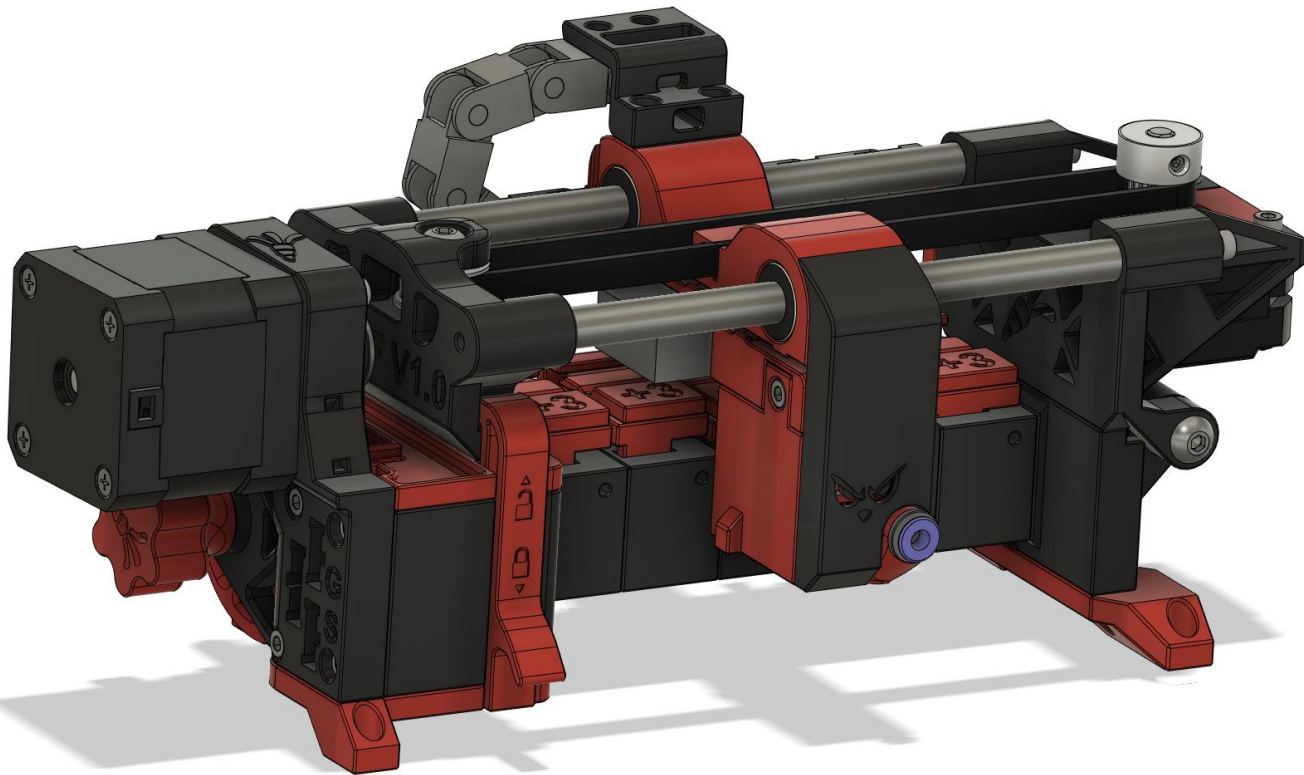


Enraged Rabbit Project

Carrot Feeder assembly

Printing tips :

- Use the printing tips found on the EnragedRabbit Github (Carrot Feeder section)



1 Prepare the filament blocks

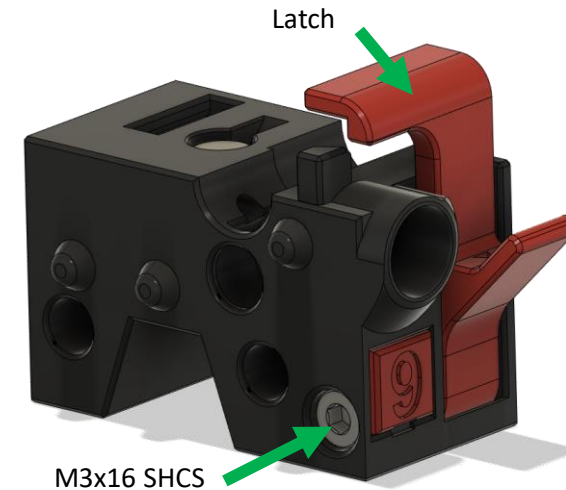
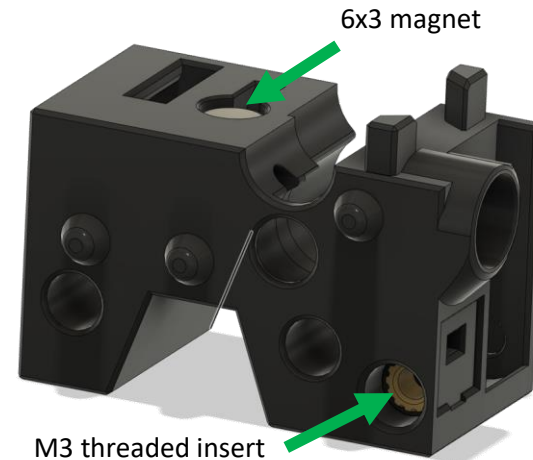


