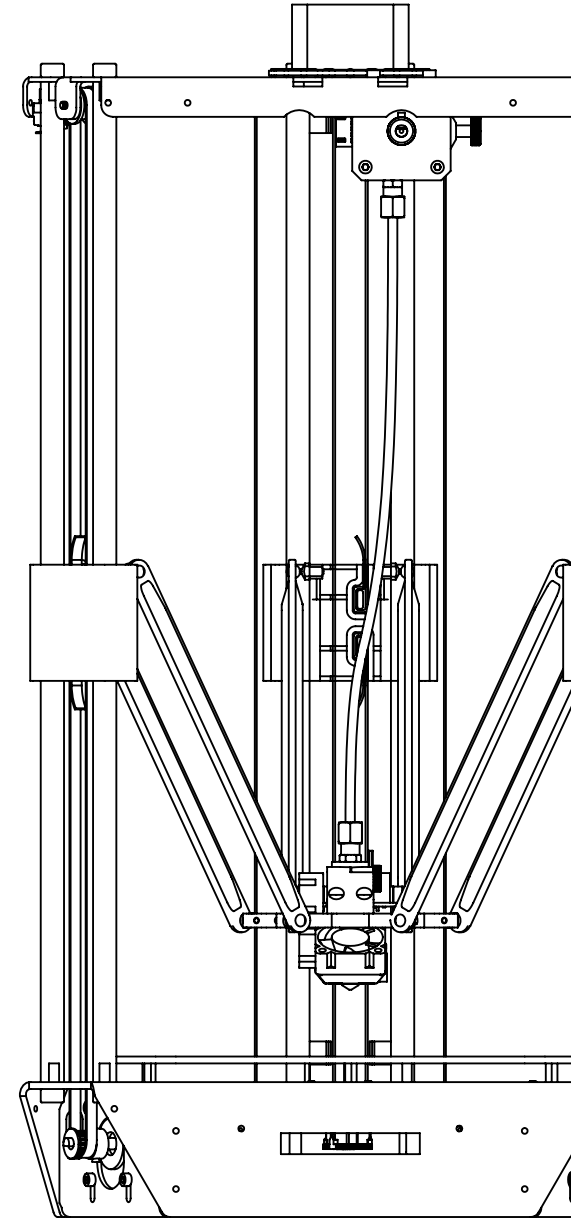


micro delta REWORK

ASSEMBLY INSTRUCTIONS



INTRODUCTION

INTRODUCTION

• Target :

Propose a visual assembly instruction guide of the MicroDelta Rework.

• Designers of the MicroDelta Rework :

eMotion Tech : <http://www.emotion-tech.com>

Hugo FLYE
Mohamad KOUBAR
Thibault MOREL

• Authors of this document :

eMotion Tech : <http://www.emotion-tech.com>

Mohamad KOUBAR
Anthony BERNA
Hugo FLYE

• Photographics credits :

Pictures and 3D representations made by eMotion Tech :
<http://www.emotion-tech.com>

• Sources :

<http://reprap.org/wiki/reprap>

• Licenses :

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• Update :

Last update : 05/03/2018

• Links :

You can find more informations on the following links :

eMotion Tech's website : <http://www.emotion-tech.com>
RepRap community : <http://reprap.org/wiki/reprap>



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MICRODELTA REWORK INTRODUCTION

The MicroDelta Rework is developed by eMotion Tech. This new 3D printer is easy to assemble and to operate without loss of performances.

Data sheet :

DATAS

- Printing surface : Ø150x200mm
- Layer height : [0.1 - 0.4]
- Electronic type : eMotronic (32 bits, 96 MHz)
- Motors : NEMA 17
- Belt type : GT2
- Extrusion Head : Hexagon 0.4
- Dimensions : Height 440mm, Width 250mm, Depth 250mm
- Nominal printing speed : 80mm/s
- Max speed : 200mm/s
- Nominal travel speed : 150mm/s
- Average precision (X,Y) : 100 microns
- Average precision (Z) : 50 microns
- Operating system : Windows, Linux and Mac OS
- Consumable : PLA 1.75mm (or ABS and others plastics with heated bed option)
- Provided with Repetier-Host pre-configured for µdelta
- Connectivity : USB
- Power supply provided : 24V, 150W

STRUCTURE

- Upper and lower plates made of bended stainless steel
- Machined aluminium core
- 10mm rectified Smooth rods
- Plastic injected sliders

ERGONOMY

Easy to mount : A 3D printer kit with an intuitive assembly

- Simple electronic, no soldering
- Easy wiring and assembly
- Belt adjustment with ergonomic belt tensioners

Easy to calibrate : A simplified software

- Fully software calibration
- Pre-configured open-source software (no firmware upload required, Repetier Host and Slic3r pre-configured)

Easy to maintain

- Quick height adjustment with the software
- Easy to reload the filament



Documents and guides

User guide

How to use the MicroDelta Rework ?

Under Windows and Linux : [Windows / Linux User Guide](#)

Under Mac OS X : [MAC OS X User Guide](#)

Other resource

Configuration files

Path :

MicroDelta Rework > Logiciels-Software > Configuration

3D resources

Differents 3D printed parts are availables for the MicroDelta Rework.

Path :

MicroDelta Rework > Ressources_3D >

IN CASE OF TROUBLE

Frequently Asked Questions

Path : «Support» section.

Link : [Frequently Asked Questions](#)



AVAILABLE OPTIONS

In order to upgrade your printer to make its use more pleasant, it is possible to add different elements :

- Heating bed kit up to 110°C
- LCD controller screen to print without a computer

Coming soon :

- Lighting LED designed for the Micro Delta Rework
- Dual extrusion head for bi-color printing

SAFETY INSTRUCTIONS

General safety instructions

NEVER LEAVE THE PRINTER WORKING WITHOUT SUPERVISOR.

The nozzle can reach 270°C, **do not touch the nozzle while the printer is working.**

A supervisor is needed when the printer is used with young people.

KEEP PRINTER AWAY FROM CHILDREN AND ANIMALS

Operate in a ventilated room. Plastic vapors effects are not known. In case of use in a closed room, we recommend the use of an extractor fan.

The addition of protections is your own responsibility. Safety can be improved by :

- An emergency stop button
- Housing protection
- Smoke detector

Electrical safety

The power supply provided is labelled CE. The power supply is protected against short-circuit and do not need any modification. The MicroDelta Rework operate at 24V and is not concerned by the low voltage directives.

Further informations

Informations above are not exhaustive.

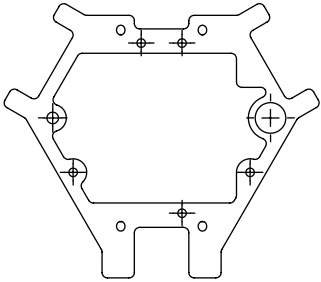
We used sources of informations that we consider reliable. However, we cannot guarantee that all these informations are true and complete.

We assume no liability for loses, injuries or damages due to assembly, transporting, storage or removal of the product.

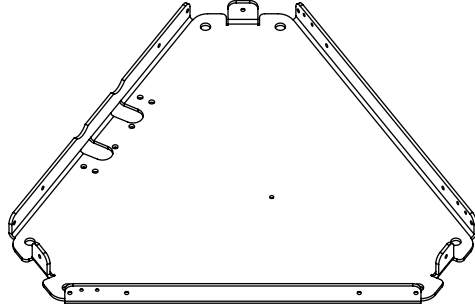


ASSEMBLY

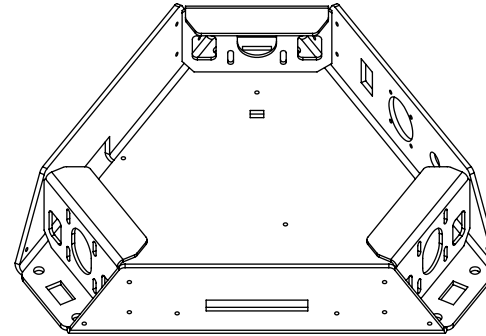
A. Metal parts



1 x Core



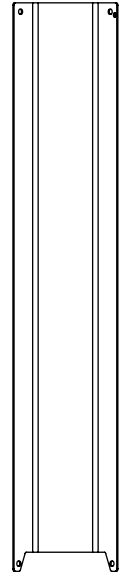
1 x Upper plate



1 x Lower plate

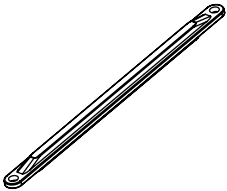


6 x $\text{Ø } 10 \times 430 \text{ mm}$
smooth rod

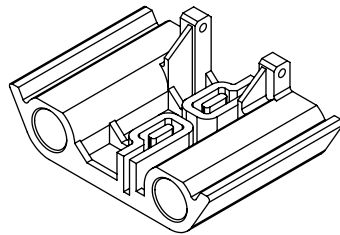


1 x Cowling

B. Plastic parts

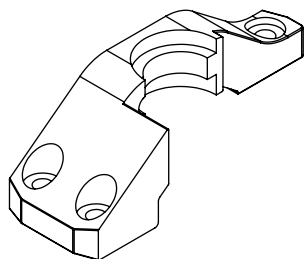


6 x Connecting rod

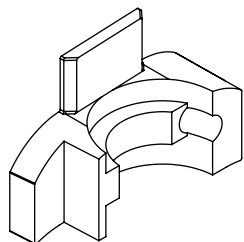


3 x Slider

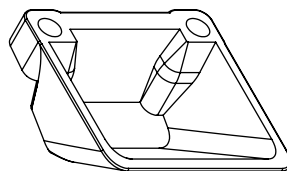
C. Printed parts



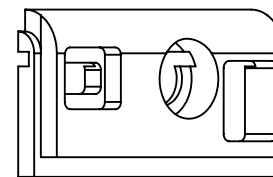
1 x Hexagon Holder



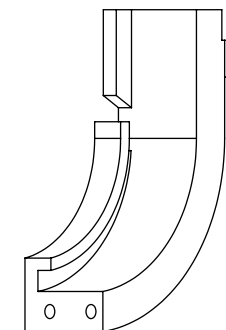
1 x Hexagon bracket



2 x Fan duct

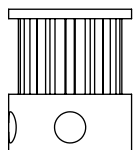


1 x Board cover



1 x Leveling sensor holder

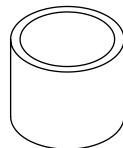
D. Mechanical parts



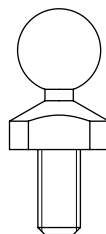
3 x GT2 Pulley



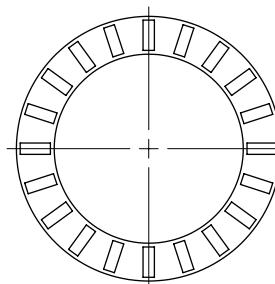
3 x GT2 belt



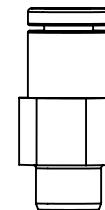
12 x Plain bearing



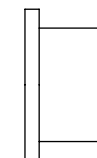
12 x Ball joint



1 x thrust roller bearing
AXK5070

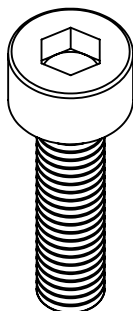


2 x Pneufit



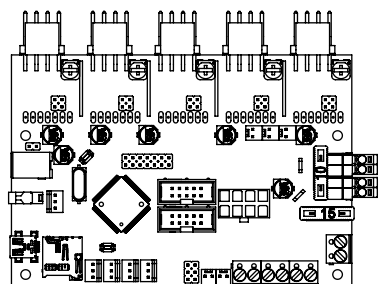
3 x Idler pulley
623zz kit

E. Hardware

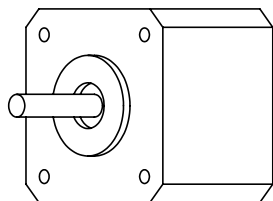


- 6 x M2.5x8 Screw
- 2 x M2.5x12 Screw
- 29 x M3x8 Screw
- 14 x M3x12 Screw
- 4 x M3x20 Screw
- 12 x M6x16 Screw
- 16 x M3 Washer
- 2 x M3 Knurled nut
- 1 x M5x12 Knurled screw
- 10 x 3mm Spacer

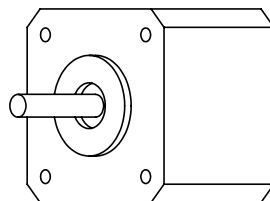
F. Electronic



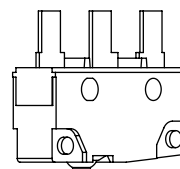
1 x eMotron



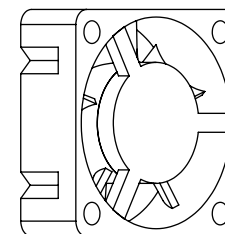
3 x Short motor
(34 mm)



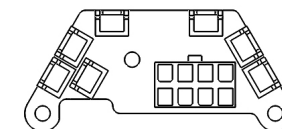
1 x Long motor
(48 mm)



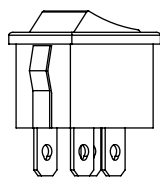
3 x endstop
(color connectors)



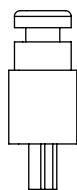
4 x 3 cm fan



1 x Interfacing board



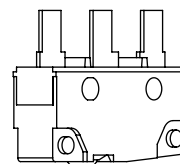
1 x ON/OFF Switch



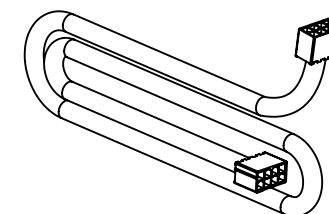
1 x Reset
button



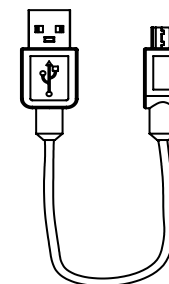
1 x Power supply



1 x Bed leveling sensor

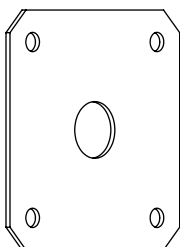


1 x Core extension cable

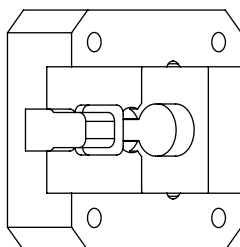


1 x USB Cable

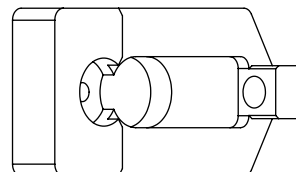
G. Kit Extruder



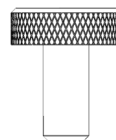
1 x Extruder
cover



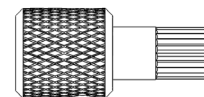
1 x Body
extruder



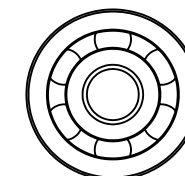
1 x Mobile
extruder



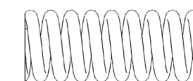
1 x Knurled
screw M5x12
mm



1 x Driving wheel

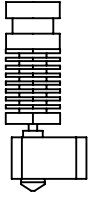


1 x 693zz
bearing



1 x Spring

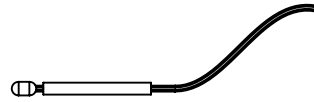
H. Kit Hexagon (printhead)



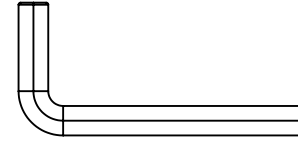
1 x Hexagon hotend



1 x Cartridge heater
100mm



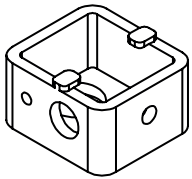
1 x Thermistor



1 x Allen key 3

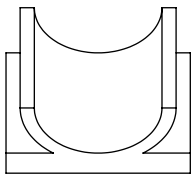


1 x wrench 4.5



1 x Silicone cap

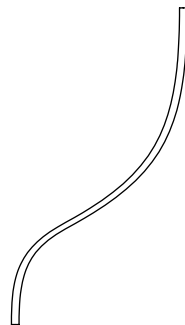
H. Other



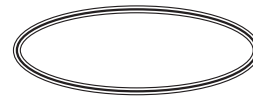
12 x Cable clamp



6 x Rubber foot



1 x PTFE Tube



3 x Elastic band



1 x Threadlock



LIST OF NEEDED TOOLS

- Wrench 8; 9; 10.
- A set of allen key
- Cutting pliers
- WD40 (penetrating oil)
- Methylated spirit



