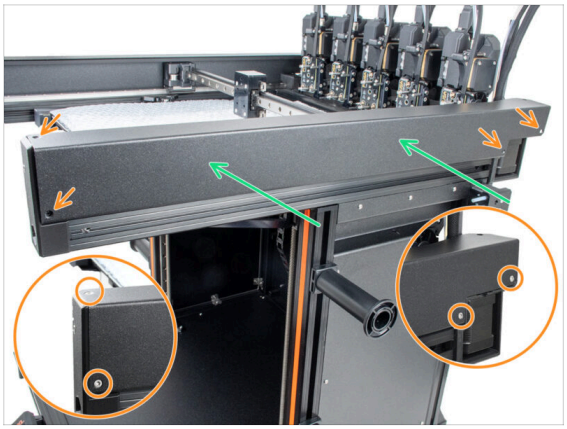




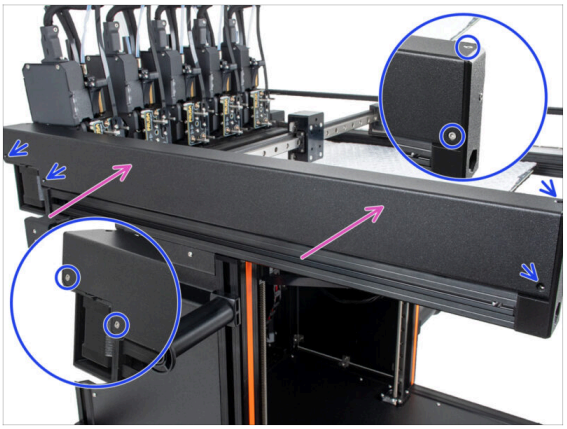
- Route two zip ties through the holes in the CoreXY back left.
- Secure the LED bar cable by tightening the zip ties. Do not use excessive force and do not overtighten the zip tie!
- Push two zip ties through the perforations in the back plate and guide them under all the cables.
- Secure all the cables by tying the zip ties. Do not use excessive force and do not overtighten the zip tie!

PASO 58 Side metal covers: parts preparation

- **For the next steps, please prepare:**
- CoreXY cover right (1x) *removed in previous steps*
- CoreXY cover left (1x) *removed in previous steps*
- M3x6bT screw (8x) *removed in previous steps*

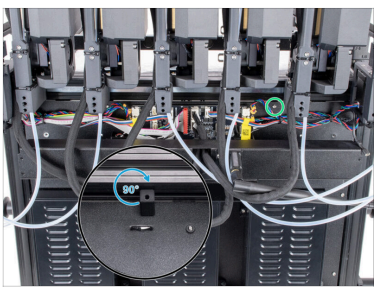
PASO 59 Installing the side metal covers

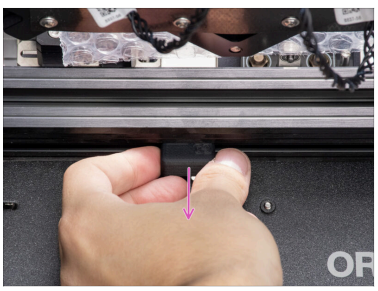


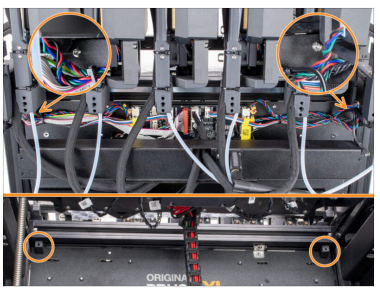


- Attach the right side metal cover back onto the right side of the CoreXY frame.
- Secure the right side metal cover with four M3x6bT screws.
- Attach the left side metal cover back onto the left side of the CoreXY frame.
- Secure the left side metal cover with four M3x6bT screws.

PASO 60 Removing upper back cover clips







- Remove the M3x8rT screw from the back of the printer.

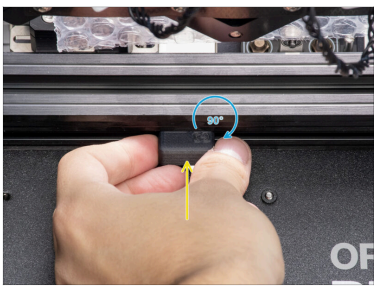
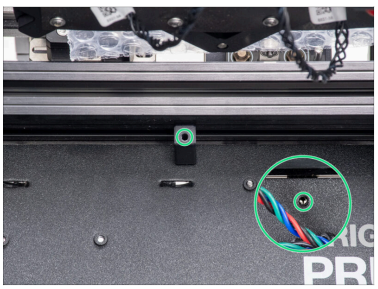
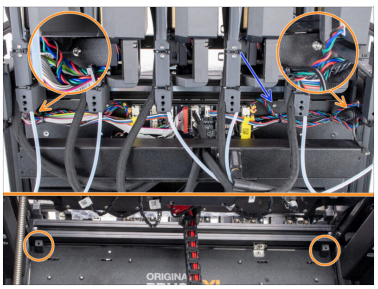
ⓘ The cover clip is inside the printer.

- Turn the cover clip 90° in any direction.
- Remove the cover clip from the frame.
- Repeat for the other two clips.

PASO 61 New upper back cover clips: parts preparation

- **For the following steps, please prepare:**
- New cover clips (3x)
- M3x8rT screw (3x) *removed in previous step*

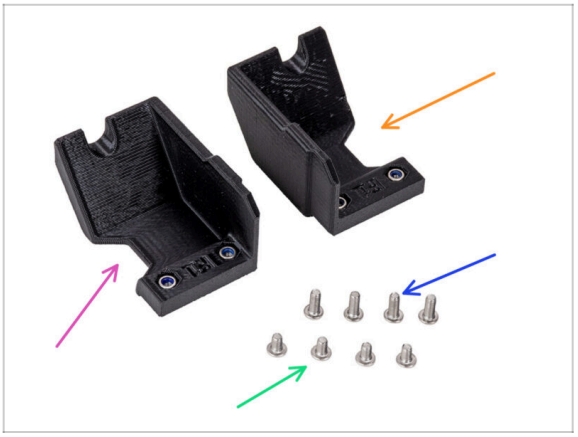
PASO 62 Installing the new upper back cover clips

- Insert the new cover clip into the frame.
  - Turn it 90° degrees to lock it in.
- Align the holes of the cover clip and the back plate.
- Secure with an M3x8rT screw.

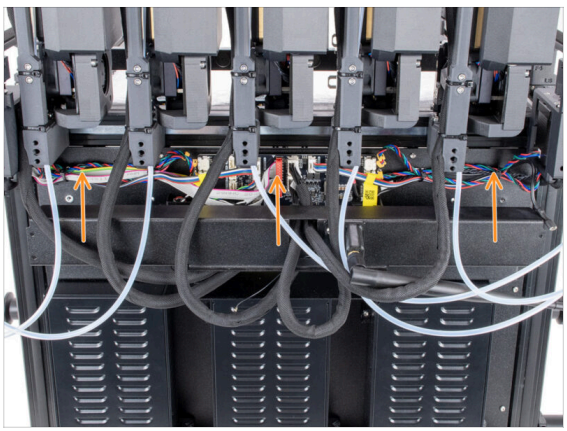
  ⚠ **Do not overtighten the screw!** You could destroy the printed part.
- Repeat for the other two cover clips.

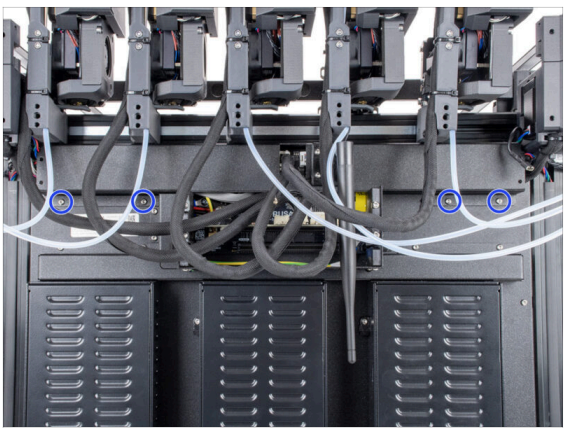
PASO 63 Cuberta trasera: preparación de las piezas



- **For the next steps, please prepare:**
- Cable cover cap left (1x) *removed in previous steps*
- Cable cover cap right (1x) *removed in previous steps*
- M3x8rT screw (4x) *removed in previous steps*
- M3x4rT screws (4x) *removed in the previous steps*

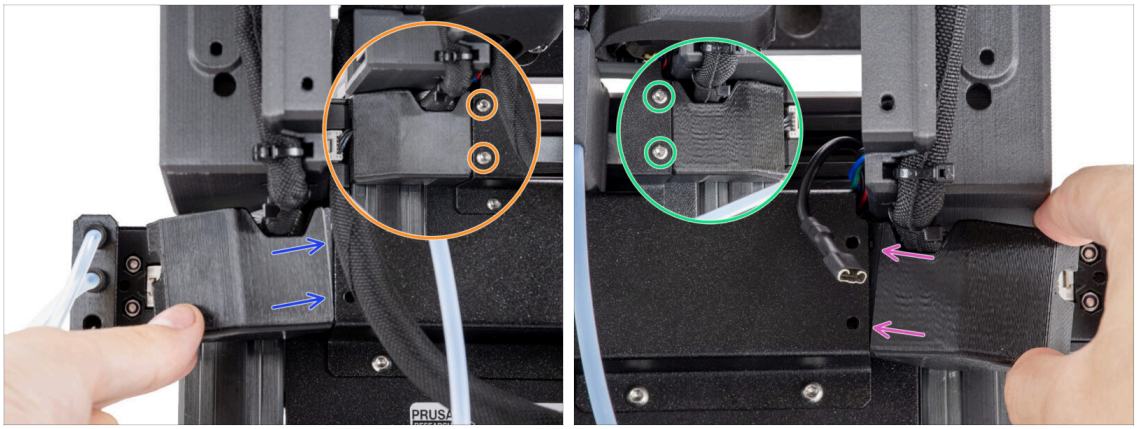
PASO 64 Back cover attaching I.





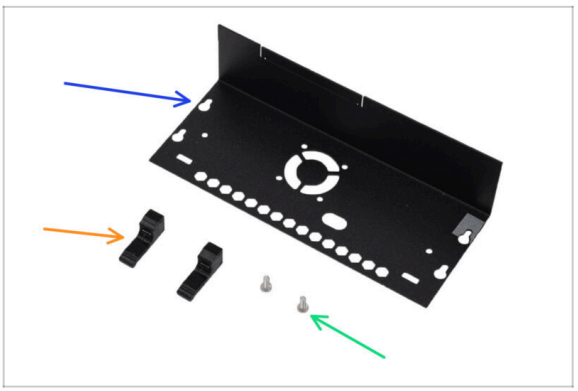
- Carefully attach the back electronics cover to the printer.
- ⚠ **Avoid pinching or damaging any of the cables!**
- Secure it with four M3x4rT screws.

PASO 65 Back cover attaching II.



- Gently insert the cable cover cap left.
  - Secure it with two M3x8rT screws using a T10 Torx screwdriver.
- On the other side, gently insert the cable cover cap right.
  - Secure it with two M3x8rT screws using a T10 Torx screwdriver.

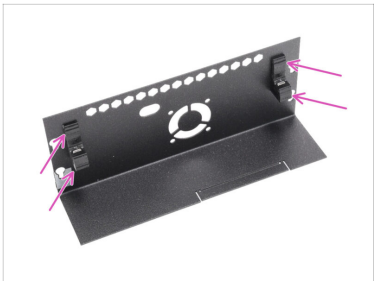
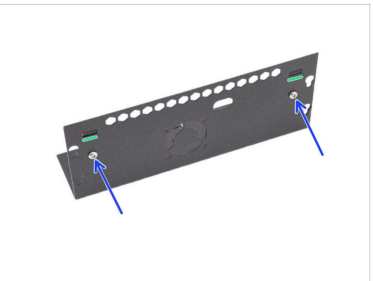
PASO 66 New electronics cover: parts preparation



- **Para los siguientes pasos, por favor prepara:**
- New XL-buddy-box-cover (1x) *electronics cover*
- Electronics-case-holder (2x) *you removed earlier*

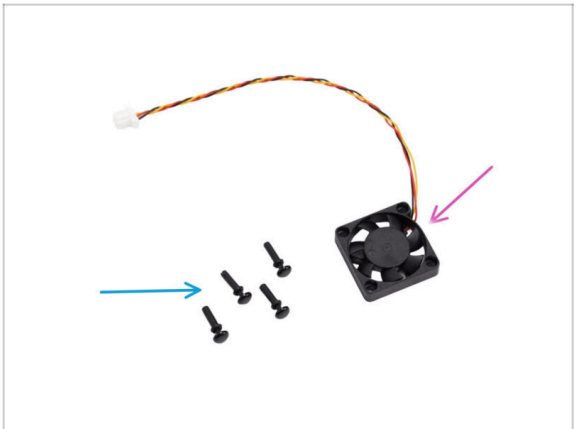
  Make sure both parts contain an M3nS nut.
- M3x8rT screw (2x) *you removed earlier*

PASO 67 Assembling the new cover

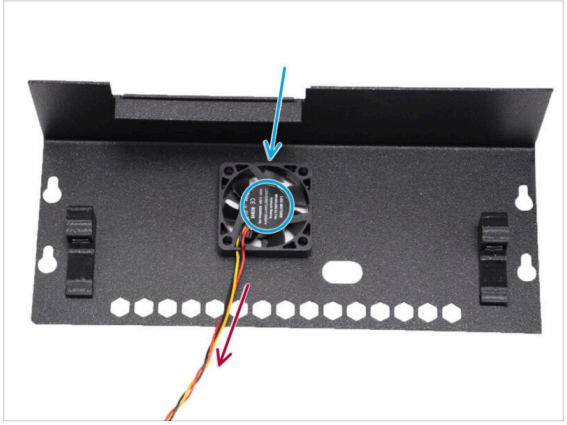
- Attach both electronics-case-holder parts to the inside of the new electronics cover.
- Make sure the tab on each part is properly seated in the cutout in the cover.
  - Then secure both parts with two M3x8rT screws.
- If you have a five-toolhead XL, bend the cut-out section of the sheet metal part inward.