- Each channel of the Carrot Feeder is one filament block
- There are two available versions for the block : with or without the M3 threaded insert. The threaded insert is tough to insert properly, so if you're not comfortable doing it, use the version without it (you'll screw the M3x16 directly in the plastic)

1-a Insert the magnet and the M3 threaded insert



Every 6x3 magnet insert on the Carrot Feeder has a small flat slot on the side : use it to easily remove the magnet if needed



1-b Insert the latch, lock it with the M3x16 screw (don't screw too hard, be gentle) and insert the numbering plate (just click it in)



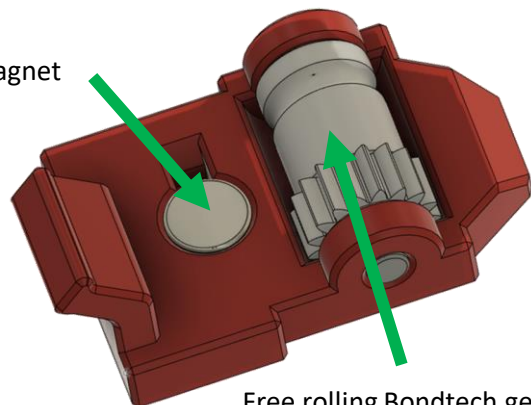
Numbering plates can be easily removed with a small flat-head screwdriver, using the bottom slot of the plate

1-c

Prepare the filament block top hat

- Install the free rolling bondtech gear, take care of its orientation!
- Insert the 6x3 magnet : **IT SHOULD REPEL THE ONE FROM THE FILAMENT BLOCK**

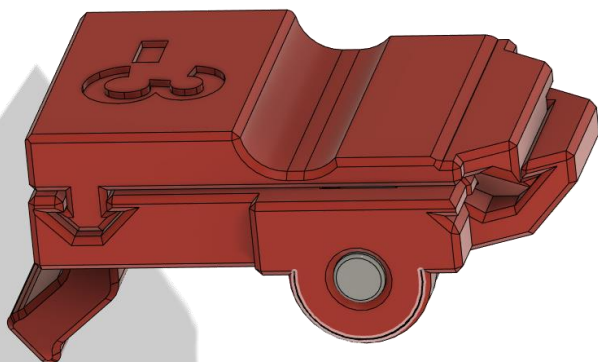
6x3 magnet



Free rolling Bondtech gear

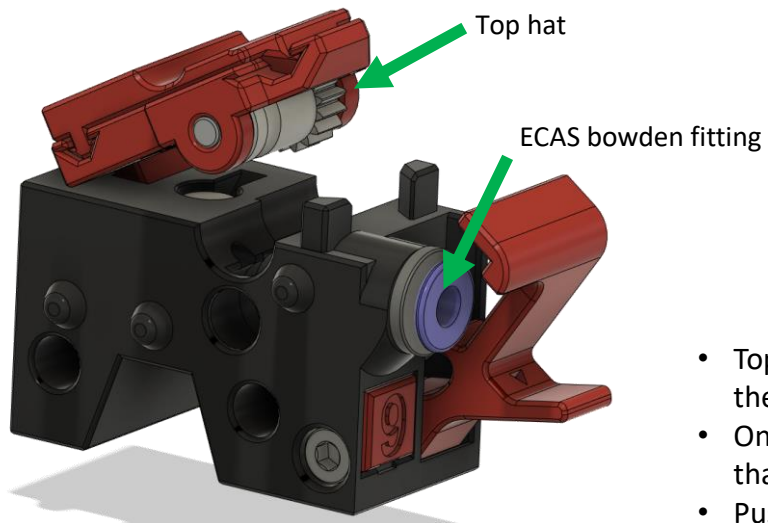
1-d

Slide in the top hat locker plate (use the « 0 » value to begin with). Make sure it's fully inserted



1-e

Press-fit the ECAS bowden fitting and install the top hat block you just did



Top hat

ECAS bowden fitting



- Top hat should be inserted without forcing too much (play with the part orientation)
- Once inserted, rest position should be as seen on the left, thanks to the repelling magnets (with latch open)
- Push down the top hat and close the latch. You can now press on the top hat with a finger (it will go down) and release the finger (it will go up), like a spring mechanism