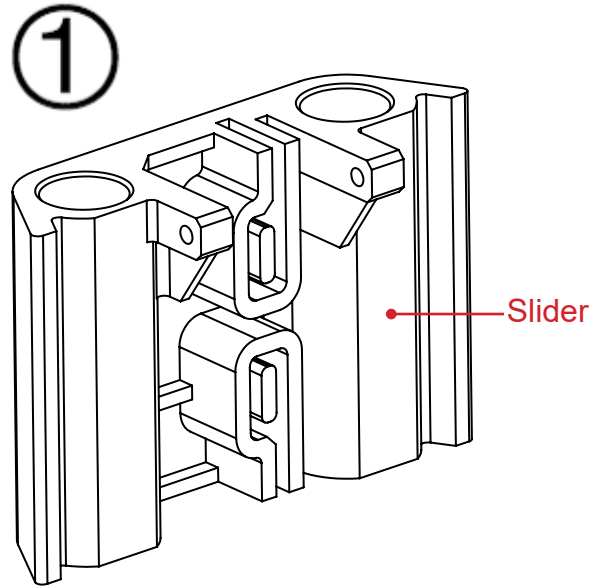
MECHANICAL ASSEMBLY

SLIDERS ASSEMBLY

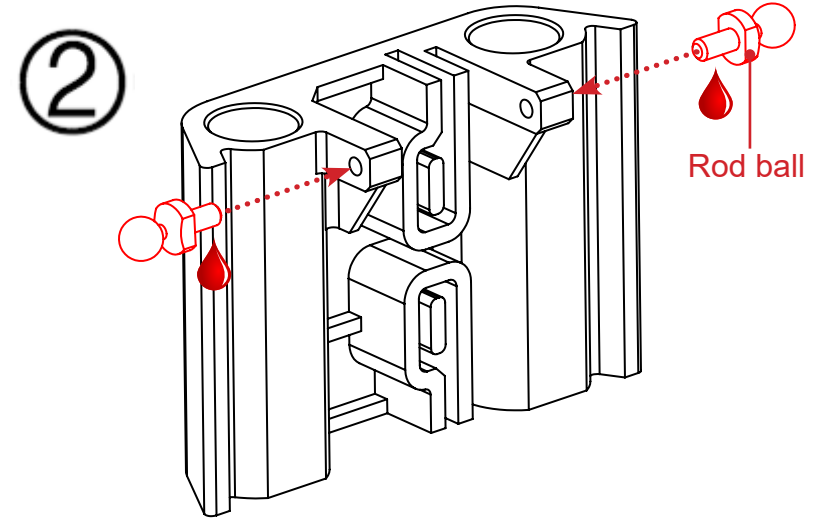
Needed parts :

- 3 x Slider
- 6 x Rod ball
- 12 x Plain bearing

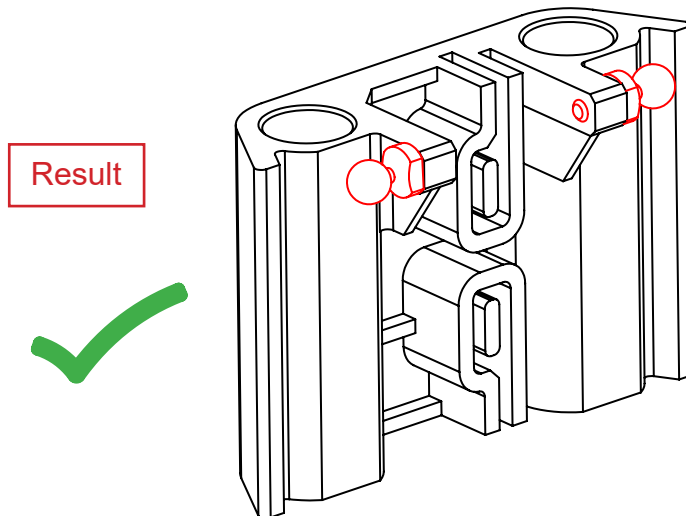
Target : screw the 6 ball joints (2 per slider) as shown in the following figures.



= add some threadlock to the thread



Do not over tighten as this may damage the thread.

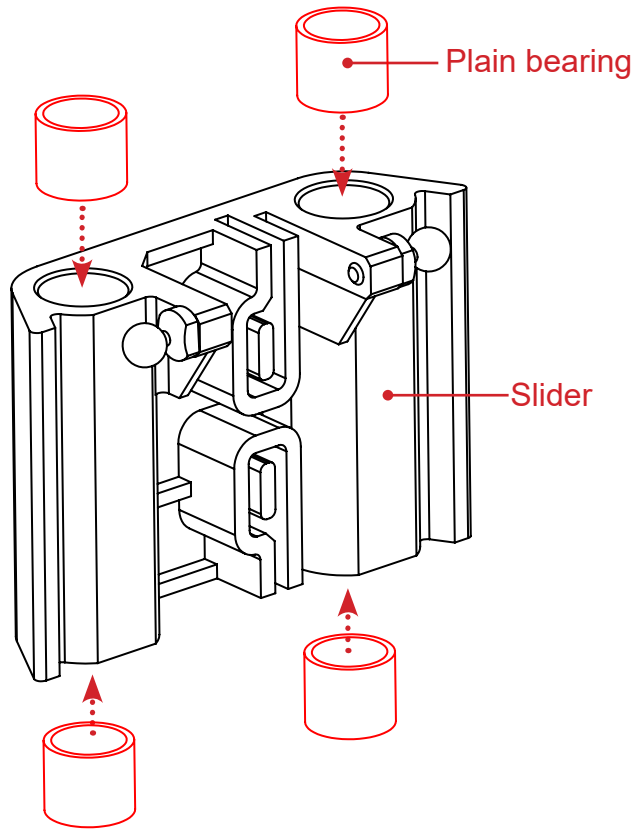


3X*

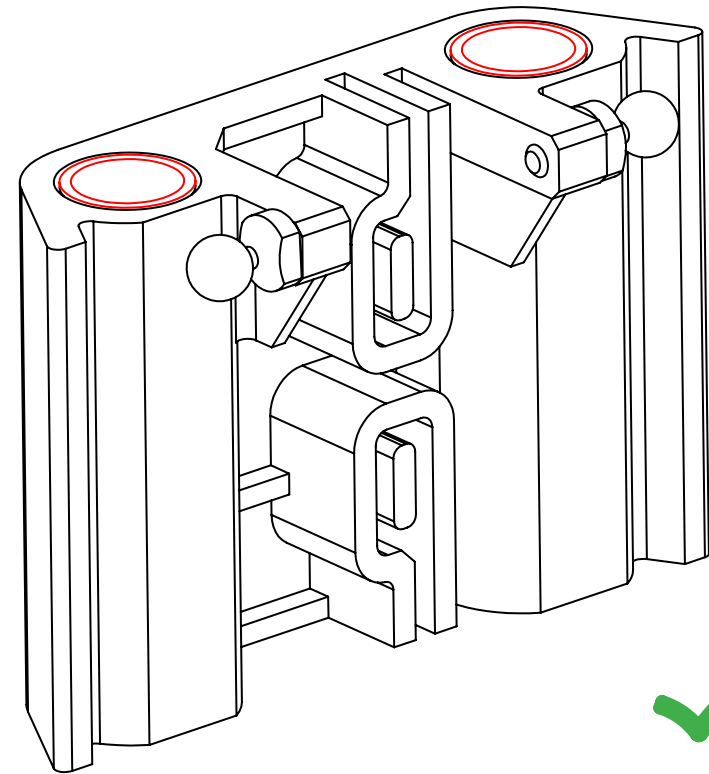
* : do the same for all sliders.

Target : insert the plain bearings in their housing as shown below (4 pieces per slider).

③



Result



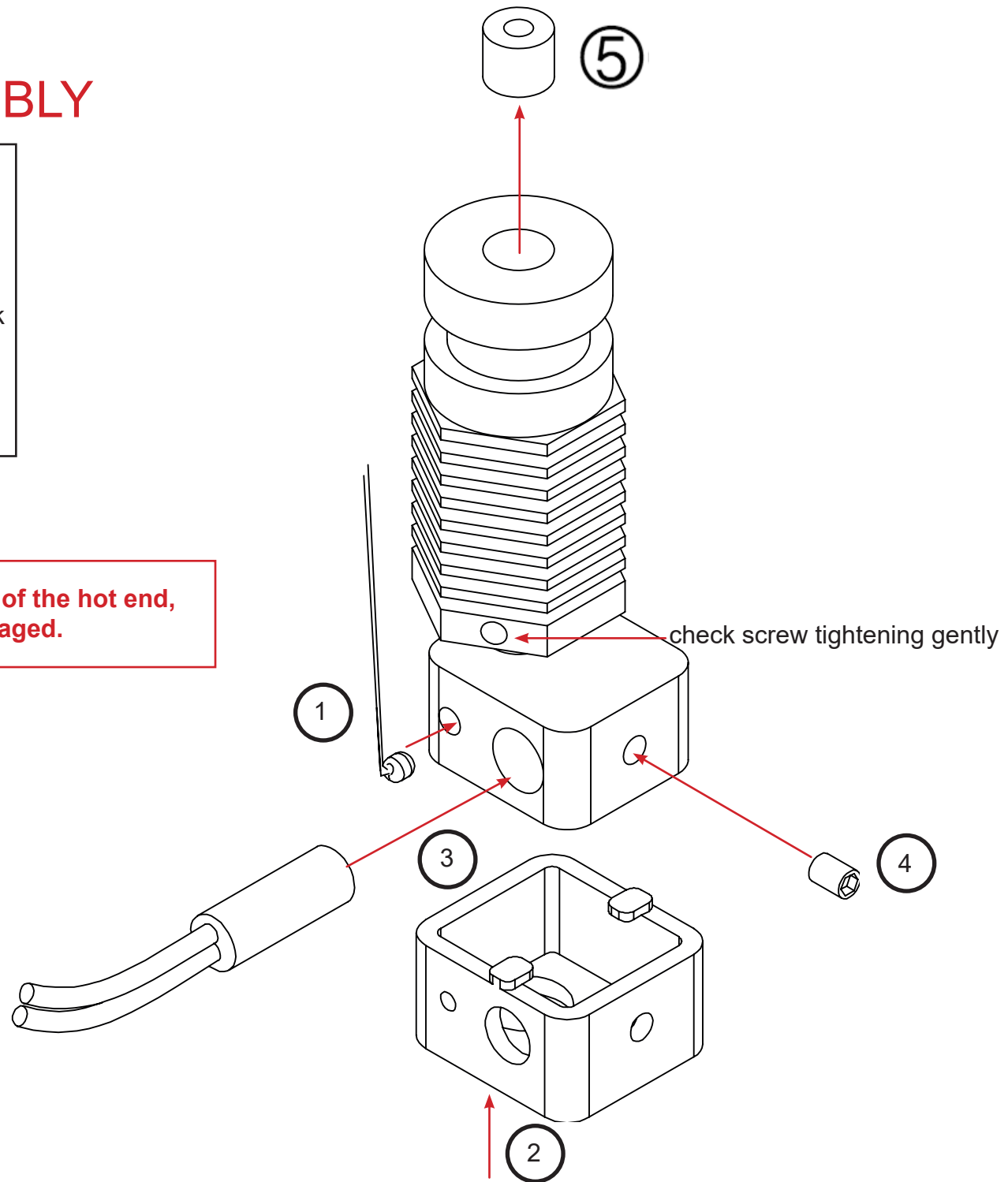
3X*

* : do the same for all sliders.

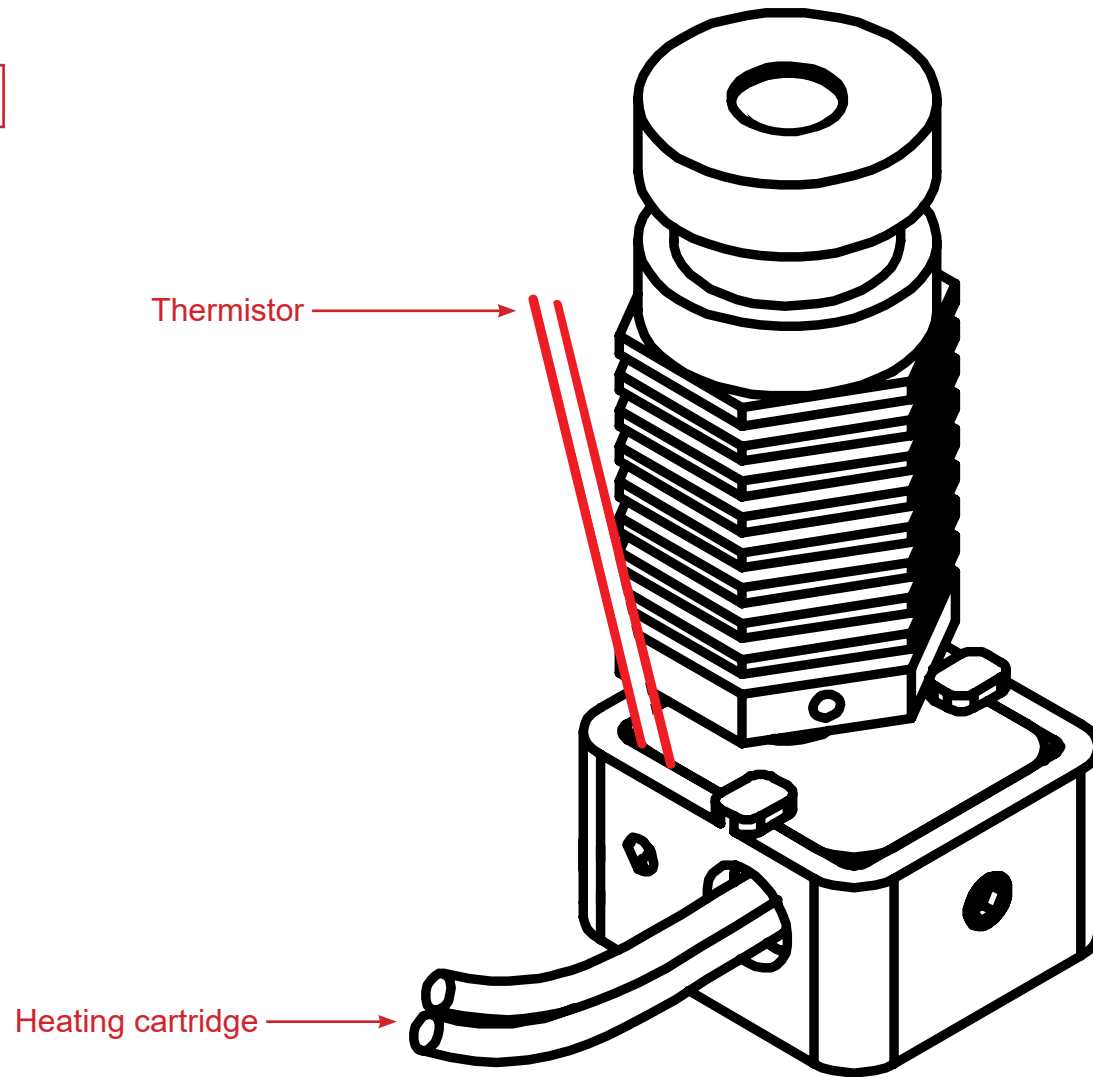
PRINTHEAD ASSEMBLY

- 1° thermistor into the heating block
(fold the thermistor's cables)
- 2° silicon sleeve on to the heating block
- 3° heater cartridge into the heating block
- 4° grub screw in the heating block
- 5° Remove the brass insert (not used)

Caution ! If the thermistor goes out of the hot end, your printer could be damaged.



