

Greenboy3D™

V1 Pellet Extruder



What you get:

Parts:

- Extruder Barrel

- Extruder Screw



- Extruder Heating Block

- Coupling



- Planetary Geared Steppermotor

- Heat Cartridge 70w 24v



- Thermistor

- 2x Fans



- 1m Pellet Conveyor Tube



Screws & Tools:

- M1.5 - M3 allen keys
- 7mm wrench
- 12x M3x10 screw
- 2x M3x18 screw
- 2x M3x25 screw
- 2x M4x50 screw
- 2x M3x3 grub screw
- 6x M3 nut
- 1x M4 nut
- 8x M3 thin washer
- M6 Ø.4 Brass Nozzle
- 2x 10cm Cable ties



What you need:

- Pellet Extruder Adapter

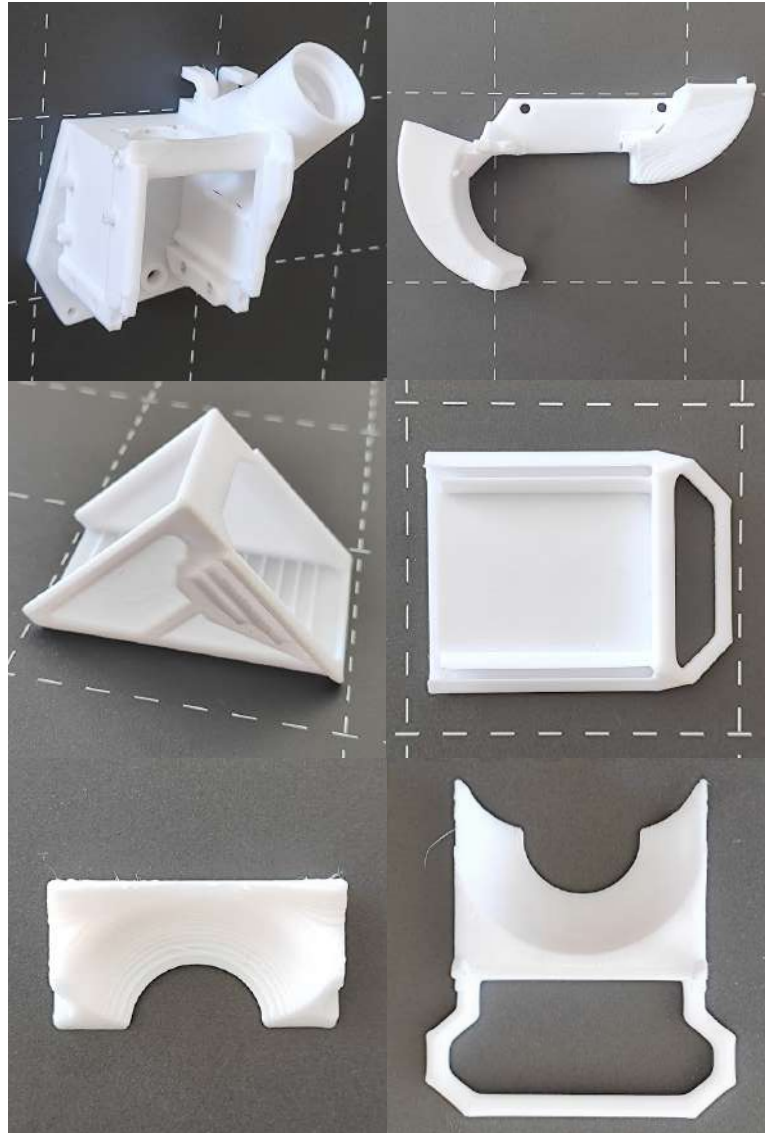
- Fan Duct

- Extruder Hopper

- Extruder Hopper Cap

- Internal Sliding Pit

- External Sliding Pit



⚠ The mounting plate of the Pellet Extruder Adapter may differ depending on your printer.

