VERSION 1

H2

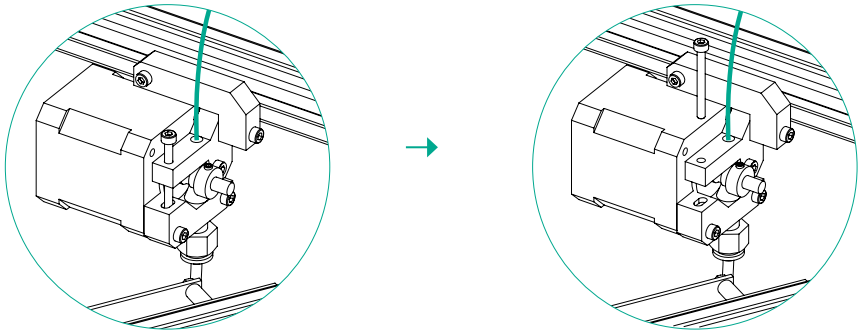
ILARO.ORG

EXTRUSSION
PROBLEMS

1 STEP

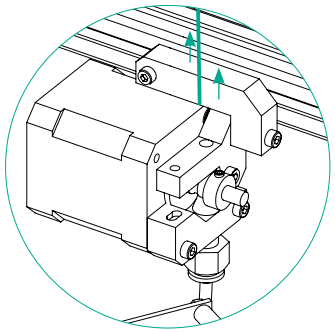
Initial Diagnosis

1. Release the extruder screw (if it is calibrated you can count 10 full turns so later you can tight it 10 full turn an get back the pre-calibrated pressure)



2. Heta the hotend and once it reaches 220 fastly pull up the filament out of the hotend-bowden-extruder.

3. Examine the filament. how is the bitting the drive wheel has left marked? In case of doubt proceed to step 2.



Opcion a. Does it have a **circular bite**? then follow to step 2.

Opcion b. **Not visible**? then you may just skip to step 4.

4. Cut and trash the previously extruded filament to get fresh new unmarked filament.

2 STEP

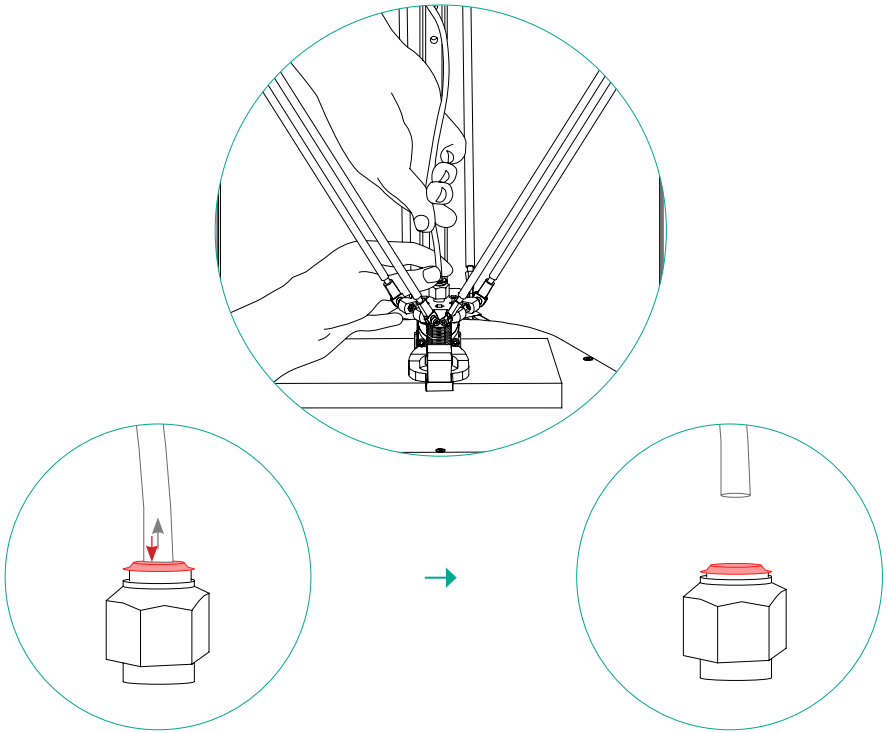
Nozzle Impurities

Hot end clogged?

Impurities in the filament or rarely dust being dragged into the **nozzle**.