Result



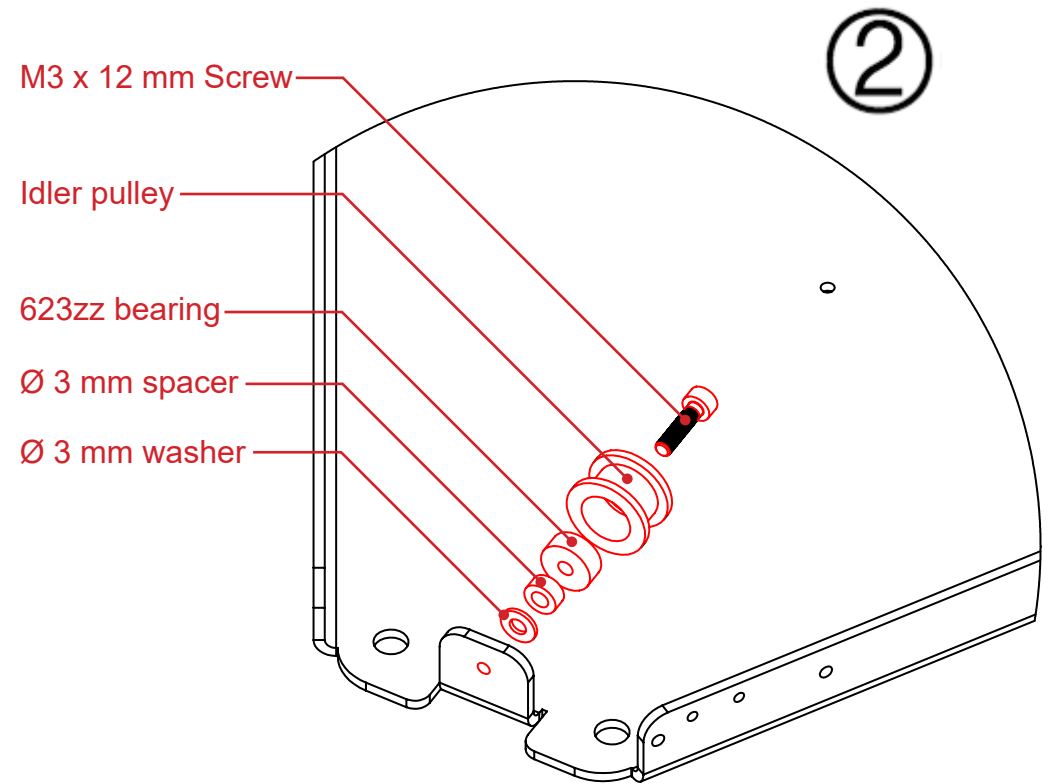
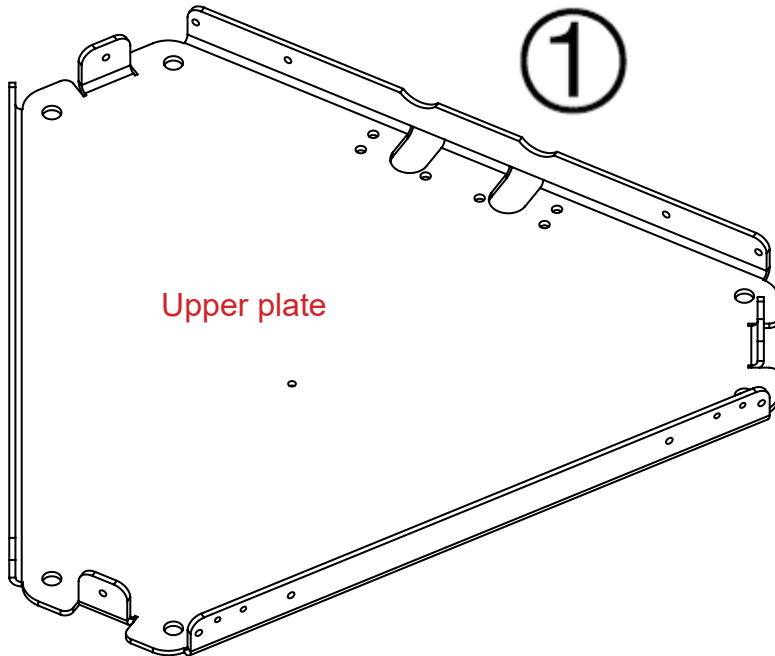
Important: make sure that the red shrink sleeves on the cartridge cables are properly protecting the metal parts and preventing short circuits.

UPPER PLATE ASSEMBLY

Needed parts :

- 1 x Upper plate
- 3 x Idler pulley
- 3 x Endstop
- 3 x Ø 3 mm spacer
- 3 x Ø 3 mm washer
- 3 x M3 x 12 mm screw
- 3 x 623zz bearing
- 6 x M2,5 x 8 mm

Target : mount the pulleys on the upper plate



3X

Target : mount the endstops on the upper plate

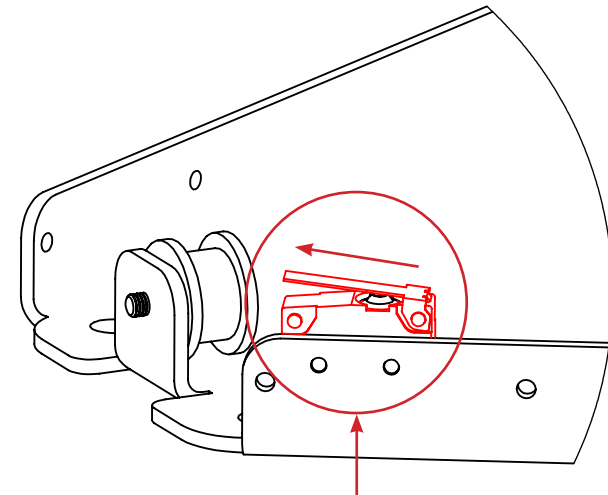
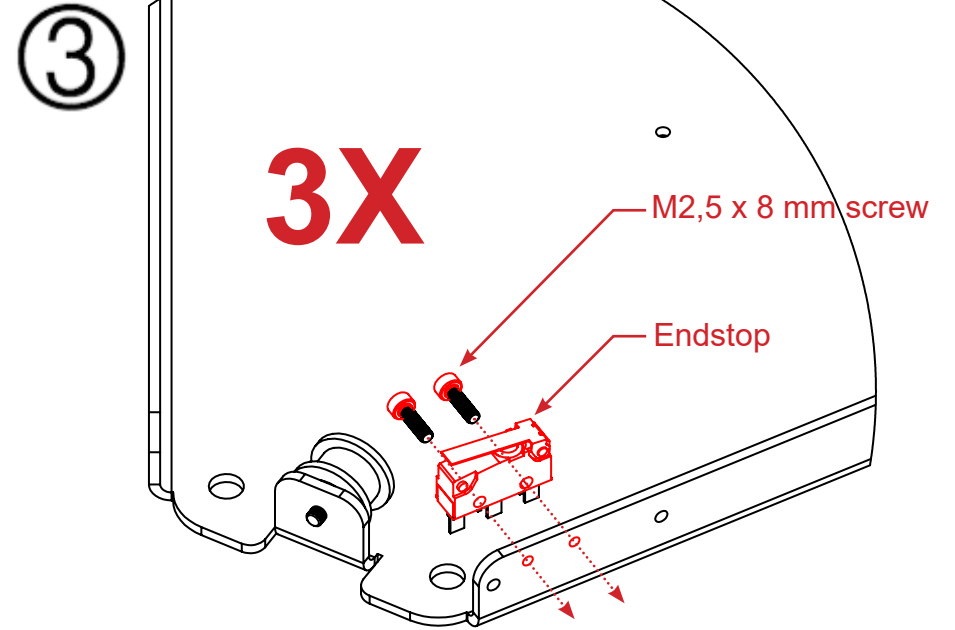
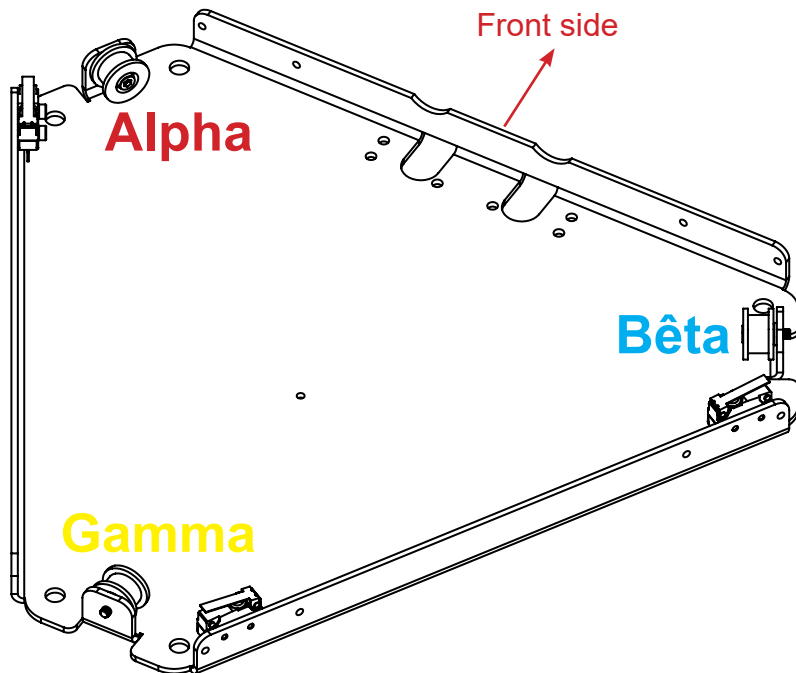
Each endstop connector has a different color :

- Alpha axis endstop : red
- Bêta axis endstop : blue
- Gamma axis endstop : yellow



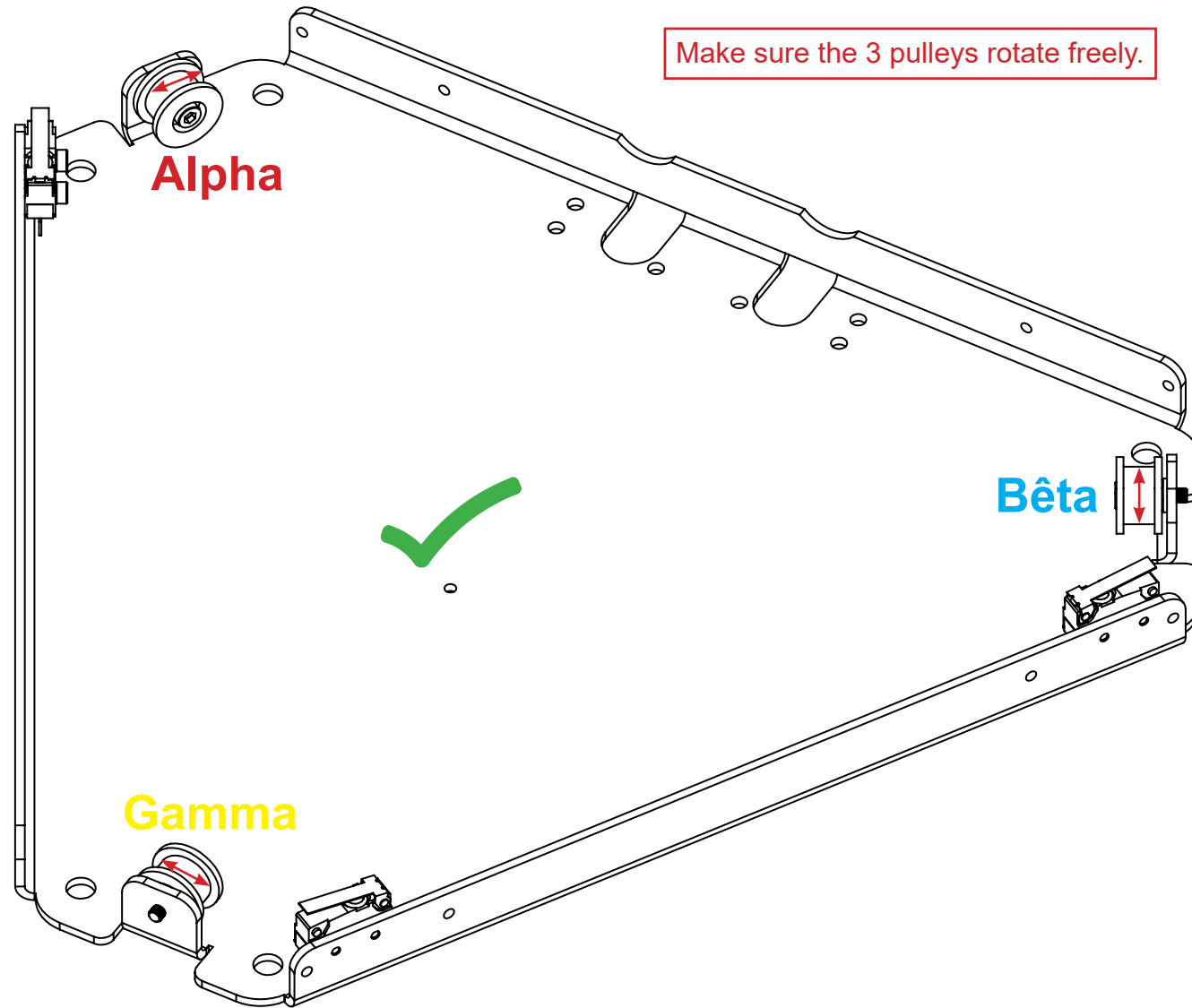
Be sure to mount each endstop on its dedicated location.
Respect the color code.

Pay attention to the direction of mounting.



Endstop's steel blade should be directed outward from the plate.

Result



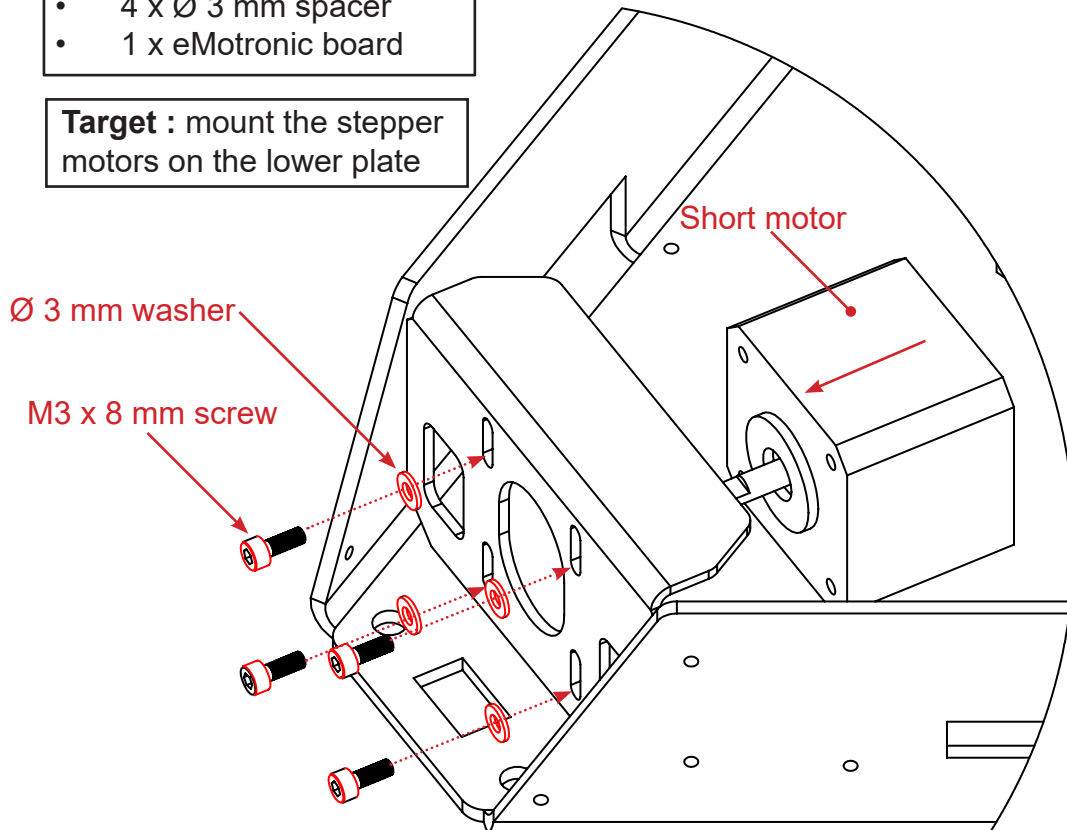
**If you have the HeatBed option,
please go to the page 71 to mount
this element !**