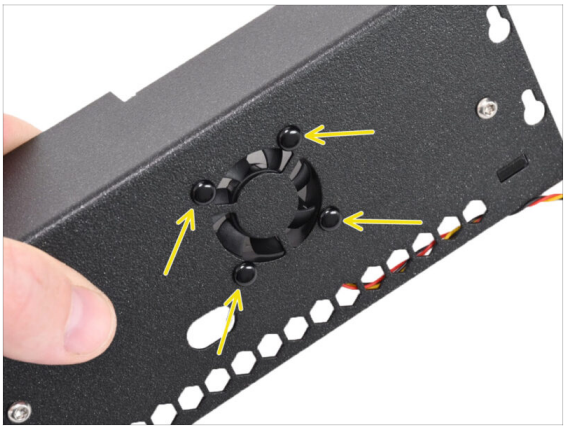
PASO 68 XL buddy fan: parts preparation



- **Para los siguientes pasos, por favor prepara:**
- XL buddy fan (1x)
- Long nylon rivet (4x)

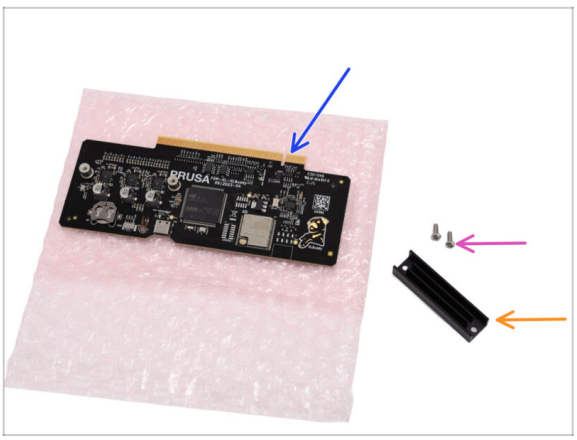
PASO 69 Installing the XL buddy fan





- From the inside of the cover, attach the XL Buddy fan.
  - The sticker must face upwards.
- Route the fan cable downward as shown in the image.
- Keep the fan in position and secure it from the opposite side of the cover using four rivets. Press them in completely.

PASO 70 XL buddy heatsink: parts preparation



- **Para los siguientes pasos, por favor prepara:**
- XL buddy board (1x) *you removed earlier*

  ⚠ **Touch any electronic board by its edges.** Avoid damaging the board components.
- Heatsink (1x)
- M3x8rT screw (2x)

PASO 71 Installing the heatsink

- Clean the heatsink area on the XL Buddy board using Isopropyl alcohol.

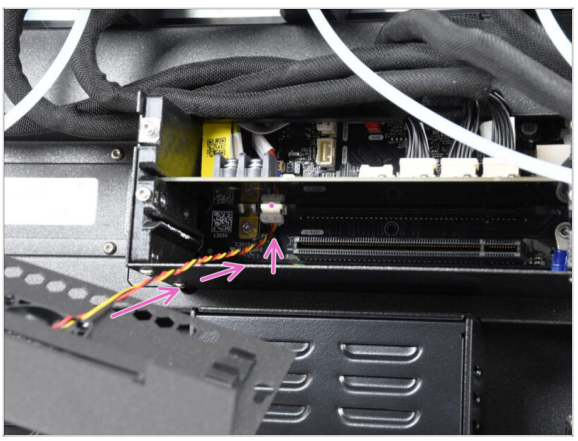
  Make sure the part is in the correct orientation and compare it with the image.

- Peel off the blue protective layer from the heatsink.

  Please note that the heatsink will become sticky after removing the protective layer.

- Place the heatsink adhesive side down on the cleaned XL Buddy board area and align it with the screw holes.
- Secure it with two M3x8rT screws.

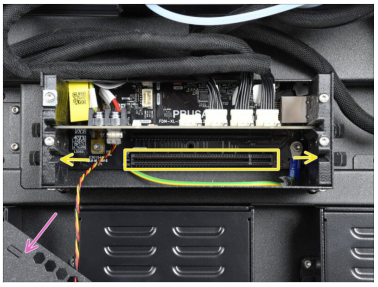
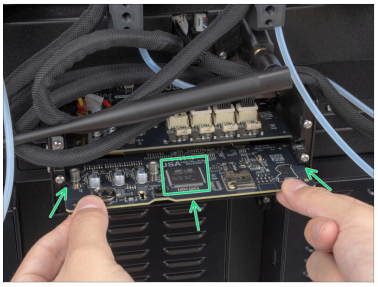
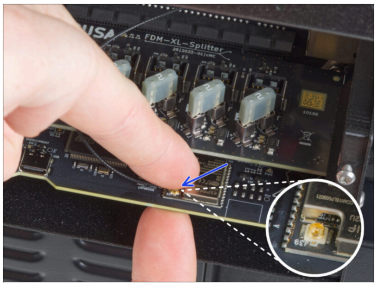
PASO 72 Connecting the XL buddy fan



- Connect the XL Buddy fan cable to the connector below the upper slot/board.

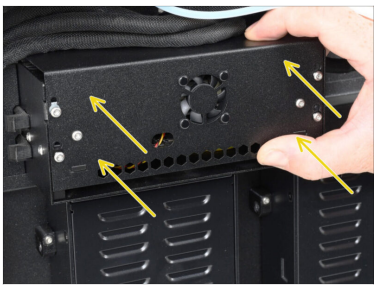
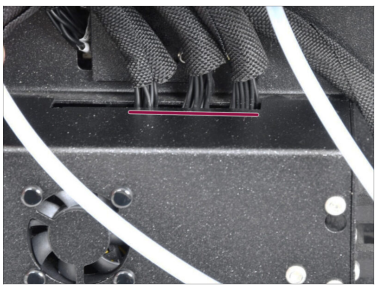
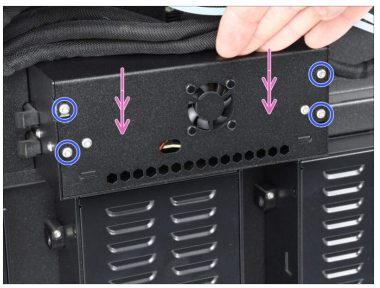
  Keep the board supported at all times so the electronics cover does not hang from the fan cable.

PASO 73 Connecting the XL buddy board

- Hold the attached electronics cover in your hand and support it so it does not hang from the cable.
- Install the XL Buddy board into the lower rails (bottom socket).
- Carefully slide the XL Buddy board into the rails and fully press it in. The microprocessor must face upward.
- Locate and connect the Wi-Fi cable to the Wi-Fi connector.

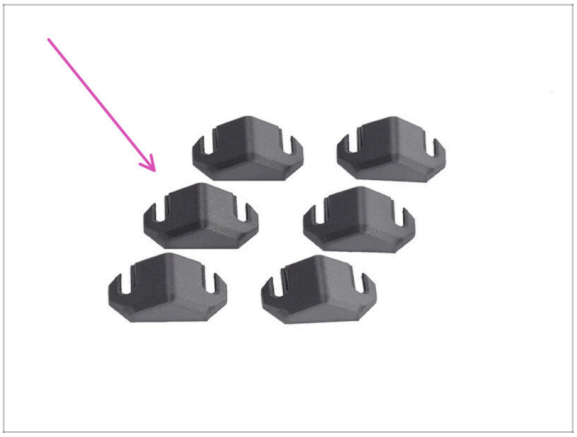
PASO 74 Covering the electronics

- Install the electronics cover onto the XL Buddy box.

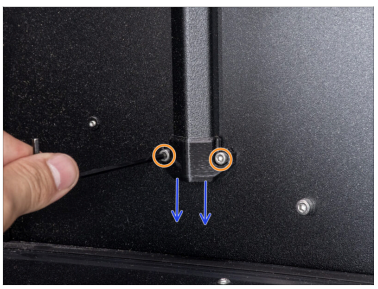
  ⚠ **Make sure no cables are pinched.**
- **If you have a five-tool XL**, make sure the cables from the three toolheads are routed **through the cut-out in the cover**.
- Slide the cover down until it properly seats on the pre-installed screws.
- Secure it by tightening the four pre-installed screws.

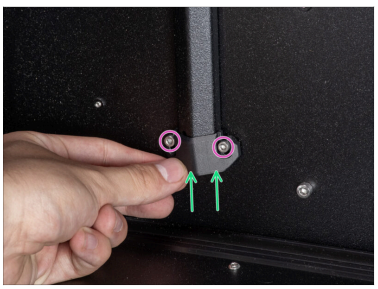
PASO 75 New PSU cable covers: parts preparation

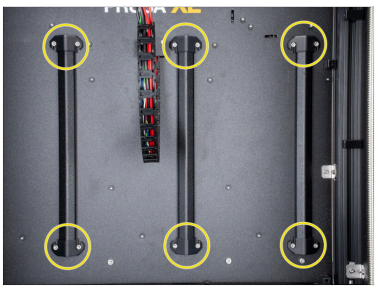


- **For the next steps, please prepare:**
- New PSU cable cover (6x)

PASO 76 Replacing the PSU cable covers

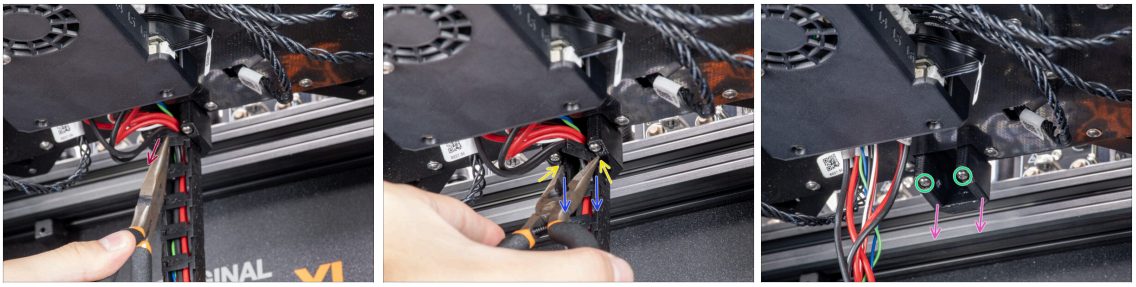






- Loosen the two M3x8 screws.
  Do not remove them completely.
- Remove the old PSU cable cover by sliding it down.
- Insert the new PSU cable cover by sliding it up under the screws.
- Gently secure it by tightening the two M3x8 screws.
  Do not overtighten, you might snap the printed part!
- Repeat the same procedure for all the PSU cable covers.

PASO 77 Removing the old bed energy chain mount



- Open one segment of the energy chain using pliers.

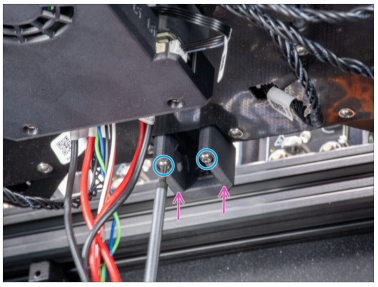
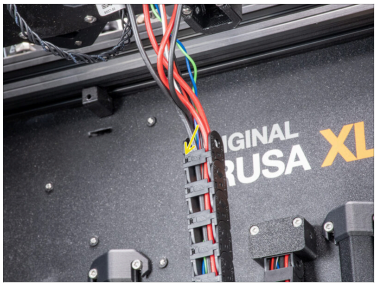
  ⚠ **Be very careful not to damage the energy chain or the cables!**

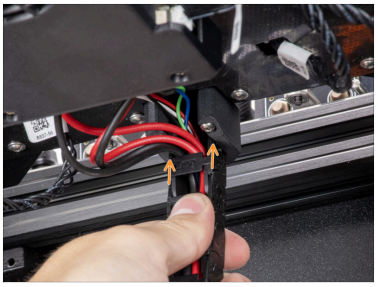
- Using pliers, grab the end of the energy chain by its sides **as close to the energy chain mount as possible**.
  - Remove it by firmly pulling downwards.
- Remove two M3x20rT screws.
- Remove the old bed energy chain mount.

PASO 78 New bed energy chain mount: parts preparation

- **Para los siguientes pasos, por favor prepara:**
- New bed energy chain mount (1x)
- M3x20rT (2x) *removed in previous steps*

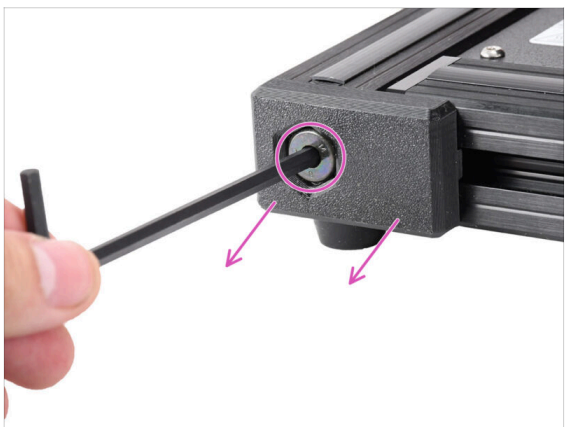
PASO 79 Installing the new bed energy chain mount



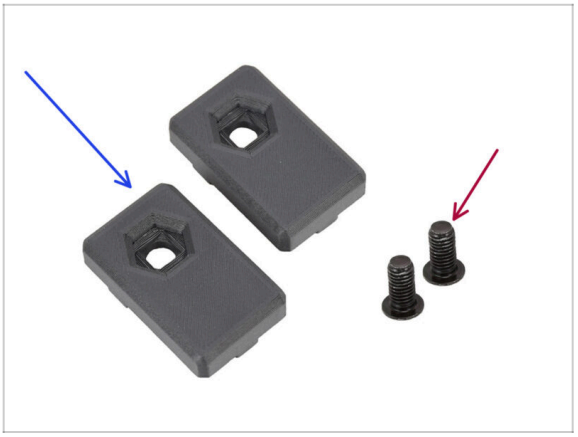
- Place the new bed energy chain mount into the designated space under the heatbed.
- Secure it with two M3x20rT screws.
- Close the segment you opened in the previous step by pusing it against the side of the energy chain mount.
- Firmly push the end of the energy chain into the bed energy chain mount until it clicks.