2

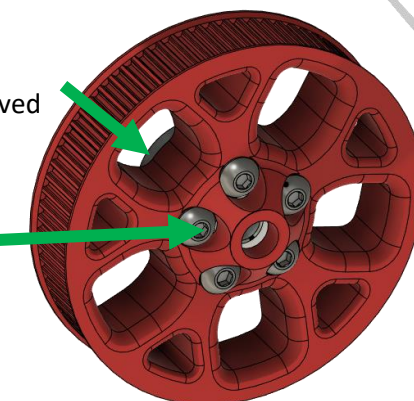
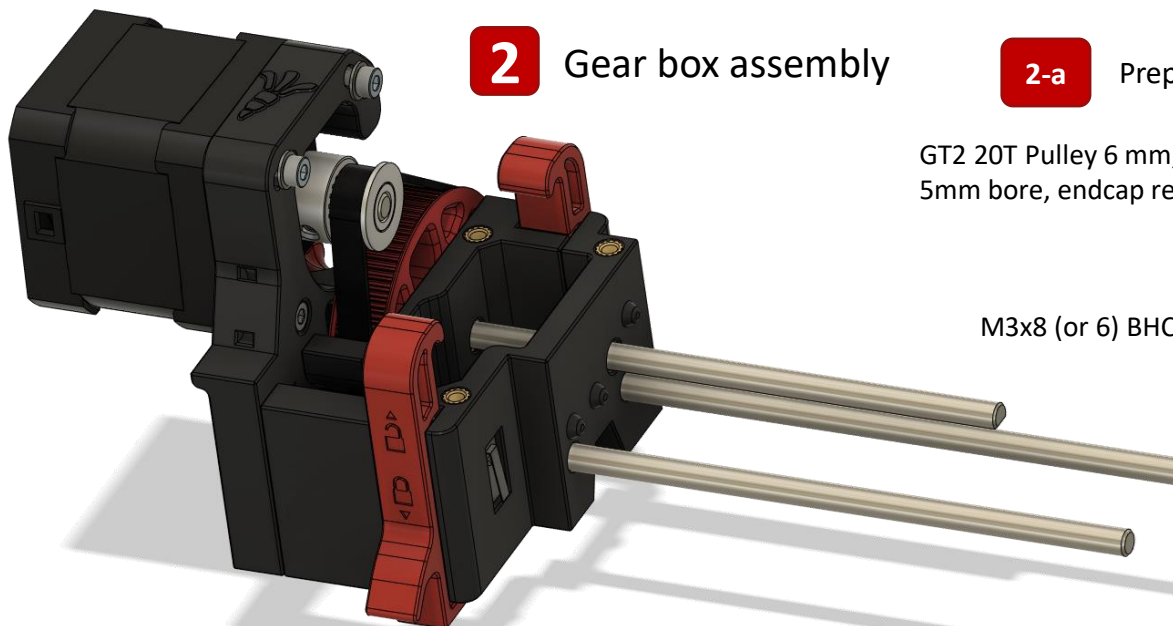
Gear box assembly