LOWER PLATE ASSEMBLY

Needed parts :

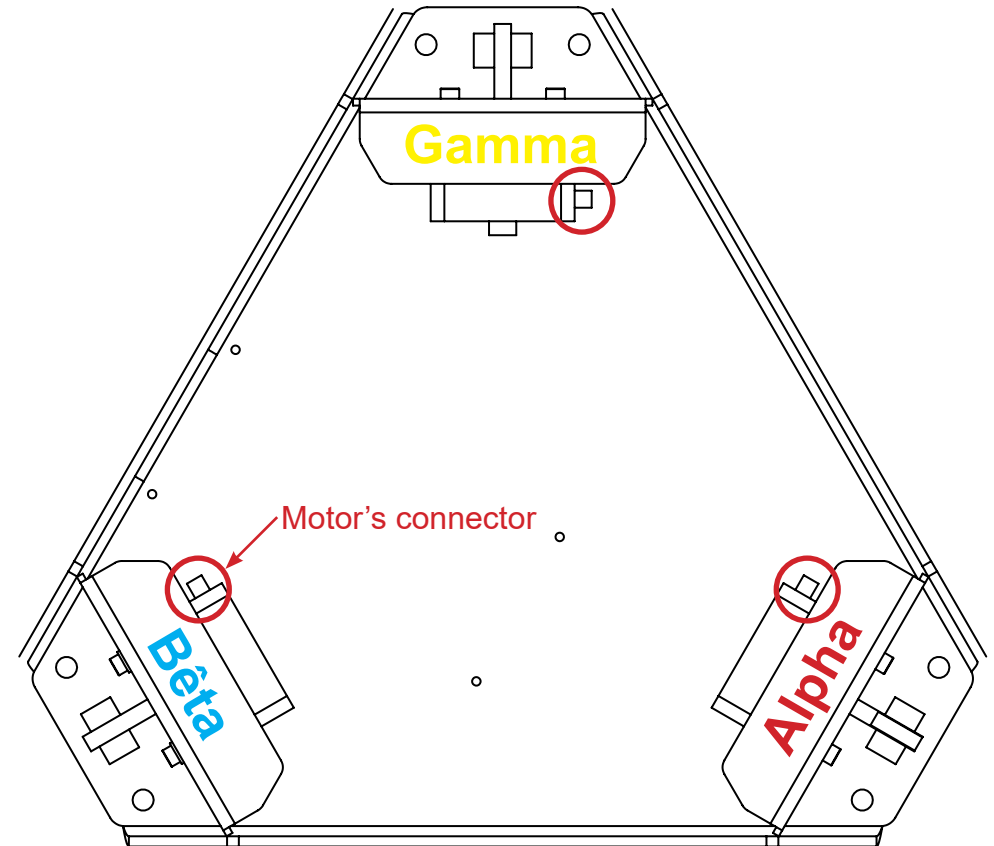
- 1 x Lower plate
- 3 x Short motor
- 16 x M3 x 8 mm screw
- 12 x Ø 3 mm washer
- 3 x GT2 pulley
- 4 x M3 x 12 mm screw
- 1 x 3 cm fan
- 1 x On/Off switch
- 1 x «Reset» button
- 4 x Ø 3 mm spacer
- 1 x eMotronic board

Target : mount the stepper motors on the lower plate



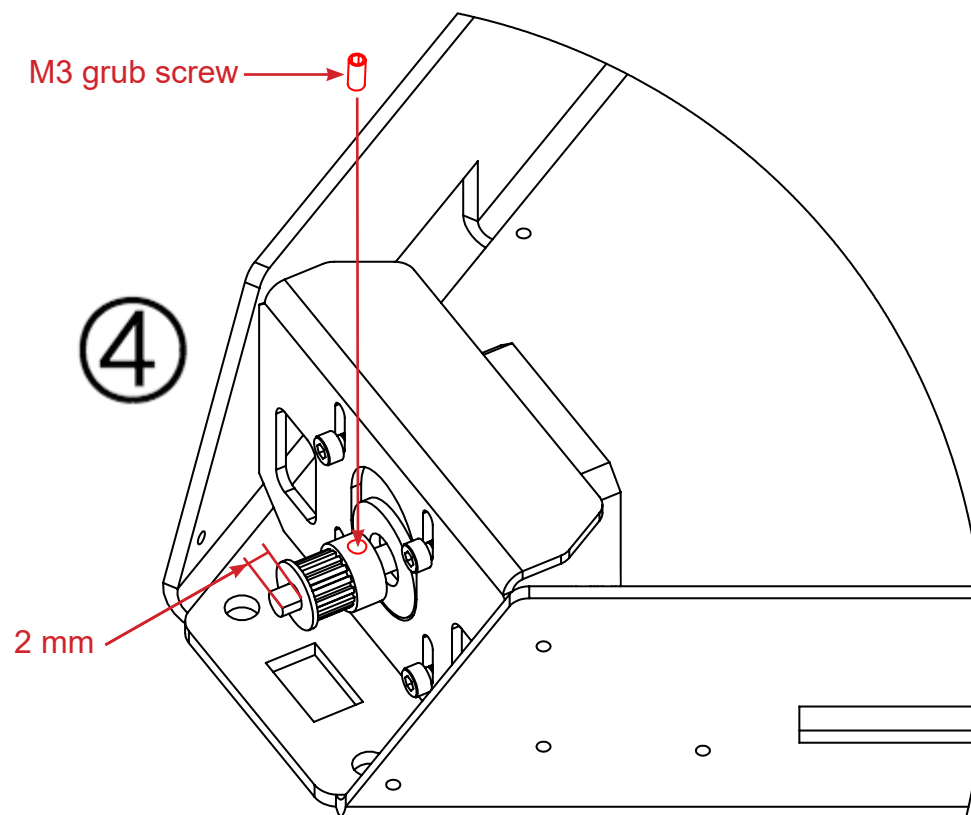
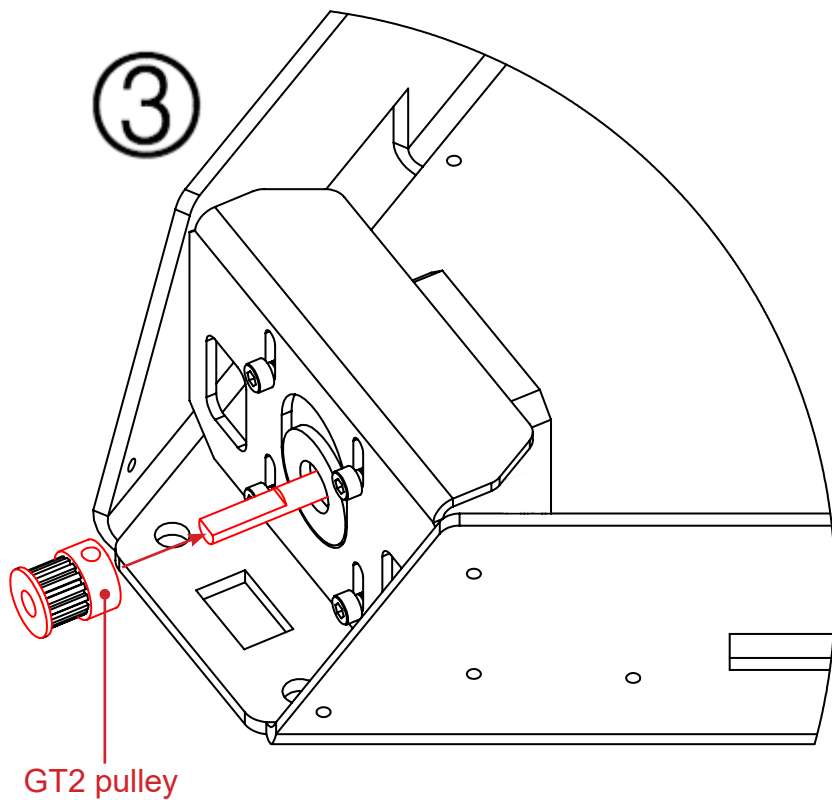
②

Repeat the operation on the two other towers & **check the motor's orientation using the connectors as reference**

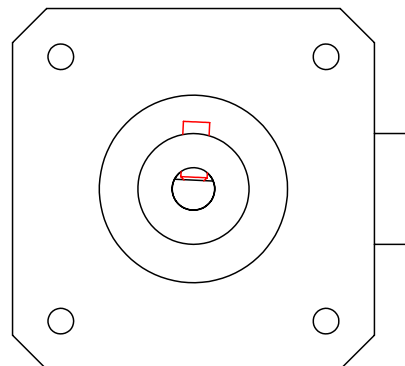
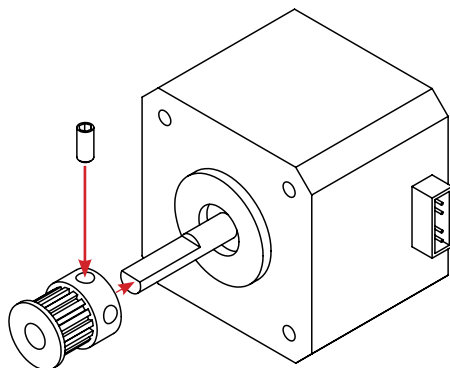


Allow gravity to drop the motor to the bottom of the notch and pre-tighten a single screw to hold the motor in this position.

Target : mount GT2 pulleys on the motor's axis

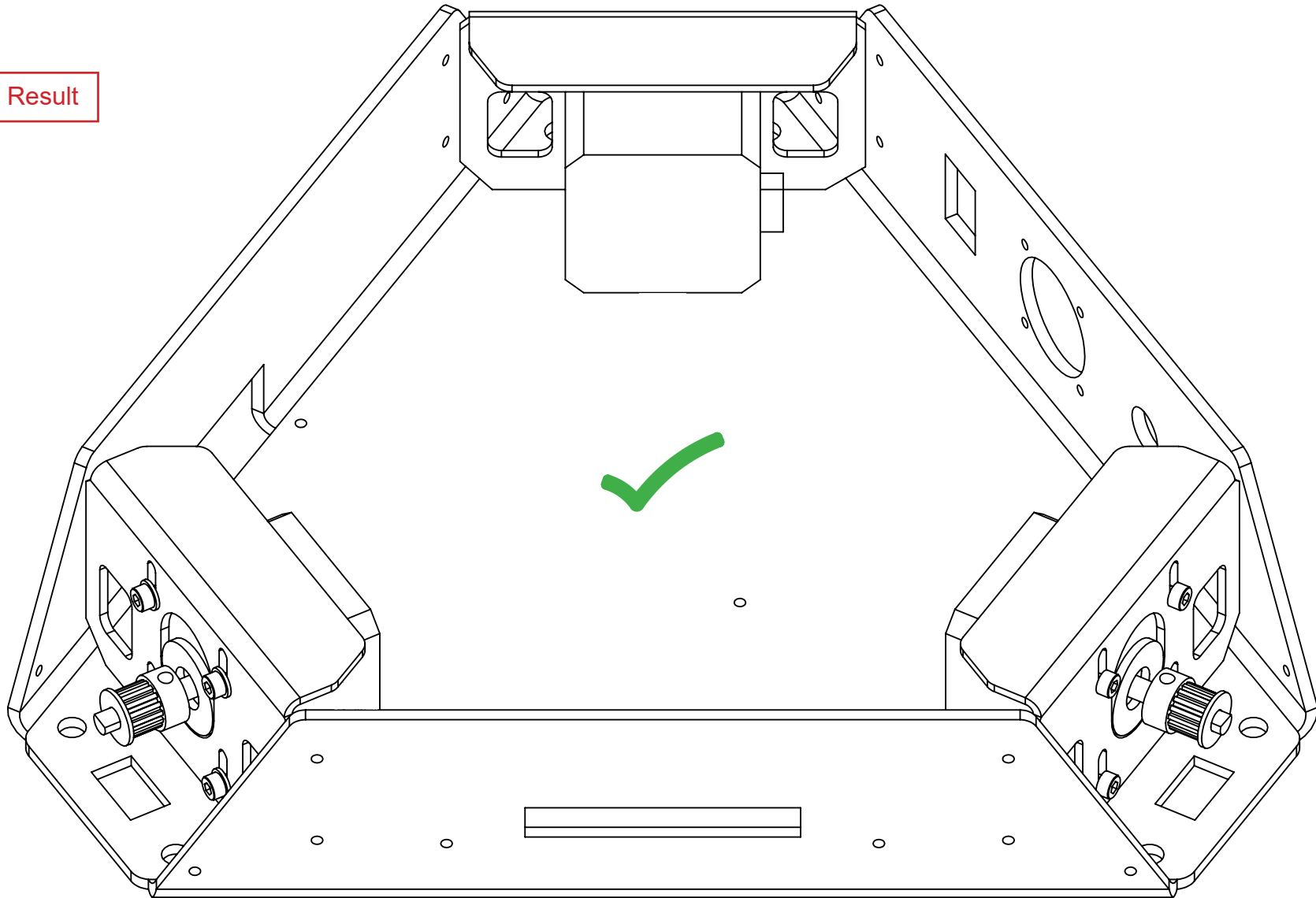


The grub screw must be in contact with the flat side of the axis.

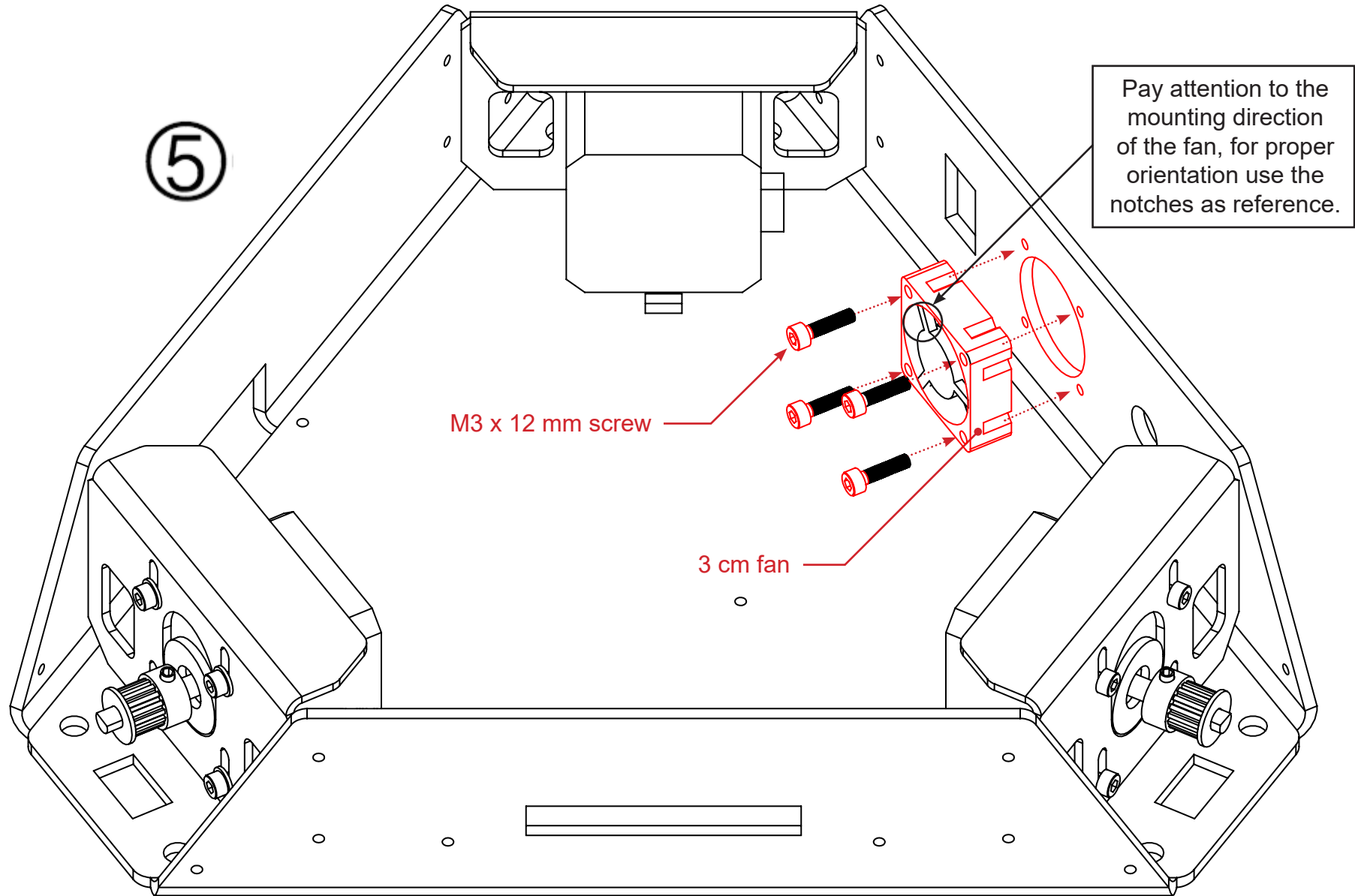


Target : repeat steps 2, 3 and 4 on the other two peaks of the lower plate.