PASO 80 Removing the frame front cover



- Remove the M8x16 screw using a 4.0mm Allen key.
- Remove the frame front cover.
- Repeat the same procedure on the other side.

PASO 81 New frame front cover: parts preparation



- **Para los siguientes pasos, por favor prepara:**
- New frame front cover (2x)
- M8x16 screw (2x) *removed in previous step*

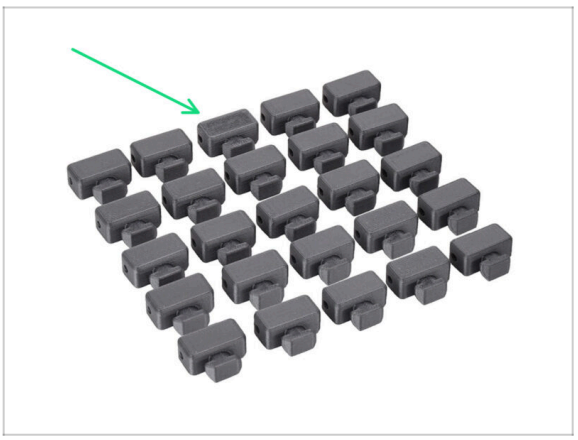
PASO 82 Installing the new right frame front cover

- Attach the new frame front cover to the exposed end of the frame on the right side.
- Secure the new frame front cover with an M8x16 screw using a 4.0 mm Allen key.

PASO 83 Installing the new left frame front cover

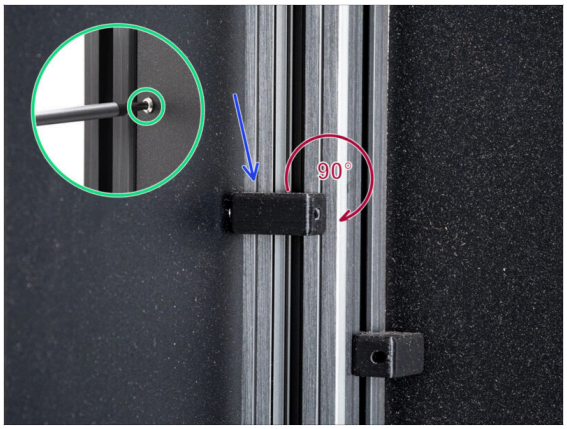
- Attach the new frame front cover to the exposed end of the frame on the left side.
- Secure the new frame front cover with an M8x16 screw using a 4.0 mm Allen key.

PASO 84 New cover clips: parts preparation



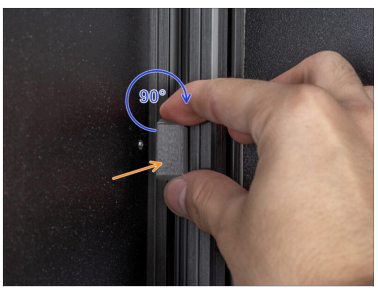
- **For the following steps, please prepare:**
- New cover clips (25x)

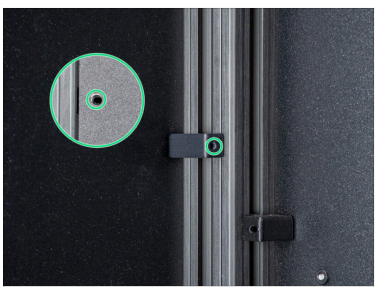
PASO 85 Removing the cover clip



- Locate the old cover clip on the inside of the printer.
- Remove the M3x8rT screw from the other side of the metal plate.
- Rotate the cover clip 90° degrees to free the cover clip.
- Remove the cover clip from the frame.

PASO 86 Installing the new cover clip

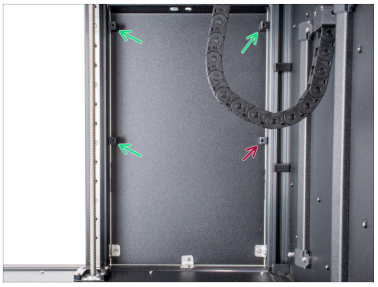
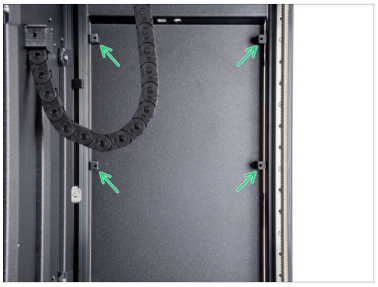
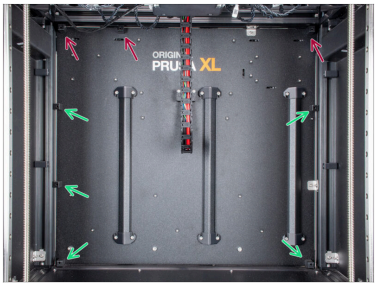




- Insert the new cover clip into the frame.
  - Turn it 90° degrees to lock it in.
- Align the holes of the cover clip and the metal plate.
- Secure with an M3x8rT screw.

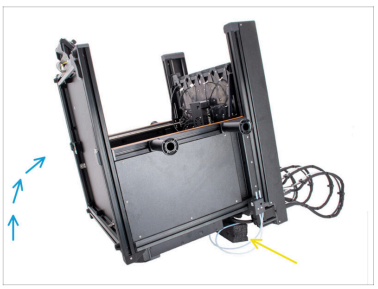
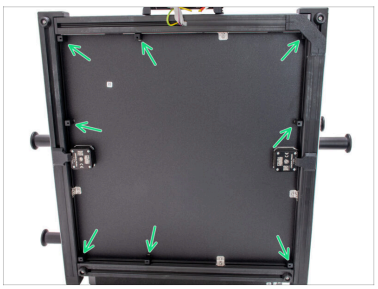
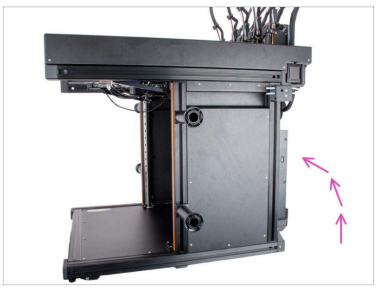
⚠ **Do not overtighten the screw!** You could destroy the printed part.

PASO 87 Replacing the cover clips I.

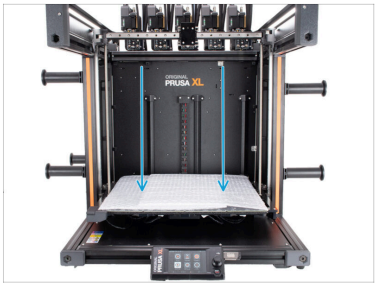
- Repeat the same procedure for the rest of the cover clips.
  - These clips have been replaced in previous steps.

PASO 88 Replacing the cover clips II.

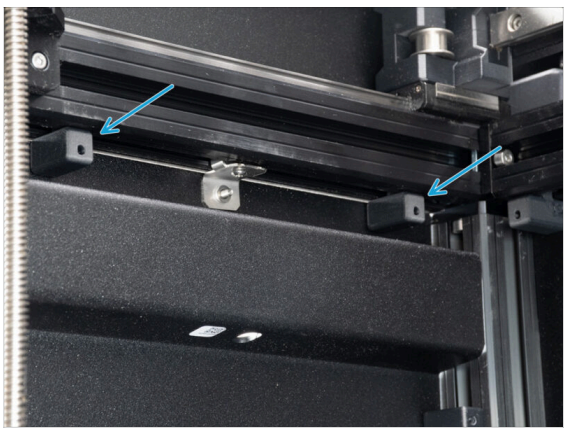
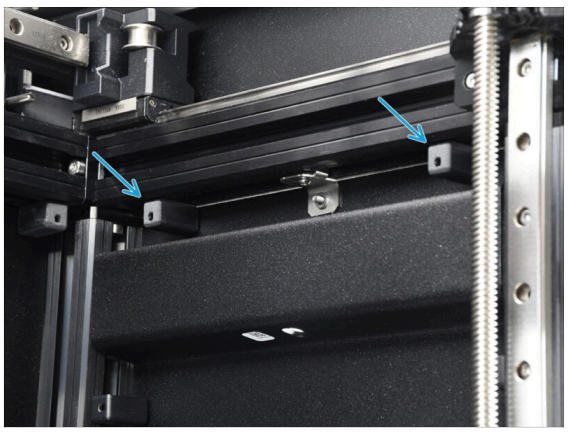
- Carefully lay the printer on it's back.
  - **Use any type of support material to not damage the printer.**
- Repeat the same procedure for the cover clips as in the previous steps.
- Carefully lift the printer and set it on it's base.

PASO 89 Adjusting the heatbed



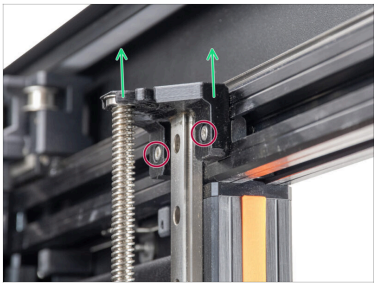
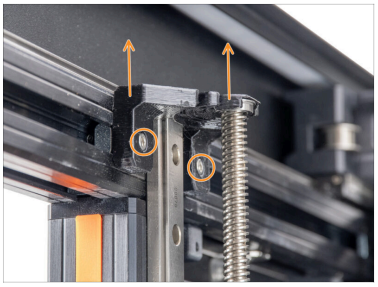
- From the rear side of the printer, plug in the PSU cable.
- Turn the power switch ON (symbol "I").
- Tu texto va aquí
  - Go to the menu, press **Control -> Move Axis -> Move Z** and set the heatbed all the way down.
- **Turn off and unplug the printer.**

PASO 90 Replacing the cover clips III.

- Replace the last four cover clips using the procedure from the previous steps.

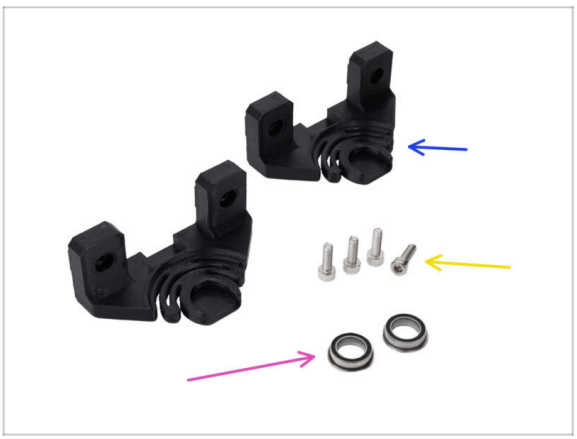
PASO 91 Removing the Z axis bearing housing

- Remove the two M3x10 screws from the Z axis bearing housing.
- Remove the Z axis bearing housing by pulling it up.
- Repeat the same procedure on the other side.
- Pull the Z axis bearing out of it's printed housing

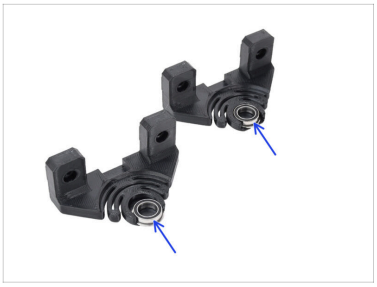
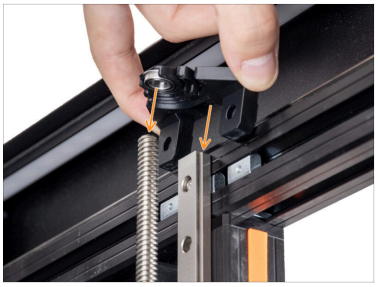
ⓘ You can throw out the printed housing, but **keep the Z axis bearing** for the next steps.

PASO 92 New Z axis bearing housing: parts preparation



- **For the next steps, please prepare:**
- New Z axis bearing housing (2x)
- Z axis bearing (2x) *removed in previous steps*
- M3x10 screw (4x) *removed in previous steps*

PASO 93 Installing the new Z axis bearing housing I.

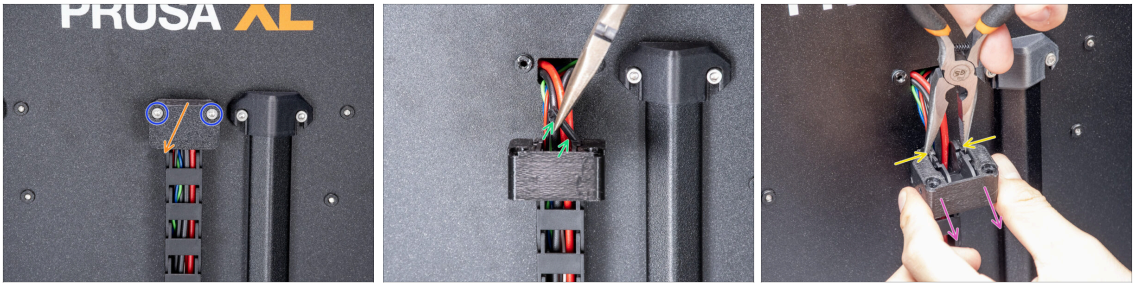



- Install the Z axis bearing into it's printed housing by pushing it firmly.
- Attach the Z axis bearing housing onto the Z axis rod and frame.
- Secure with two M3x10 screws.

