

Changing hotend

TOOL LIST

- 1 mm hex key
- 2 mm hex key
- Boron nitride thermal paste
- Metal bristle brush
- Paper tissue

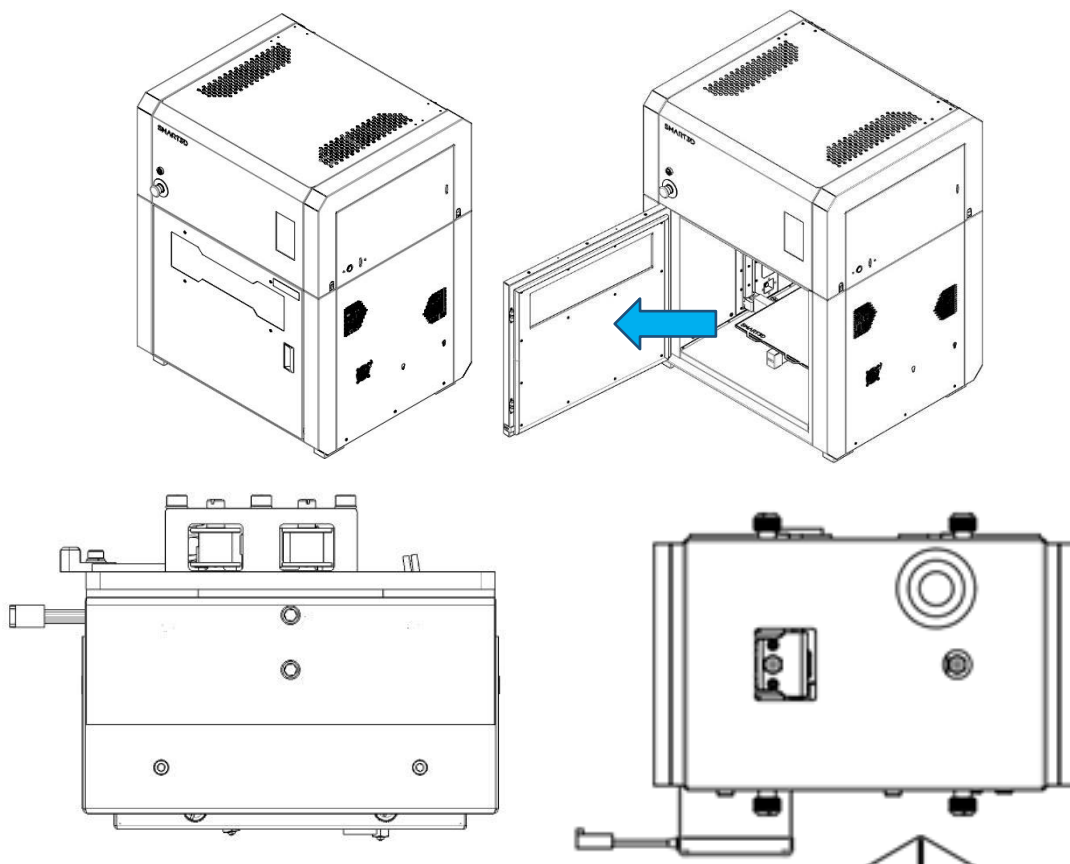
MANUAL

STEP 1. Check there are no filaments loaded in the two hotends. For more information about how to unload the filament, see: "S3D_MacroPU_Filament load/unload".

STEP 2: Use the **Z+25** button to lower the build plate so you can work more comfortably.

IMPORTANT: Turn off the Macro Unit and unplug it. This is very important to avoid any type of accident.

STEP 3: Open the door and identify the hotend you need to change.