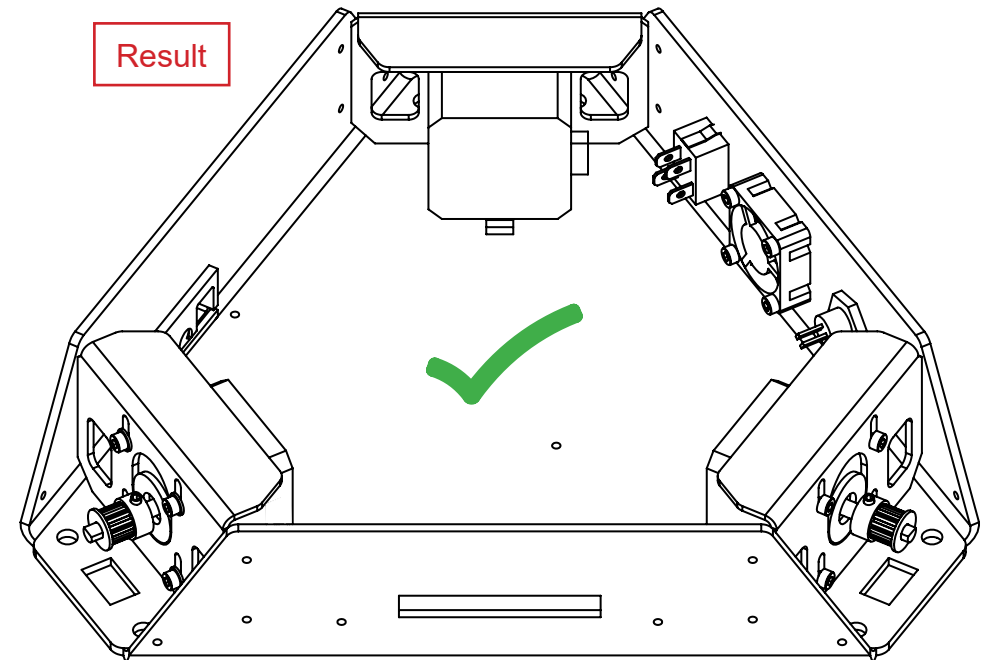
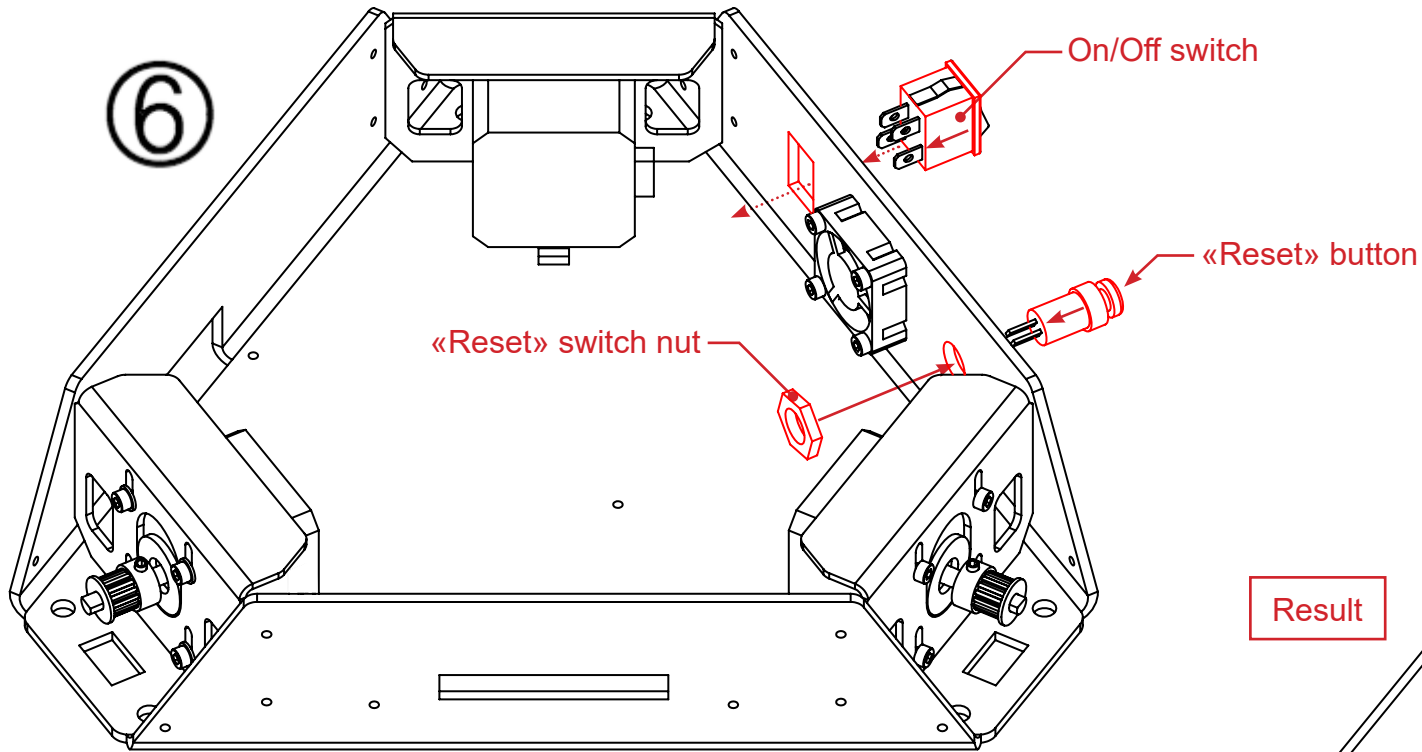
Result