PASO 94 Installing the new Z axis bearing housing II.

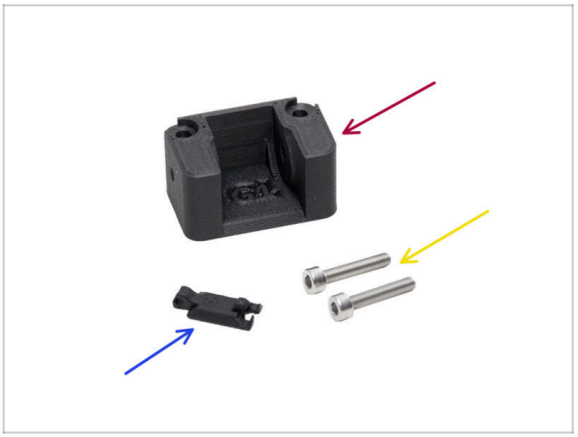
- Move to the other side.
- Attach the Z axis bearing housing onto the Z axis rod and frame.
- Secure with two M3x10 screws.

PASO 95 Removing the frame energy chain mount



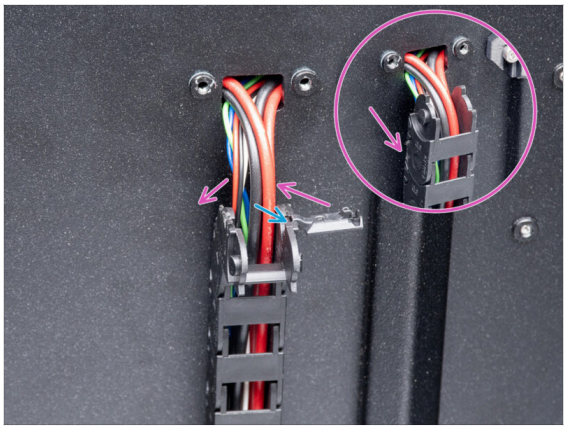
- Remove the two M3x16 screws from the frame energy chain mount.
- Pull the frame energy chain mount towards yourself.
- Completely remove the top energy chain segment lock by pulling it away from the chain using pliers.
- Push the sides of the energy chain together with pliers as close to the frame energy chain mount as possible.
- Pull the frame energy chain mount out to remove it.

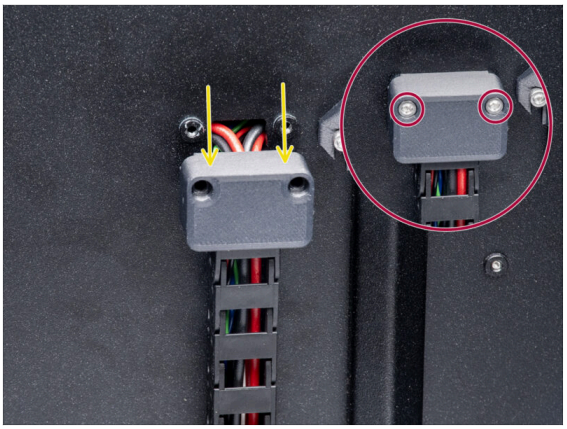
PASO 96 New frame energy chain mount: parts preparation



- **Para los siguientes pasos, por favor prepara:**
- New frame energy chain mount (1x)
- Energy chain segment lock (1x) *removed in previous step*
- M3x16 screw (2x)*removed in previous step*

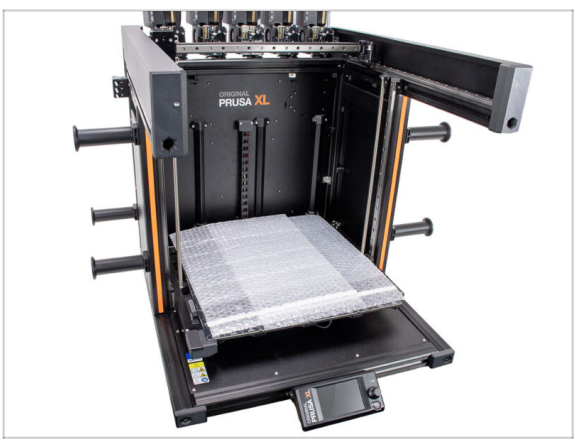
PASO 97 Installing the new energy chain mount





- Install the energy chain segment lock onto the energy chain.
  - First push the single end onto the right side.
  - Then guide it behind the cables and lock it on the other side.
- Firmly push the new energy chain mount onto the chain mount.
- Secure it to the back plate with two M3x16 screws.

PASO 98 It's done



- Compare the final look of the assembly with the picture.
- Let's continue to the next chapter: **Belts and spool holder upgrade**.

5. Belts and spool holder upgrade

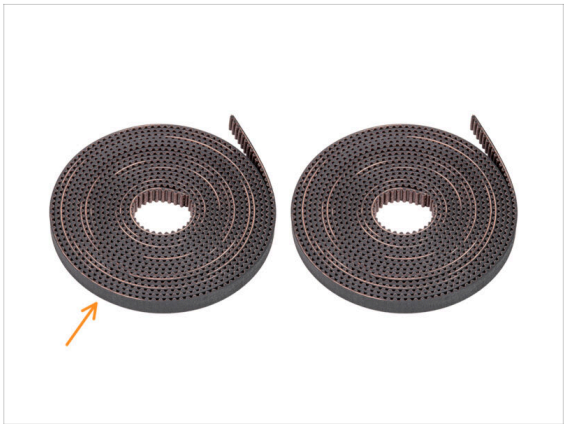
PASO 1 Colocando las correas: información importante

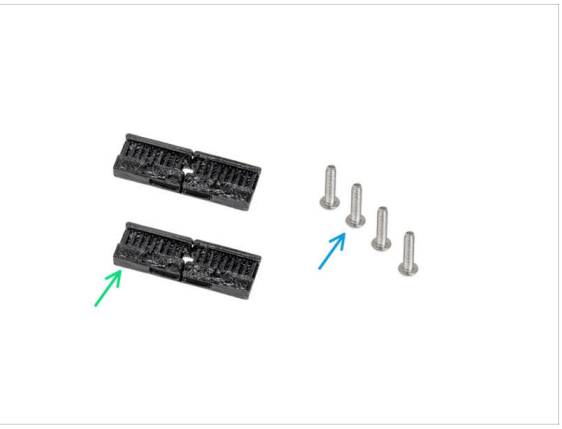
⚠ It is important to attach the belts correctly to the printer. Do not rush.

- Always Compare pictures with your printer.

⚠ Make sure, that no belt is twisted.

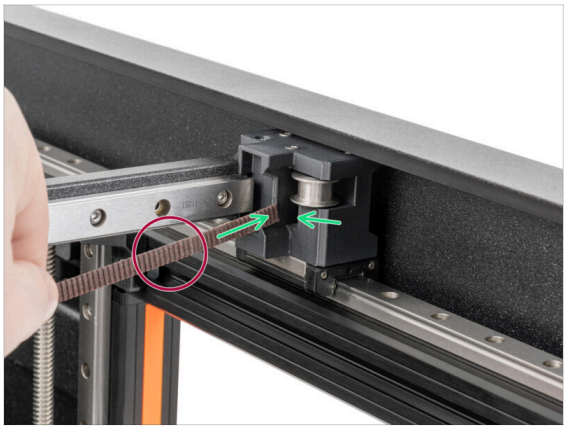
PASO 2 Colocando las correas: preparación de las piezas





- **Para los siguientes pasos, por favor prepara:**
- New XY belt 1.5GT (2x)
- New belt clamp (2x)
- M3x12rT screws (4x) *removed in previous steps*

PASO 3 Colocando la correa inferior: lado delantero derecho

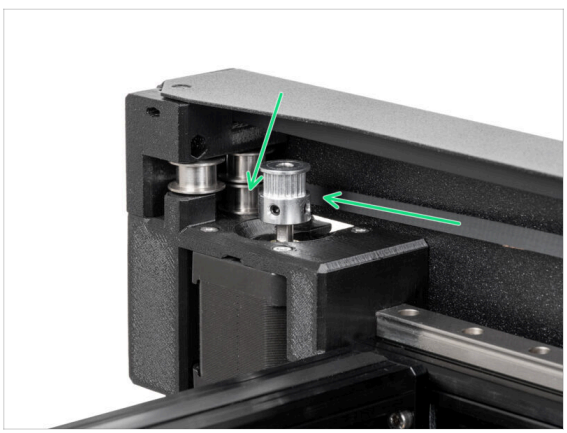


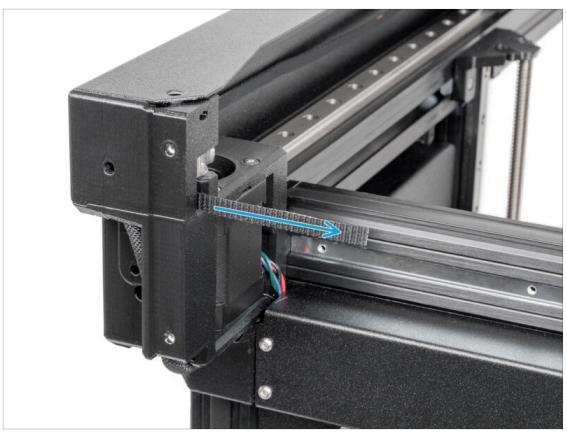
- Desde la parte frontal de la impresora:
- Take one of the belts.
- Insert the one end of the belt into the front lower section of the Y-carriage-right-base.
- The belt has to be facing toward the printer with the teeth showing (not the smooth side of the belt).

  ⓘ Comprueba dos veces que los dientes están orientados hacia la máquina.
- On the inner side of the Y-carriage-right-base pull the the belt.

⚠ Don't pull the belt too much, it can fall out from the Y-carriage-right-base and the whole process of the belt attaching has to be repeated from the start.

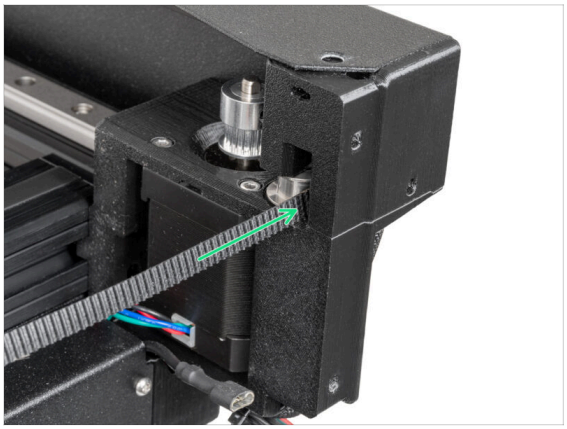
PASO 4 Lower belt attaching: right rear side

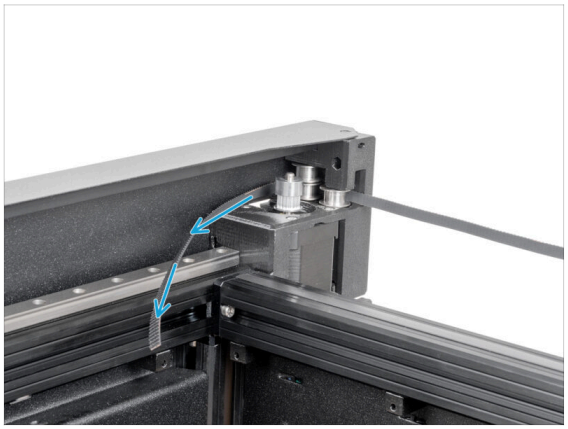




- Pull the belt some more and insert it behind the lower pulley.
- Pull the belt, which is now inserted through the lower pulley.

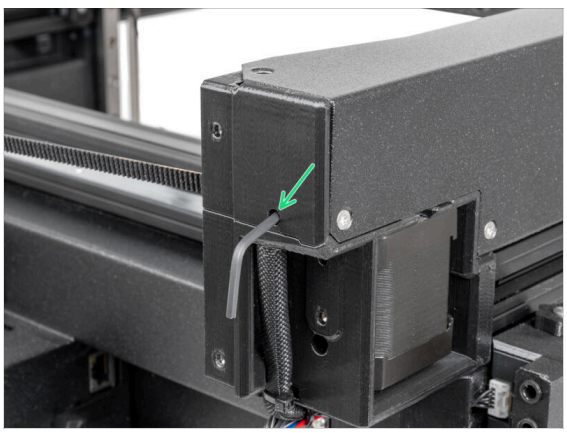
PASO 5 Lower belt attaching: left rear side

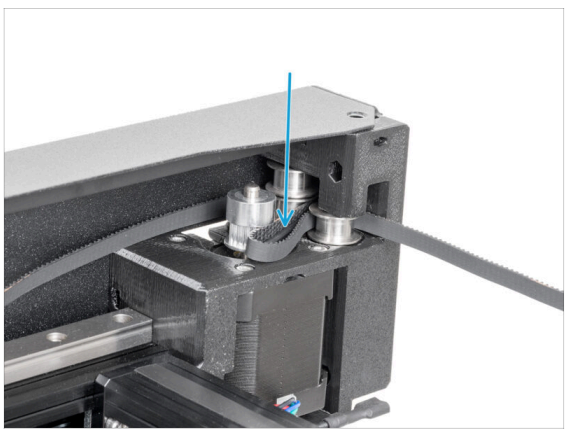




- Pull the belt some more and insert it behind the lower pulleys.
- Pull the belt, which is now inserted through the lower pulleys.