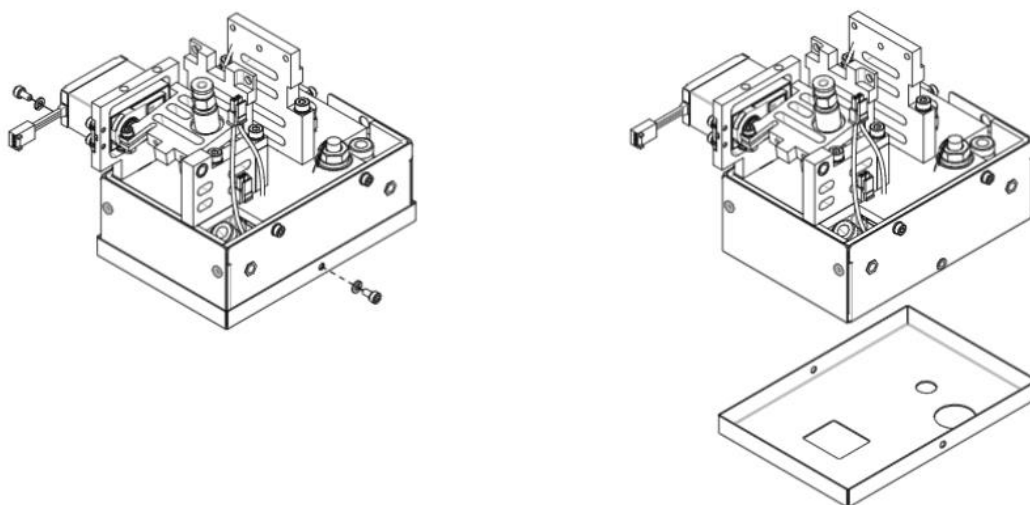


Picture's references:

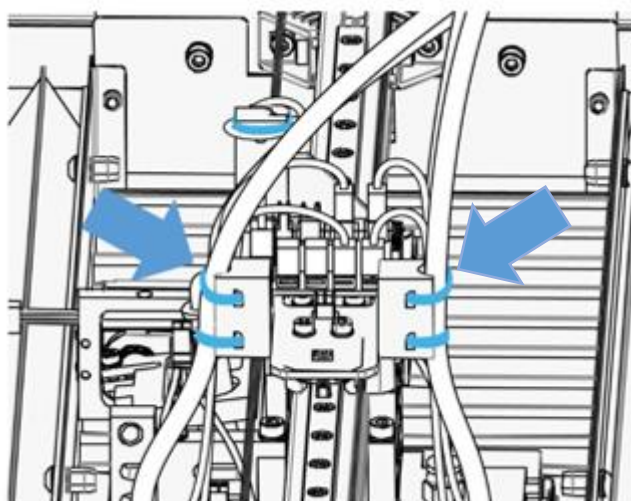
T0 Right hotend: Magnum Mosquito

T1 Left hotend: Regular Mosquito

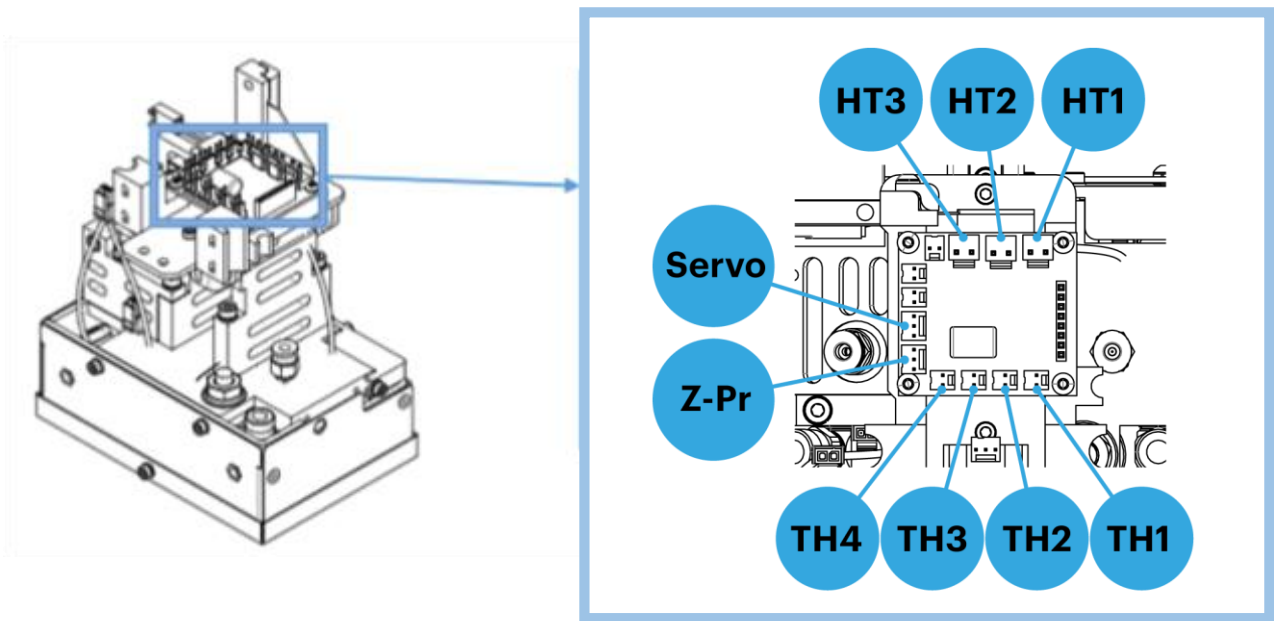
STEP 4. Detach the metallic print head cover by using a 2,5mm hex key to remove the two (2) M3 x 6mm located on the front and back of the printhead.