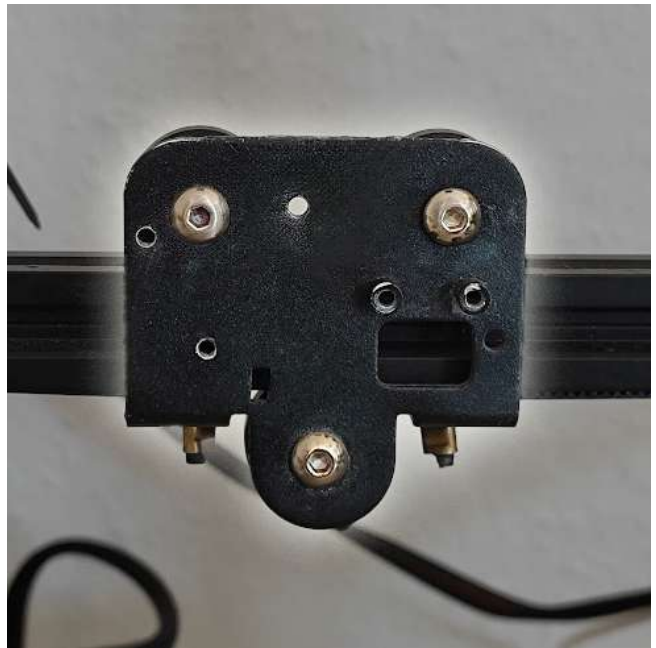
You can download all files at:

<https://wiki.greenboy3d.de/docs/category/adapters-and-3d-files>

Assembly:

Step 1:

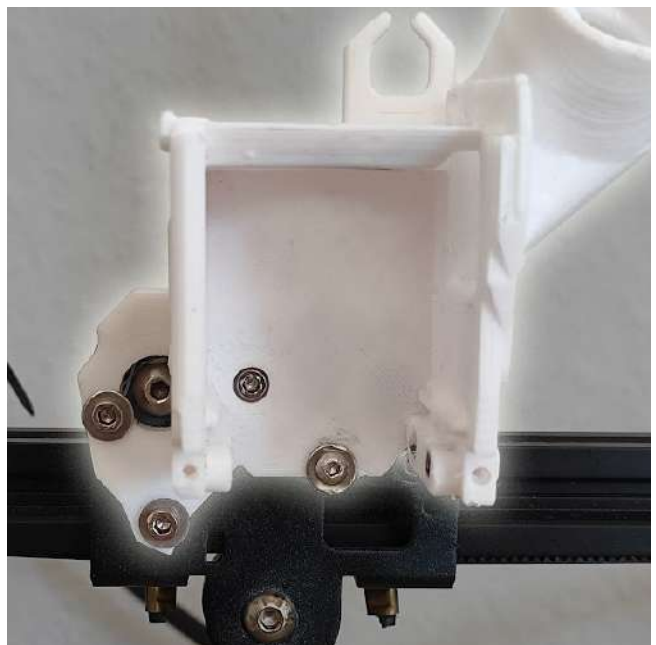
Disassemble the current printhead from your printer until only the mounting plate on the X-carriage is left. The exact process can be more difficult depending on the specific printer you are using.



Step 2:

Mount the corresponding adapter for your printer from my wiki onto the X-carriage mounting plate.

Most adapters are designed to work with the original screws from your printer, but depending on the model, you may need to use different screws to ensure proper fit and stability.