2-a

Prepare the M4 wheel

GT2 20T Pulley 6 mm,
5mm bore, endcap removed

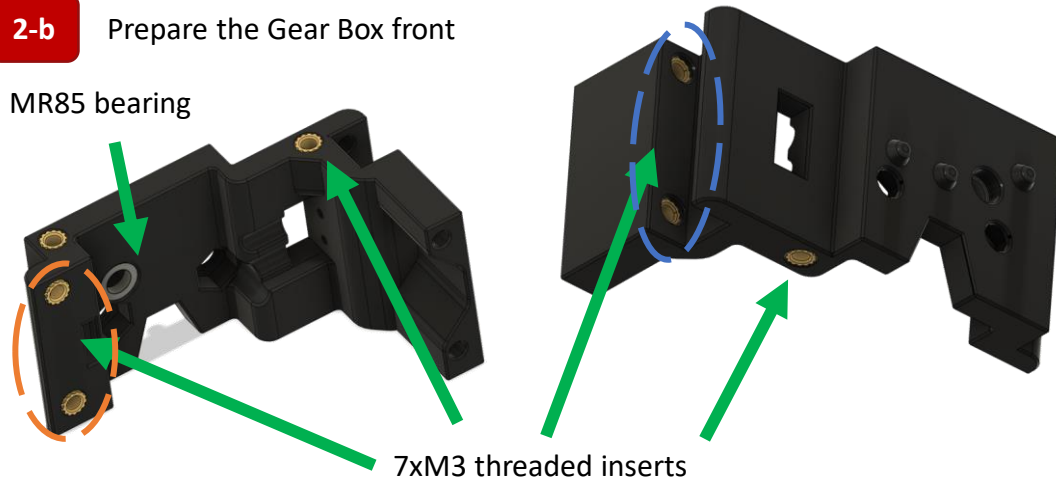
M3x8 (or 6) BHCS



2-b

Prepare the Gear Box front

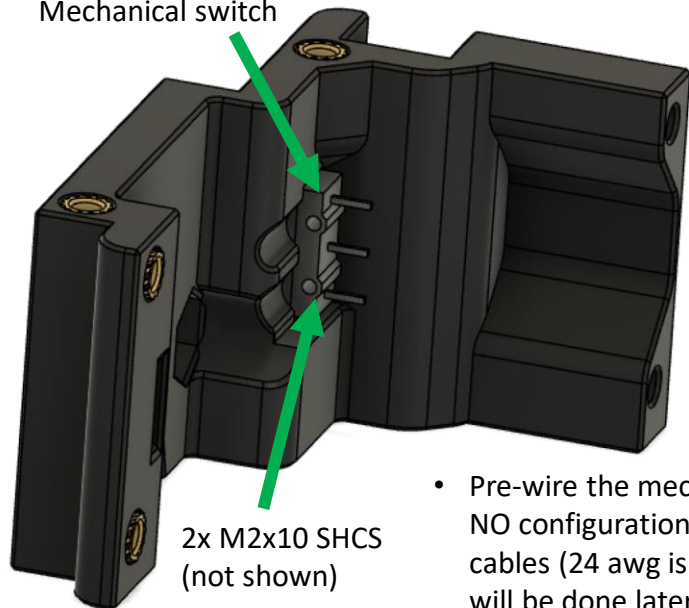
MR85 bearing



7xM3 threaded inserts

- Those M3 threaded inserts are difficult to insert (not much plastic behind), go slowly and do not put your soldering iron tip inside the insert if the tip sticks out of it
- Push those inserts using the soldering iron from the side, and take your time to make them well aligned with the holes

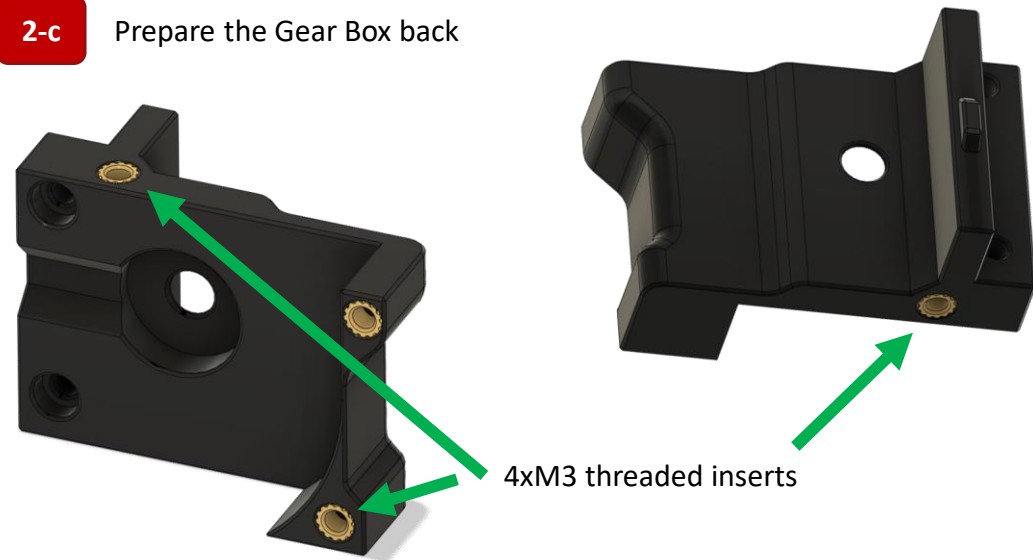
Mechanical switch

2x M2x10 SHCS
(not shown)

- Pre-wire the mechanical endstop (should be in a NO configuration). Prepare around 10 cm long of cables (24 awg is more than enough). Crimping will be done later in the build