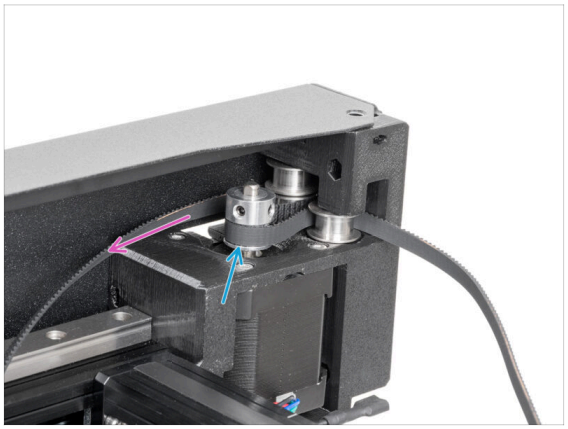
PASO 6 Colocando la correa inferior: preparando la correa de la polea del motor





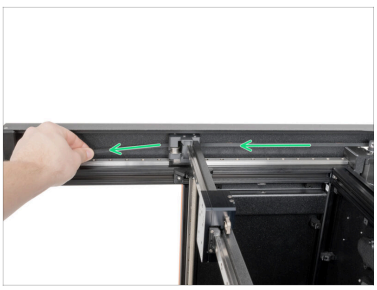
- From the rear side of the printer:
- Insert the 2.5 mm Allen key through the hole to create a loop on the belt.
- When the loop is created, you can remove the Allen key. **Do not pull the belt!**

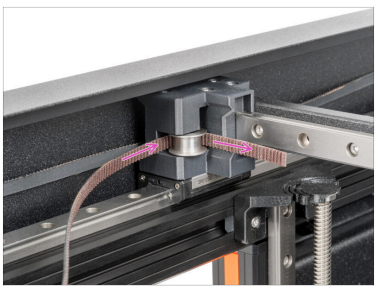
PASO 7 Colocando la correa superior: fijando la correa de la polea del motor



- Desde la parte frontal de la impresora:
- Using a shorter side of the 2.5 mm Allen key, pull gently the belt to create larger loop.
- Attach the loop on the motor pulley.
- Pull the belt to secure its position on the pulley.

PASO 8 Colocando la correa inferior: lado izquierdo

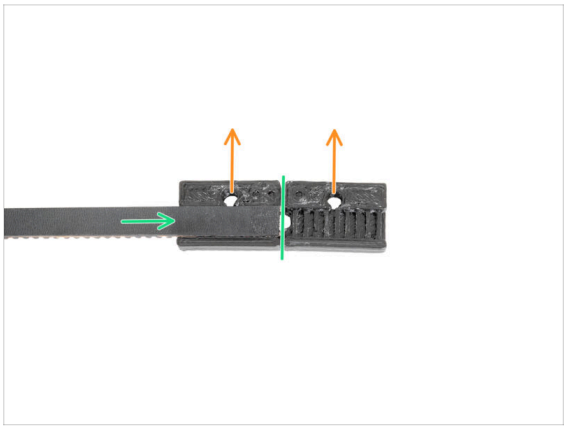


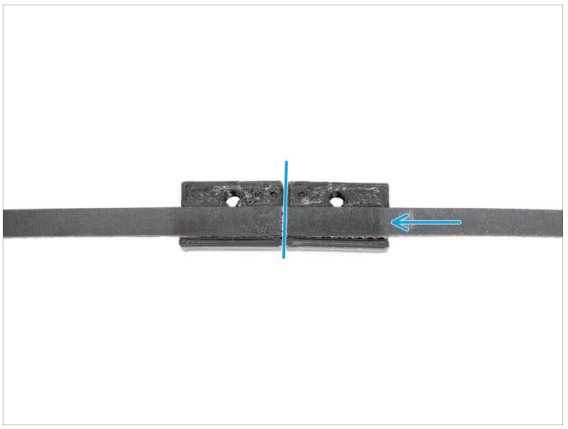


ⓘ When you pull on the belt you will feel more resistance from the XY motor, that's perfectly fine.

- Pull the belt some more and guide it behind the Y-carriage-left-base.
- Wrap the belt around the pulley on the front left side.
- Wrap the belt around the pulley in the Y-carriage-left-base.

PASO 9 Colocando la correa inferior: sujección de la correa





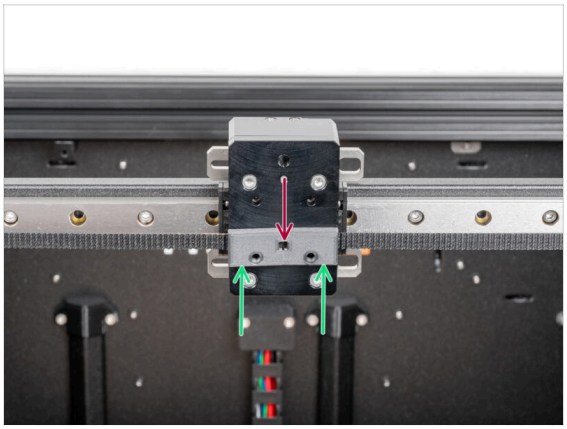
The color of the belt-clamps may be different depending on if you have an Original Prusa XL Enclosure. The procedure is the same, please continue.

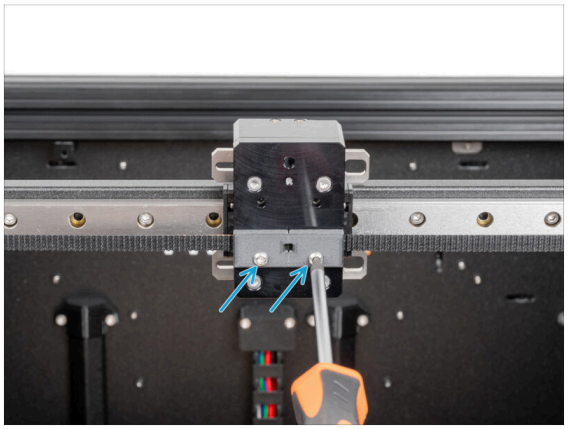
This image has been taken outside the printer on a white background for better visibility and definition. Follow this step on your printer.

- Prepare one belt-clamp facing with the holes for the screws facing up.
- Attach the left end of the belt to the belt-clamp. The end of the belt must be on half of the belt-clamp.
- Attach the right end of the belt to the belt-clamp. The end of the belt must be on half of the belt-clamp.

The belt-clamp with the belts will be turned by 180°and attached to the X-carriage.

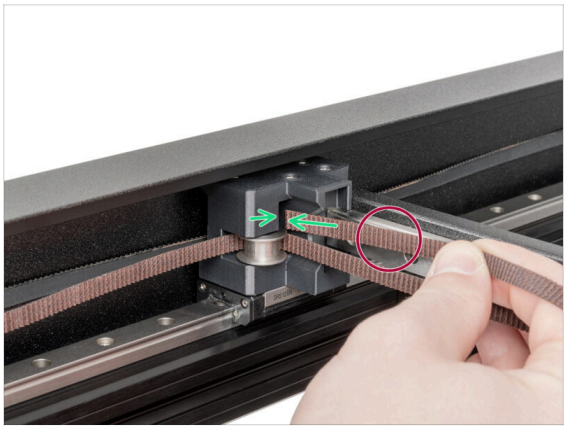
PASO 10 Colocando la correa inferior: fijando la sujección de la correa

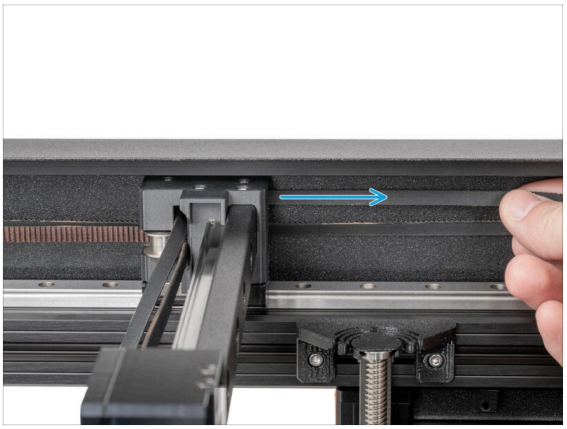




- Turn the prepared belt-clamp by 180° and attach the belt-clamp with the belts on the X-carriage.
- Check the belts if they are in their position. If not - correct the position by the previous step.
- Insert two M3x12rT screws and secure them using a T10 Torx screwdriver.
- ¡Bien hecho! Uno de las correas está atornillada. Probemos con la segunda.

PASO 11 Colocando la correa superior: lado delantero izquierdo



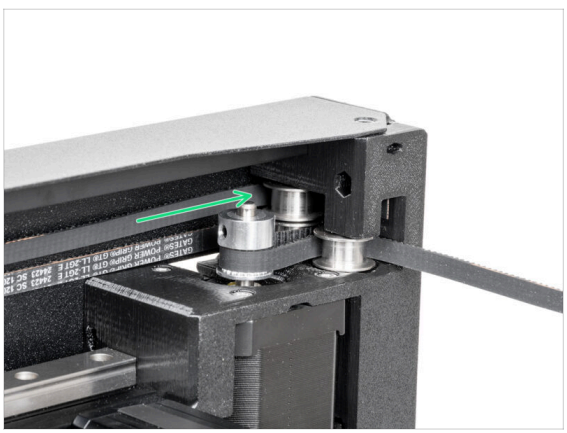


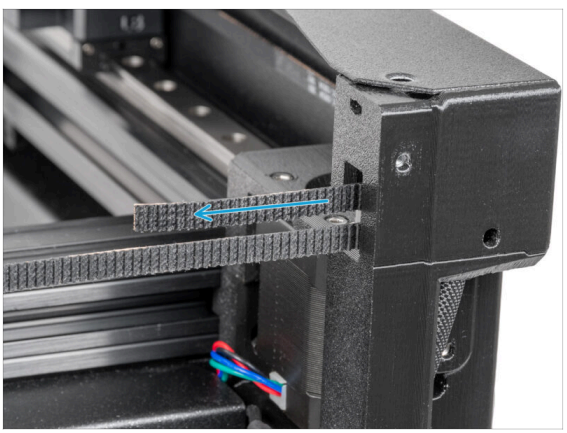
- Desde la parte frontal de la impresora:
- Take the second belt.
- Insert the one end of the belt into the front upper section of the Y-carriage-left-base.
- The belt has to be facing toward the printer with the teeth showing (not the smooth side of the belt).

  ⓘ Comprueba dos veces que los dientes están orientados hacia la máquina.
- On the inner side of the Y-carriage-left-base pull the the belt.

ⓘ Don't pull the belt too much, it can fall out from the Y-carriage-left-base and the whole process of the belt attaching has to be repeated from the start.

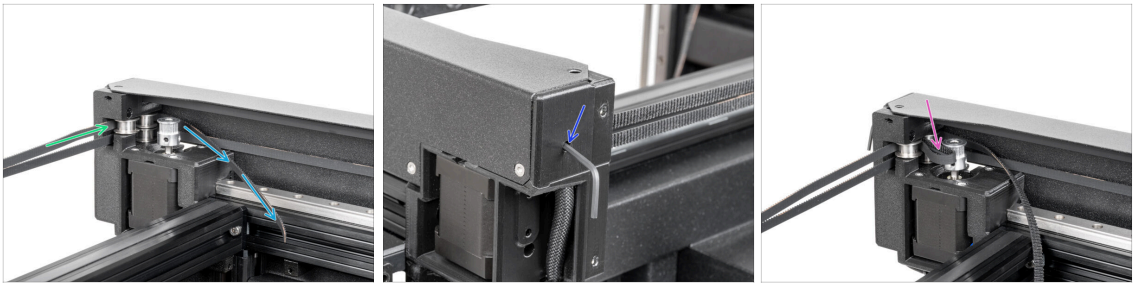
PASO 12 Colocando la correa superior: lado trasero izquierdo





- Pull the belt more and insert it behind the upper pulley.
- Pull the belt, which is now inserted through the upper belt pulley.

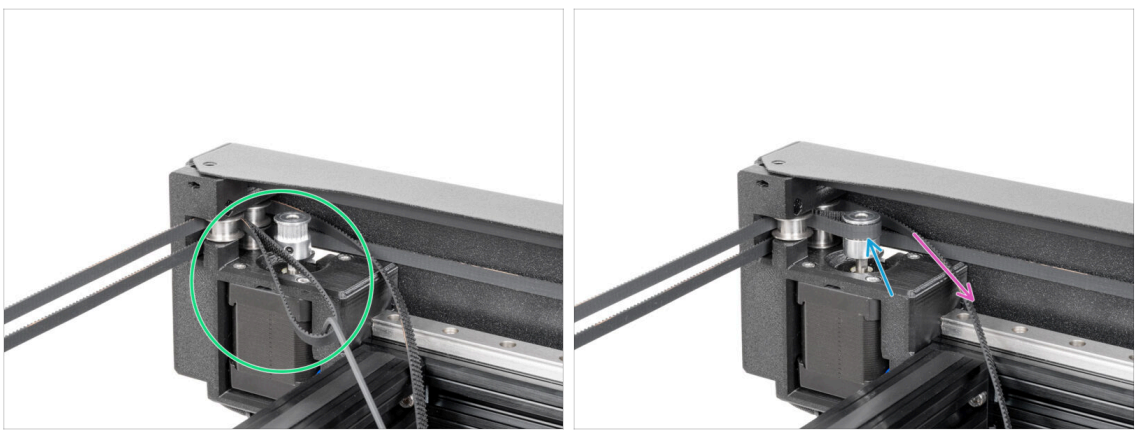
PASO 13 Colocando la correa superior: lado trasero derecho



*Hint: For the simplest possible assembly, remove the fifth Nextruder **(for Five-head users only)** and place it on top of the box on the heating heatbed.*

- Pull the belt more and insert it behind the upper pulleys.
- Pull the belt, which is now inserted through the upper pulleys.
- From the rear side of the printer:
- Insert the 2.5 mm Allen key through the hole to create a loop on the belt.
- When the loop is created, you can remove the Allen key. Do not pull the belt!
- Continúa en el siguiente paso.