STEP 5: Cut the upper cable tie, the right or the left one depending on the hotend you want to replace .
Note: Be careful not to damage any cables.

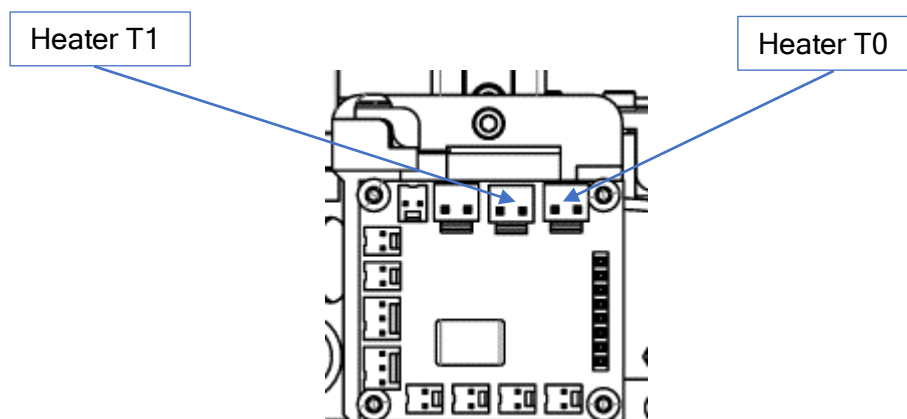


SETP 6. Open the Top door and Unplug the heater cartridge and thermistor of the hotend from the circuit board on top of the printhead.

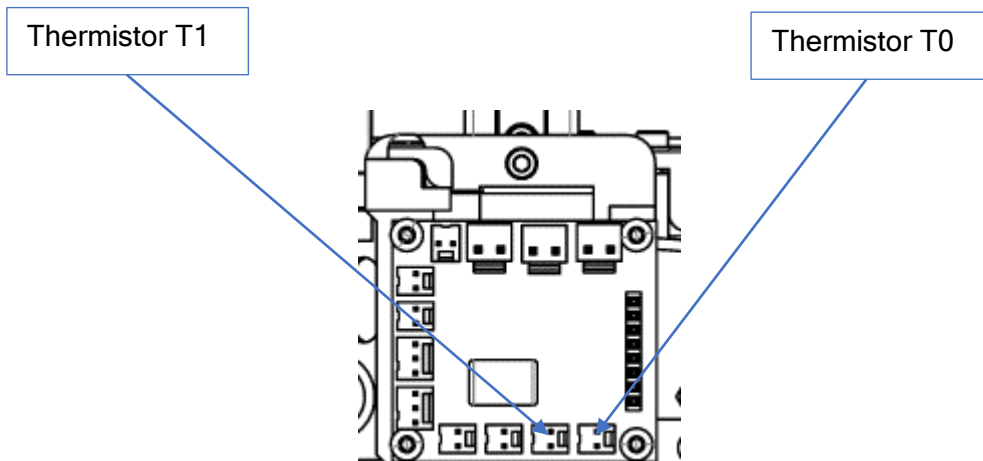


Label	Component
HT1	heater T0
HT2	heater T1
SERVO	servo
Z-Pr	inductive sensor
TH1	thermistor T0
TH2	thermistor T1
TH3	endstop
TH4	endstop

a. Unplug the heater cartridge connector.