Target : fix the electronic board fan like shown below

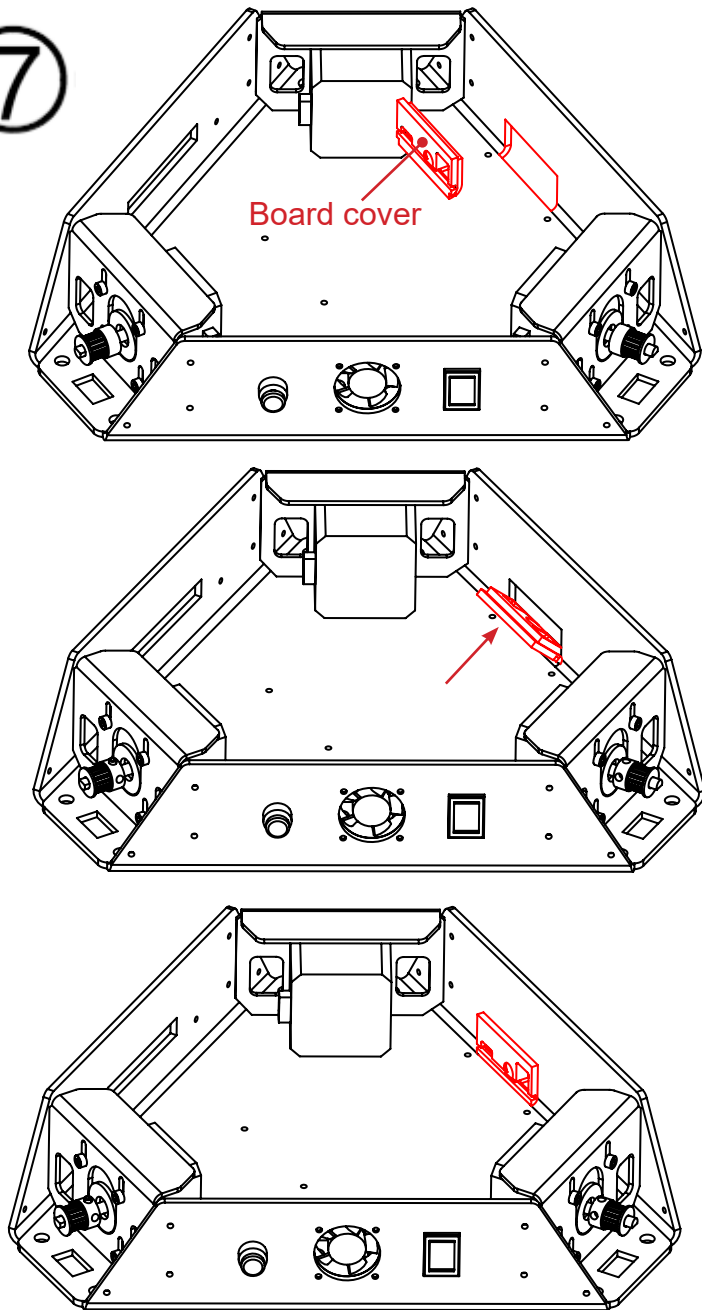


Target : mount the On/Off switch and the «Reset» button on the lower plate

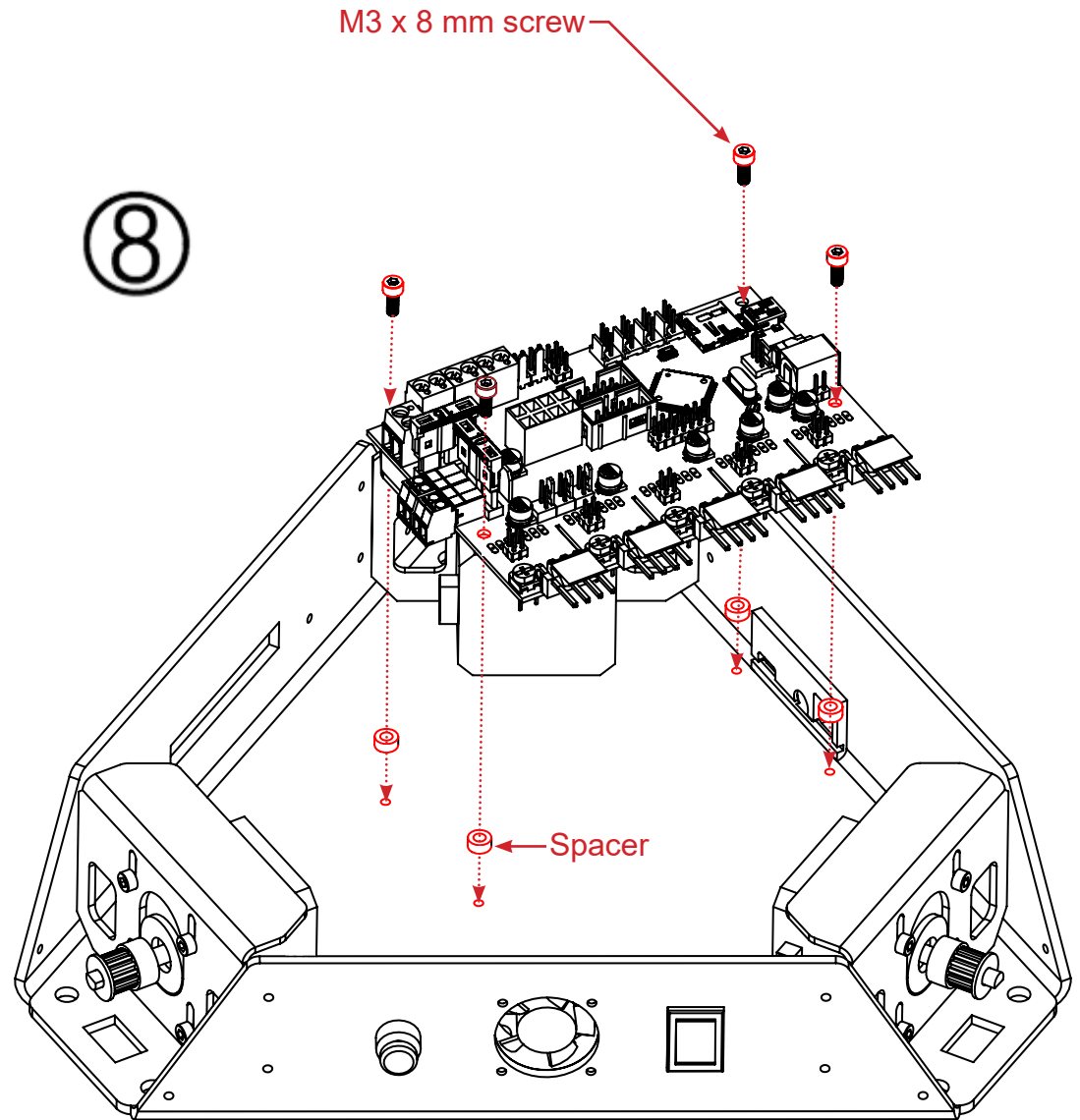


Target : install the eMotronic board and its protective cover

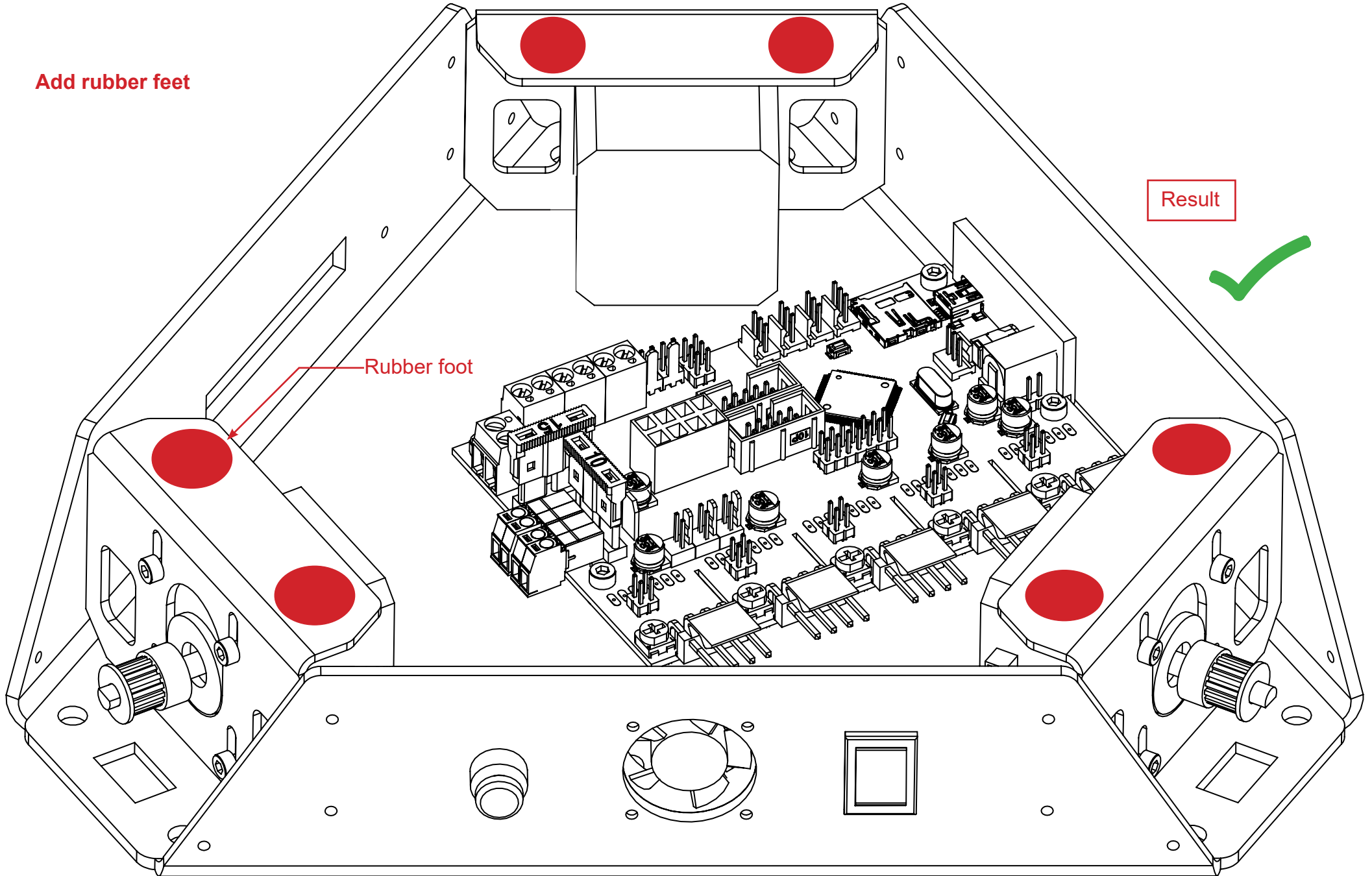
7



8



Add rubber feet



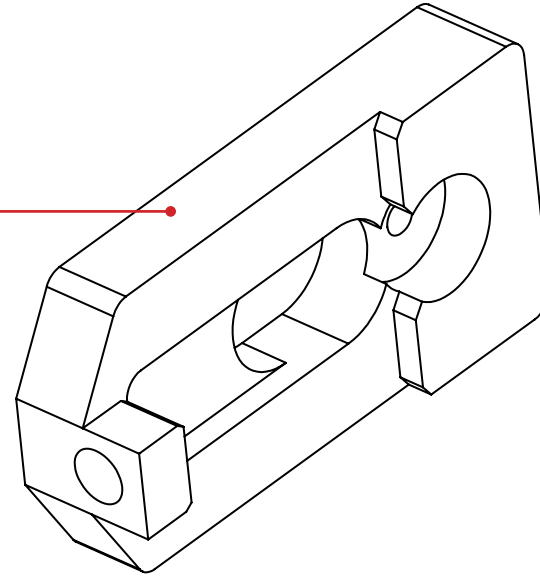
EXTRUDER ASSEMBLY

Needed parts :

- 1 x Extruder cover
- 1 x Body extruder
- 1 x Extruder mobile
- 1 x Driving wheel
- 1 x M5 x 12 mm Knurled screw
- 1 x Ø 3 mm washer
- 1 x 693zz bearing
- 1 x M3 x 8 mm screw
- 4 x M3 x 20 mm screw
- 1 x Long motor
- 1 x Spring

