

Extruder Aluminum Block Replacement

SOURCE:

<https://support.zortrax.com/extruder-aluminum-block-replacement/>

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Unloading the Material



From the menu choose “Material” and then “Unload the material” option. The extruder should start to heat up automatically. Once the extruder is hot, the motor will start to unload the material.

Unplugging the Power Cable



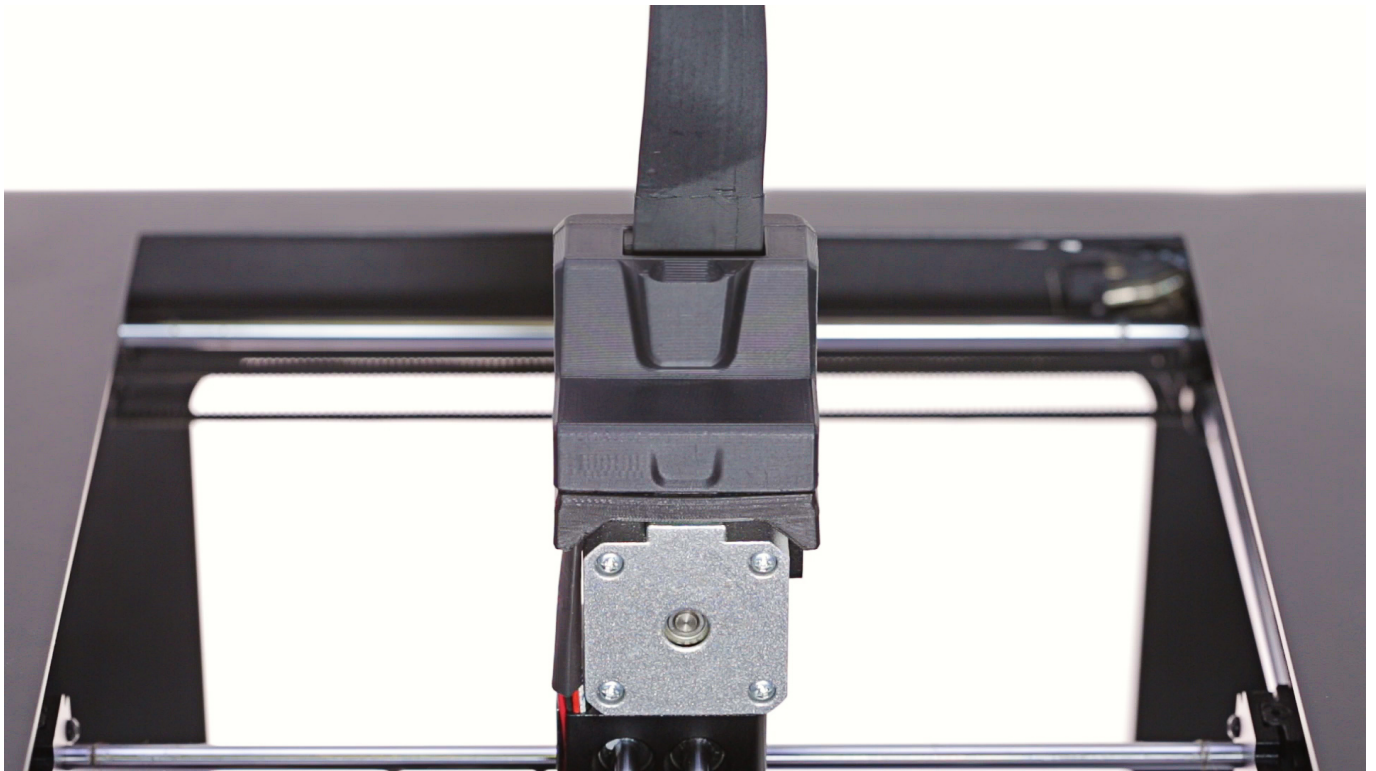
Turn off the printer and unplug the power cable.

Material Guide Removal



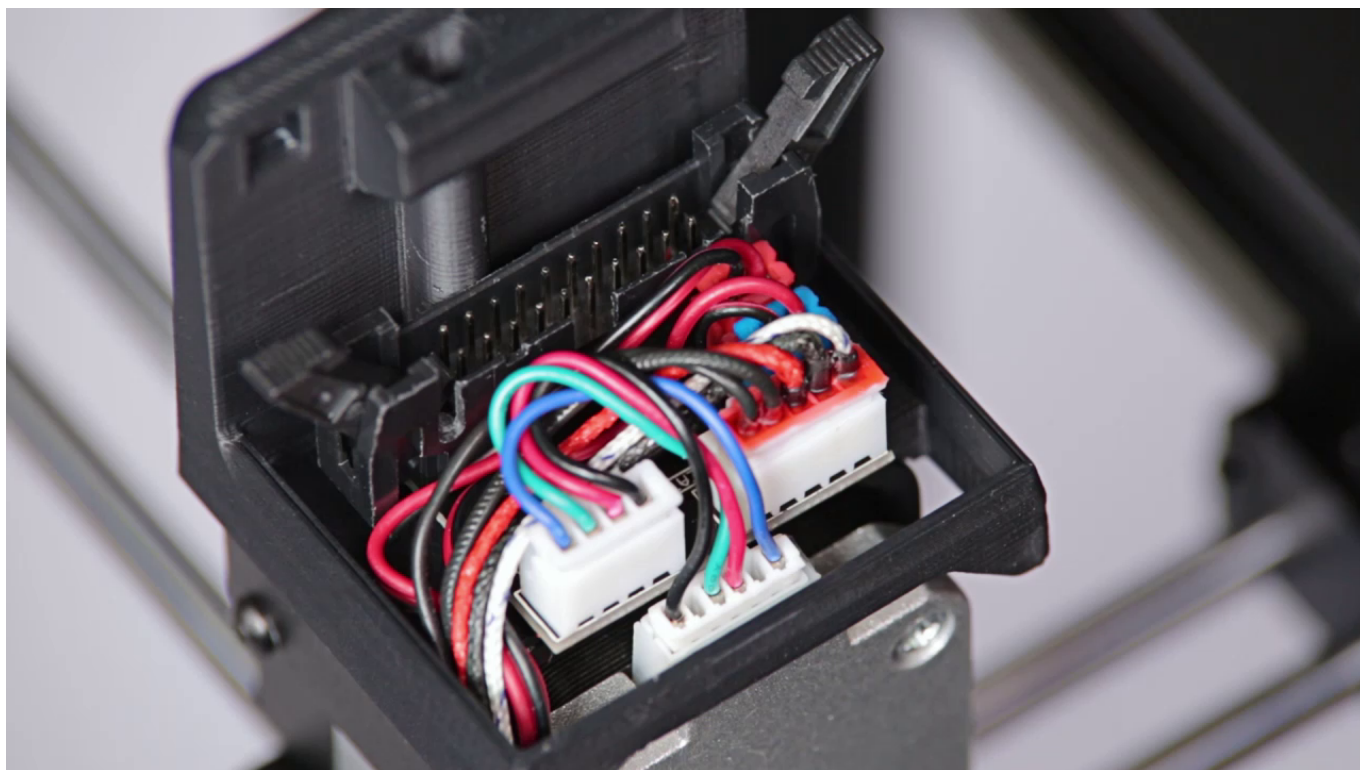
Detach the material guide from the extruder cover. Next, separate the guide from the extruder cable.

Unplugging the Extruder Cable



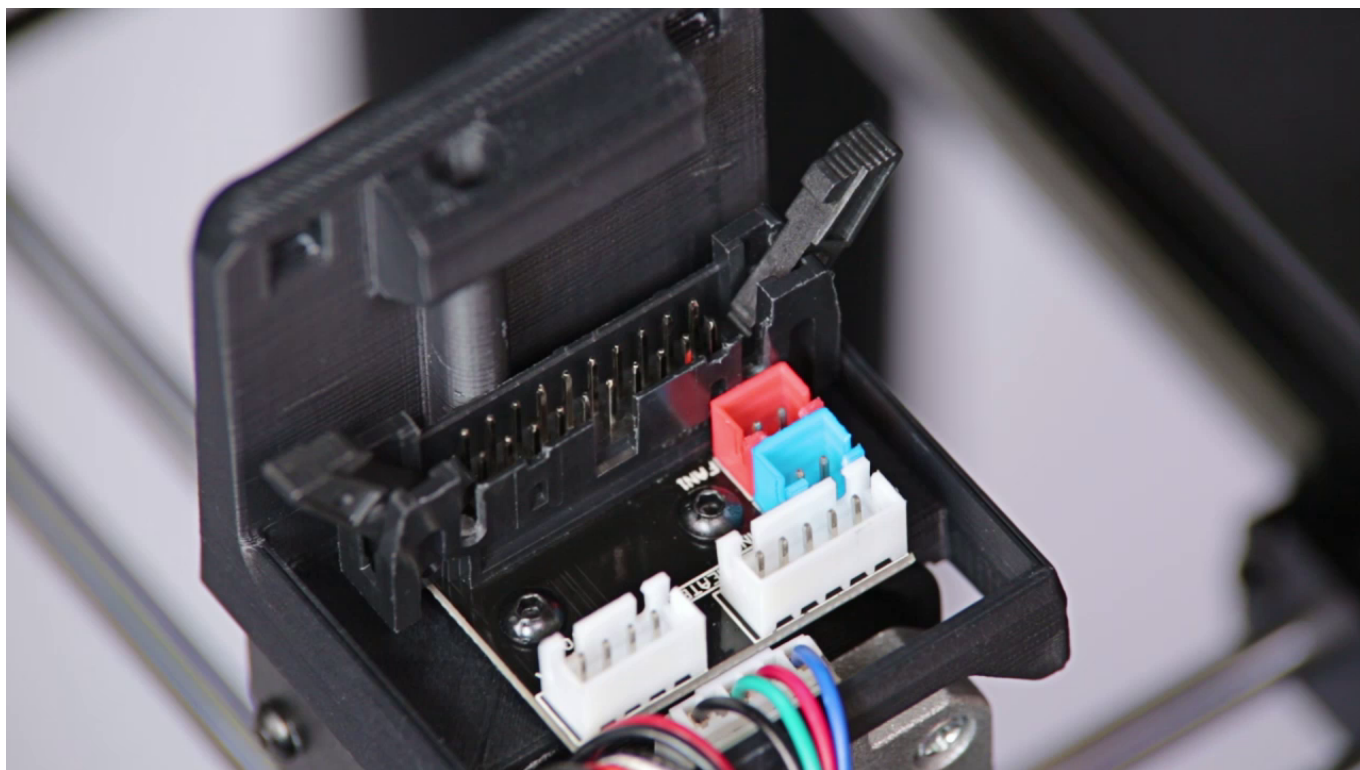
Detach the extruder upper printed cover and unplug the extruder cable.