PASO 14 Colocando la correa inferior: fijando la correa de la polea del motor



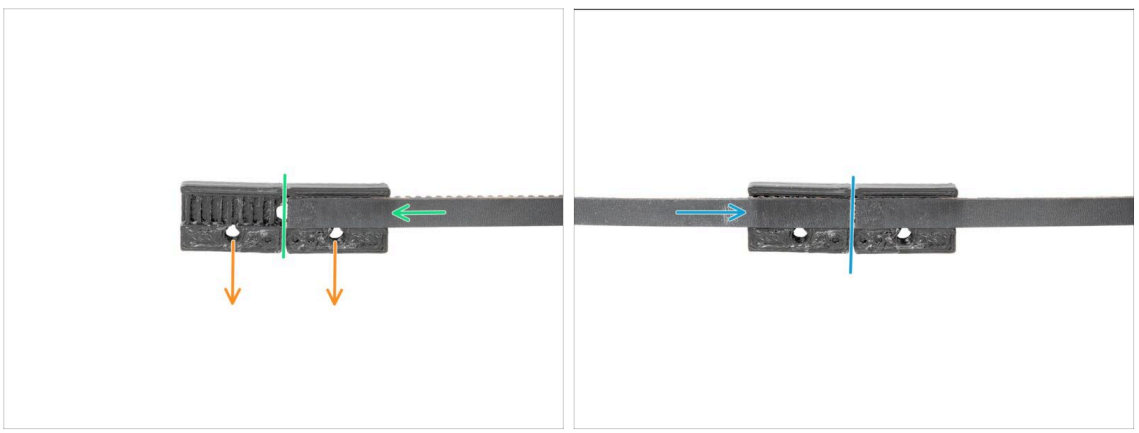
- Desde la parte frontal de la impresora:
- Using a shorter side of the 2.5 mm Allen key, pull gently the belt to create larger loop.
- Attach the loop on the motor pulley.
- Pull the belt to secure its position on the pulley.

PASO 15 Colocando la correa superior: lado derecho

When you pull on the belt you will feel more resistance from the XY motor, that's perfectly fine.

- Pull more the belt and stretch the belt behind the Y-carriage-right-base.
- Pull the belt around the pulley on the right front side.
- Pull the belt around the pulley in the Y-carriage-right-base.

PASO 16 Colocando la correa superior: sujección de la correa

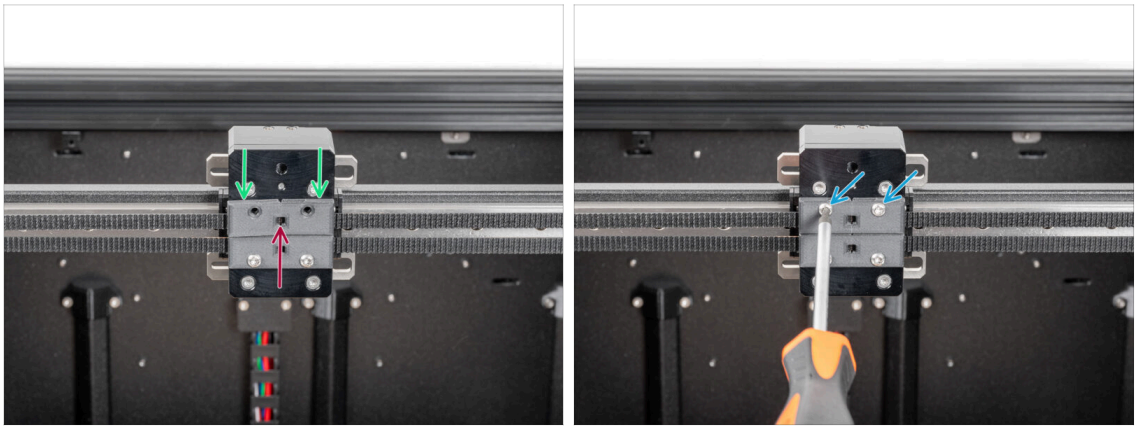


This image has been taken outside the printer on a white background for better visibility and definition. Follow this step on your printer.

- Prepare one belt-clamp facing with the holes for the screws facing down.
- Attach the right end of the belt to the belt-clamp. The end of the belt must be on half of the belt-clamp.
- Attach the left end of the belt to the belt-clamp. The end of the belt must be on half of the belt-clamp.

The belt-clamp with the belts will be turned by 180°and attached to the X-carriage.

PASO 17 Colocando la correa inferior: fijando la sujección de la correa



- Turn the prepared belt-clamp by 180° and attach the belt-clamp with the belts on the X-carriage.
- Check the belts if they are in their position. If not repair the position by the previous step.
- Insert two M3x12rT screws and secure them using a T10 Torx screwdriver.
- Well done! Both of the belts are fastened.

PASO 18 Belt tensioning

- On the front side of the printer:
- Using a 2.5mm Allen key, slightly tighten the M3 screw holding the left CoreXY tensioner.
- Using a 2.5mm Allen key, slightly tighten the M3 screw holding the right CoreXY tensioner.
- No tenses completamente la correa, procede con el siguiente paso, donde hay un video sobre el ajuste de la tensión de las correas.

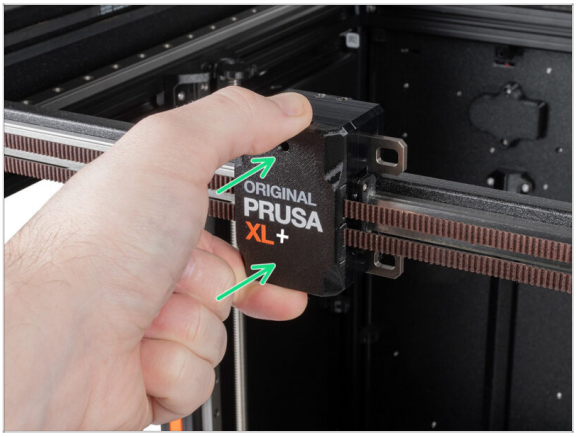
PASO 19 Belt tensioning: video

- En la Original Prusa XL, ajustar la correa a la tensión óptima es fundamental para conseguir una buena calidad en las impresiones. Una correa floja puede provocar desplazamientos de capas, imágenes fantasma u otras anomalías en la impresión, como obtener una forma irregular en lugar de un círculo perfecto. Una correa demasiado tensa puede provocar un movimiento irregular en los ejes X e Y.
- Tenemos nuestro propio afinador de correas. La aplicación determina la tensión de la correa midiendo la frecuencia de la vibración generada al tocarla. Sigue las instrucciones del vídeo a continuación para ajustar la correa.

PASO 20 X-carriage cover: preparación de las piezas

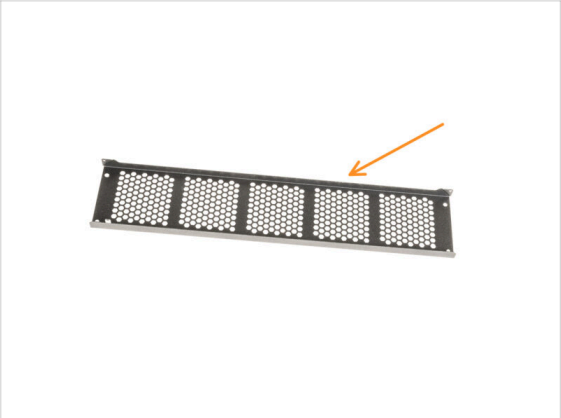
- **Para los siguientes pasos, por favor prepara:**
- New X carriage cover (1x)

PASO 21 X-carriage cover attaching



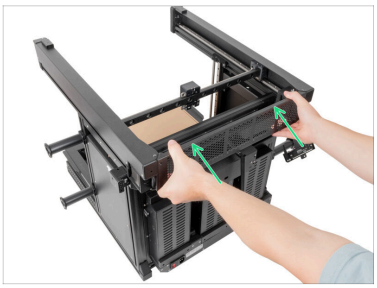
- Attach the new X-carriage cover.

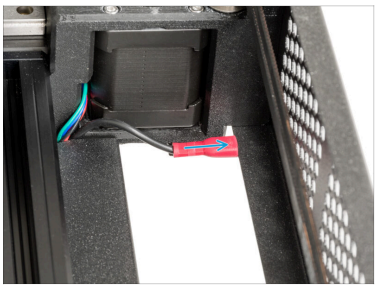
PASO 22 Cubierta CoreXY: preparación de las piezas



- **Para los siguientes pasos, por favor prepara:**
- CoreXY cover (1x)
- M3x6bT screws (6x) *removed in previous steps*

PASO 23 CoreXY cover attaching





- Gently attach the CoreXY cover on the back of the CoreXY.
- On the inner side of the CoreXY cover, connect the PE connector.
- Insert six M3x6bT screws and tighten them using a T10 Torx screwdriver.

PASO 24 CoreXY cover securing

- Insert six M3x6bT screws and tighten them using a T10 Torx screwdriver.

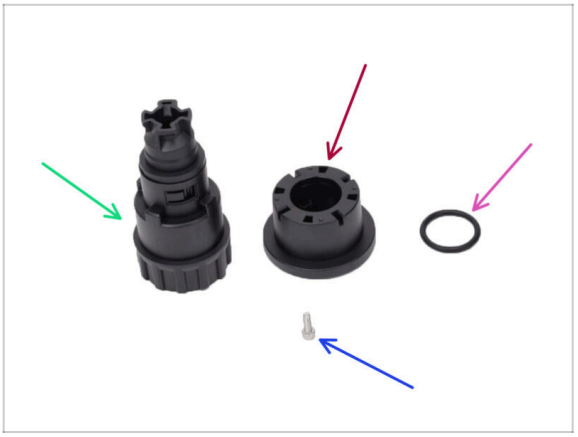
PASO 25 Removing the spool holder

- Using the **long** 3.0mm Allen key, unscrew the M4x12 screw holding the spool hodler assembly.
- Remove the spool holder assembly.

If your printer uses a printed spool holder, it is equipped with an M5 screw and an M5nEs nut in the profile.

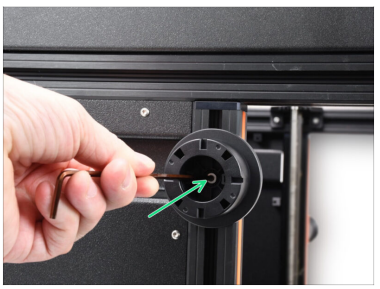
Replace both with the supplied M4 screw and M4nEs nut before proceeding.

PASO 26 New spool holder: parts preparation



- **Para los siguientes pasos, por favor prepara:**
- Spoolhoder-static (1x)
- Puck-universal (1x)
- O-ring (1x)
- M4x12 screw (1x) *you removed earlier*

PASO 27 Installing the spool holder puck



- Insert the M4x12 screw into the universal puck.
- Align the screw in the puck with the M3nEs nut in the profile.
- Make sure both tabs on the puck are inserted into the profile.
- Fully tighten the M4x12 screw.

PASO 28 Montaje del portabobinas

- Install the O-ring onto the spool holder.
- Insert the spool holder into the puck.
- Insert the spool holder into the puck.
- **Repeat the same for the remaining spool holders.**

PASO 29 It's done

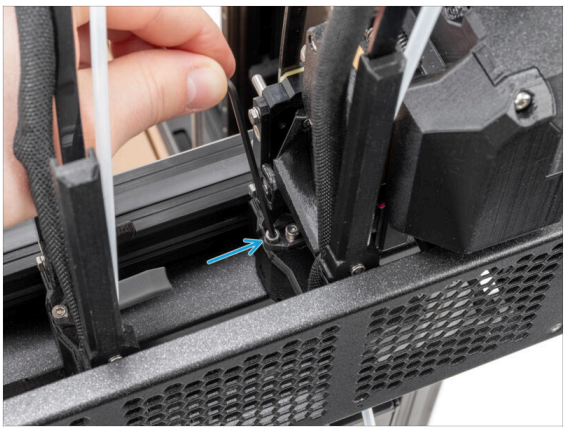
- Compara el aspecto final del ensamblaje con la imagen.
- Let's continue to the last chapter: **Finishing up**.

6. Finishing up

PASO 1 Antes de empezar con el Multi-Cabezal

- Este capítulo muestra una breve descripción del asistente. Ten en cuenta que las capturas de pantalla son ilustrativas y pueden diferir de las del firmware.
- Asegúrate de estar ejecutando el **Firmware 6.2.4 o más reciente**
- Algunas partes del asistente se realizarán múltiples veces, esto depende del número de cabezales. Por ejemplo:
  - Dock Calibration
  - Loadcell calibration
  - Filament sensor calibration

PASO 2 Calibración de la altura del sello de boquilla



- En los pasos de calibración de la altura del Sello de la boquilla se utilizaron Nextruder acoplados sin la impresora para una mejor visibilidad, procede a los siguientes pasos en tu impresora. **No desmonte los docks.**
- En el siguiente paso, calibraremos la altura del sello de la boquilla.
- Con la llave Allen de 2.5 mm, aprieta o afloja el tornillo M3x30 para calibrar la altura del sello de la boquilla.