2-c

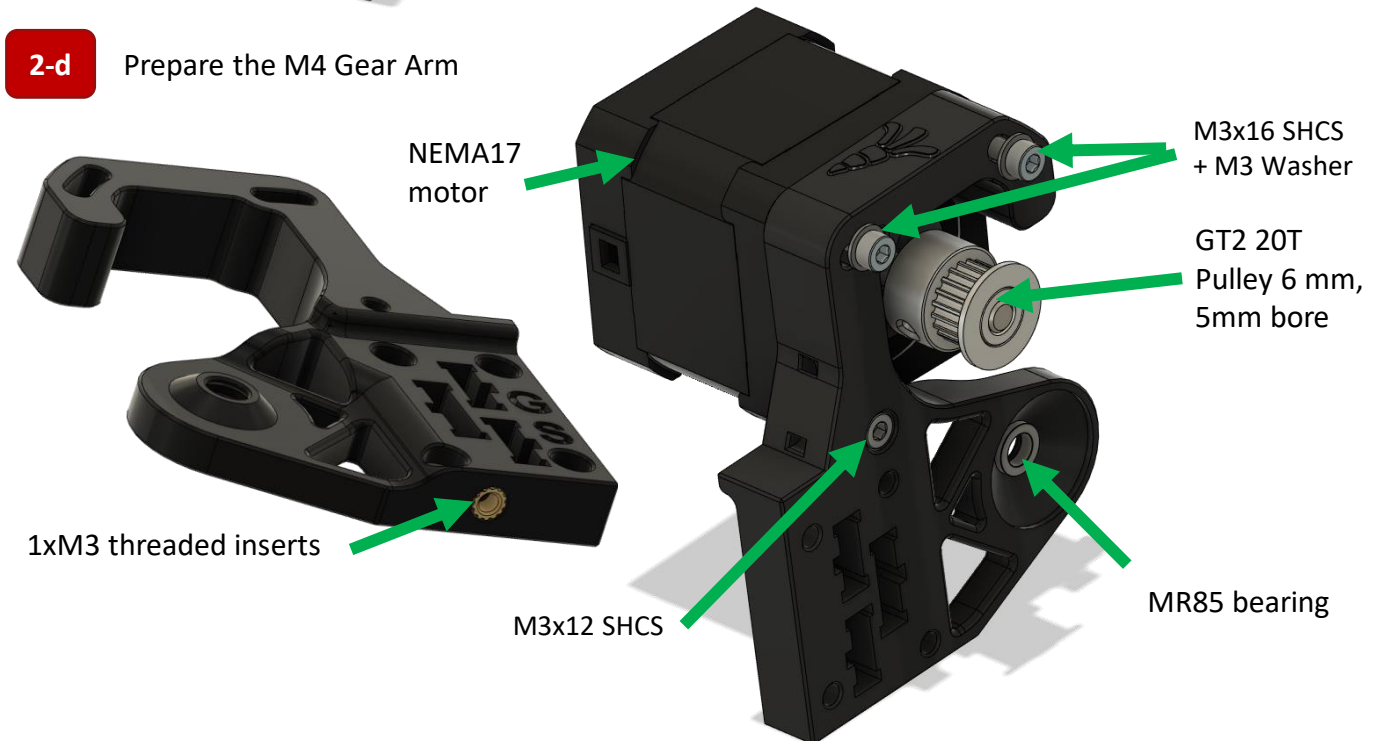
Prepare the Gear Box back



4xM3 threaded inserts

2-d

Prepare the M4 Gear Arm

NEMA17
motorM3x16 SHCS
+ M3 WasherGT2 20T
Pulley 6 mm,
5mm bore

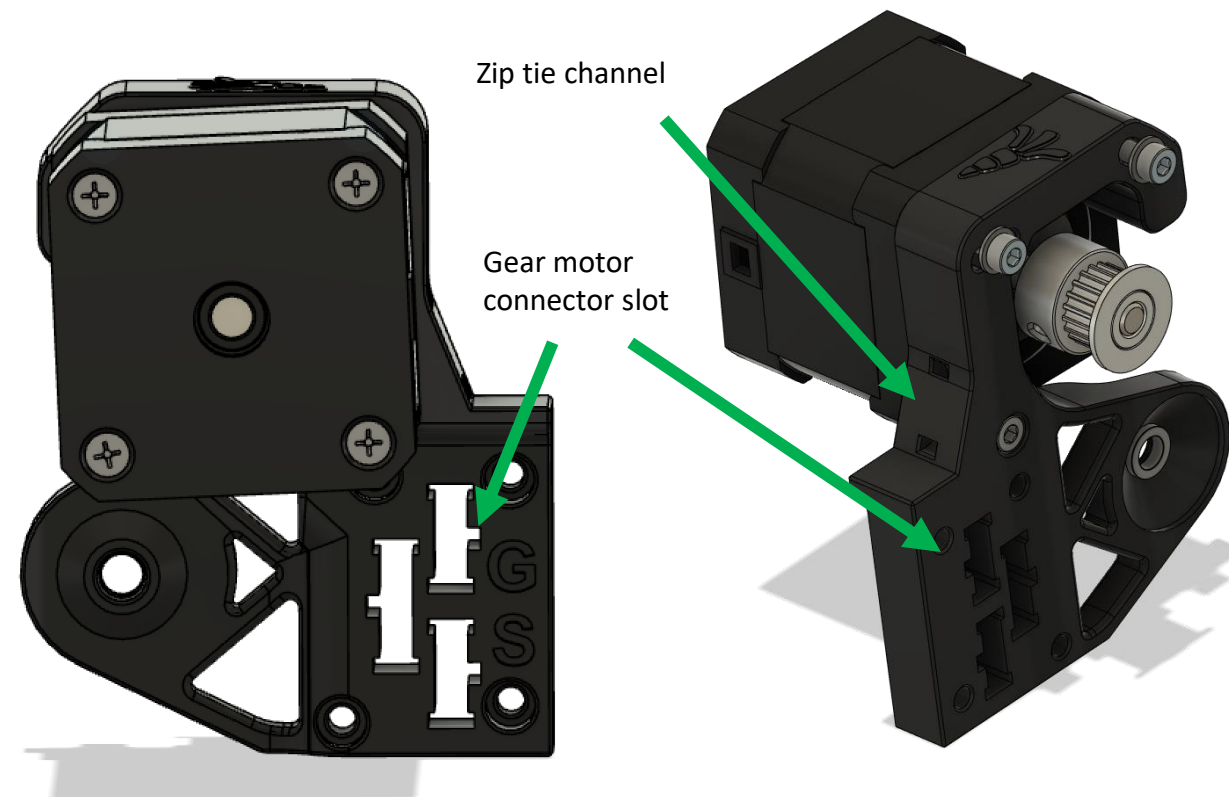
1xM3 threaded inserts

M3x12 SHCS

MR85 bearing

Don't forget to put some blue Loctite or similar on the grub screw of the GT2 20T Pulley

- You can already install the Gear motor (G label on the connector plate) cabling. Connect the 4 pins molex microfit connector