Unplugging all Cables from the Extruder PCB



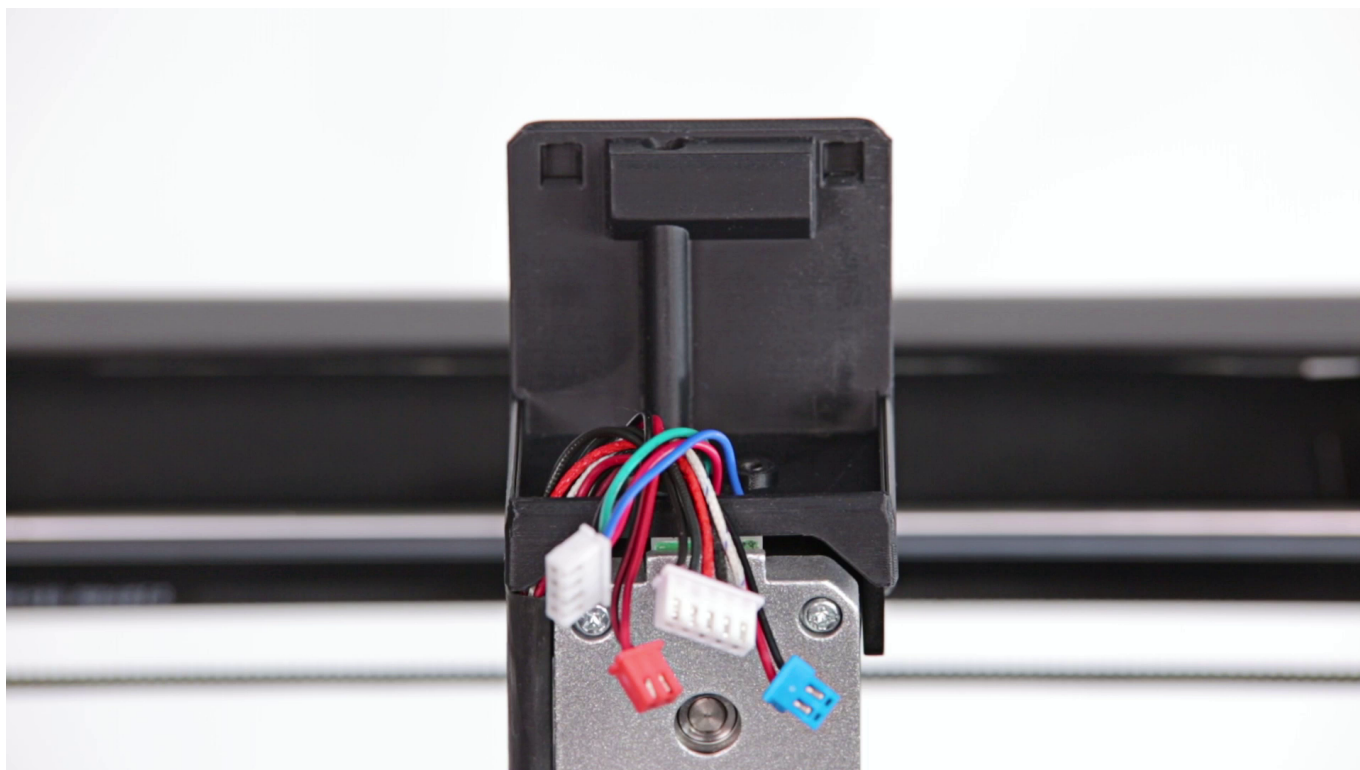
Unplug all the cables from the extruder PCB.

Unscrewing the Extruder PCB



Unscrew the two screws that secure the extruder PCB using a 2mm Allen key. Remove the PCB from the extruder.

Extruder Lower Printed Cover Removal



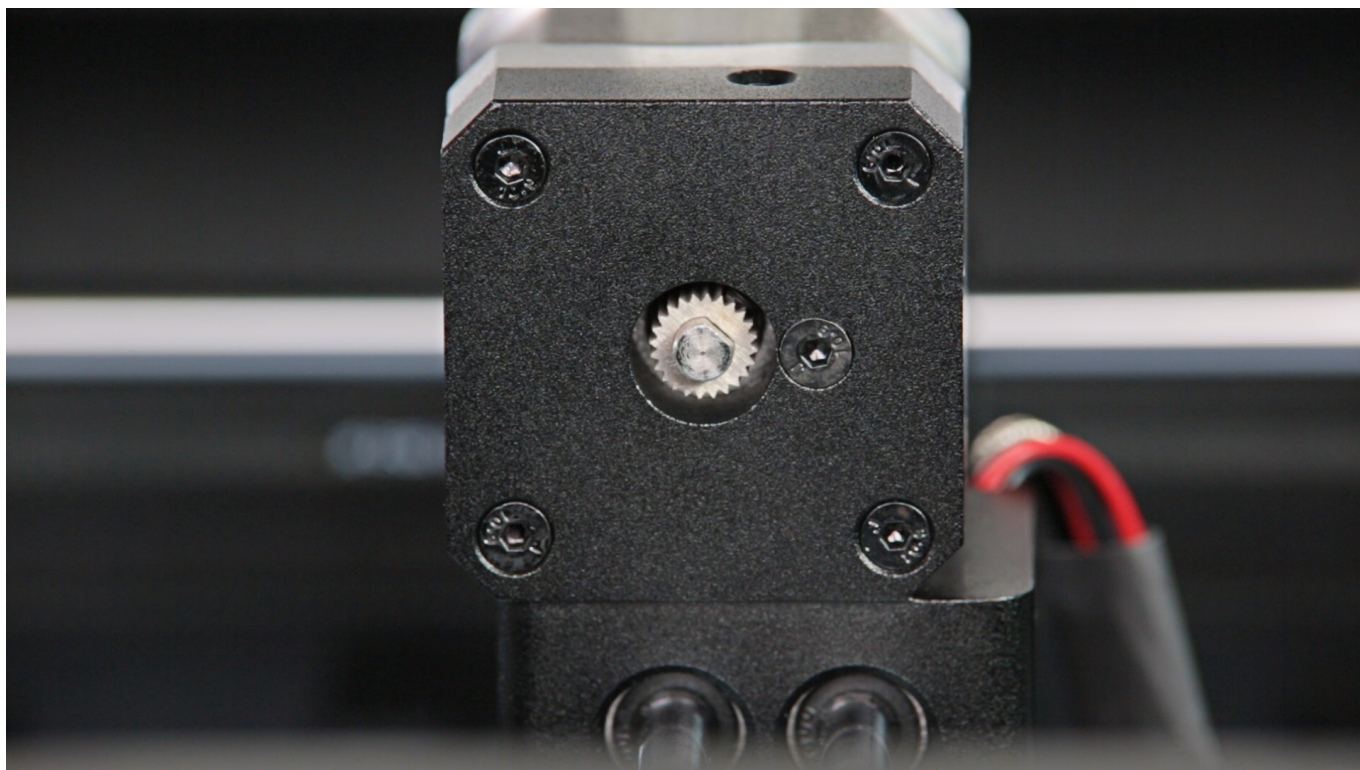
Remove the extruder lower printed cover.

Extruder Aluminum Cover Removal



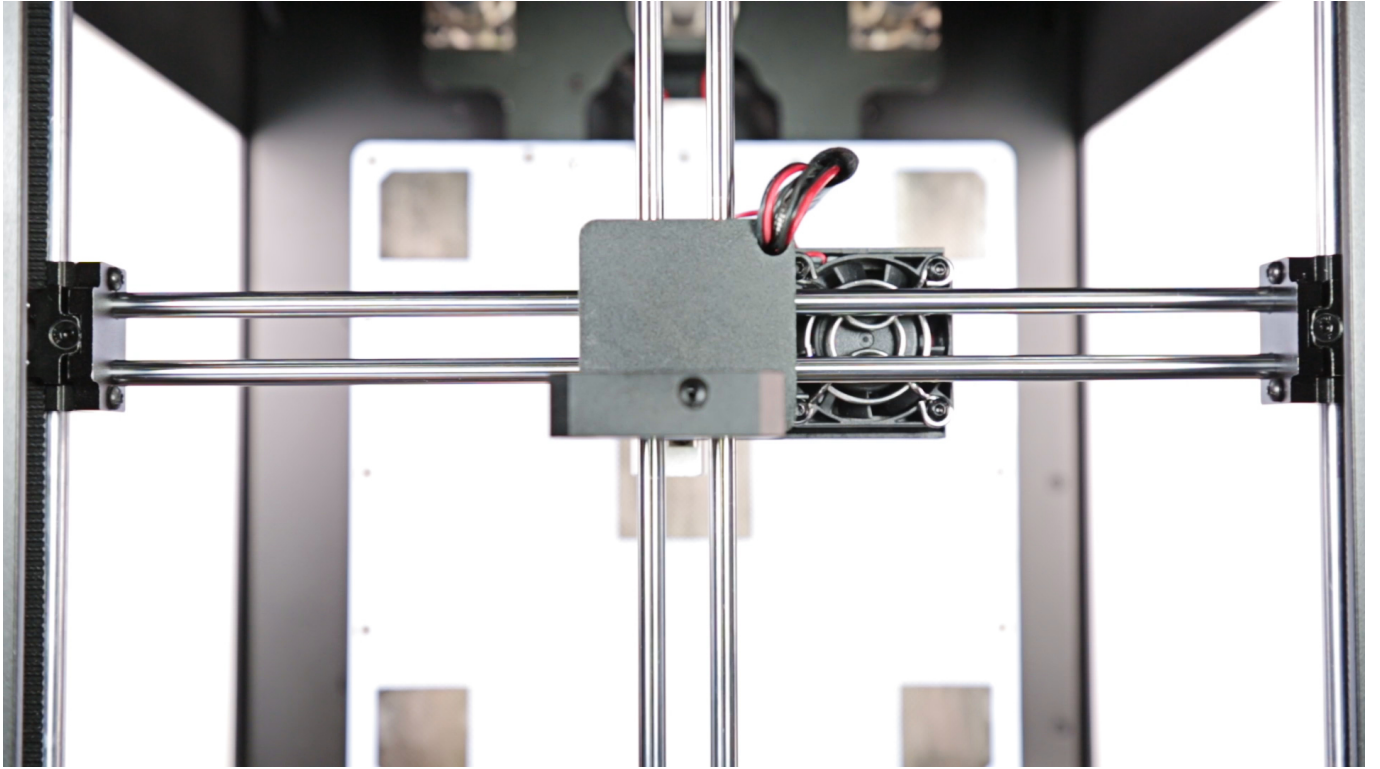
Unscrew the screws that secure the extruder aluminum cover on both sides of the extruder. Separate the cover from the extruder motor.

Extruder Motor Removal



Unscrew the four screws that secure the extruder motor. Separate the motor from the extruder block.

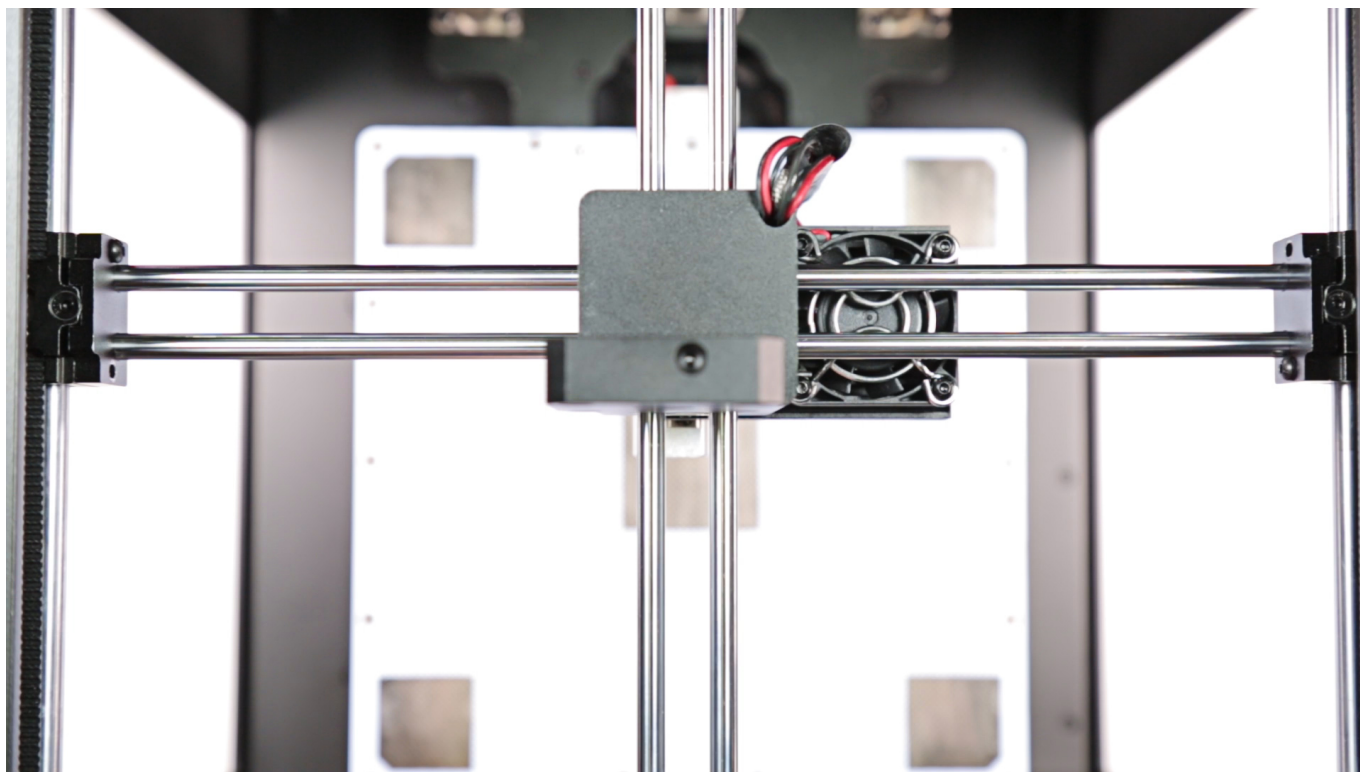
Unscrewing the Axis Block Covers, part 1



Unscrew one of the screws that secures the axis block cover on each block.