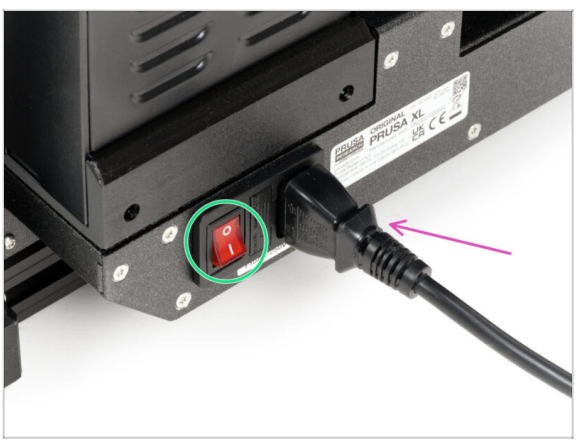
PASO 3 Calibración de la altura del sello de boquilla

- Si el sello de la boquilla está demasiado bajo o demasiado alto, hay que reposicionar su altura.
- Usando una llave Allen de 2.5 mm, gira el tornillo M3x30 en el sentido de las agujas del reloj para ajustar el sello de la boquilla más abajo.

  ⓘ Si tienes problemas para acceder al tornillo, puede desmontar el cabezal de impresión adyacente para acceder mejor.
- Si el sello de la boquilla no está doblada y está en contacto con la boquilla, significa que está en la posición correcta.

  ⓘ Prueba a presionar suavemente con el dedo la parte inferior de la junta de la boquilla para comprobar que la junta está en contacto con la boquilla.

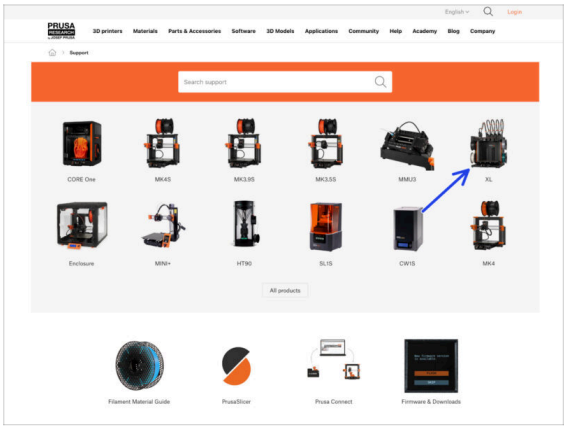
PASO 4 Preparing the printer

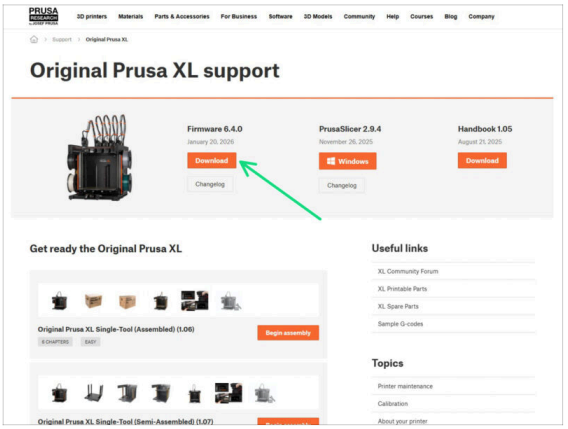


⚠ Asegúrate de que la impresora está colocada en un lugar estable donde no se transmitan vibraciones ambientales (por ejemplo, donde estén imprimiendo otras impresoras).

- Enchufa el cable de la fuente de alimentación desde la parte posterior de la impresora.
- Enciende el interruptor (símbolo "**I**").

PASO 5 Firmware update





ⓘ Todos los packs de impresoras que se envían incluyen una unidad USB con el firmware más reciente. Sin embargo, se recomienda comprobar y posiblemente actualizar la versión del firmware.

- Visita la página help.prusa3d.com.
- Visita la página de la Prusa XL.
- Guarda el archivo de firmware (*.bbf) en la memoria USB adjunta.*

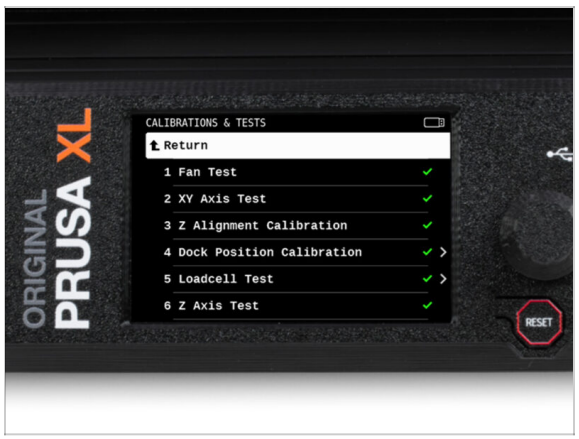
ⓘ Consejo pro: Para acceder a la página de inicio de la Prusa XL puedes utilizar la URL: prusa.io/XL

PASO 6 Asistente: Configuración Red y Prusa Connect

ⓘ Tras el arranque de la impresora, la pantalla ejecuta el asistente de prueba y configuración de la impresora.

- La configuración inicial comienza con la CONFIGURACIÓN DE RED opcional, que también incluye la CONFIGURACIÓN DE PRUSA CONNECT. Sigue las instrucciones que aparecen en pantalla si deseas conectar tu impresora a Wi-Fi y Prusa Connect.

PASO 7 Wizard: Calibration tests



El asistente probará todos los componentes importantes de la impresora. Algunas partes del asistente requieren la interacción directa del usuario. Sigue las instrucciones que aparecen en pantalla.

ADVERTENCIA: No toques la impresora durante el asistente a menos que se le indique. Algunas partes de la impresora pueden estar CALIENTES y moverse a gran velocidad.

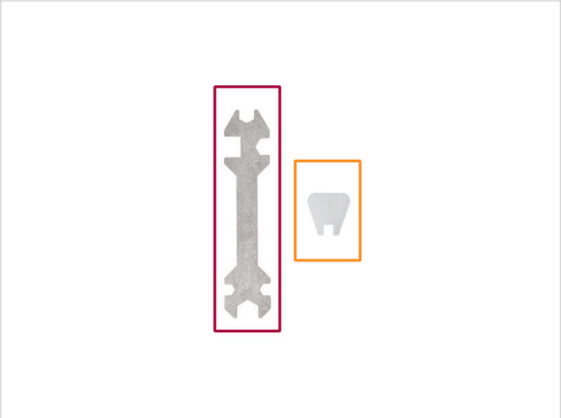
El asistente comienza con estos tests:

- Fan test
- Test ejes X e Y
- Z-axis alignment calibration

- **Estos primeros tests son totalmente automáticos durante la primera calibración.**

Mientras pruebas los ejes, asegúrate de que no hay nada en la impresora que obstruya el movimiento de los ejes.

PASO 8 Asistente: Calibración Posición Dock

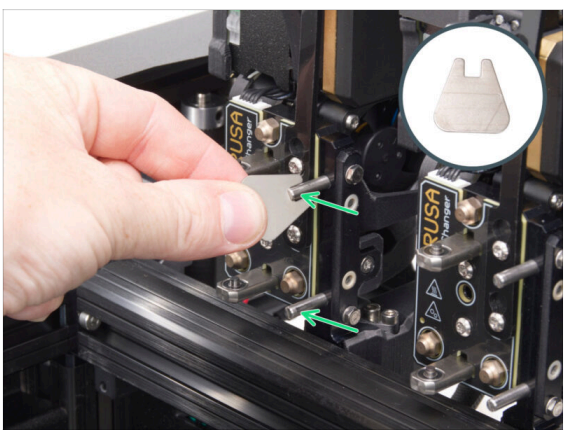


ⓘ Este test requerirá tu intervención. La impresora te guiará para calibrar correctamente la posición de cada uno de los cabezales de la impresora.

- You will need:
  - Universal wrench (1x)
  - Mini wrench (1x)

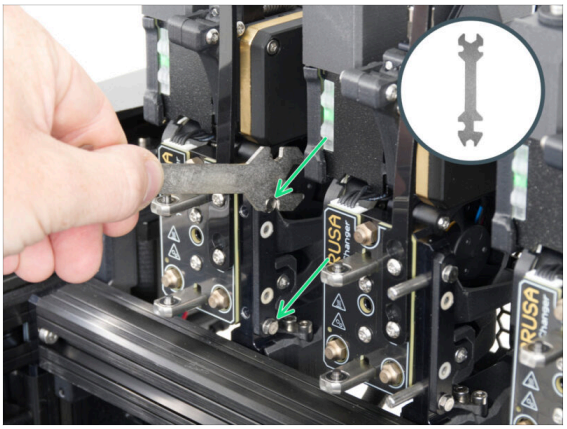
⚠ ¡Es necesario seguir correctamente todos los pasos de la calibración del dock! **No te precipites. Lee dos veces cada paso y sigue las instrucciones.**

PASO 9 Asistente: Retira los pines del dock



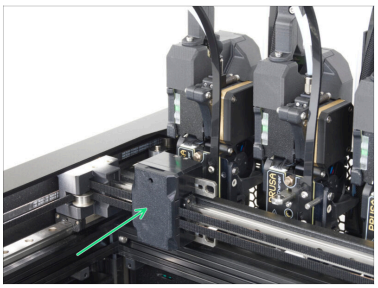
- Sigue las instrucciones del asistente en la pantalla.
- Con una llave Mini, desatornilla y retira los dos pines del Dock 1. Déjalos a un lado, los volveremos a usar pronto.

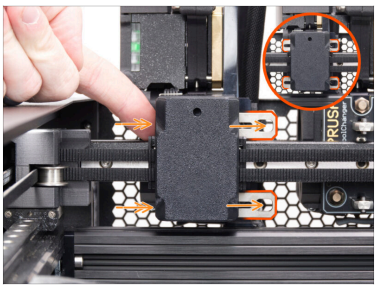
PASO 10 Wizard: Loosen screws



- Sigue las instrucciones del asistente en la pantalla.
- Con una llave Uni, afloja dos tornillos. **Basta con darles unas vueltas; no retires los tornillos**

PASO 11 Asistente: Bloqueando la herramienta

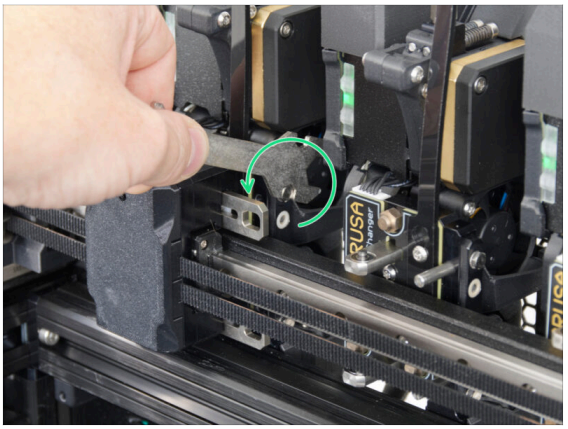




- Sigue las instrucciones del asistente en la pantalla.
- Mueve lenta y cuidadosamente el mecanismo de cambio de herramientas con la mano hasta el primer cabelza (el de más a la izquierda).
- Bloquea manualmente las barras metálicas como se indica en la imagen.

⚠ **La herramienta debe estar bloqueada en el portaherramientas.**

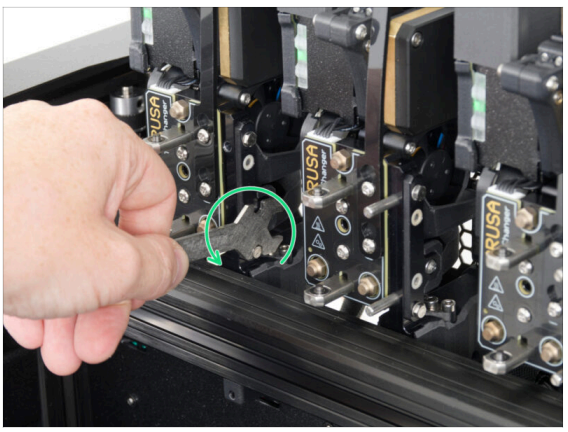
PASO 12 Asistente: Apretando el tornillo superior



- Sigue las instrucciones del asistente en la pantalla.
- Con una llave Uni, aprieta el tornillo superior en el lado del dock.

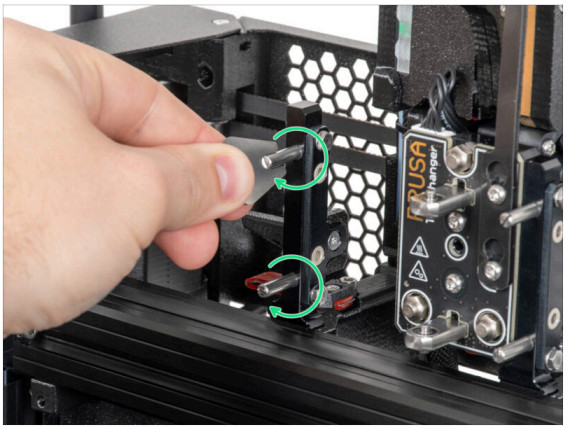
⚠ Tras confirmar con el botón continuar de la pantalla LCD, el eje XY abandonará el dock con el cabezal. **Asegúrate de que no haya obstáculos en el camino.**

PASO 13 Asistente: Apretando el tornillo inferior



- Sigue las instrucciones del asistente en la pantalla.
- Con una llave Uni, aprieta el tornillo inferior de un lado del dock.

PASO 14 Asistente: Instala los pines del dock

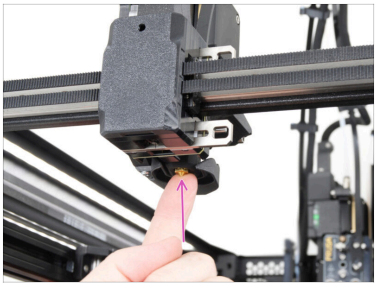


- Sigue las instrucciones del asistente en la pantalla.
- Inserta los dos pines metálicos y apriétalos con una llave Mini.
- Después de hacer clic en el botón *Continuar* de la pantalla LCD, la impresora volverá a colocar el cabezal en el dock 1 y realizará algunos movimientos de calibración.