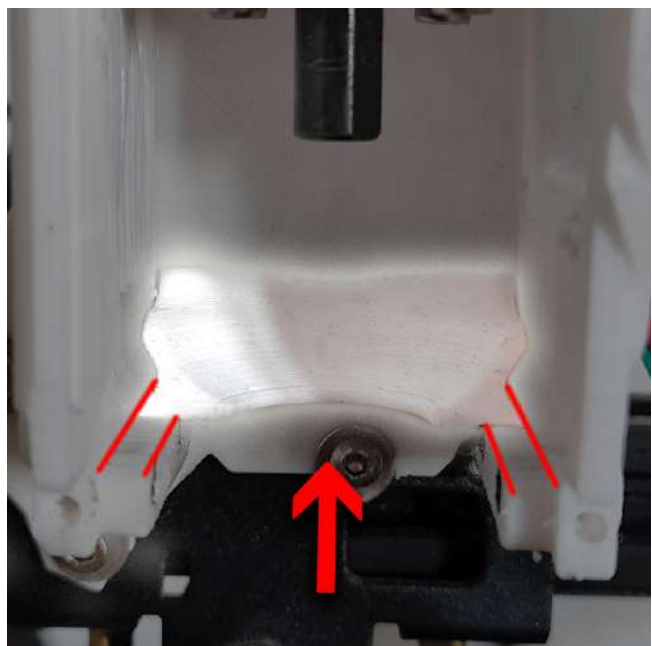
Step 3:

Place the stepper motor on top of the adapter and secure it using at least 2x M3x10 screws with M3 washers. Ideally, use all 4 screws for maximum stability. Tighten them using a 2.5 mm Allen key.



Step 4:

Insert the Internal Sliding Pit into the adapter using the two guide rails on the lower inside of the adapter and push it all the way to the back.



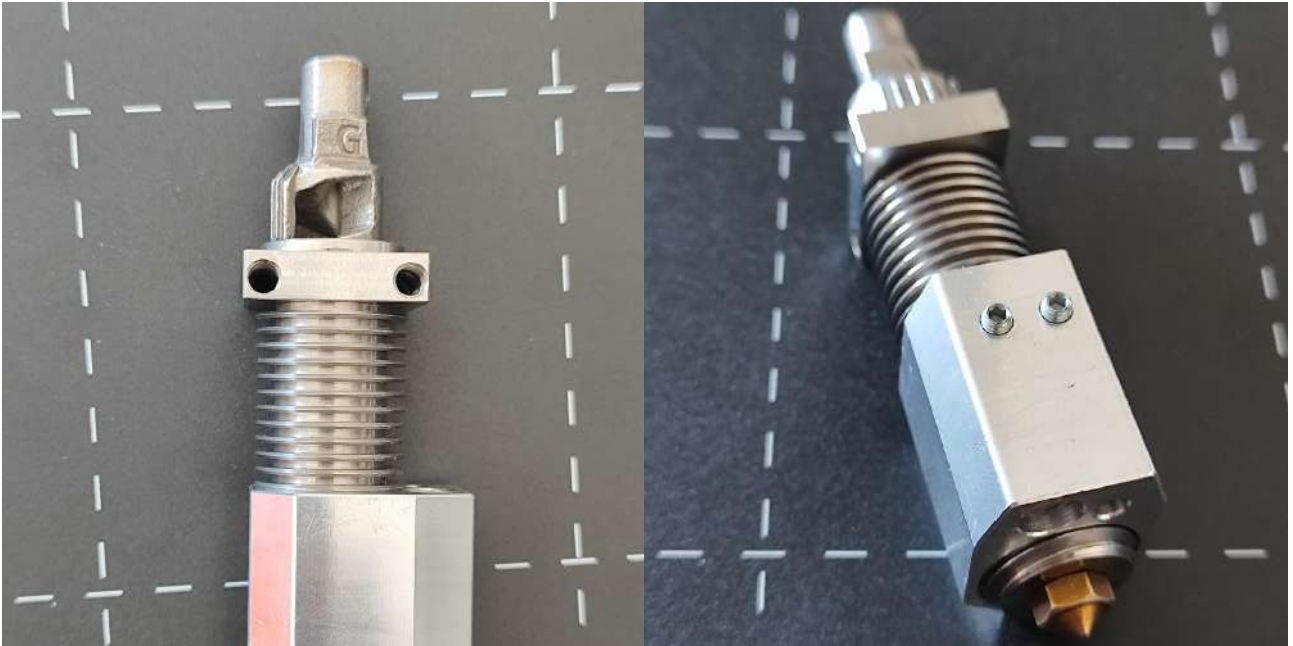
Step 5:

Screw the heating block onto the extruder barrel.
Then screw the nozzle into the barrel as well.