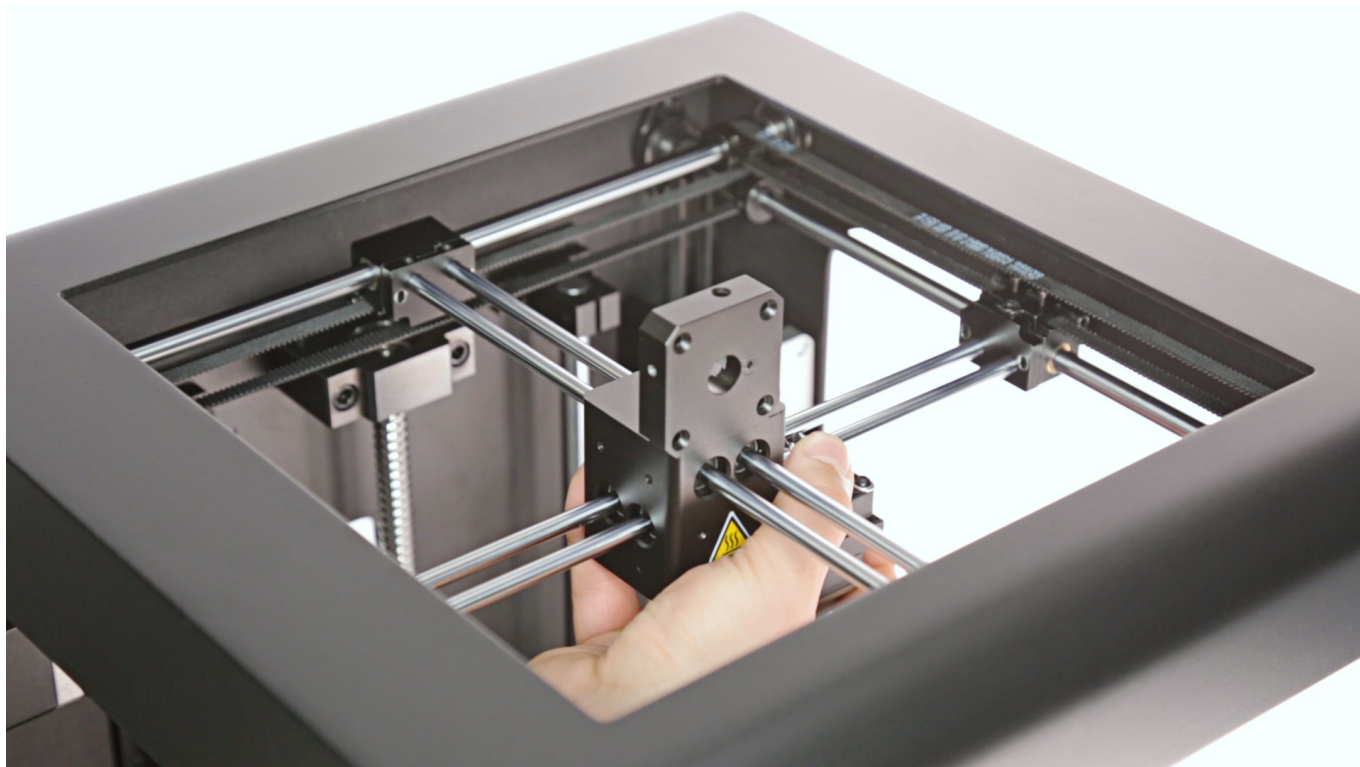
The axis blocks in the M300 look different than in the M200 but they can be unscrewed in the same way.

Unscrewing the Axis Block Covers, part 2



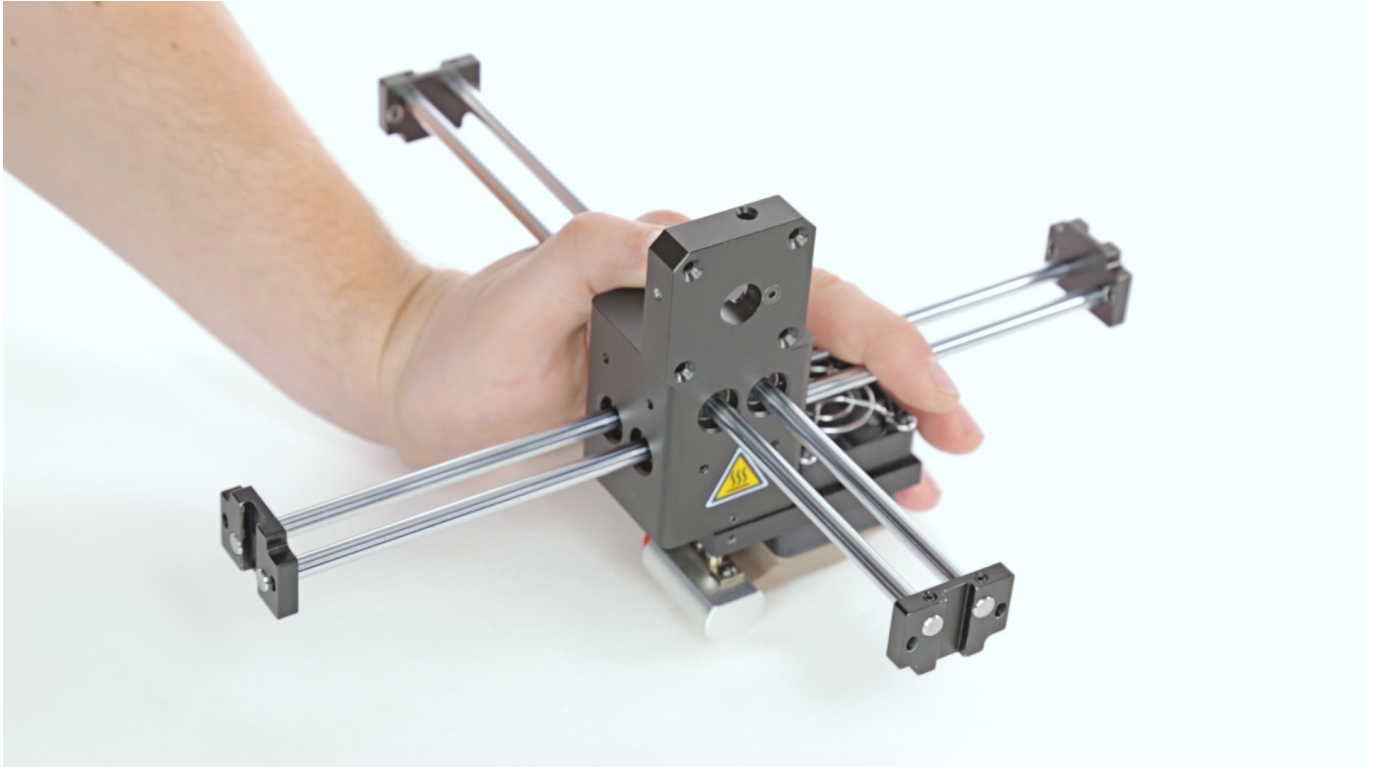
Unscrew the other screw that secures the axis block cover on each block.

Extruder Removal



Remove the extruder along with its guide rails.

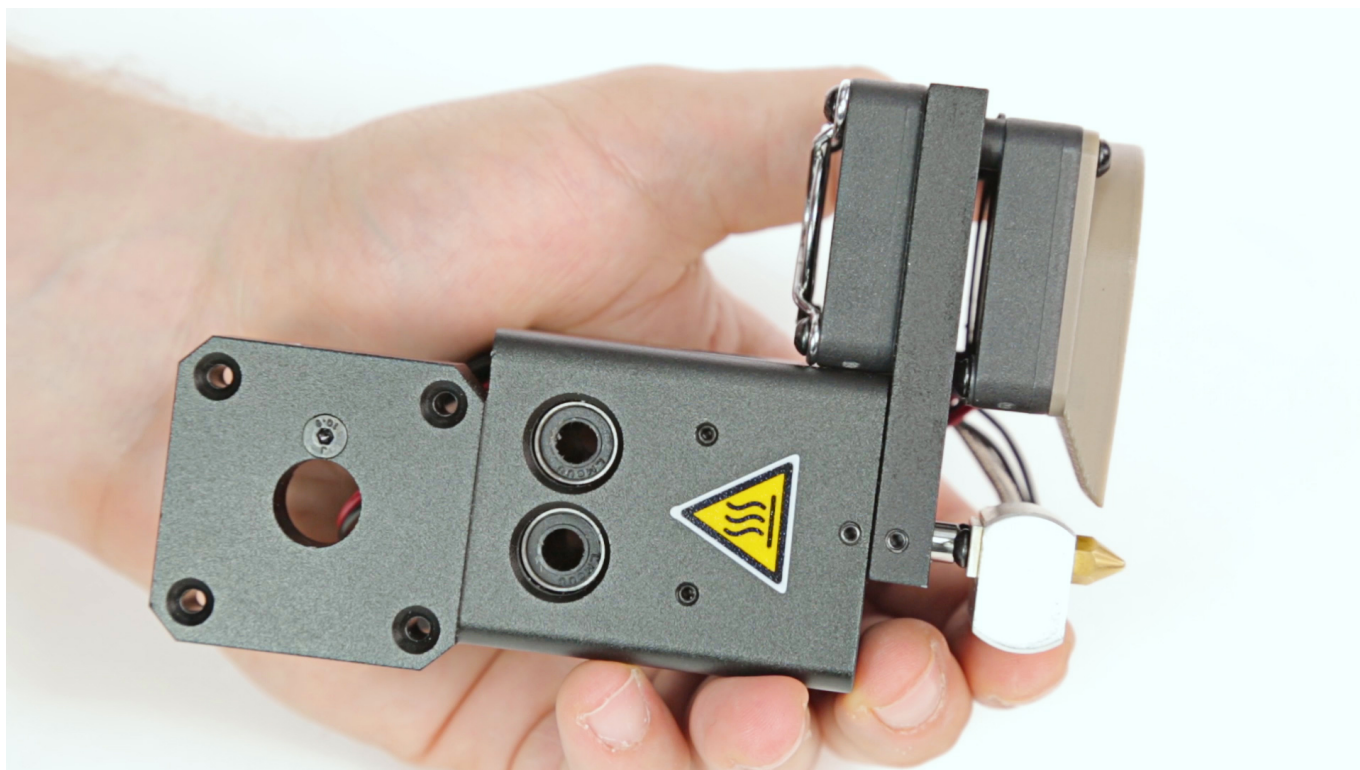
Extruder Guide Rails Removal



Loosen the two screws on the axis block cover and separate the cover from the extruder guide rail. Next, remove the rail from the extruder.