in the dedicated slot (press fit). Use the zip-tie channel to secure the cable path



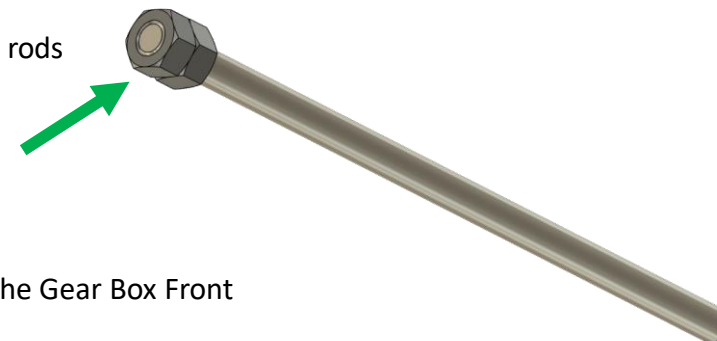
- i** The microfit connector to install in the ERCF is the Female housing (with Male crimps). Just push them from the ERCF inside towards the exterior



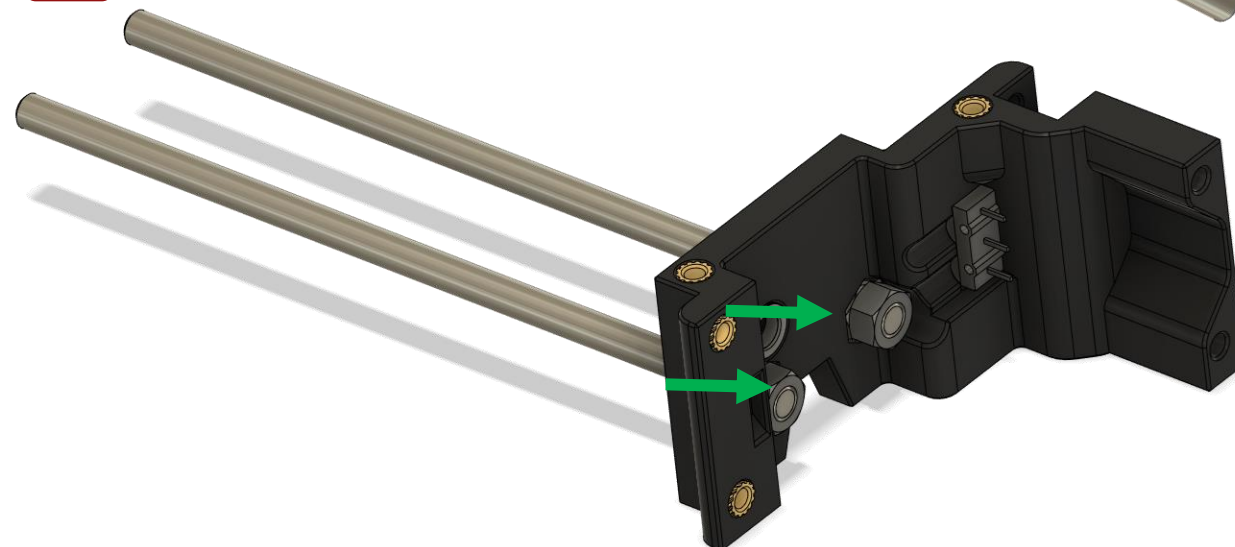
Molex Microfit connector to install in the ERCF part

- 2-e** Prepare the 2x M5 threaded rods

2xM5 nuts (nut + counter-nut) OR 1xM5 nut + 1xM5 Nylock nut (the outside one)