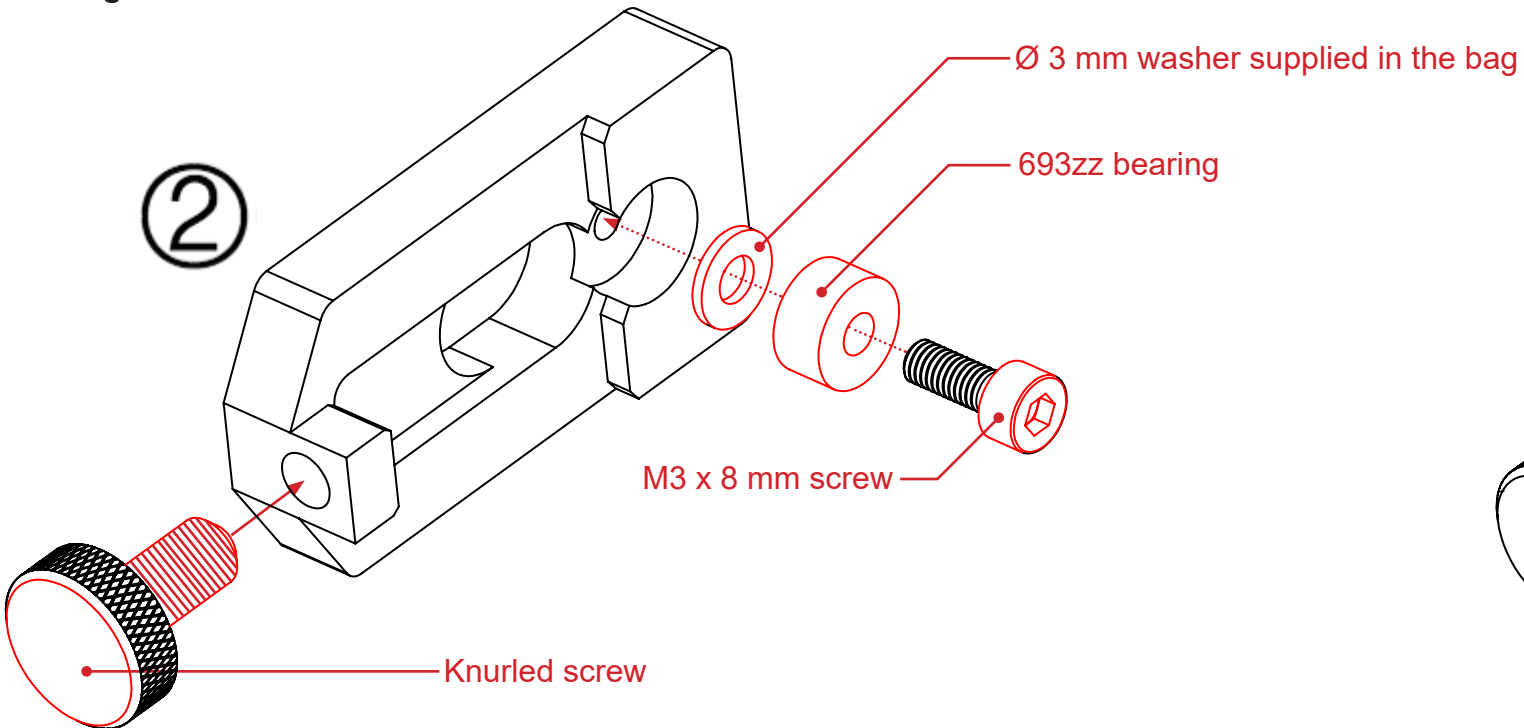
Extruder Mobile

1

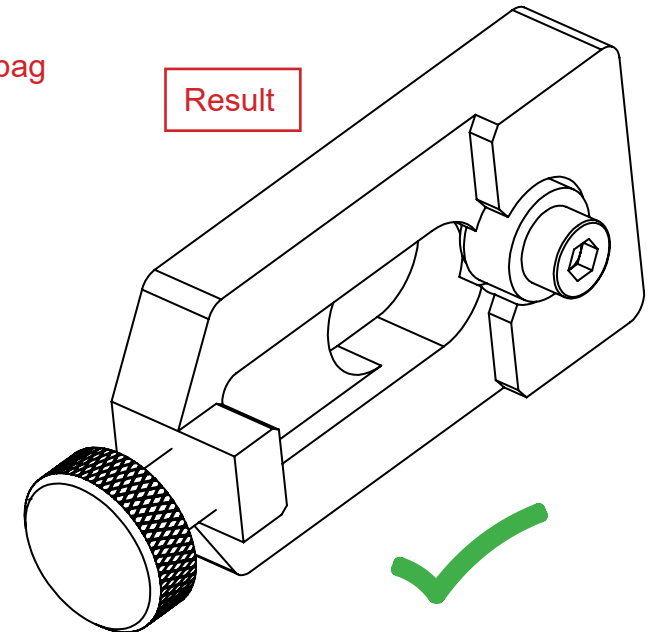


Target : mount the extruder

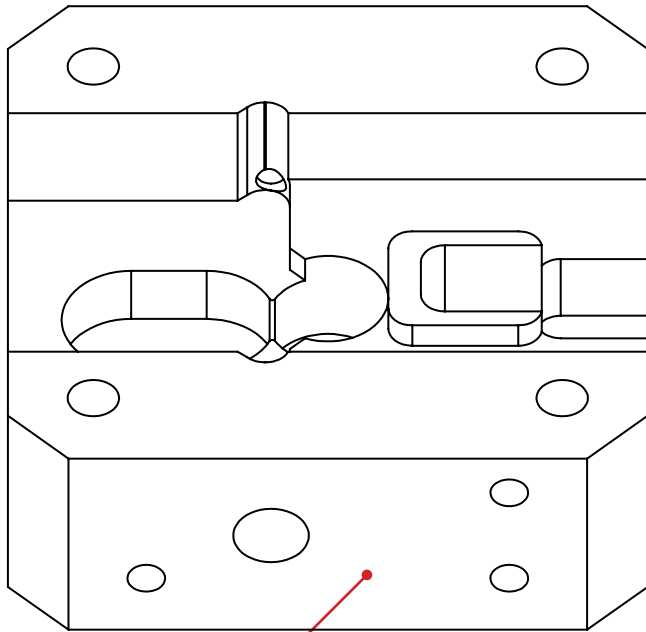
2



Result

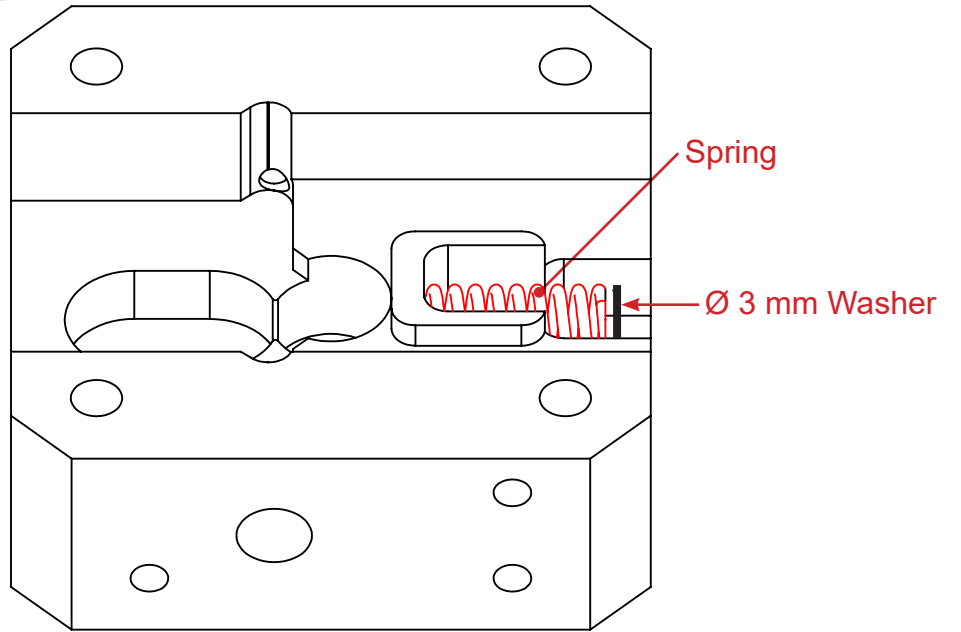


③



Body extruder

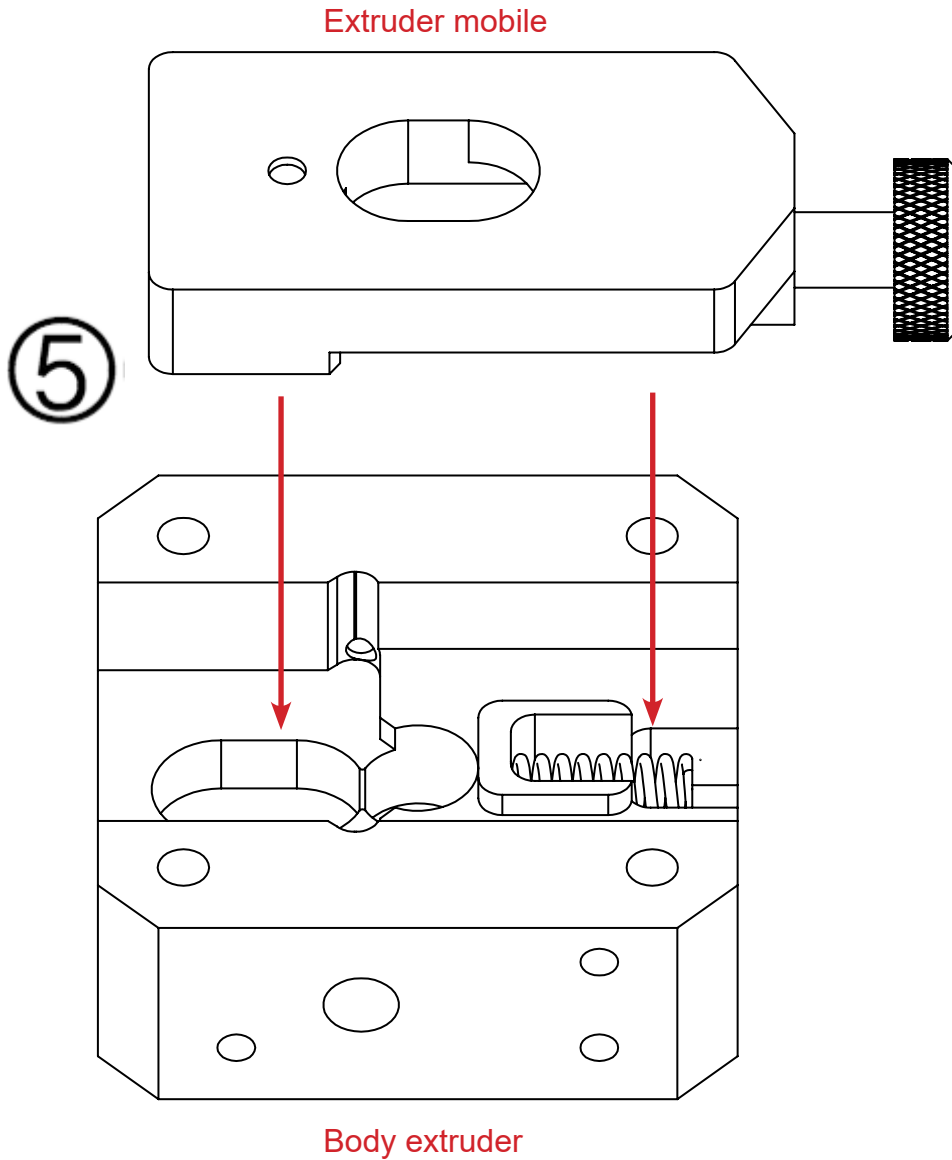
④



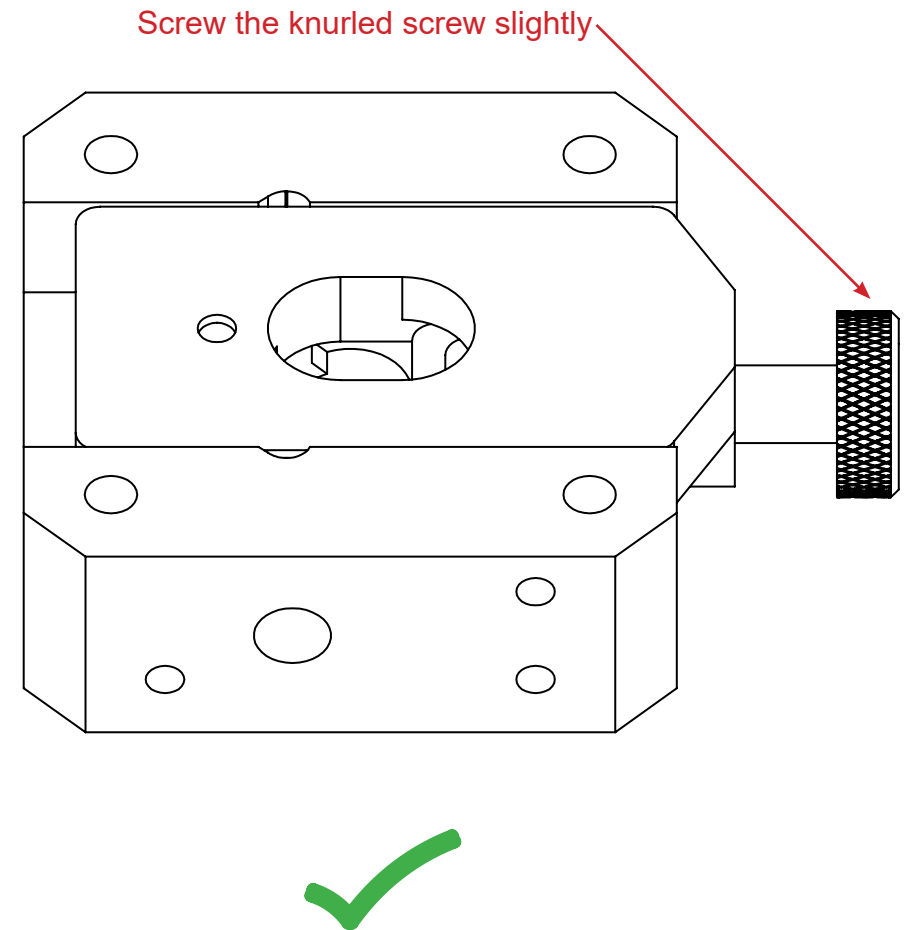
Spring

Ø 3 mm Washer

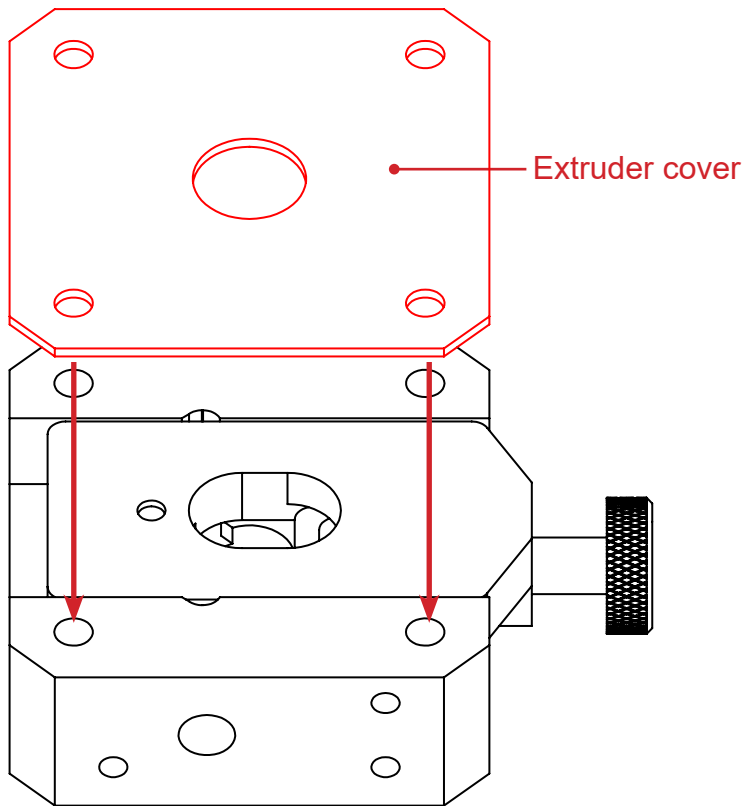
Place «Extruder Mobile» on «Body extruder.»
The spring should remain in its place.



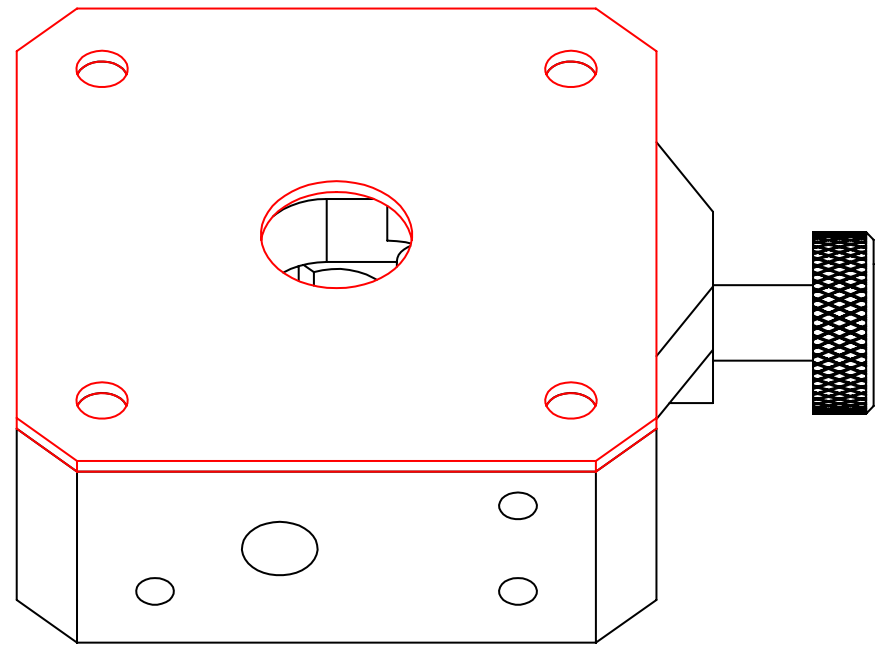
Result



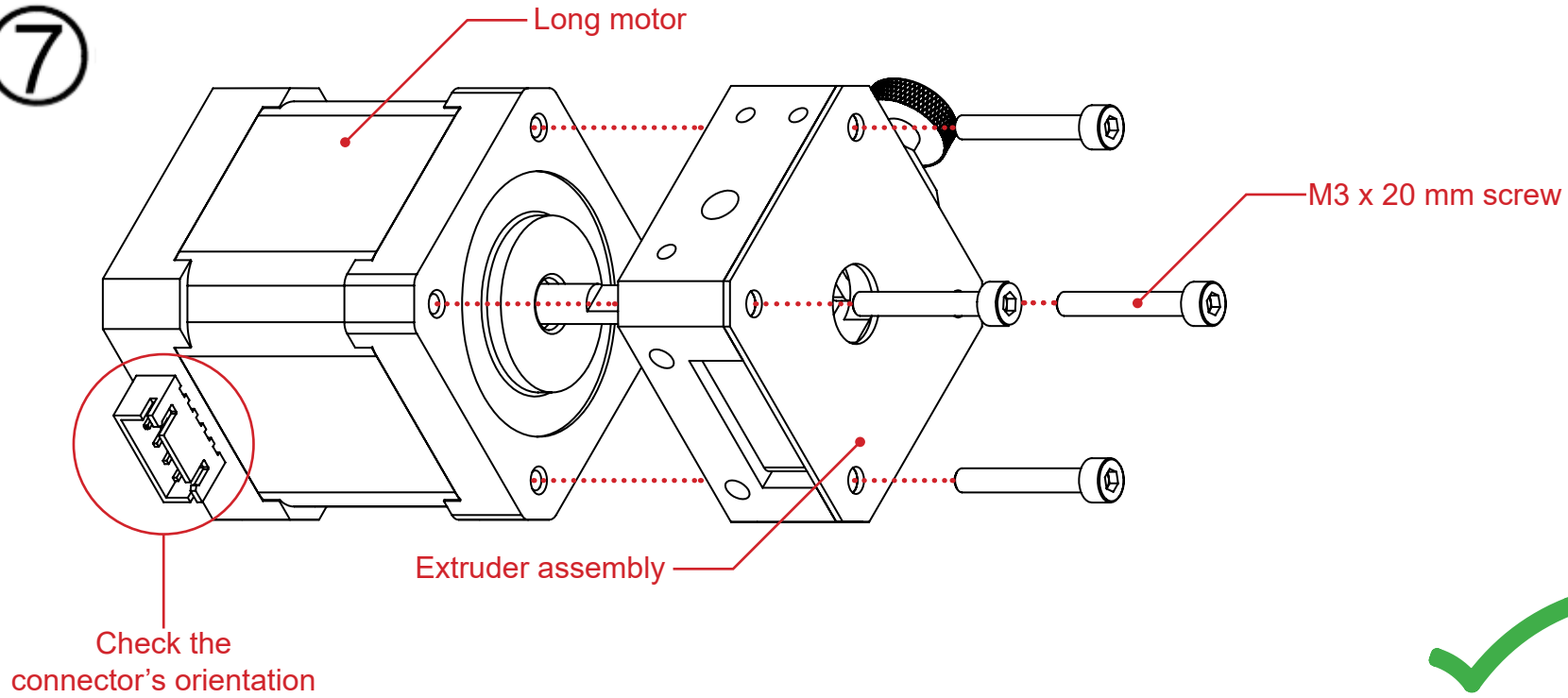
⑥



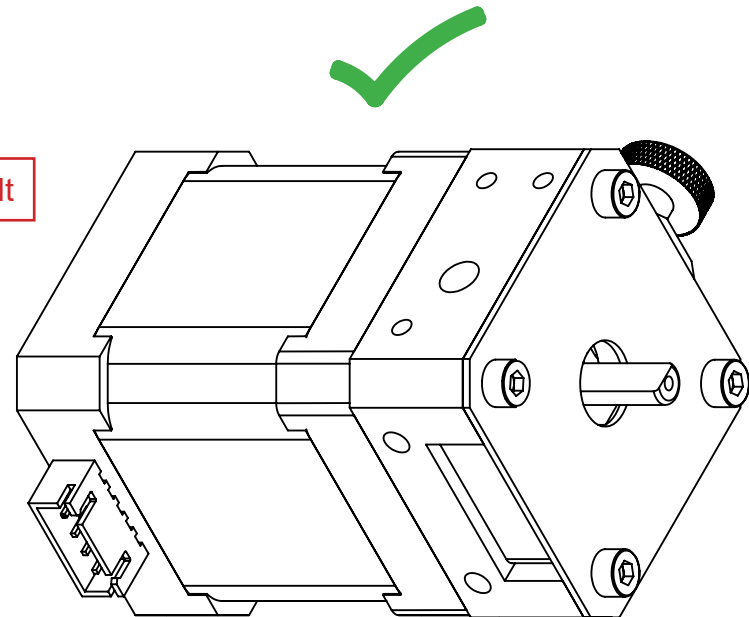
Result



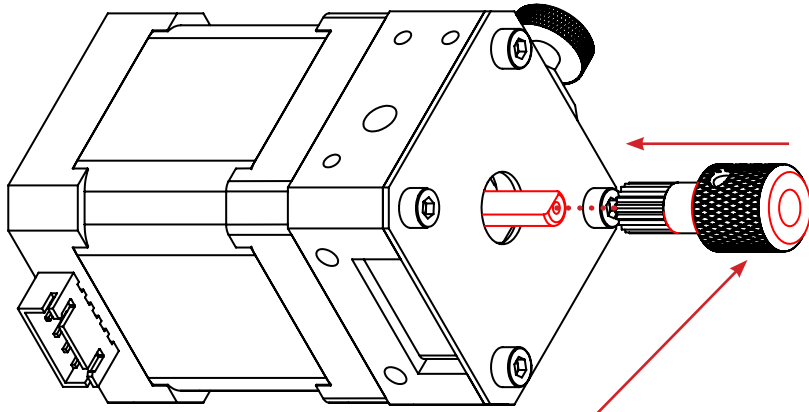
7



Result

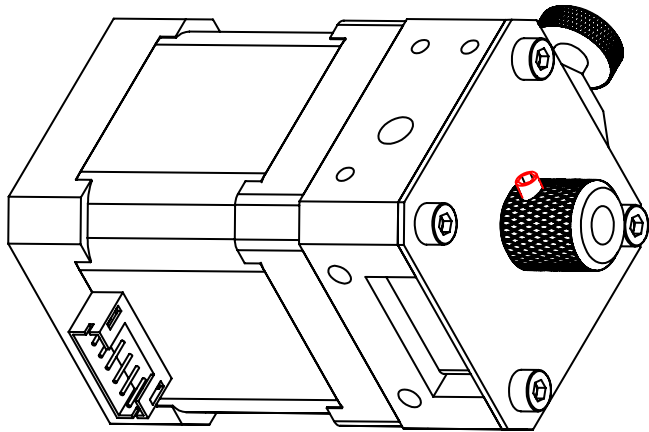


8

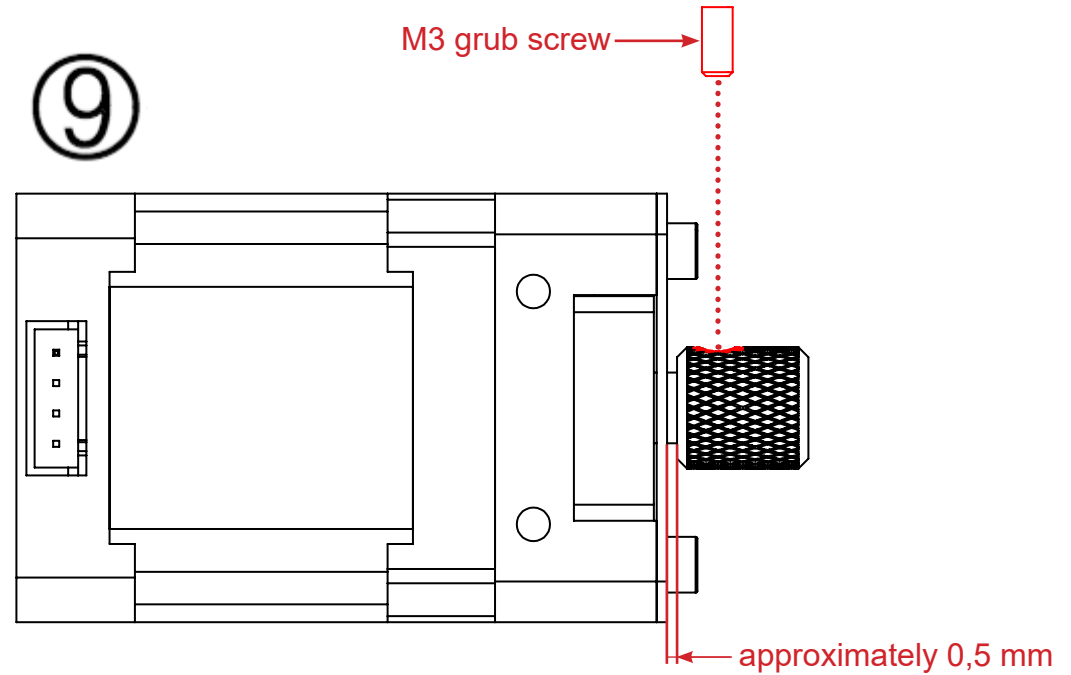


Driving wheel

Result



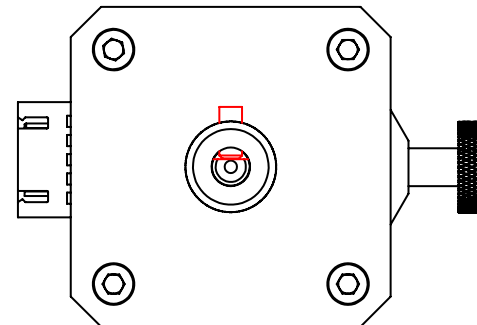
9



M3 grub screw

approximately 0,5 mm

The grub screw must be in contact with the flat side of the axis.