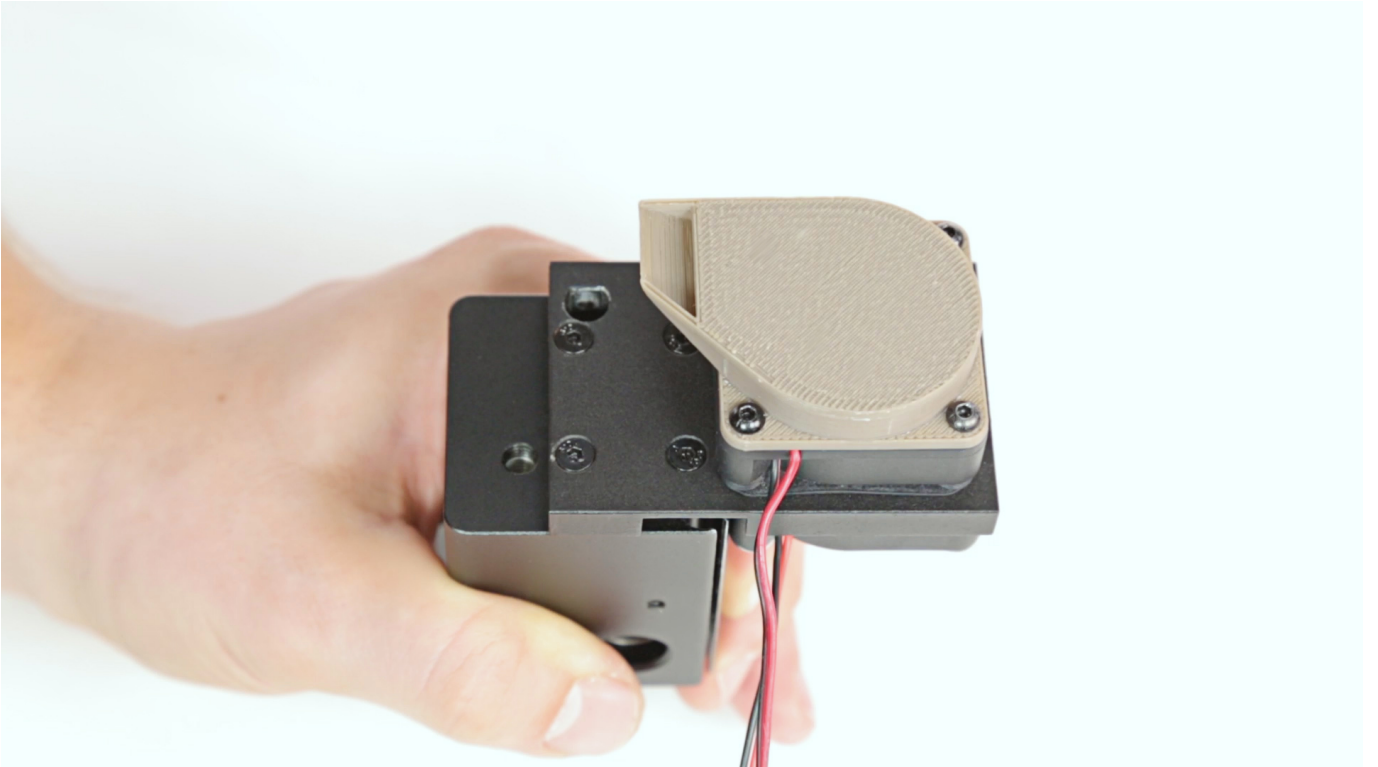
Loosen the two screws placed under the other axis block cover and separate the cover from the extruder guide rail. Remove the rail from the extruder.

Hotend Removal



Unscrew the two screws that secure the hotend in the extruder. Remove the hotend from the extruder and remove the heater, thermocouple and fans cables from the extruder block.

Extruder Lower Fan Removal



Unscrew the three screws that secure the extruder lower fan, separate the fan from the heat sink and remove the distance piece.

Extruder Upper Fan Removal



Unscrew the four screws that secure the heat sink with the extruder upper fan. Separate the heat sink from the extruder block.

Extruder Bearing Removal



Unscrew one screw that secures the extruder bearing. Remove the bearing using tweezers.

Extruder Linear Bearings Removal



Loosen the two screws that secure the extruder linear bearing and remove the bearing from the extruder aluminum block.

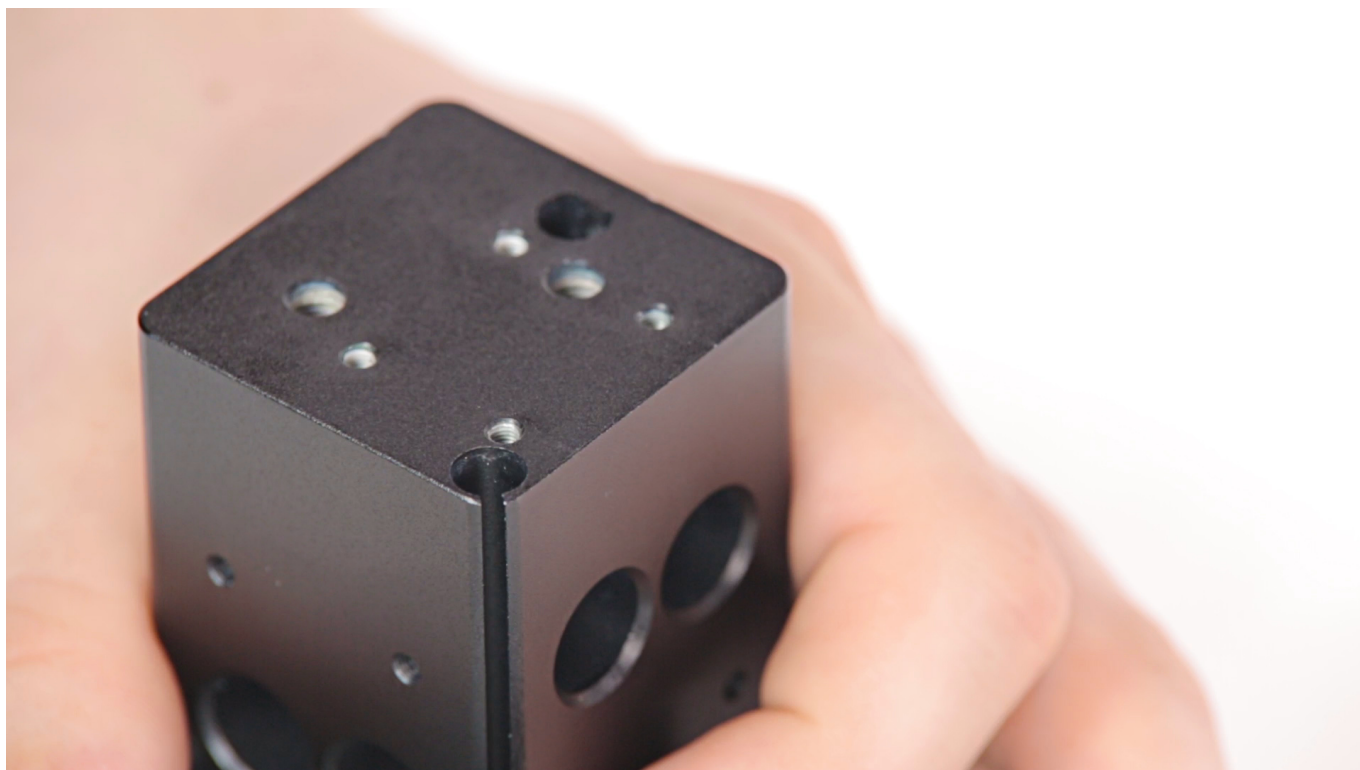
Remove the remaining bearings likewise. There are four linear bearings altogether.

Extruder Bearing Assembly



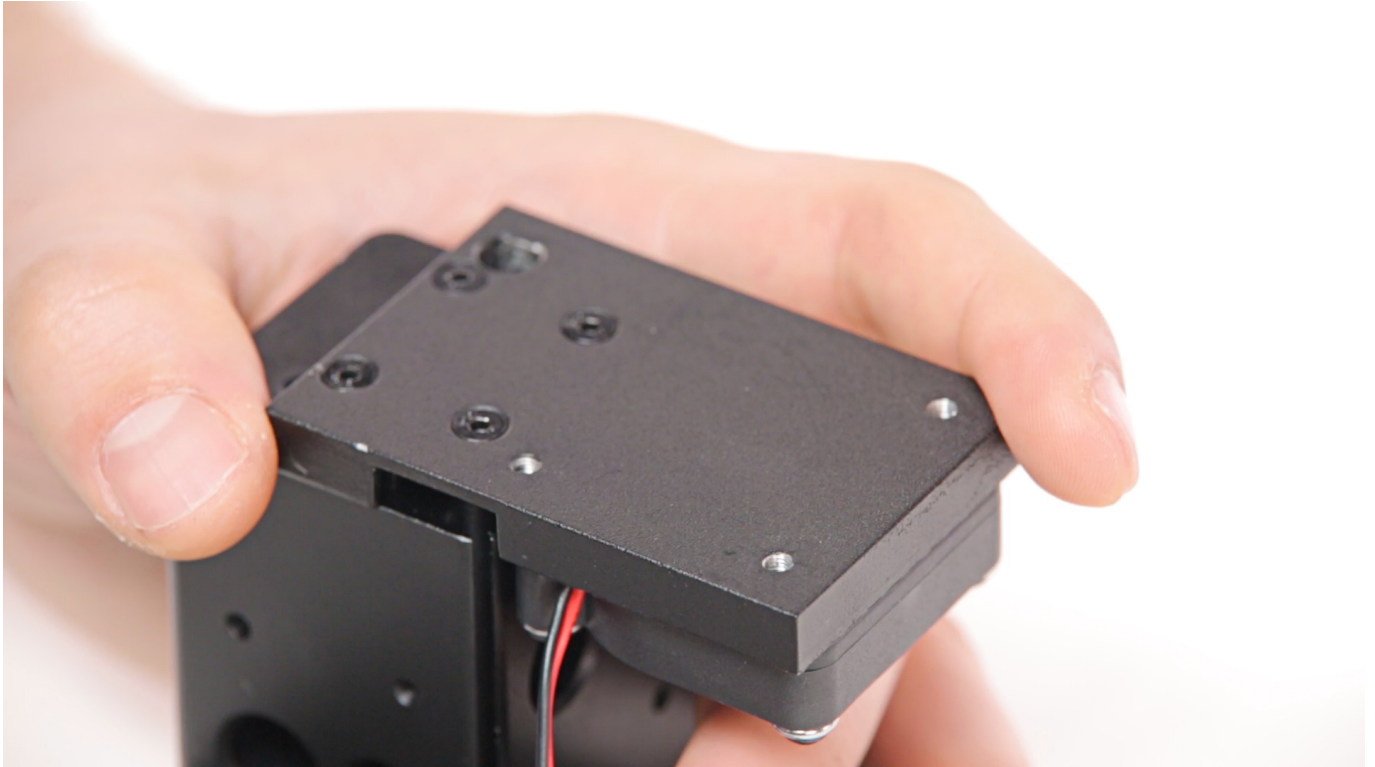
Insert the extruder bearing into the new extruder aluminum block and secure it with the screw.