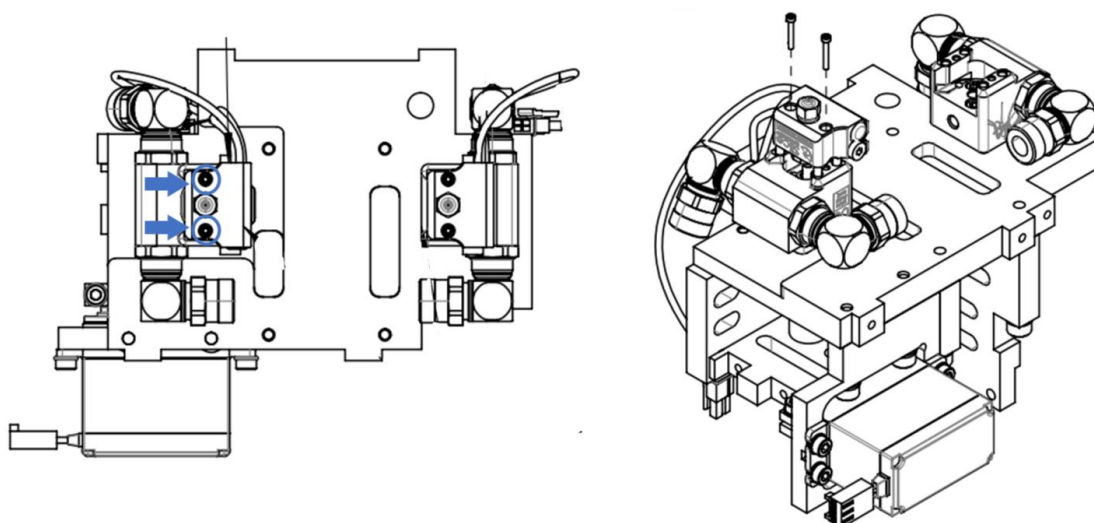


b. Unplug the hotend's thermistor connector.



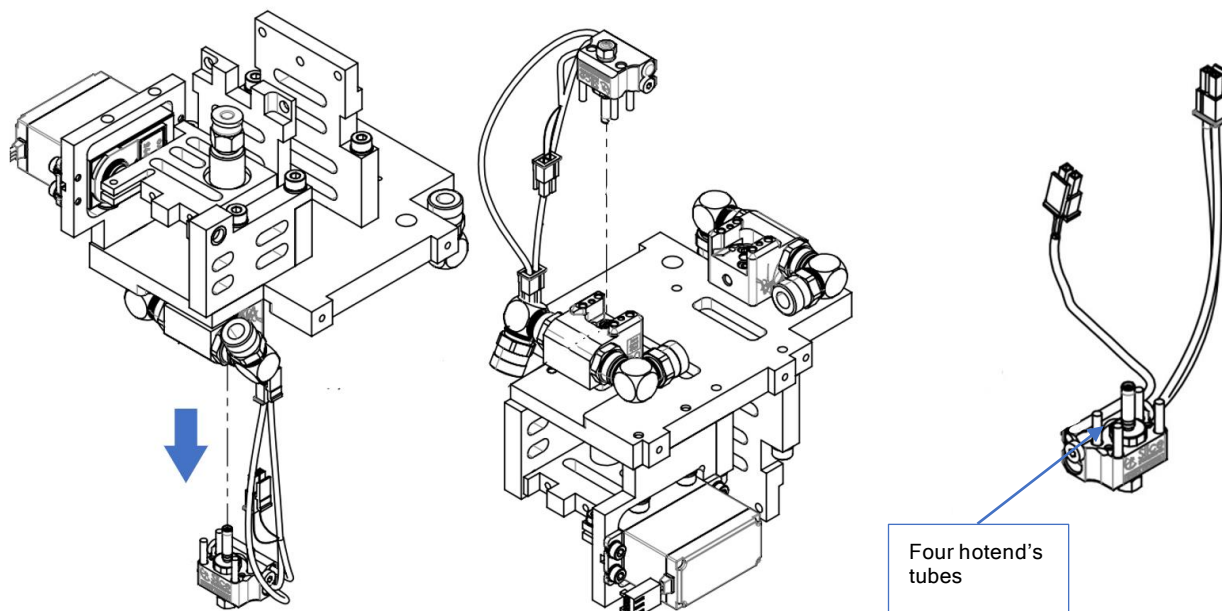
STEP 7. Identify the hotend you need to change. Each hotend has two screws that adjust the hot block. Use the 1 mm hex key, that comes with the accessory kit, to loosen these two screws.

Attention: When loosening the screws, be careful not to lose them as they are very tiny.

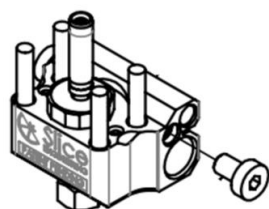


STEP 8. Take out the hotend. There is not much room for the hotend, with the cables, to come out. Wiggle it gently until you can take it out.

