

Cold zone inside Heat break is clogged

The problem:

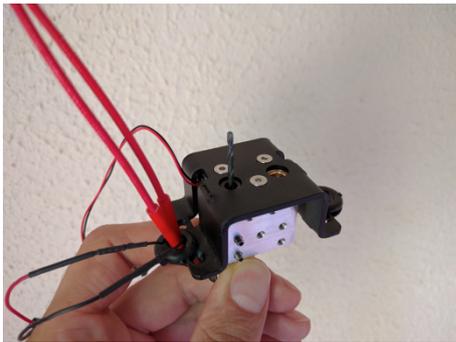
Filament got stuck inside the nozzle. It is impossible to feed plastic through.

Initial trouble shooting:

1. Make sure you first checked if no filament strings have been cumulated inside the entry of the hot-end. You can remove these with tweezers
2. Bad alignment of the bowden tube and hot-end heat break can prevent the filament from entering the hot-end. Make sure you cut the filament under angle of 45 degrees so the filament can enter the hot-end easily.

The solution for a clogged heat break:

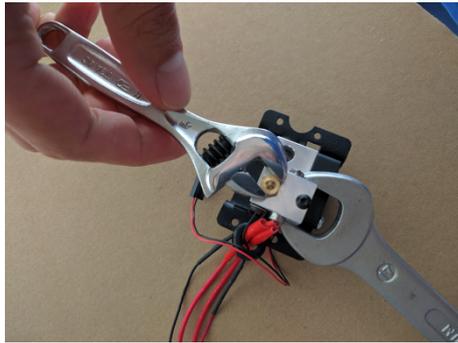
1. Take a drill of 2mm and use the back of the drill to push the filament through towards the nozzle tip.



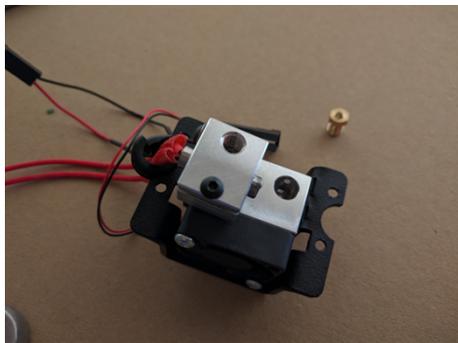
You are done, or go to step 2.

2. In case step 1 didn't worked out: Get access to your hot-end tip.
 - a. Tripodmaker Classic:
Remove the hot-end skit from the magnet connectors and put upside down on the build plate.
 - b. Tripodmaker Black Edition:
Remove the omega profile with 4 screws on top of the hot-end platform. Make sure you don't burn the cables in the next few steps.
3. Heat up the nozzle to 210 degrees by browsing through your menus on your Tripodmaker.
4. Once the nozzle is hot, use a wrench to keep the heater block in place and unscrew the nozzle from the heater block with a smaller wrench. Pay attention that you don't damage the components inside the heater block. Prevent rotating the heater block itself as the thermistor and heater

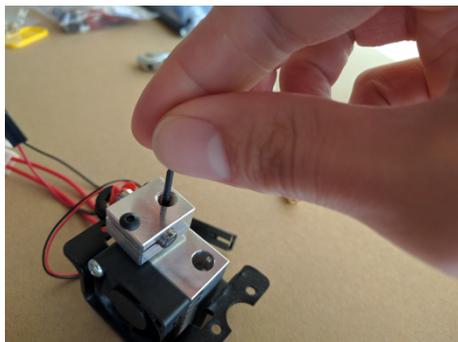
cartridge is still connected.



5. Now remove the nozzle completely. Pay attention, this component is very hot.



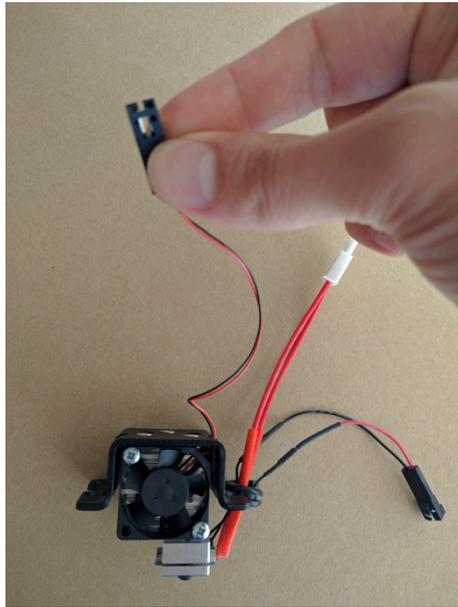
6. Use a 2 mm drill to push back the filament that got stuck in the cold zone. If you are unable to push it through directly, allow the drill to heat up and melt the plastic that is in the cold zone.