Extruder Upper Fan Assembly



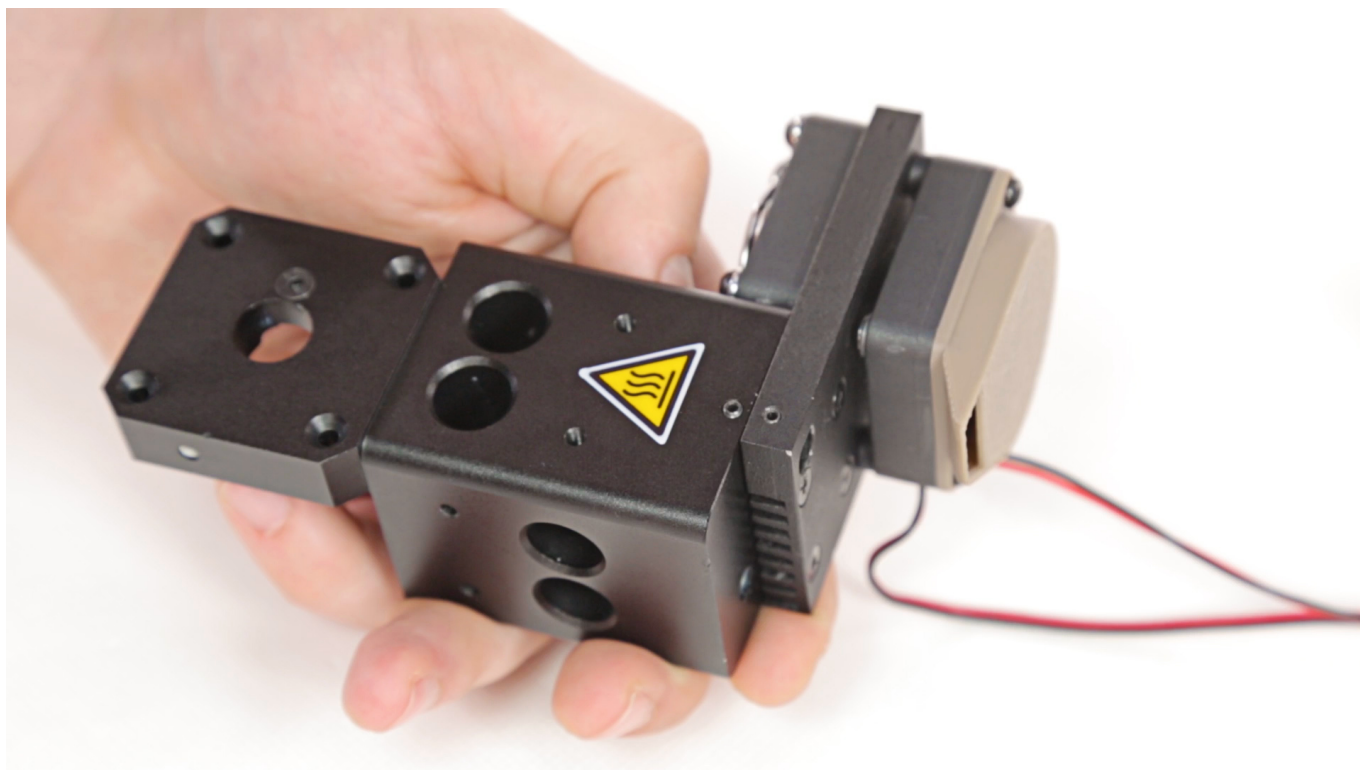
Join the extruder aluminum block with the extruder upper fan heat sink and tighten the four screws.

Extruder Lower Fan Assembly



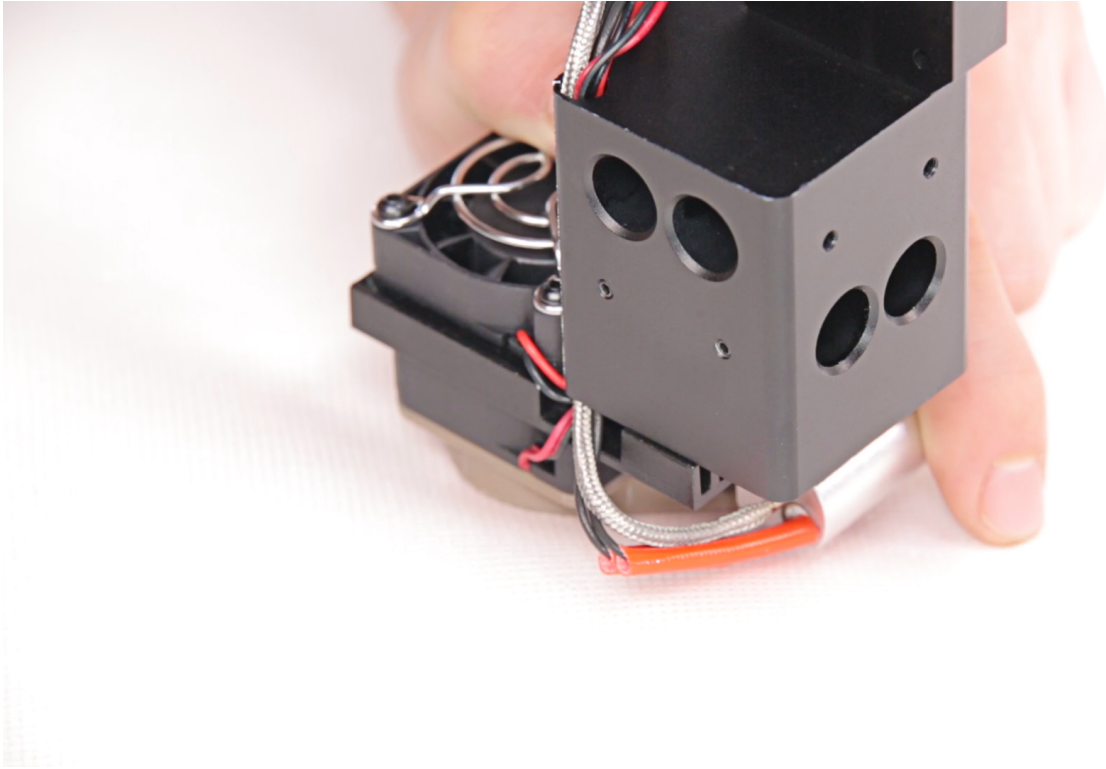
Place the extruder lower fan in its place and tighten the three screws. Remember to place the distance piece.

Hotend Assembly



Insert the hotend into the extruder and tighten the two screws.

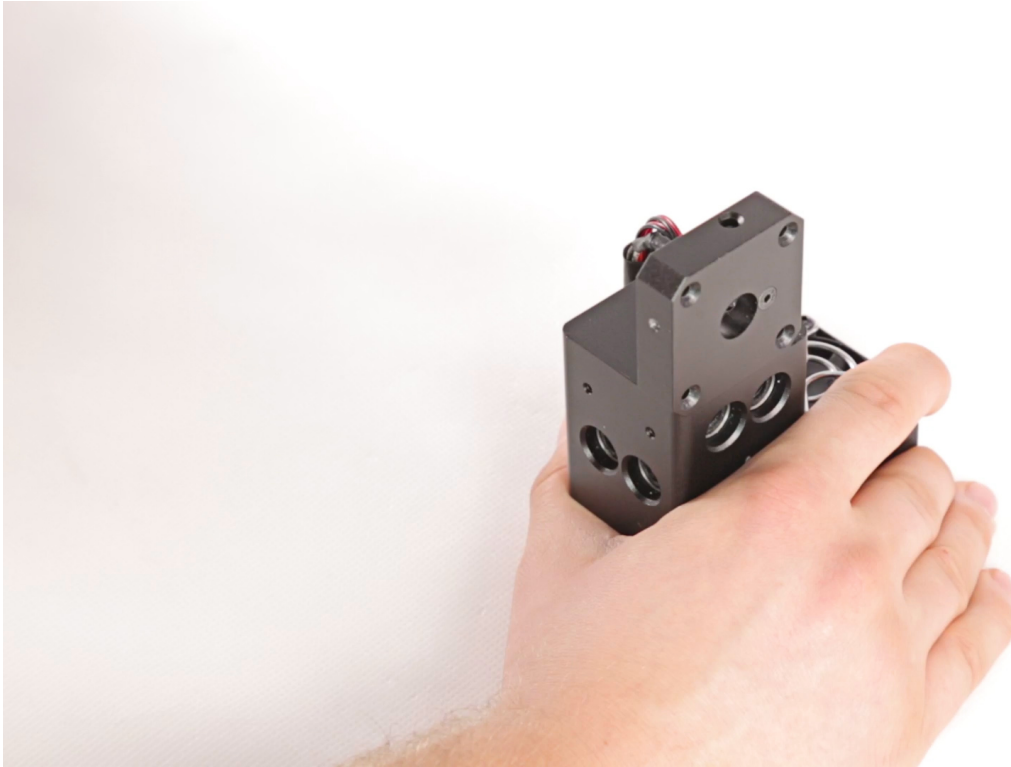
Extruder Linear Bearings Assembly



Insert the extruder linear bearing into the extruder and secure it with the two screws.

Install the remaining bearings likewise. There are four linear bearings altogether.

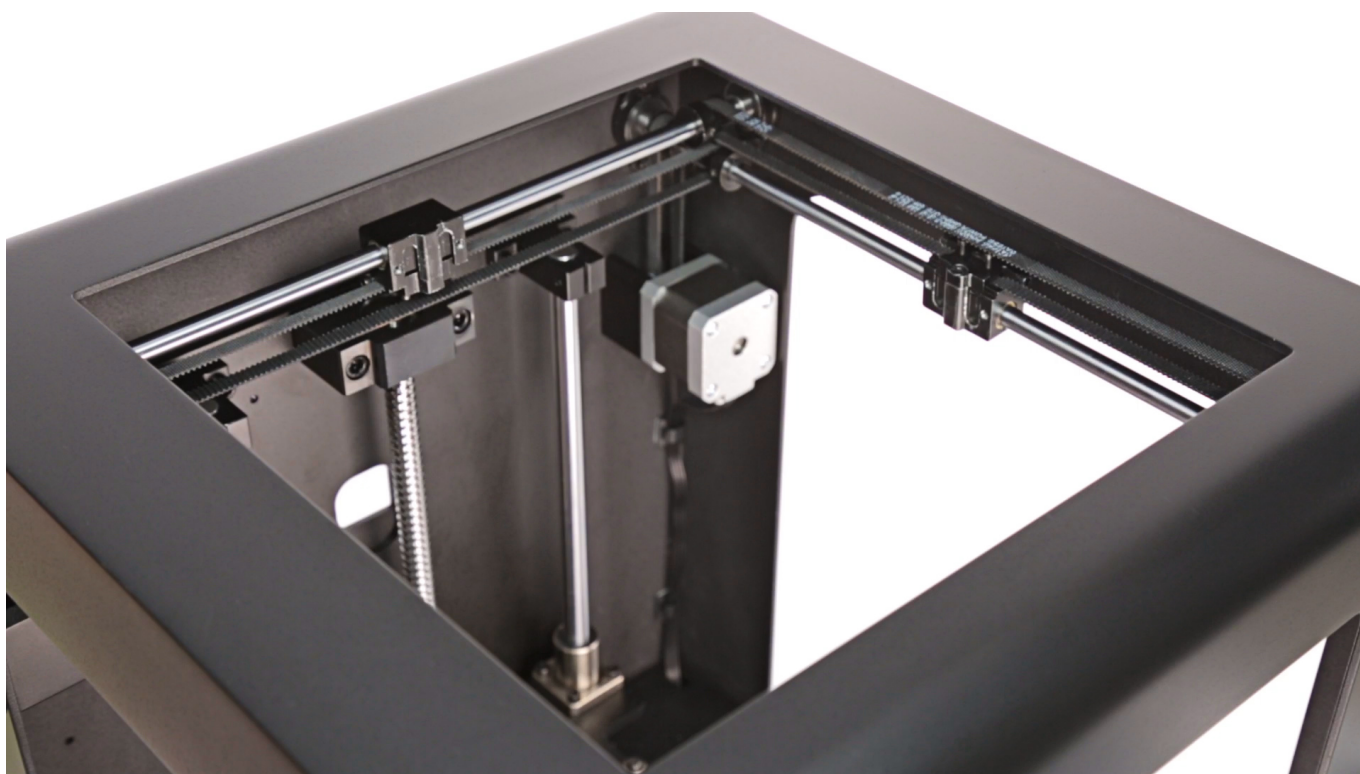
Extruder Guide Rails Assembly



Insert the extruder guide rails into the extruder and place the axis block covers on both rails. Be careful not to damage the linear bearings – insert the guide rails at a straight angle.