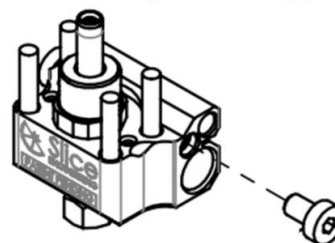
Note: When you remove the old hotend the four hotend tubes may or may not come out. We recommend taking them out and placing them in the new hotend. It will serve as a guide when installing the new hotend.



Hotend Mosquito Regular



Hotend Mosquito Magnum



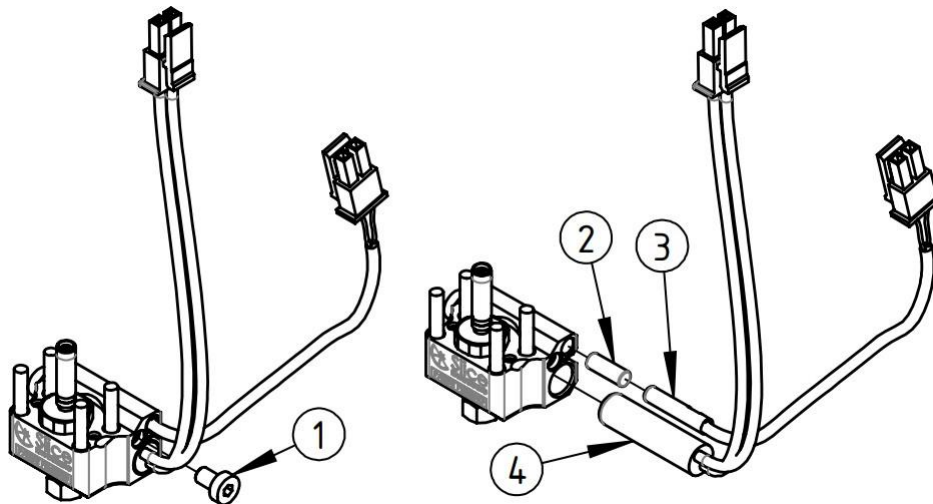
T0 Right hotend: Magnum Mosquito
T1 Left hotend: Regular Mosquito

STEP 9. Once you've taken the hotend out, use the 2 mm hex key from the Macro's accessory kit to loosen the retainer screw to pull out the heater and the thermistor cartridges. The thermistor has a separator, take it too.

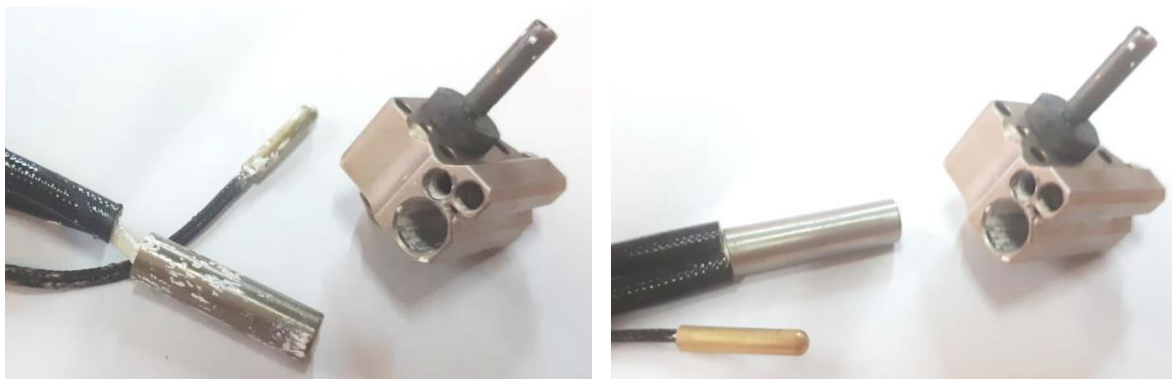
Note: Do not use force to pull the cartridges out as this can damage their cables. Give the hotend block a gentle tap and try again.