Step 6:

Place the Extruder Screw inside the Barrel. Slightly screw the 2 M3x3 grub screws into the heating block.



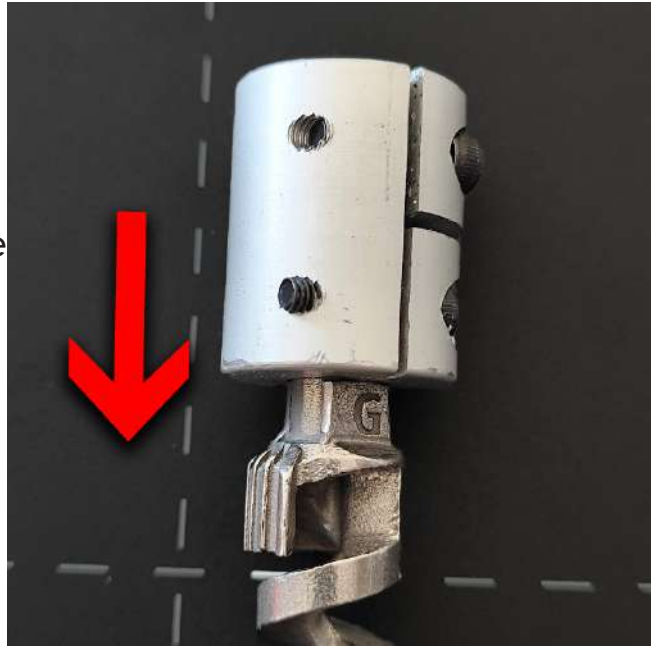
Step 6:

Put the Thermistor (small black cable) into the smaller hole of the heating block. Put the Heat Cartridge (big white cable) into the bigger hole. Then tighten both M3x3 grub screws using a 1.5 mm Allen key.



Step 7:

Place the coupling onto the top of the Extruder Screw, but do not tighten it yet.
It should sit as close as possible to the motor shaft.

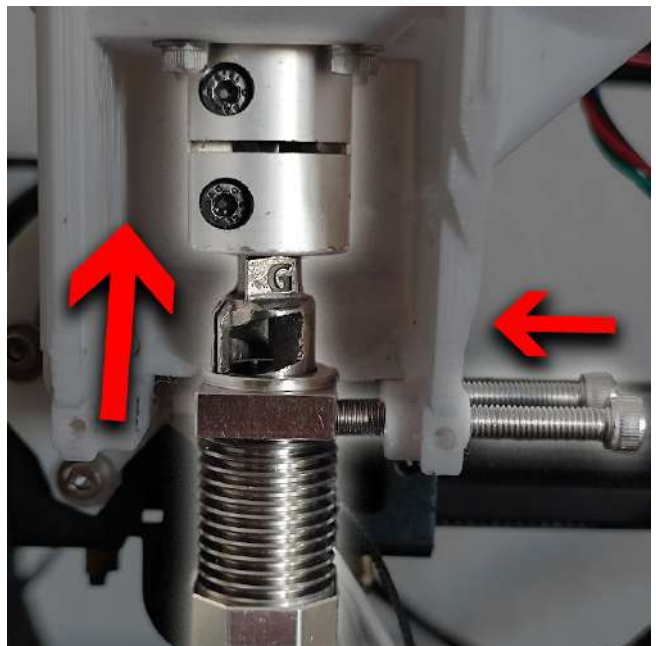


Step 8:

Take the Barrel assembly and slide it into the adapter and the coupling into the motor shaft.