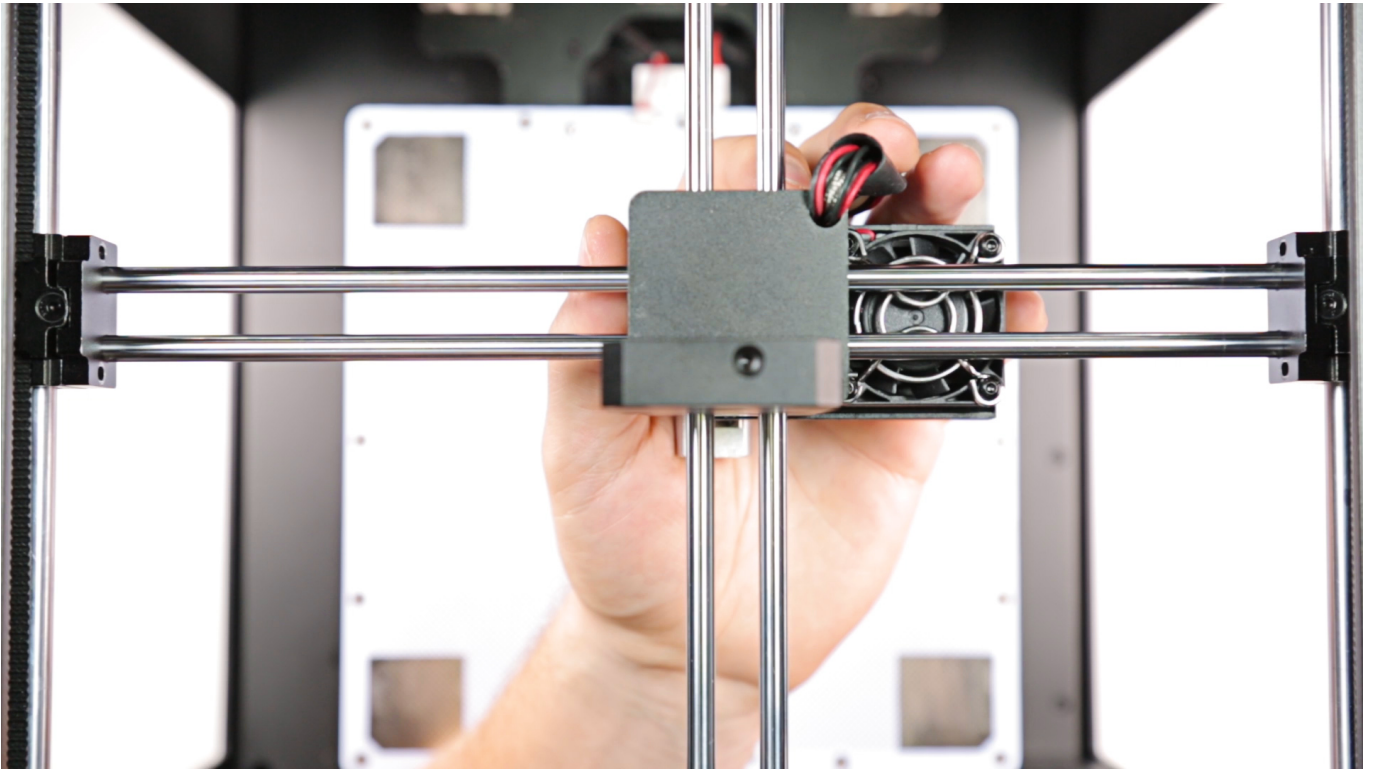
Do not tighten the screws on the axis block covers yet.

Extruder Installation



Install the extruder with its guide rails in the printer.

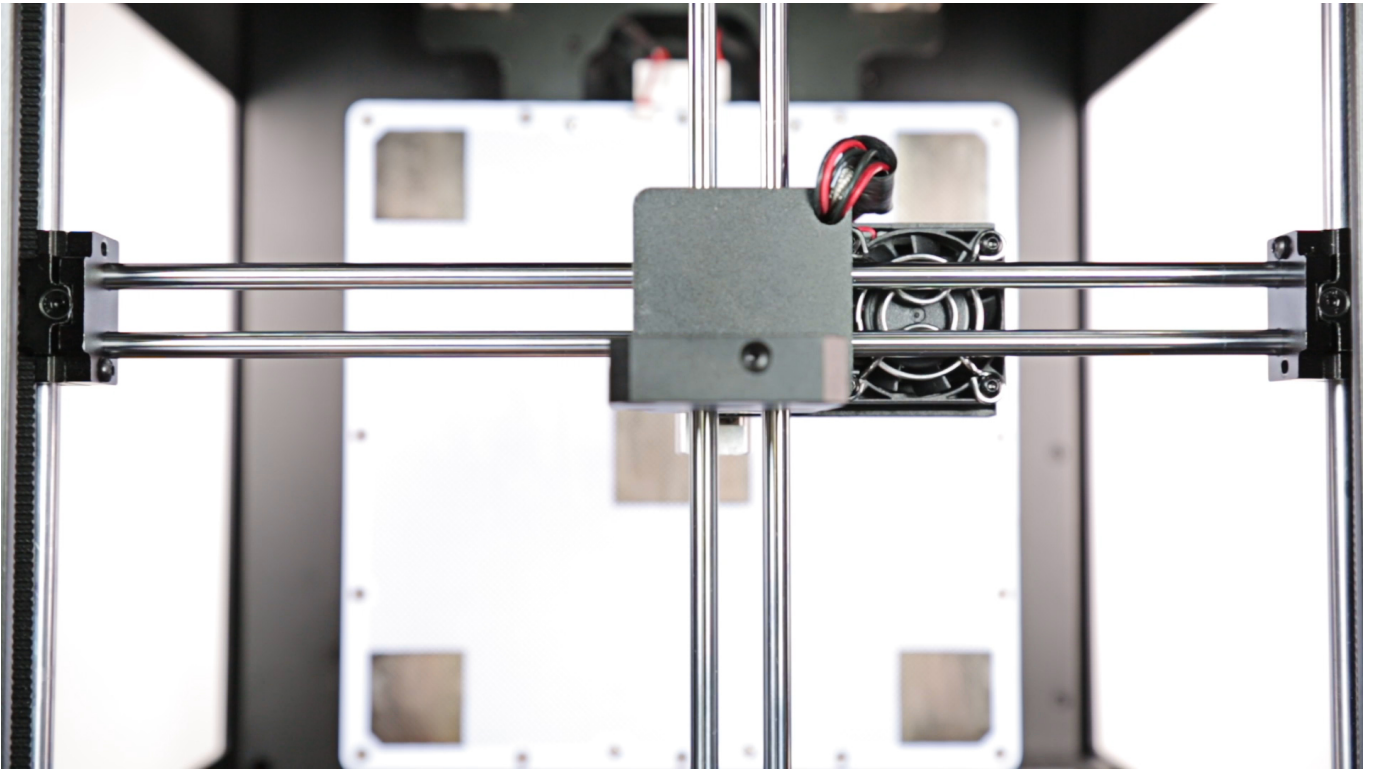
Securing the Axis Block Covers, part 1



Tighten the screws that secure the axis block cover on each block.

Do not tighten the screws fully yet. They need to be tightened once the assembly is finished.

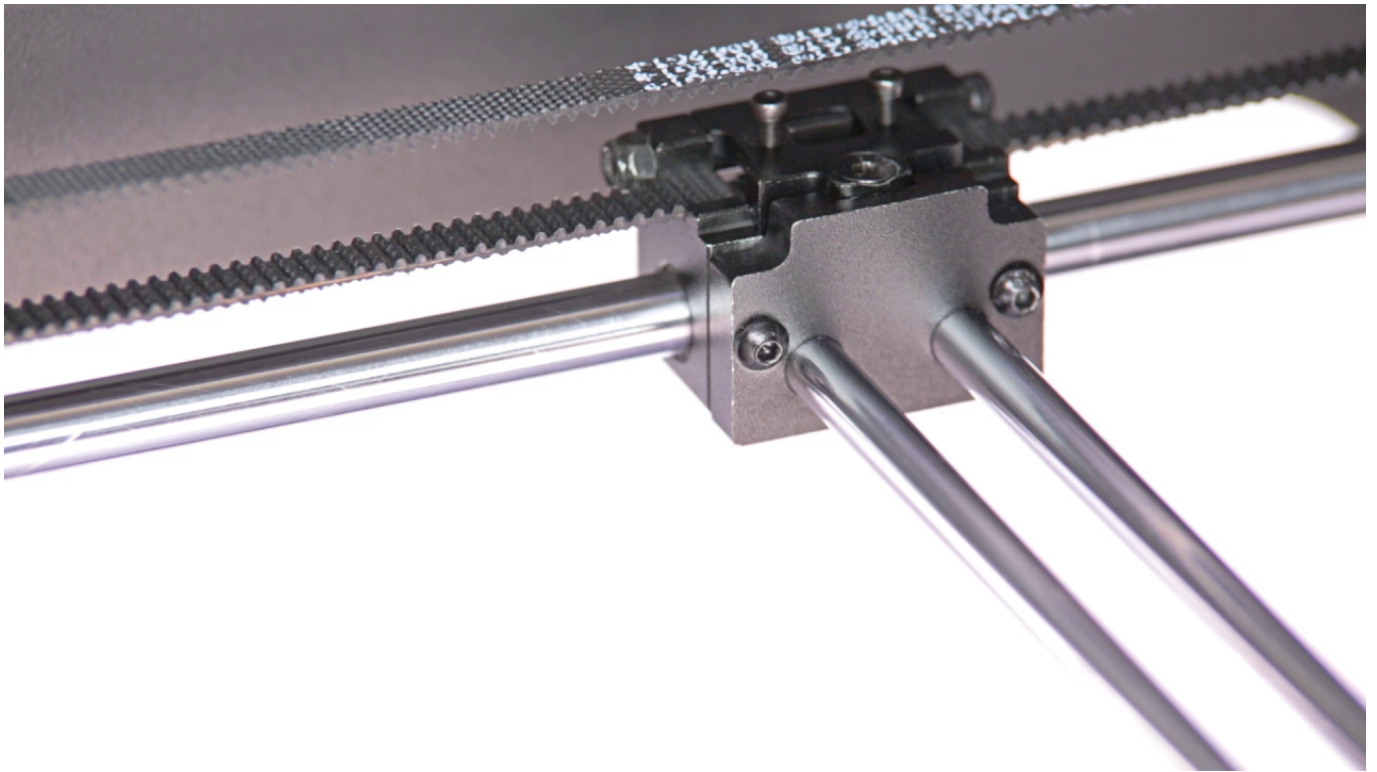
Securing the Axis Block Covers, part 2



Tighten the other screws on each axis block.