Picture reference:

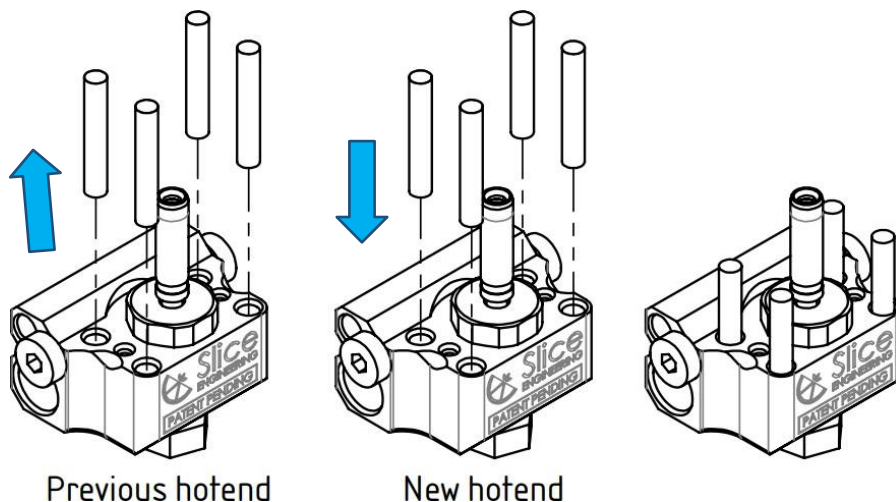
1. M3 retainer screw
2. Thermistor separator
3. Thermistor cable
4. Heater cable



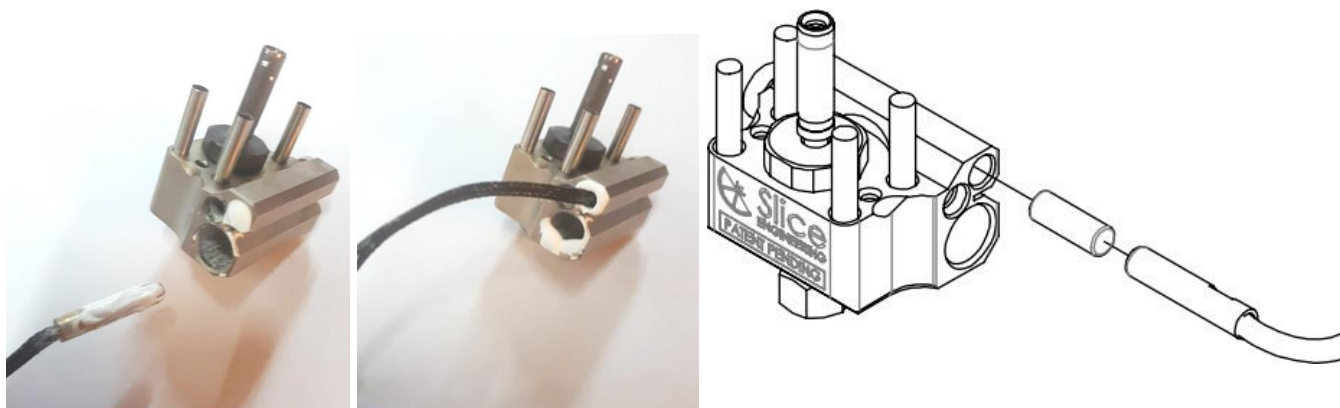
STEP 10. Clean the thermal paste from the heater and thermistor connector. Use a paper tissue.



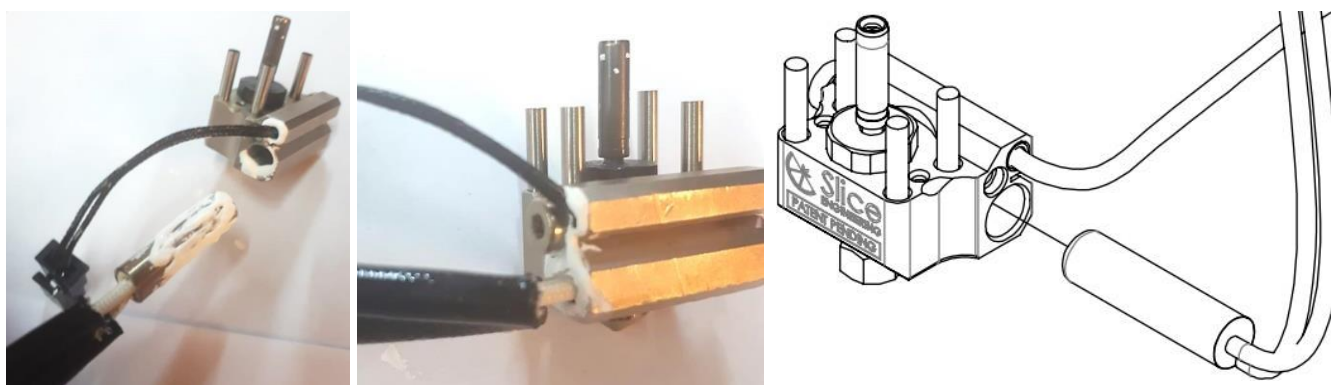
STEP 11. Take the four tubes of the old hotend and place them in the new one. They fit with pressure.