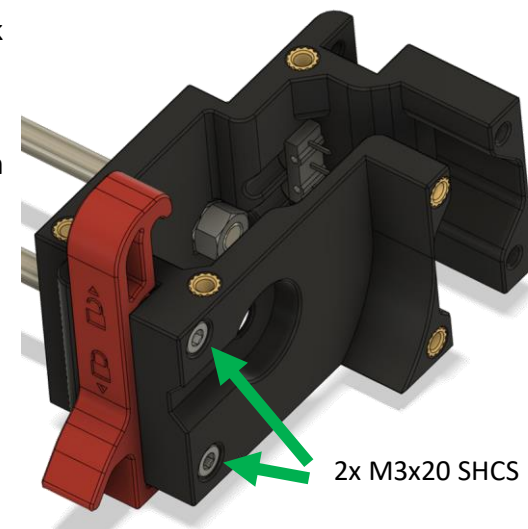


- 2-f** Install the threaded rods in the Gear Box Front



- 2-g** Install the first Side Latch and the Gear Box Back

- i** Before installing the Side Latches, make sure you've released their print-in-place mechanism (use a allen wrench in the arm's hole to unlock it if needed)



- Do not screw too hard the 2x M3x20 SHCS, you should be able to lock//unlock the latch without trouble

2-g

Install the 5mm axis

188mm GT2,
6mm belt

5mm D-cut shaft

M4 Wheel

Don't forget to install the belt!



No need to tighten the grub screws for the M4 wheel yet, we'll adjust the wheel//shaft position later

2-h

Install the 2nd Side Latch and the M4 Gear Arm

2x M3x40 SHCS

2x M3x12 SHCS

2-i

Install the knob, tighten the M4 grub screw and tension the belt

- Press fit to the max the Knob on the 5mm shaft
- Put the Knob + Shaft assembly at around 1mm of the M4 Gear Arm part
- Tighten the M4 Wheel grub screws using the side access
- Tighten the belt by rotating the motor around it's M3x12 SHCS screw
- Test the motion using the Knob, it should be smooth

M4 Wheel grub
screw access

Knob

2-j

Take a break, eat some gummy bears (not provided) or whatever, if you want !

3

Prepare the Block End

MR85 bearing

2xM3 threaded inserts

4

Install the Filament Blocks

4-a

Slide a single Bondtech gears on the 5mm shaft

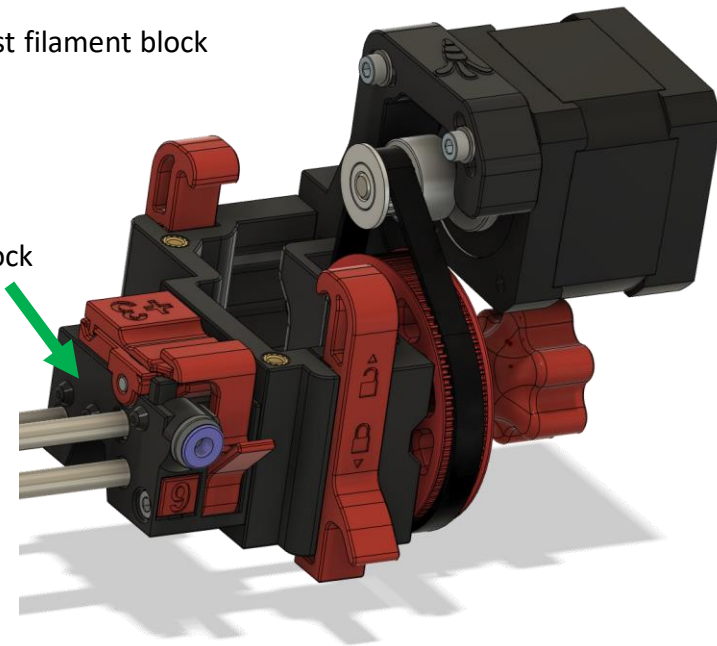
Yes, only one ! Also don't
tighten its grub screwTake care of the gear
orientation !!

Bondtech gear

4-b

Slide in the first filament block

Filament Block

**4-c**

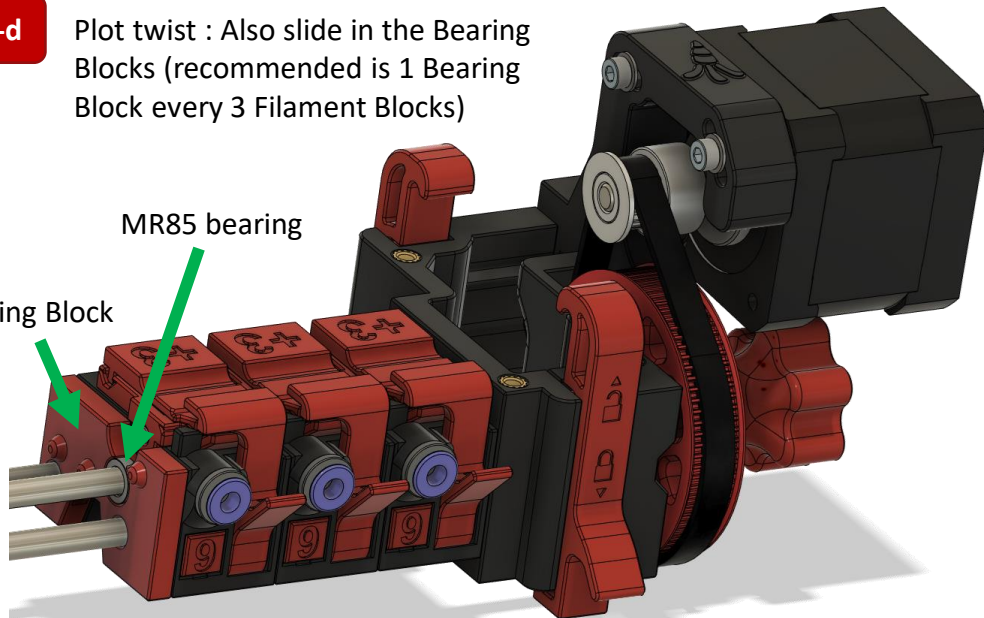
Repeat steps 4-a and 4-b for all your Filament Blocks