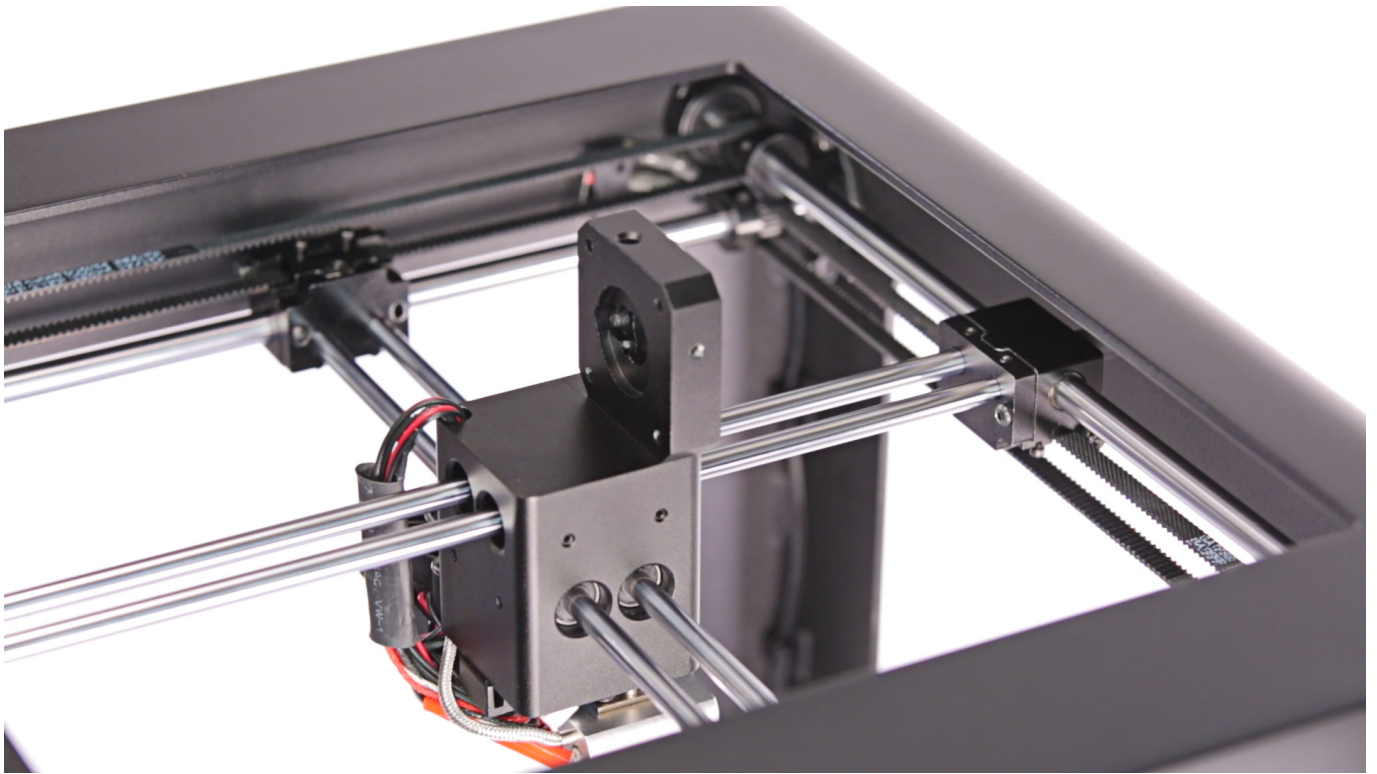
Do not tighten the screws fully yet. They need to be tightened once the assembly is finished.

Tightening the Screws on the Axis Block Covers, part 1



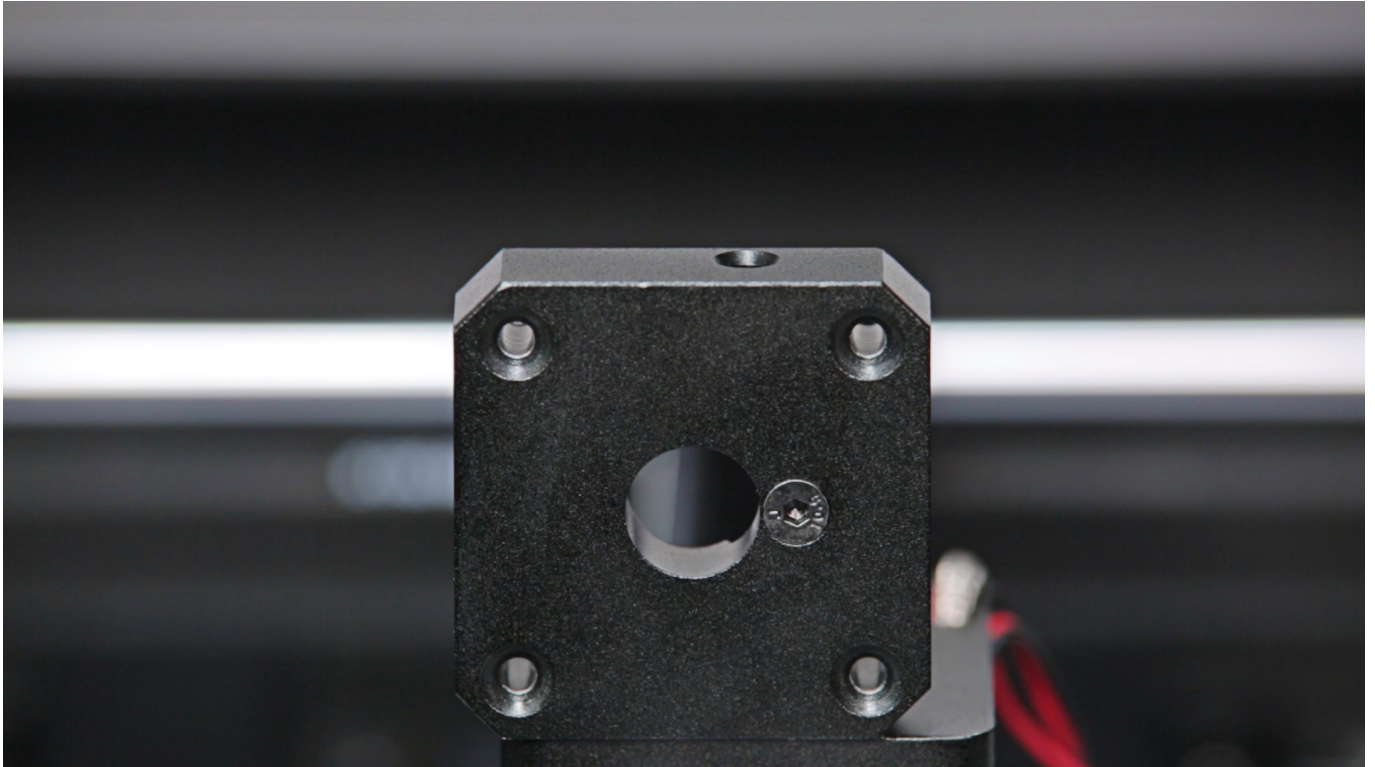
Finish tightening the screws on the axis block covers.

Tightening the Screws on the Axis Block Cover, part 2



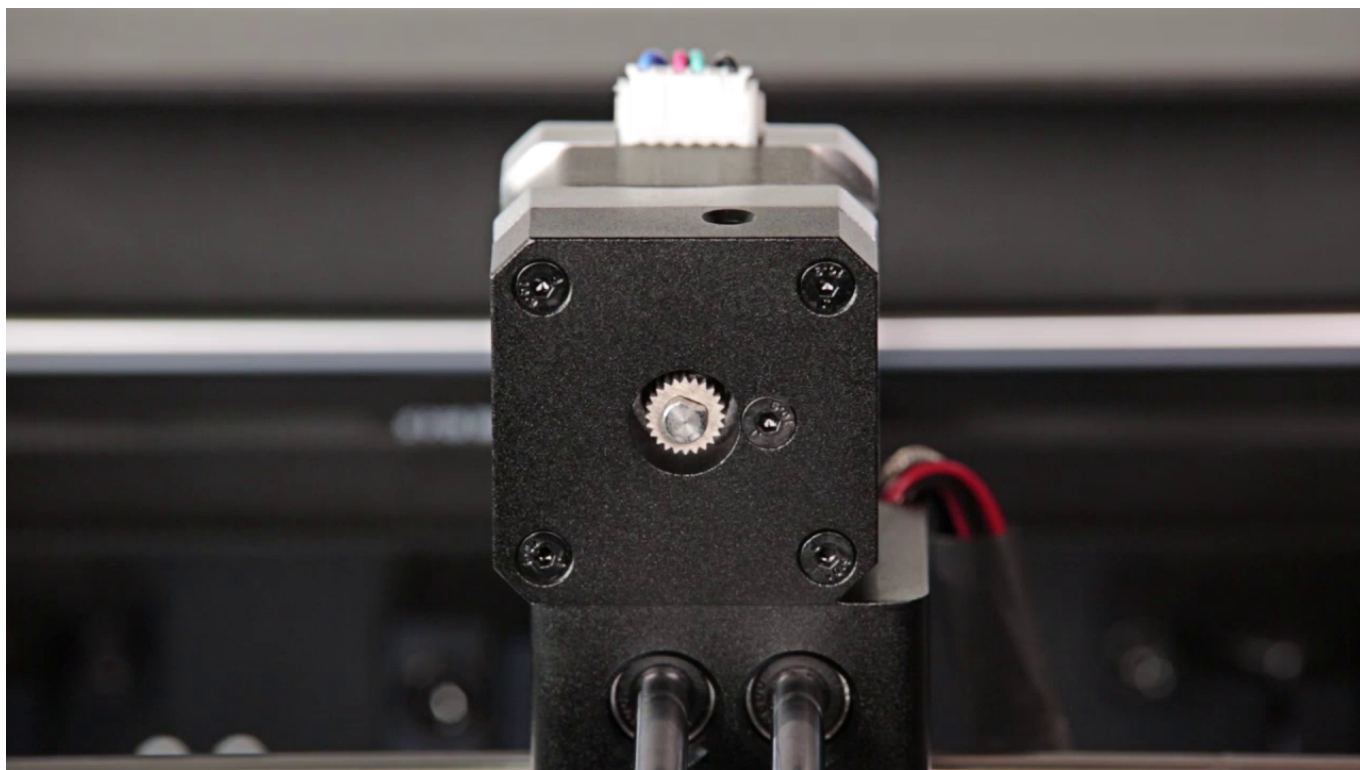
Secure the axis block covers to the extruder guide rails by tightening the screws shown in the video.

Extruder Motor Assembly



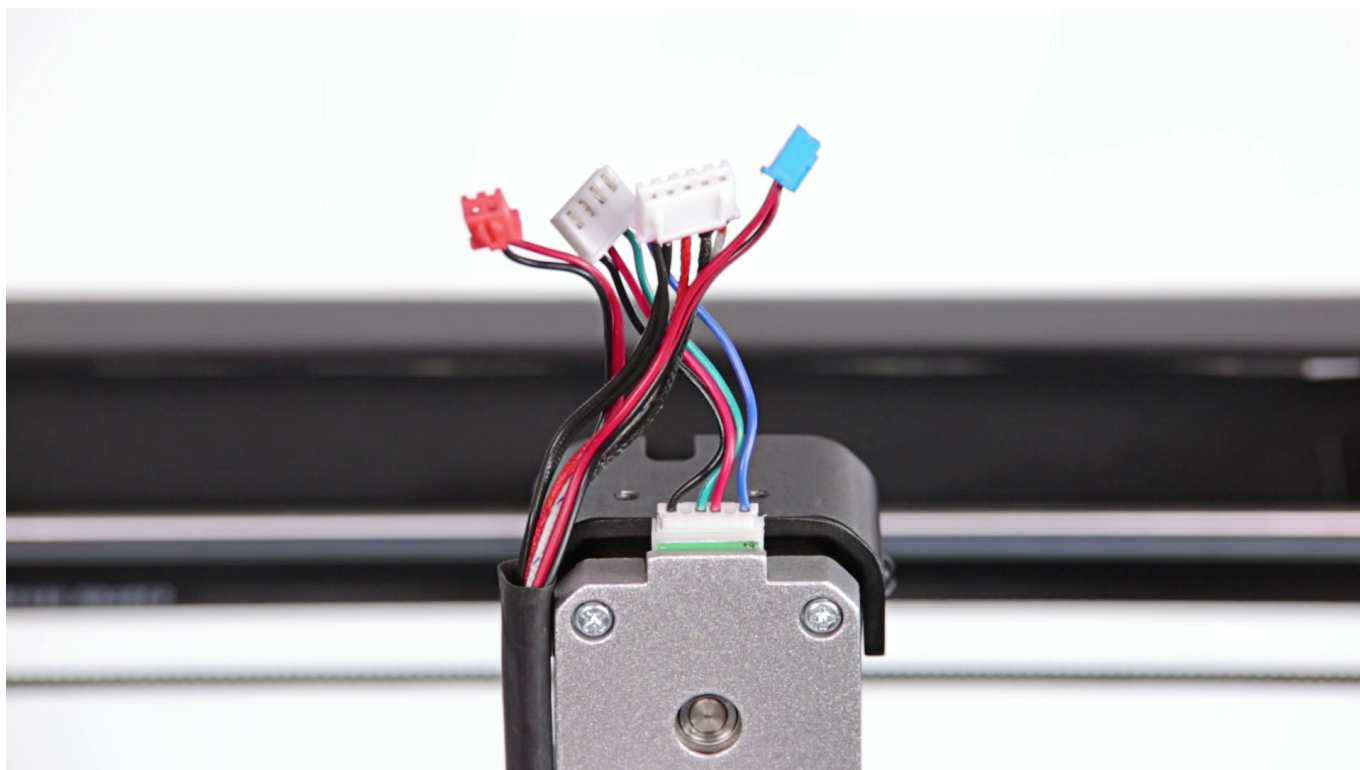
Reattach the extruder motor to the extruder block and secure the motor with the screws. Press the motor to the right side so that the bearing rack is as close as possible to the bearing. Tighten the screws crosswise in the following order: 1-4, 2-3.