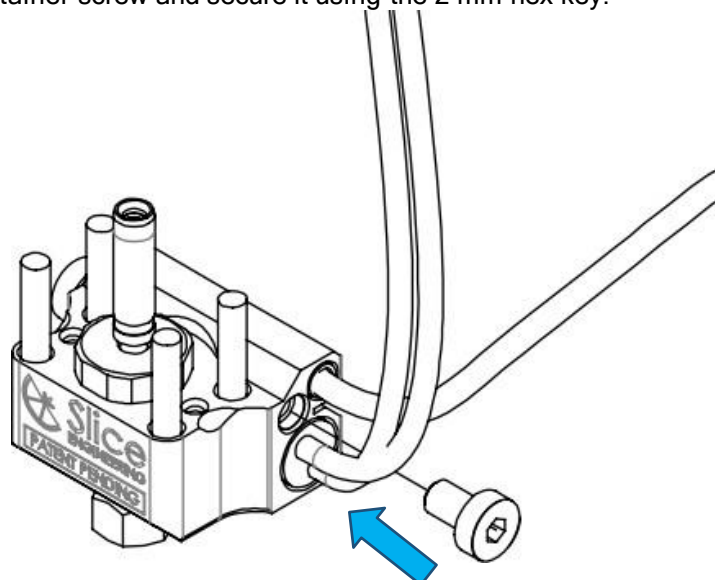
STEP 12. Take the Boron nitride thermal paste and apply some on the thermistor, the separator and place them inside the new heat block. You can also put a drop of paste in the thermistor hole. Apply some gentle force to ensure they are correctly positioned.



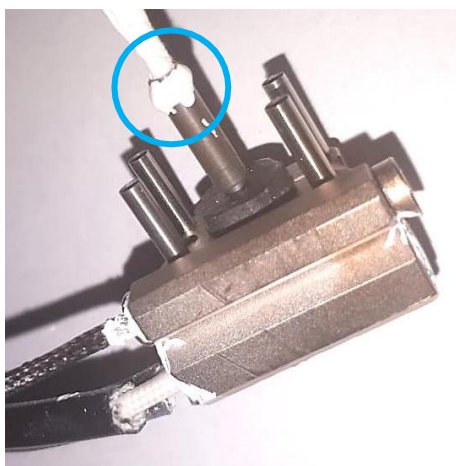
STEP 13. Do the same procedure with the heater cartridge. Apply some thermal paste and position.



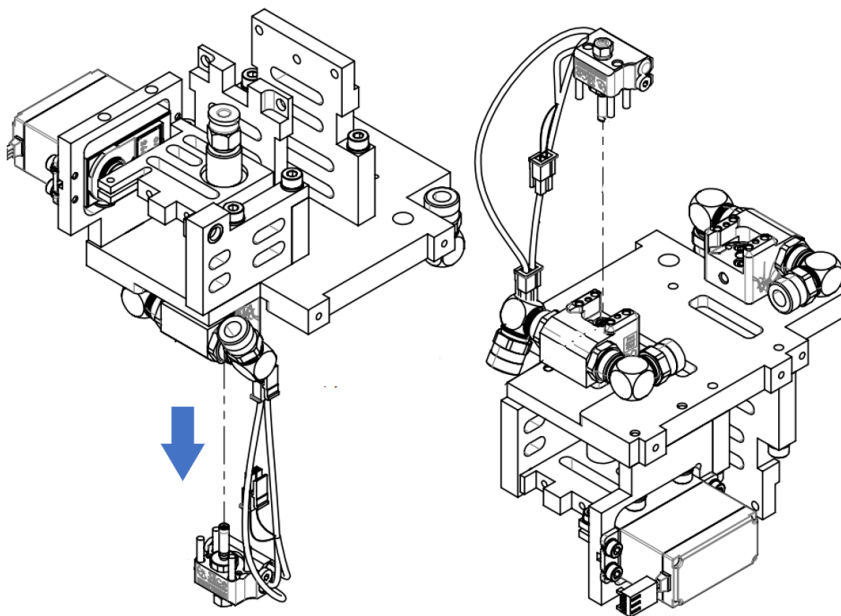
STEP 14. Reinsert the retainer screw and secure it using the 2 mm hex key.