Insert the 2 long M4x50 screws from the right side into the adapter and tighten them using a 3 mm Allen key.

You may need to slightly adjust the height of the Barrel until the screws align properly, which is why the coupling should not be tightened yet (it still needs to sit close to the screw).

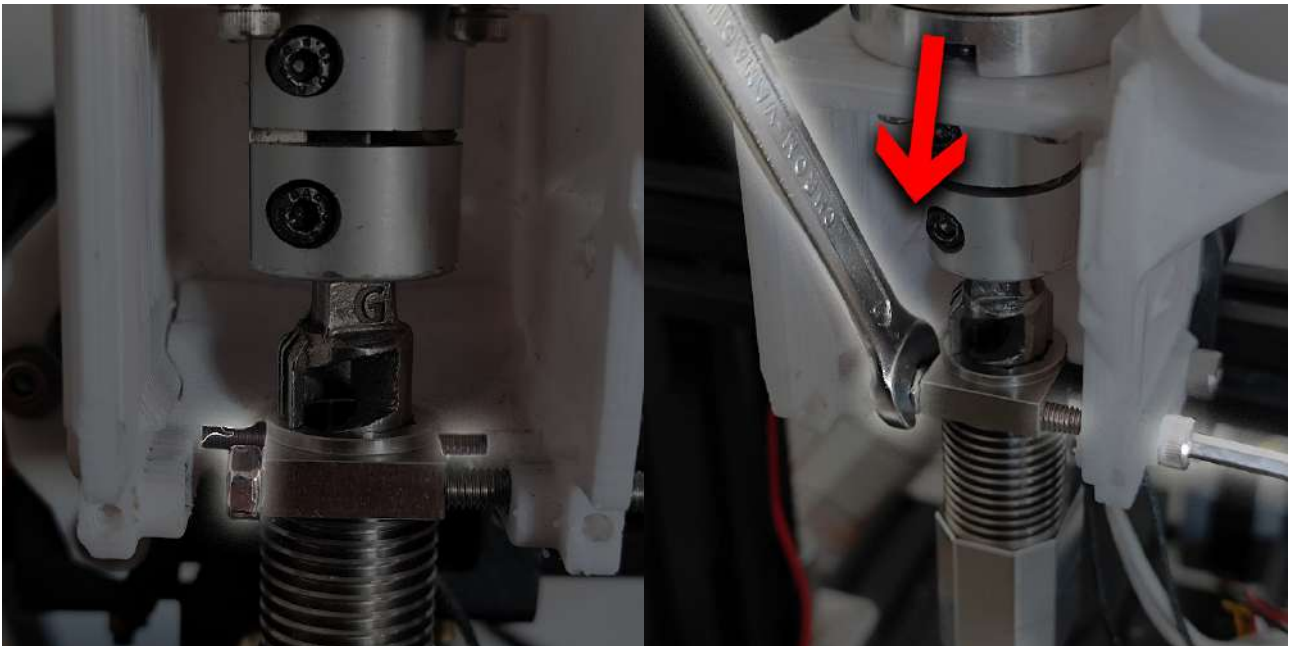


Step 9:

Tighten the M4 screw at the back first, then the one in the front.

Once the thread of the front screw comes out of the Barrel, screw the M4 nut onto it and continue tightening the screw all the way.

When finished, use a 7 mm wrench and a 3 mm Allen key to tighten the nut against the Barrel.