PASO 15 Asistente: Dock calibrado correctamente

- ¡Buen trabajo! El Dock1 está calibrado.
- Repite el proceso de calibración para todos los cabezales.

PASO 16 Wizard: Loadcell test



- El siguiente paso del asistente te pedirá que toques la boquilla para probar y calibrar la Célula de carga. Las partes de la impresora no se calientan durante este test; puede tocar las partes de la impresora. Haz clic en ***Continuar***.
- **No toques la boquilla todavía.** Espera hasta que finalice la cuenta atrás y la impresora te avise con un sonido y un mensaje en la pantalla.
- Golpea suavemente la boquilla pero con decisión. No ejerzas una fuerza excesiva. Si la célula de carga no detecta tu toque, se te pedirá que repitas el paso.

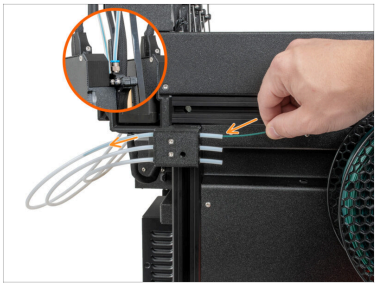
Repite el test de la célula de carga según el número de cabezales de impresión.

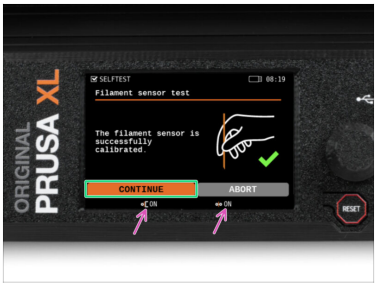
Después de este paso, procede al **Test del Eje Z** y al **Test del calentador de la boquilla**, respectivamente. Estos dos tests son automáticas y requieren una intervención mínima.

PASO 17 Asistente: Calibrar Sensores Filamento

- La impresora te preguntará si desea reasignar el sensor de filamento del tercer lado. Selecciona **Izquierda**. Cambia el lado solo en caso de que no tengas suficiente espacio alrededor de la impresora para el tercer porta bobinas del lado izquierdo.
- Durante la calibración de los sensores de filamento, se te pedirá que utilices al menos 130 cm de filamento. Utiliza el Prusament suministrado con tu impresora y móntalo directamente en el portabobinas.
- Cuando hayas preparado el filamento, haz clic en ***Sí***.
- Espera a que la impresora te indique que insertes el filamento en el sensor de filamento lateral.

PASO 18 Asistente: Calibrar Sensores Filamento



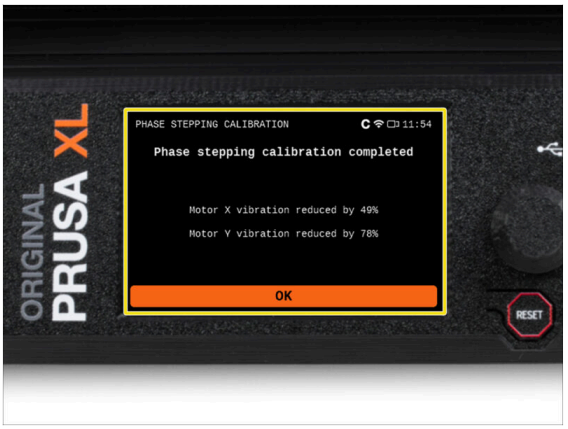


- Inserta el filamento en el sensor de filamento lateral a través del tubo PTFE. Empújalo hasta que alcance el sensor de filamento del extrusor (notarás una ligera resistencia).
- Puedes comprobar el estado del sensor de filamento lateral (izquierda) y del sensor de filamento del extrusor (derecha) en la barra inferior de la pantalla.
- Al final de la prueba, se le pedirá que **retires el filamento del sensor.**

ⓘ Según el número de cabezales de impresión, repite el proceso de calibración del sensor de filamento.

- Una vez todos sensores de filamento se han calibrado y probado correctamente, la impresora pasará a la calibración de la compensación de herramientas. Para ello, necesitará tu intervención. Pasa al siguiente paso →

PASO 19 Wizard: Phase stepping



- **El último paso es la calibración del phase stepping.** Esta función se introdujo en la versión 6.0.0 del firmware. La calibración es automática. Sigue las instrucciones que aparecen en pantalla.

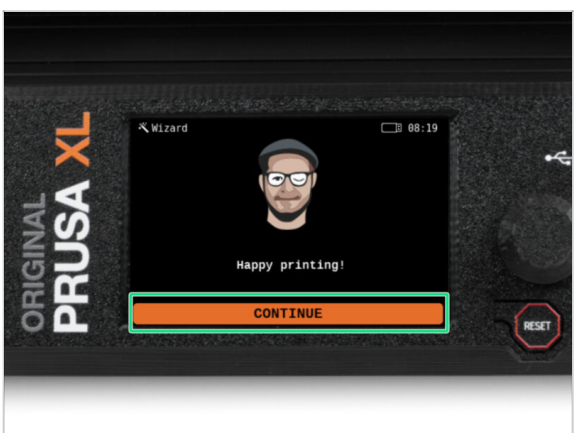
ⓘ Puedes encontrar más información sobre el phase stepping en los siguientes enlaces:

- **GUÍA PHASE STEPPING:** Información necesaria sobre la calibración del phase stepping.
- **PHASE STEPPING BLOG ARTICLE:** A more in-depth look at the phase stepping feature.

ⓘ La impresora moverá el primer cabezal de impresión al centro de la base calefactable y moverá la herramienta en diagonal para los ejes X e Y a diferentes velocidades.

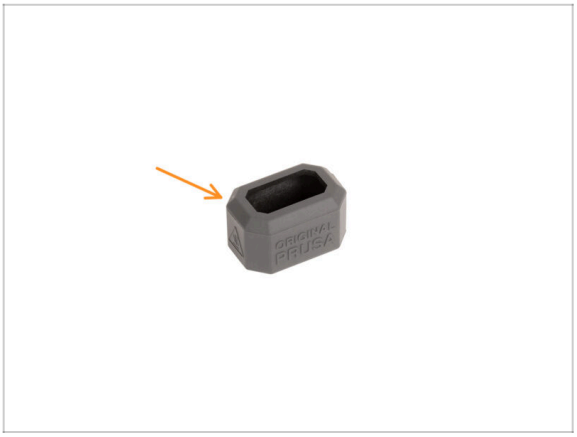
- Una vez que la impresora haya completado la prueba, la pantalla mostrará en qué medida se han reducido las vibraciones del motor.

PASO 20 It's done



- **¡Bien hecho! La impresora está lista para imprimir.** Sin embargo, sigue las instrucciones de este manual hasta el final.

PASO 21 Calcetín para nextruder (Opcional)

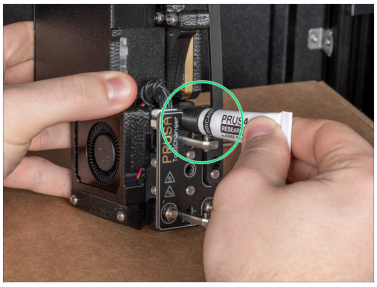


El calcetín del Nextruder ayuda a mantener estable la temperatura en el bloque calefactor. También mantiene limpio el hotend de la suciedad del filamento y lo protege en caso de que la impresión se desprenda de la superficie de impresión.

- A silicone sock is supplied with each Nextruder package.
- **Si quieres instalar el calcetín, recomendamos hacerlo después de la calibración.**

Cómo instalar el calcetín - consulta el artículo.

PASO 22 Regular printer maintenance



Para que tu impresora siga funcionando correctamente a lo largo del tiempo, es muy recomendable realizar un mantenimiento periódico.

- Para el mantenimiento regular de la impresora, sigue el artículo Mantenimiento Regular de la Impresora (XL) para obtener información e instrucciones.

En impresoras con múltiples cabezales es necesario lubricar los pines de acoplamiento de los cabezales.

Se pueden lubricar los pasadores de acoplamiento junto al resto del mantenimiento o se puede hacer si notas que tus impresiones tiene problemas de oscilaciones o bandas laterales.

- Para lubricar los pines de acoplamiento usa la guía en línea Cómo lubricar los pasadores de acoplamiento de la Original Prusa XL.

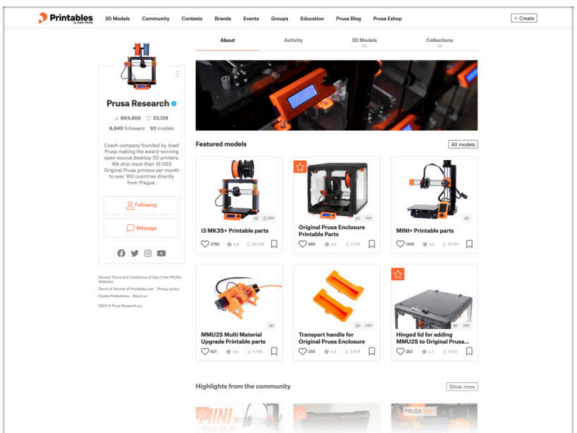
Tienes que aplicar lubricante a los pines. Por favor mira esta guía dedicada a ello para más información.

PASO 23 Guía rápida para tus primeras impresiones

Ahora, lee el **Manual de impresión 3D** , que está hecho a medida para tu impresora, y **sigue las instrucciones para configurar la impresora correctamente** . La última versión siempre está disponible en **este enlace**.

⚠ Lee los capítulos *Renunciae* instrucciones de *Seguridad*

PASO 24 Printable 3D models



- **¡Felicidades! Ya estás preparado para empezar a imprimir ;-)**
- Puede empezar imprimiendo algunos de nuestros objetos de prueba incluidos en la memoria USB incluida - puedes verlos en esta colección.

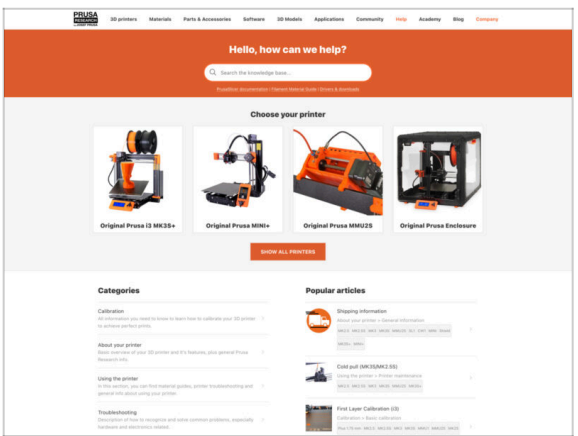
PASO 25 Give us feedback

- Sabemos que estás deseando empezar a imprimir, pero te agradeceríamos mucho que dedicaras entre tres y cuatro minutos a **compartir tu opinión** sobre este manual: si te ha resultado claro, si ha sido fácil de seguir y cualquier idea que tengas para mejorarlo.

  ⓘ Estos comentarios son un poco diferentes de los comentarios habituales que se suelen dejar en los pasos individuales.

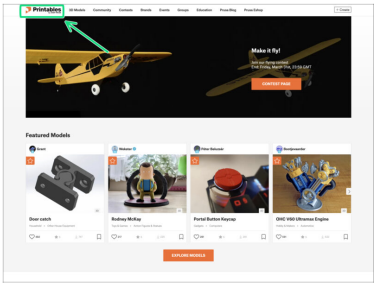
- **Comparte tu opinión aquí.**
- ¡Gracias por ayudarnos a mejorar nuestros manuales!

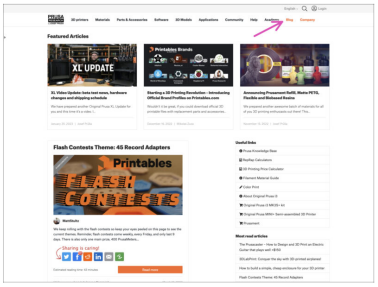
PASO 26 Prusa knowledge base

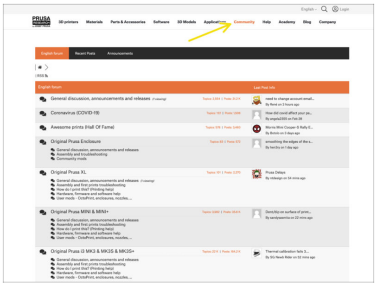


- Si te encuentras con algún problema de cualquier tipo, no te olvides que siempre puedes revisar nuestra base de conocimientos en help.prusa3d.com
- ¡Añadimos nuevos temas todos los días!

PASO 27 Join Printables!







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- Si necesitas ayuda durante el montaje, échale un vistazo al Foro con su fantástica comunidad :-)

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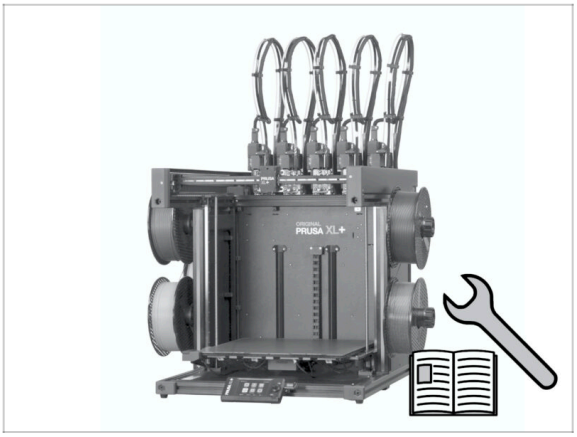
Manual changelog

PASO 1 Version history



- **Version history of the Prusa XL+ upgrade manual:**
- 08/2026 - Initial version 1.00

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