STEP 15. Put a q-tip inside the hotend central tube in order to prevent thermal paste from entering. Apply a ring of thermalpaste around the tip of the tube. Take a thin stick to apply the paste.



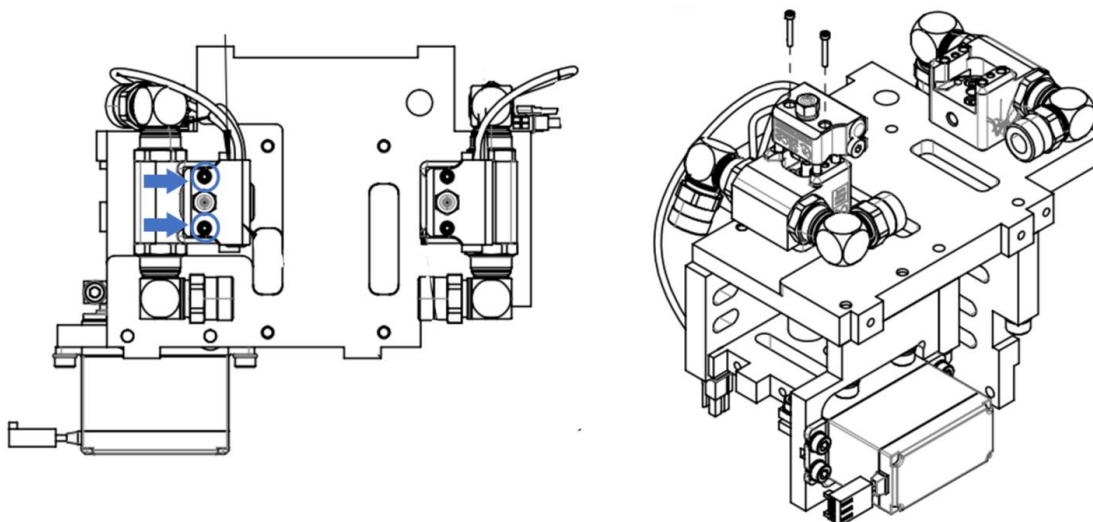
STEP 16. Insert the hotend inside, use the four tubes as guides. Once they are in, apply some pressure in order to stabilize the hotend.



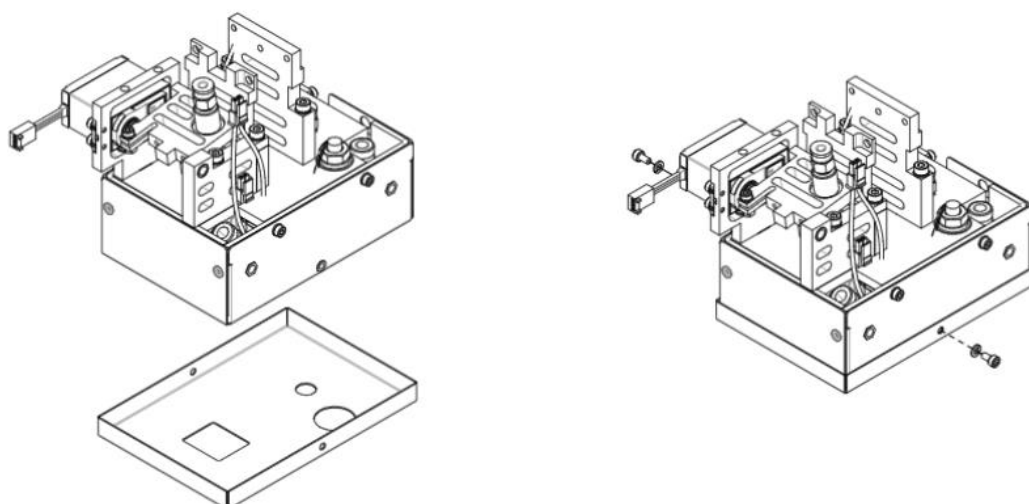
STEP 17. Finally adjust the hotend.

Insert the screw and turn it softly. When the screw begins to be difficult to turn, turn $1/8$ of a revolution.

Attention: This is **VERY** important. If too much force is applied it could ruin the hotend.



STEP 18. Attach the metallic cover.



STEP 19. Open the top door and connect the two cables, the thermistor and the heater cartridge.