Step 10:

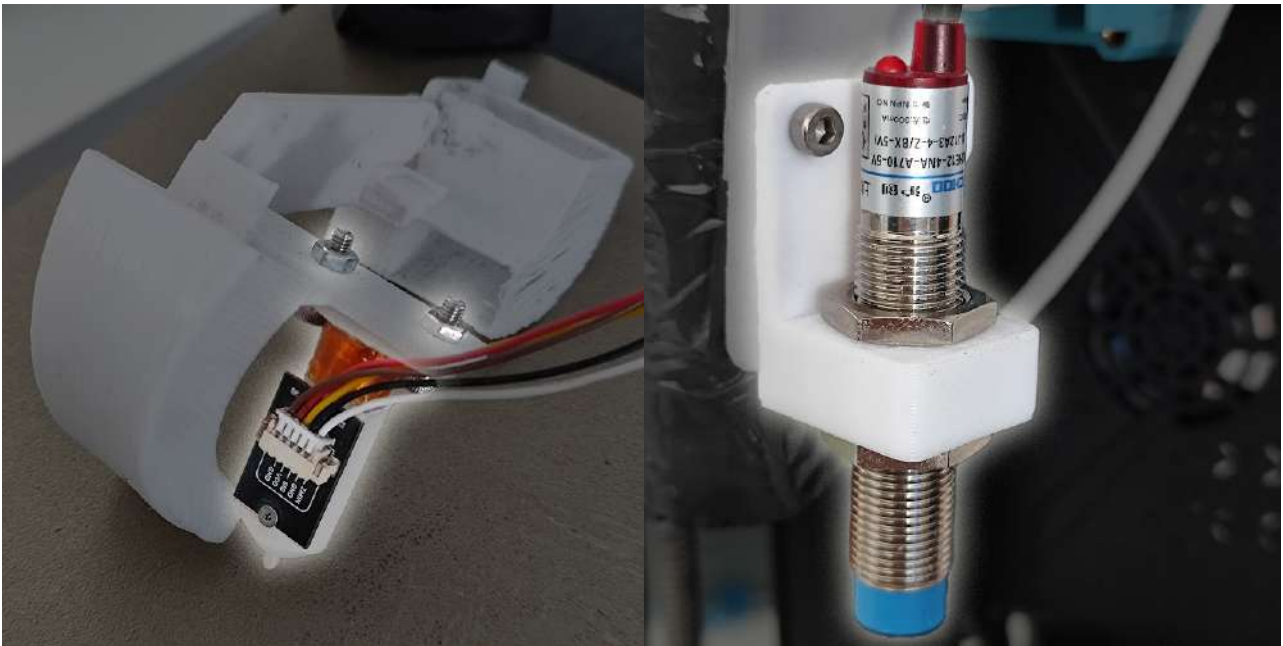
You can now tighten the two screws of the coupling using a 2.5 mm Allen key. Make sure the coupling sits all the way on the Extruder Screw.



Step 11:

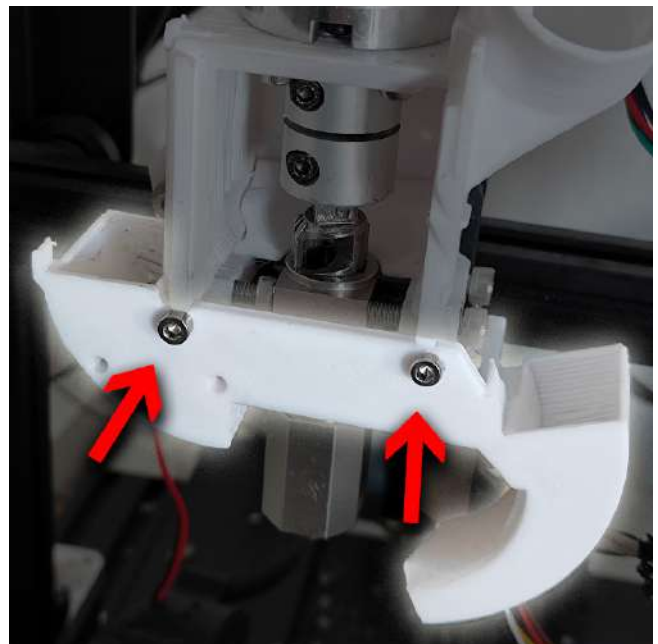
Mount your leveling sensor onto the fan duct. There are two mounting positions available, depending on the leveling sensor you are using.