Extruder Aluminum Cover Assembly



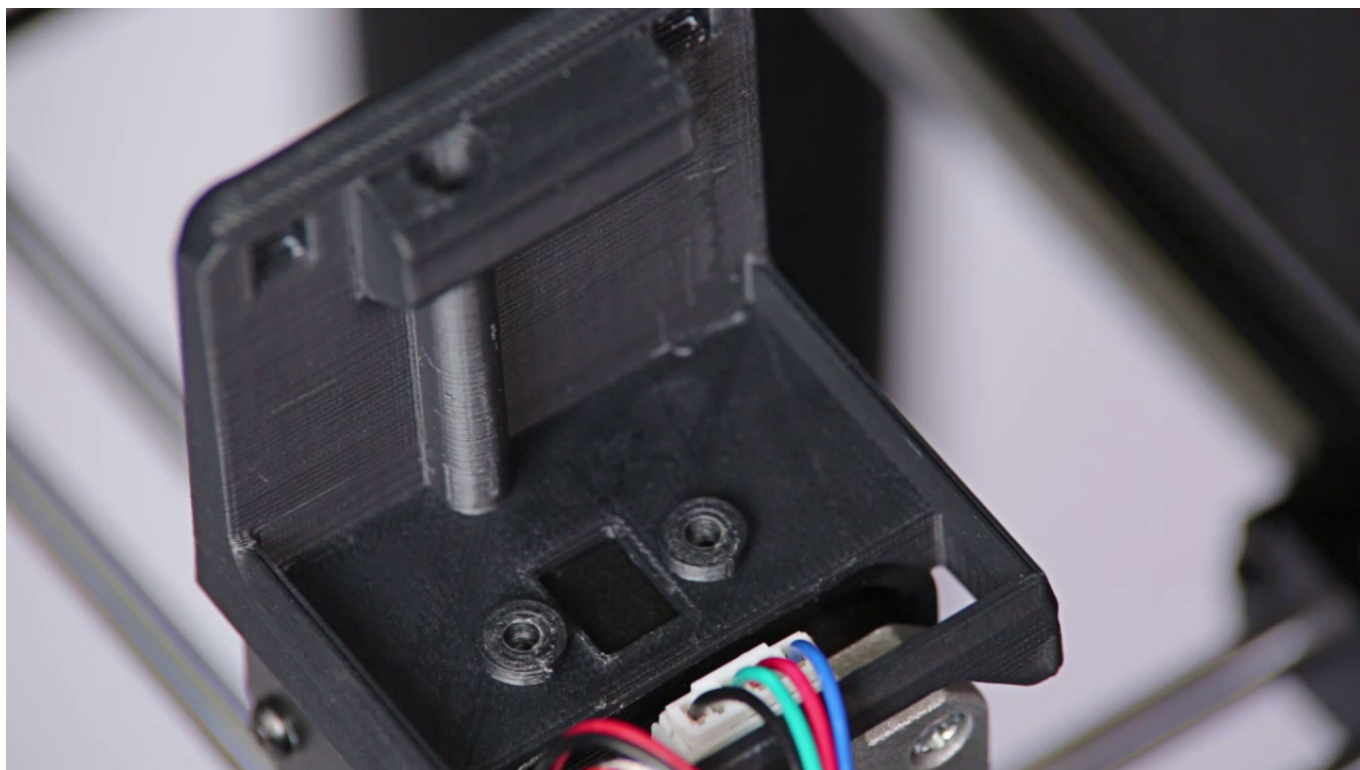
Reattach the extruder aluminum cover to the extruder and secure it with the screws.

Extruder Lower Printed Cover Assembly



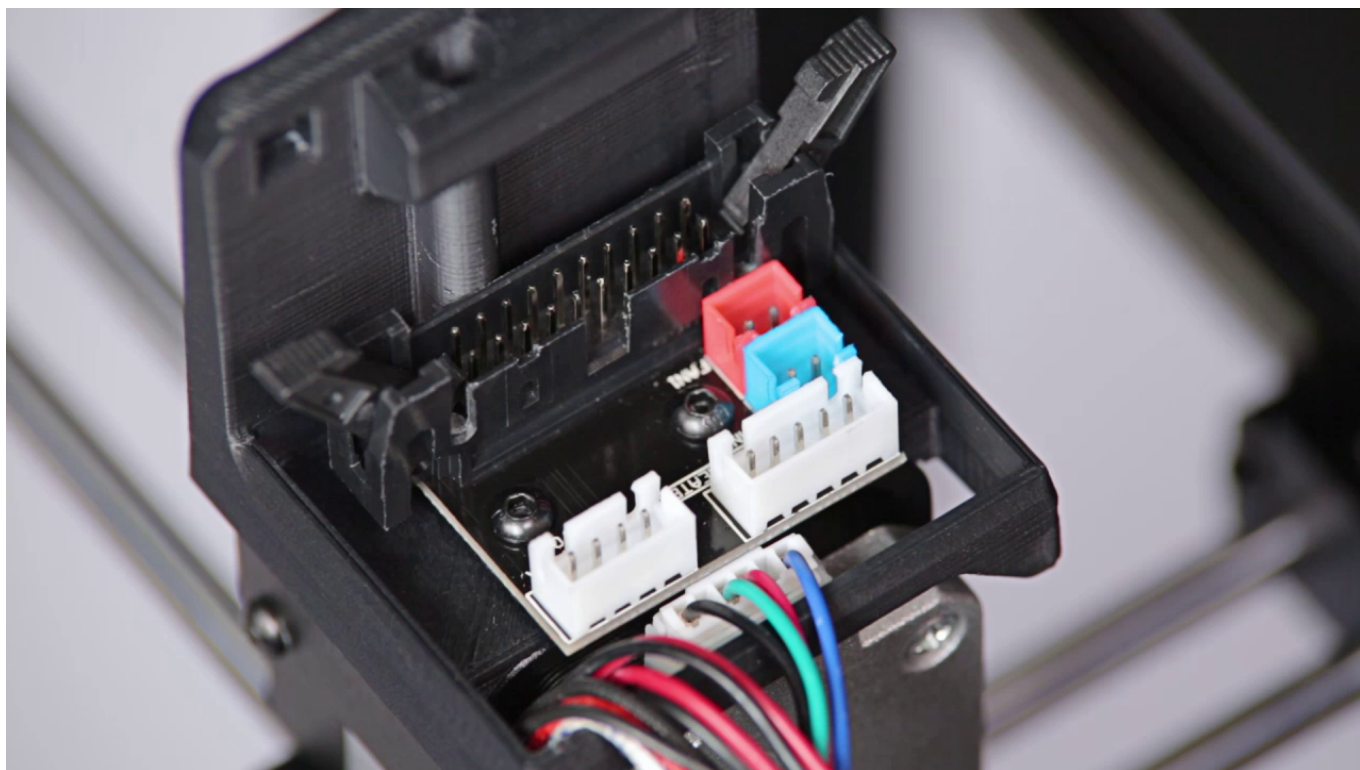
Attach the extruder lower printed cover to the extruder.

Extruder PCB Assembly



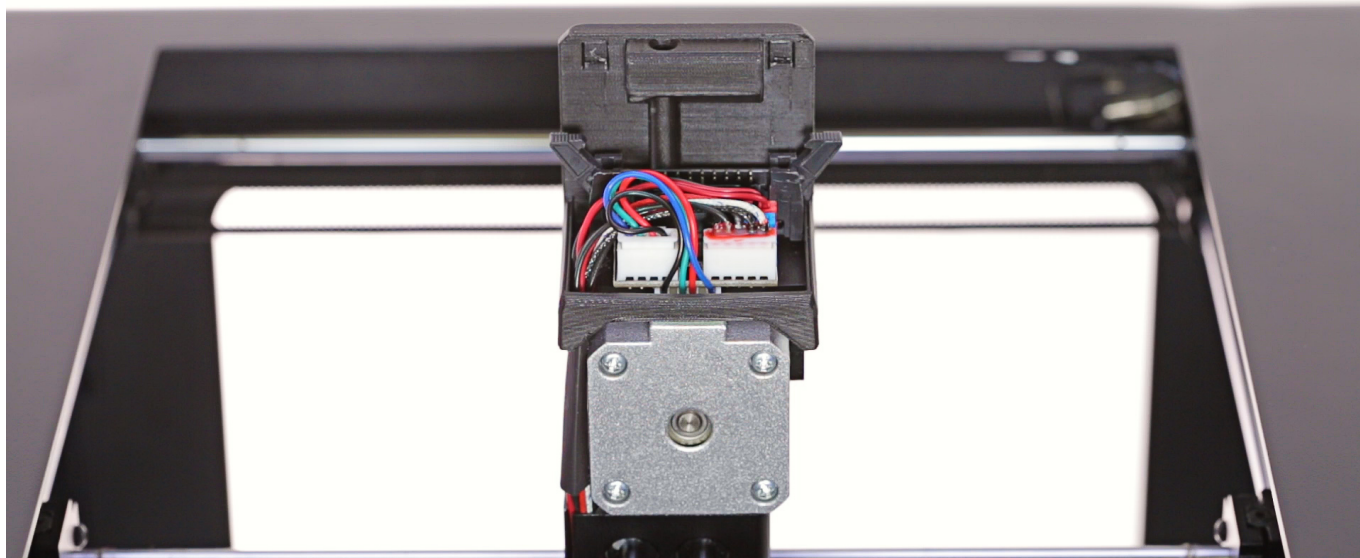
Place the extruder PCB in its place and secure it with the two screws.

Plugging all Cables into the Extruder PCB



Plug all the cables in. Remember to arrange the cables so that they don't get damaged, e.g. by wrapping against each other.

Plugging the Extruder Cable



Plug the extruder cable in, and then attach the extruder upper cover to the lower cover.

MAKE SURE THE EXTRUDER CABLE IS PROPERLY PLUGGED IN.

Material Guide Installation



Attach the material guide to the extruder cover. Next, secure the guide to the extruder cable with the material guide clamps.

MAKE SURE THE MATERIAL GUIDE IS PROPERLY INSTALLED IN THE COVER.

Plugging the Power Cable



Plug the power cable in.