1. Place a **wood** part in between the nozzle and the bed so you can release the bowden tube.

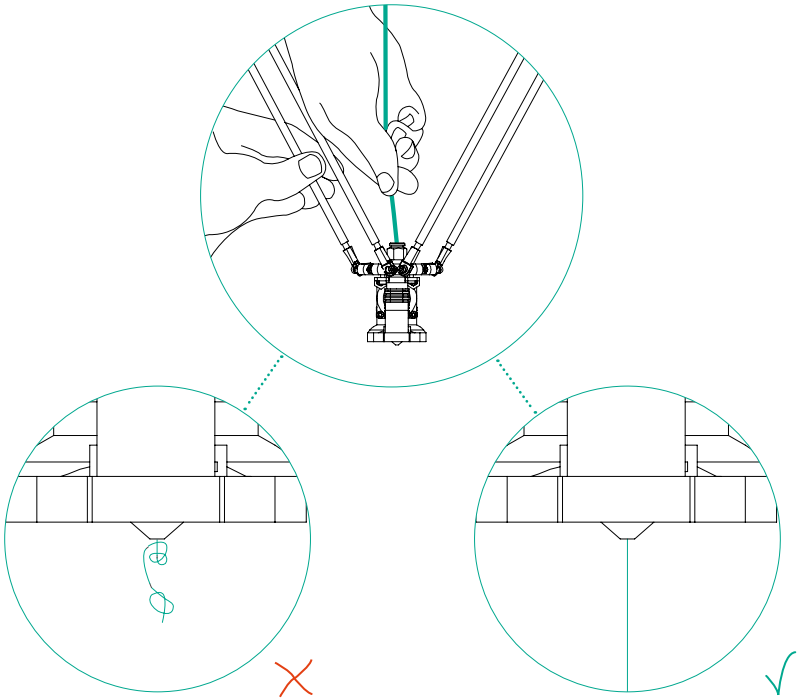
2. Do so by making pressure over the endeffector with one hand and pulling the tube with the other. **Important!** push the red part on the pushfit prior to pulling the tube.



Friction Deformed Filament

3 Cut the deformed filament to always push in fresh perfectly round filament.

3 Heat the nozzle to 220ºC and directly extrude plastic by hand. Do this until succesful manual extrude. this sometiems can take quite a lot of time. **Stress is your enemy.**



Opcion a.
Flush the **debris**. alternate with the high-pressure pushing very **fast full-length retractions**, we do this is order to drag out debris stacked in the nozzle too big to fit through.

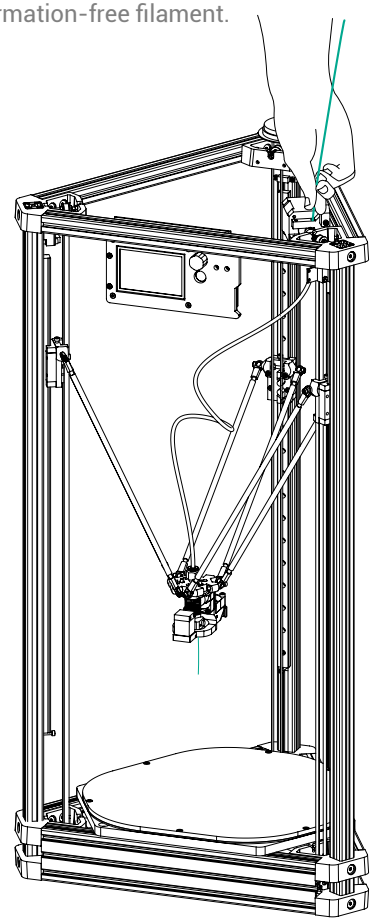
Opcion b.
If plastic comes up nicely (not curling at the exit of the nozzle and without) skip to next step.

Is bowded ok?

Most of the times the real problem is a deformed filament creating excesive friction inside the tube.

1 Cut fialment to get fresh texture-free, deformation-free filament.

2 Push the bowden tube back in the pushfit and extrude manually from the top side of the filament. Important! dont forget to heat the hotend to 220ºC and to release the extruder screw force necessary should be the same as the force employed at the end of step2.

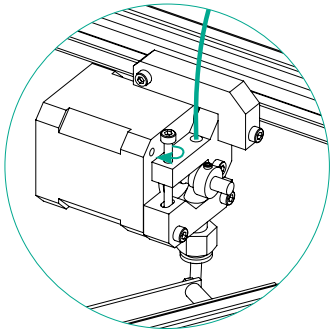


3 If you get stacked at this point contact us.

4 STEP
Pressure

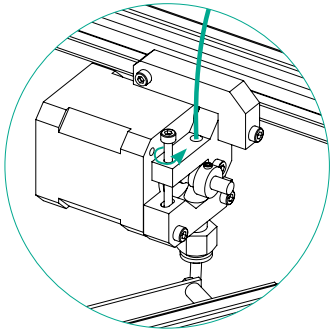
Is the pressure over the filament-drive wheel optimal?

1. It can be **underpressured**. In such case the teeth in the drive wheel dont create enough grip to force the filament down with enough force.



Screw the screw

2. It can be **overpressured**. In such case the filament is being squezed and deformed creating extra friction inside the bowden.



Unscrew the screw

3. If none of this works back to the first step.

FIXED

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