If you want to continue using the sensor from your old printhead, you may need to create a custom part to connect the sensor to the duct.



Step 12:

Use 2 M3x10 screws to connect the fan duct to the two front holes of the adapter.



Step 13:

Mount the two fans onto the sides of the fan duct.
Make sure the controllable fan is mounted on the right side so it cools the print. Use the 2 M3x18 screws for this fan.
The fan on the left side uses the 2 M3x25 screws.



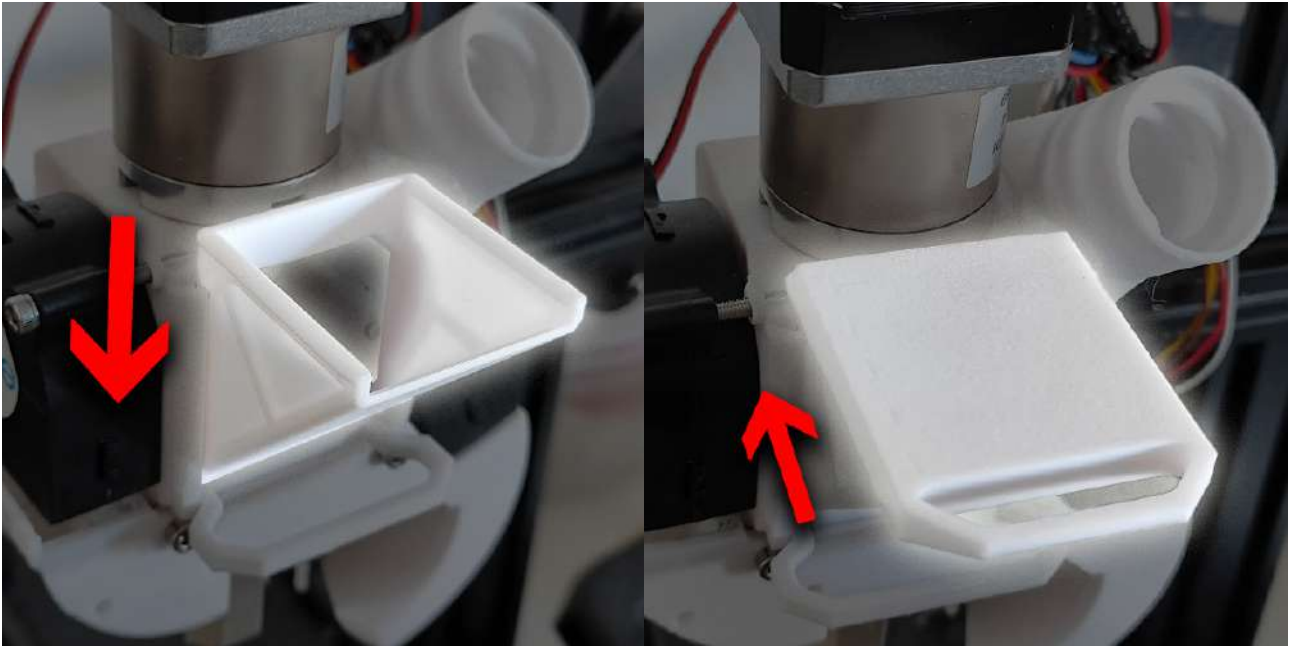
Step 14:

Insert the External Sliding Pit into the adapter using the two guide rails.



Step 15:

Slide the Extruder Hopper all the way down using the front guide rails. Then slide the Extruder Hopper Cap onto the Extruder Hopper.



Step 16 (Optional but recommended):

Screw the hose into the thread of the adapter.

Before screwing the other side onto the Pellet Storage Hopper (3D files can be found on the Wiki), twist the hose around 90 degrees clockwise.

Then push it onto the Hopper and screw it counterclockwise, so the hose becomes straight again and is not twisted while connected.