4-d

Plot twist : Also slide in the Bearing Blocks (recommended is 1 Bearing Block every 3 Filament Blocks)

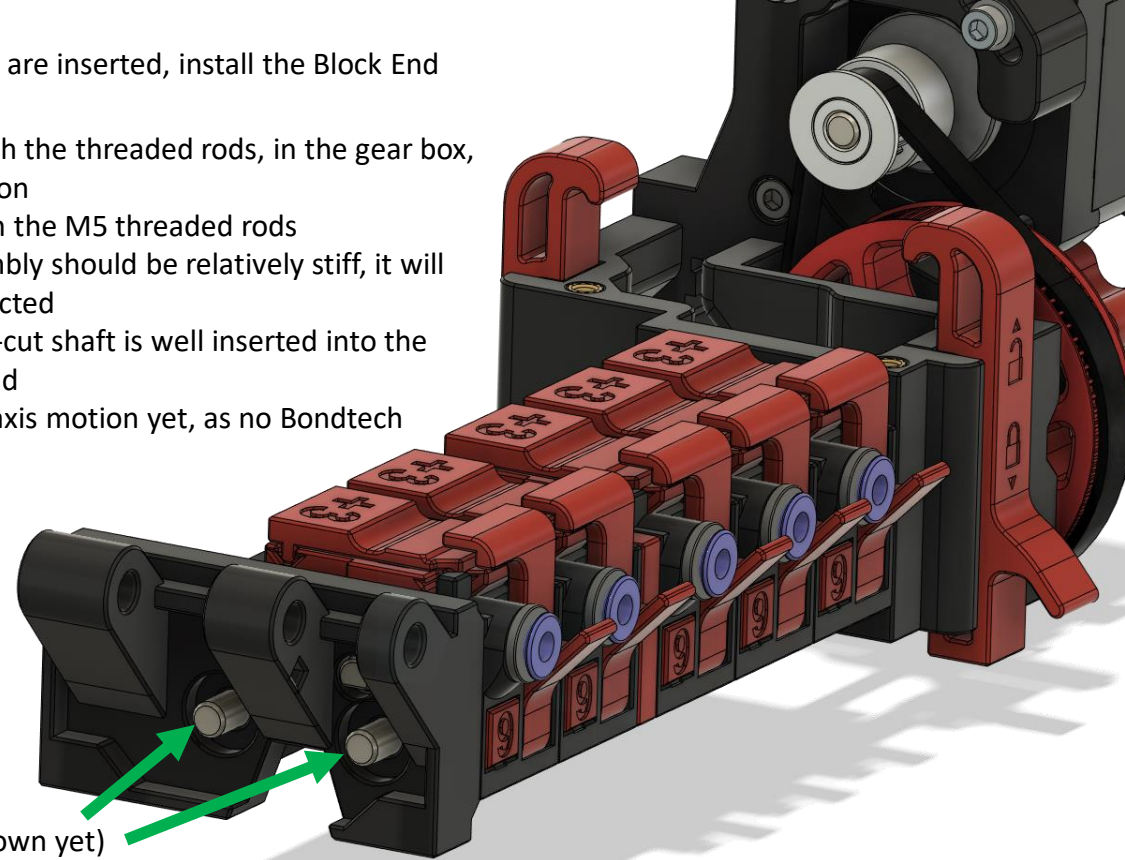
MR85 bearing

Bearing Block

**4-e**

When all blocks are inserted, install the Block End

- Use your fingers to push the threaded rods, in the gear box, into their proper position
- Tighten the M5 nuts on the M5 threaded rods
- While the whole assembly should be relatively stiff, it will flex//bend, this is expected
- Check that the 5mm D-cut shaft is well inserted into the bearing of the Block End
- Don't check the 5mm axis motion yet, as no Bondtech gears are tighten yet



M5 washer + Nut (not shown yet)

To be continued...