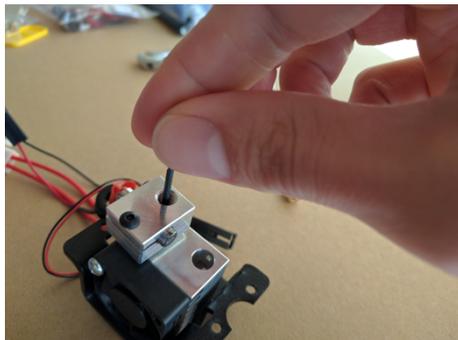
Your clog is gone; you can let cool down the nozzle and go to step 12, else, go to step 7.

7. Your drill still doesn't move. This means there is too much filament stuck in the cold zone and the drill bit is unable to heat up this amount of plastic. Disable the fan sitting on the hot-end.
 - a. Tripodmaker Classic:
Remove the blue fan duct by clicking it off.

- b. Tripodmaker Black Edition:
Open up the wiring and detach the red-blue-wire fan connector



- 8. Use a 2 mm drill to push back the filament that got stuck in the cold zone.



Your clog is gone; you can let cool down the nozzle and go to step 11, else, go to step 9

- 9. You have quite a sticky clog. Remove the heat sink from your hot-end assembly.
 - a. Tripodmaker Classic:
Unscrew the 4 bolts on top of the hot-end skit so the U-profile loosens and allows you to slide out the hot-end heat sink. Remove the heat sink from the hot-end.



- b. Tripodmaker Black Edition:
Only do this step if you have thermal paste to use during the re-assembly. Unscrew the 2 setscrews from the back of the heat sink and slide out the heat break from the heat sink.

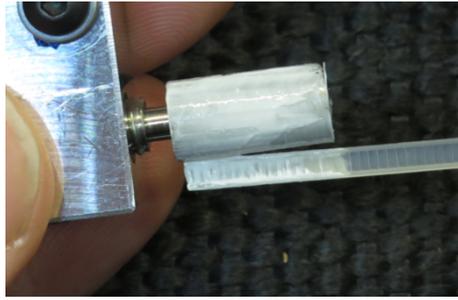


10. Use a 2 mm drill to push back the filament that got stuck in the cold zone.

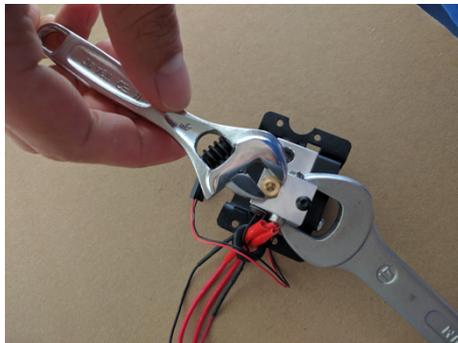
Your clog is gone or you will need a new heat break. You can let cool down the nozzle.

11. Place the heat sink back on the heat break.

- a. Tripodmaker Classic:
Screw the heat sink back onto the heat break. Make sure you don't over tighten, as the heat break is really sensitive to damage. Remount the current hot-end assembly underneath the U-profile onto the hot-end skit.
- b. Tripodmaker Black Edition:
Make sure to add thermal paste on the shaft of the heat break. Slide the heat break back in the heat sink and tighten the 2 setscrews. Do not over tighten the setscrews.



12. Screw the nozzle back into the heater block until it is tight.
13. Now heat up the nozzle up to 245 degrees C. Position the heater block so it is aligned. Tighten the nozzle firmly with a small wrench whilst holding the heater block with a wrench. Once the nozzle is tightened, the heater block won't be able to turn around.



14. Remount the hot-end assembly
 - a. Tripodmaker Classic:
Remount the current hot-end assembly underneath the U-profile onto the hot-end skit.
 - b. Tripodmaker Black Edition:
Attach the omega profile back with the 4 screws.



15. Additional step for the Tripodmaker Classic: Tighten the nozzle slightly without holding the heater block. This is necessary to make sure the heat break sits tight inside the heat sink. In case the heater block rotates, loosen the 4 screws on top of the hot-end skit to reposition the fully

assembled hot-end.

16. All done, good to go now!