CORE ASSEMBLY

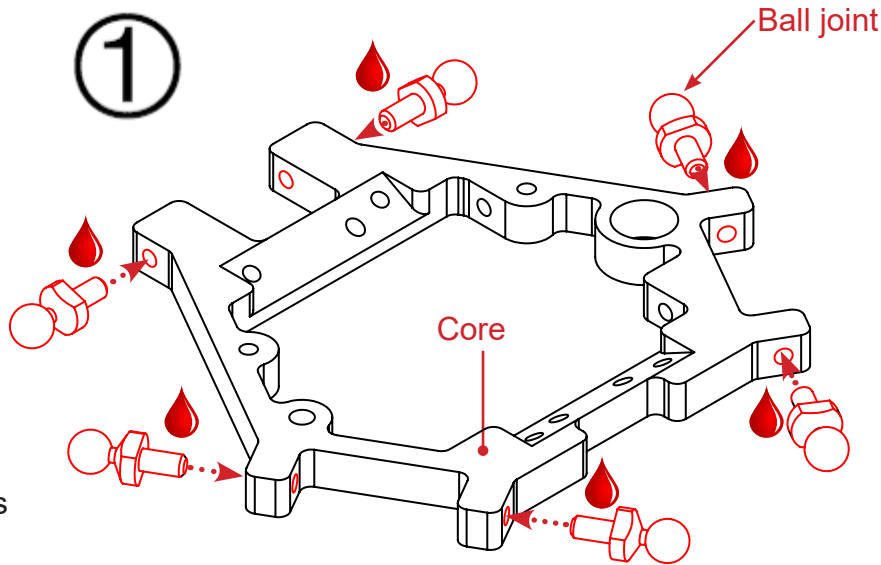
Needed parts :

- 1 x Core
- 6 x ball joints
- 3 x 3 cm fan
- 4 x M3 x 8 mm screw
- 3 x M3 x 12 mm screw
- 5 x M3 x 20 mm screw
- 2 x Fan duct
- 3 x Ø 3 mm spacer
- 1 x Hexagon holder
- 1 x Hexagon bracket

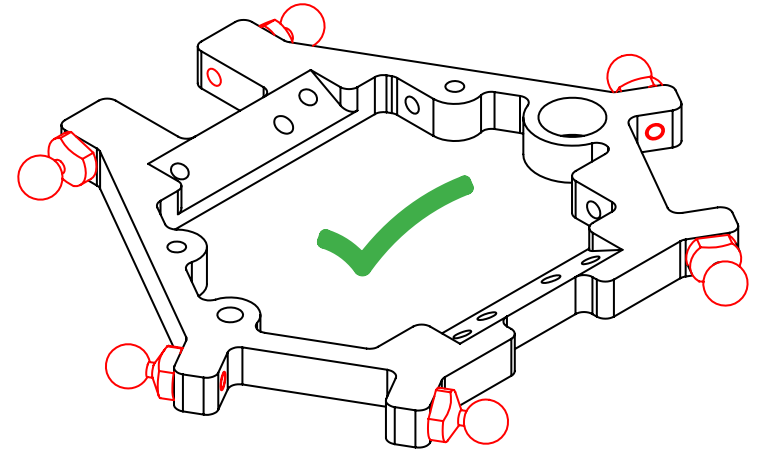
Target : mount the ball joints on the core

= add some threadlock to the thread

①

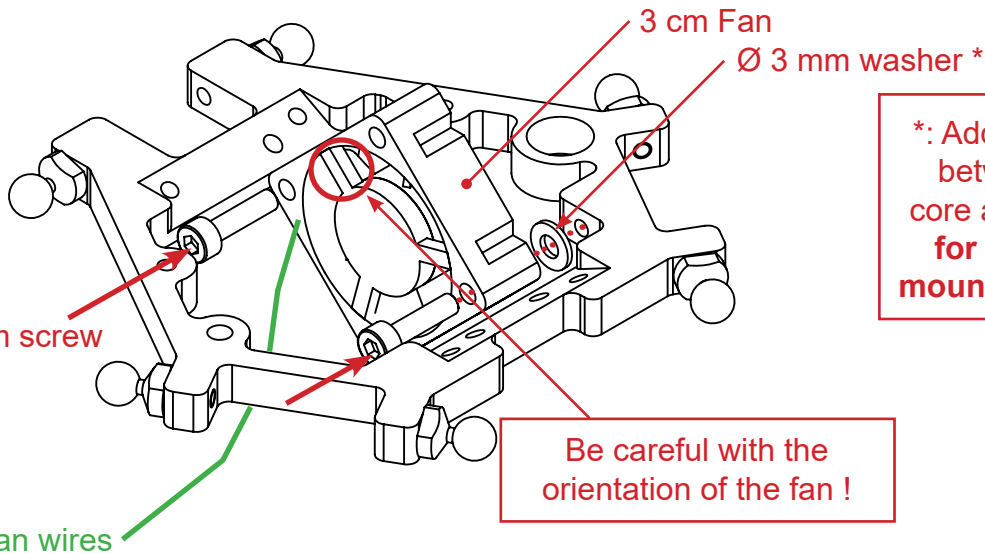


Result



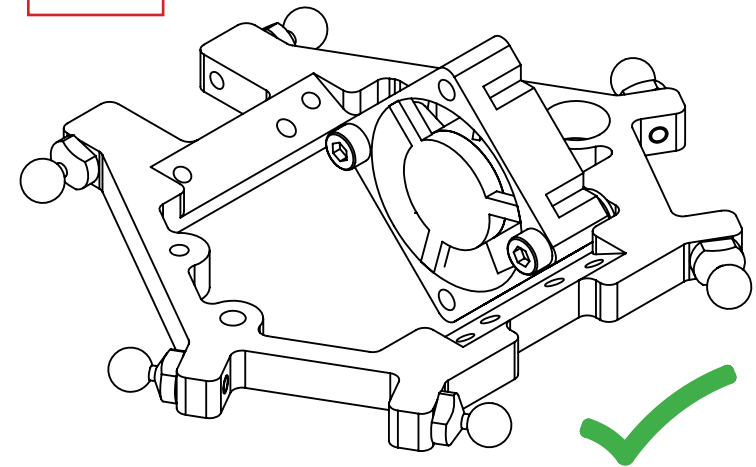
Target : mount the printhead's fan

②



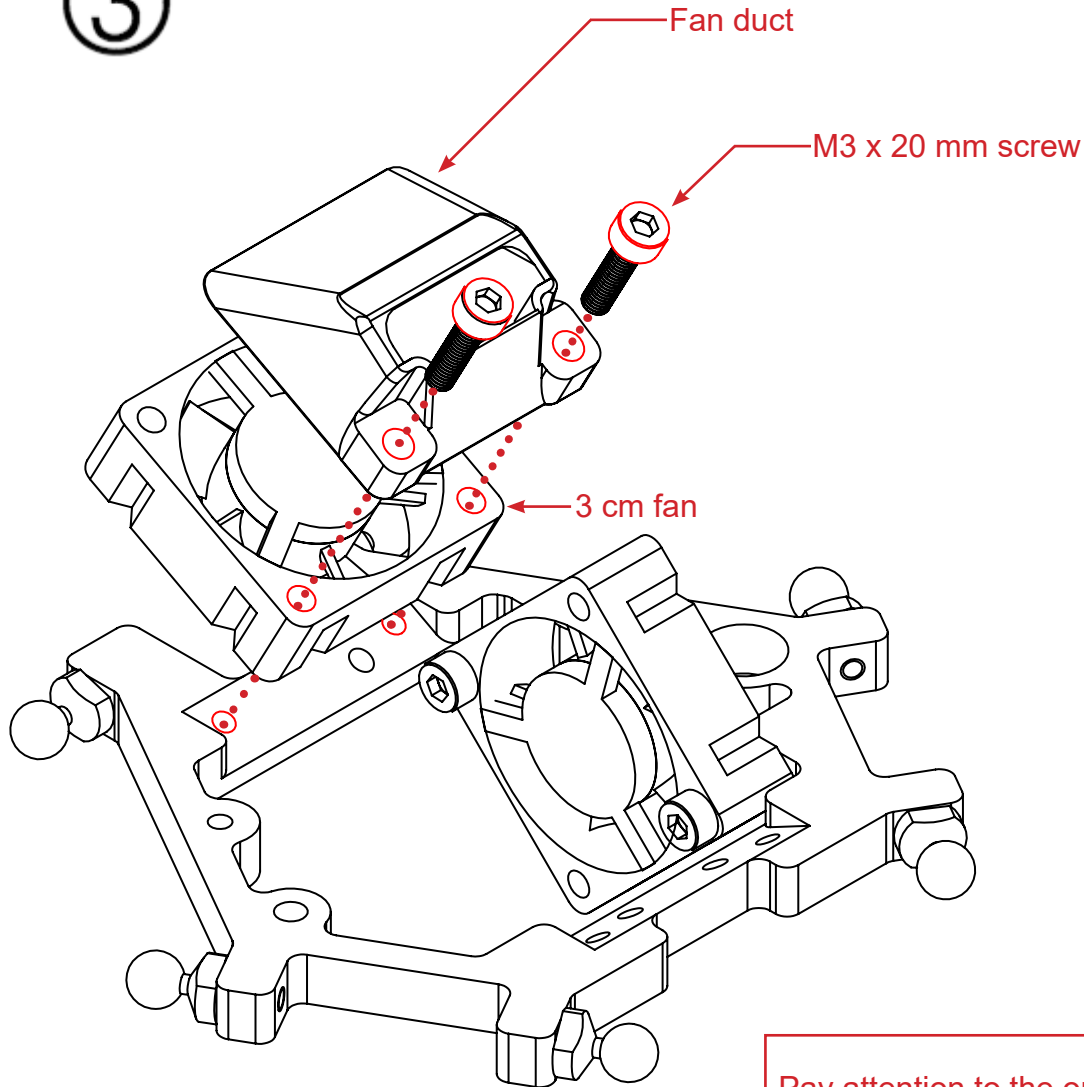
*: Add a washer between the core and the fan for each fan mounting screw.

Result



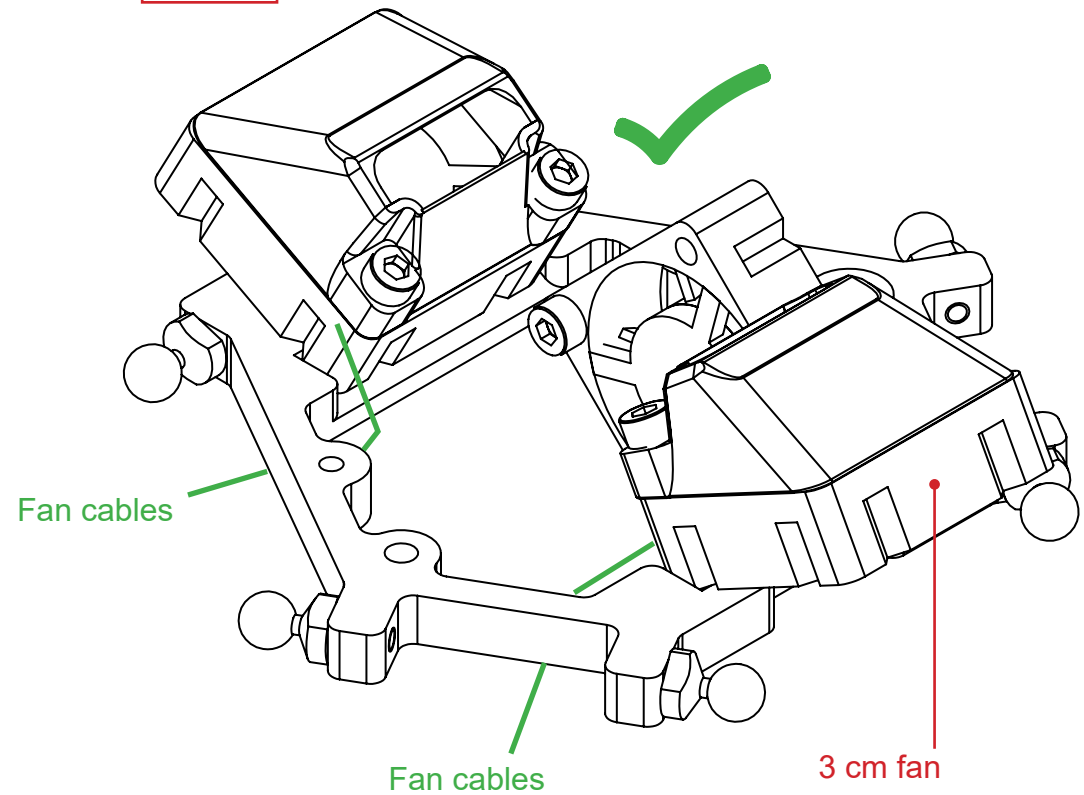
Target : mount the 2 other fans

③



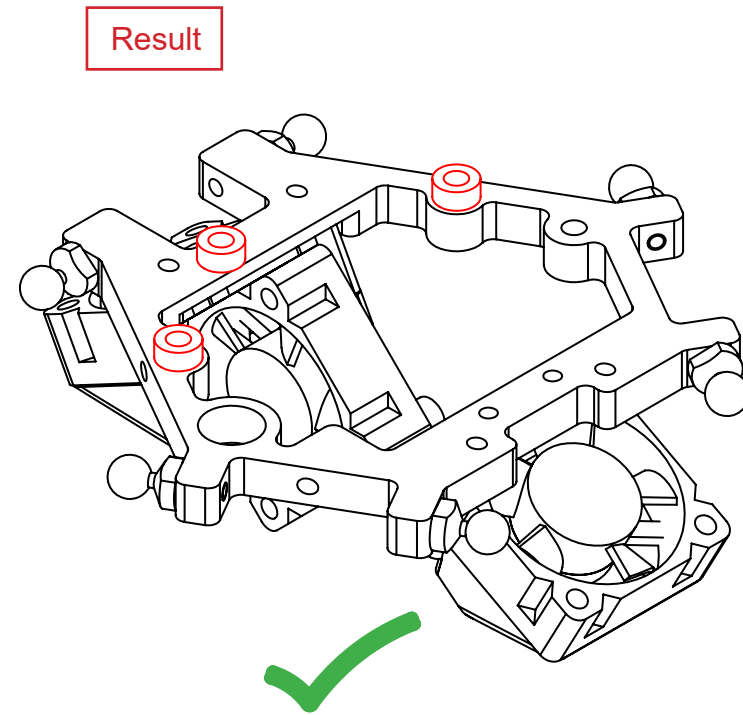
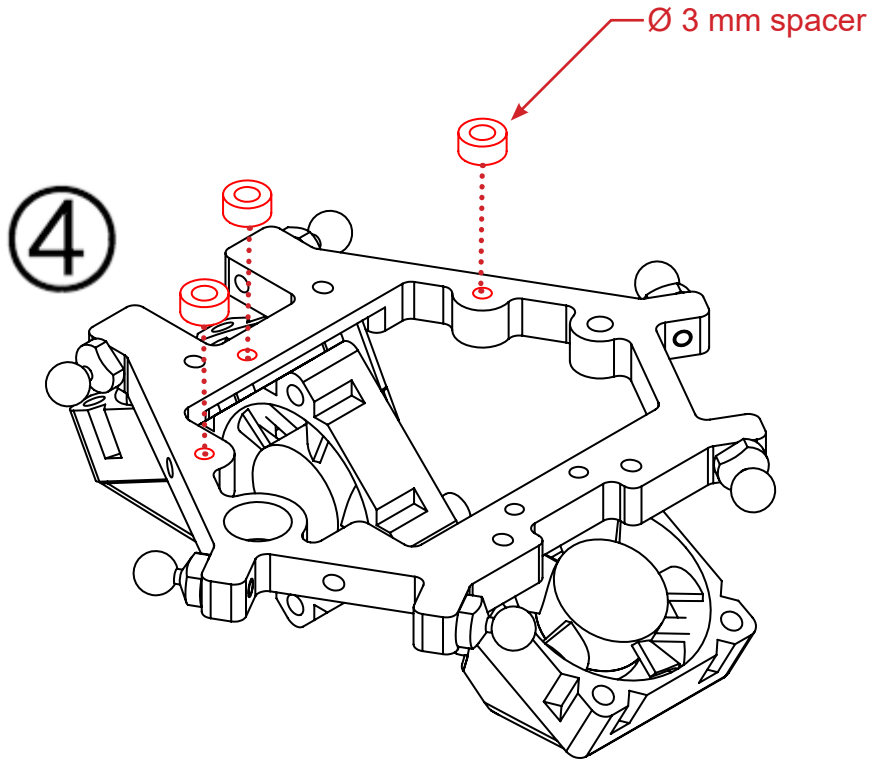
CAUTION: If you have the **LED option**, please refer to page 95 of this guide to mount the option now.

Result

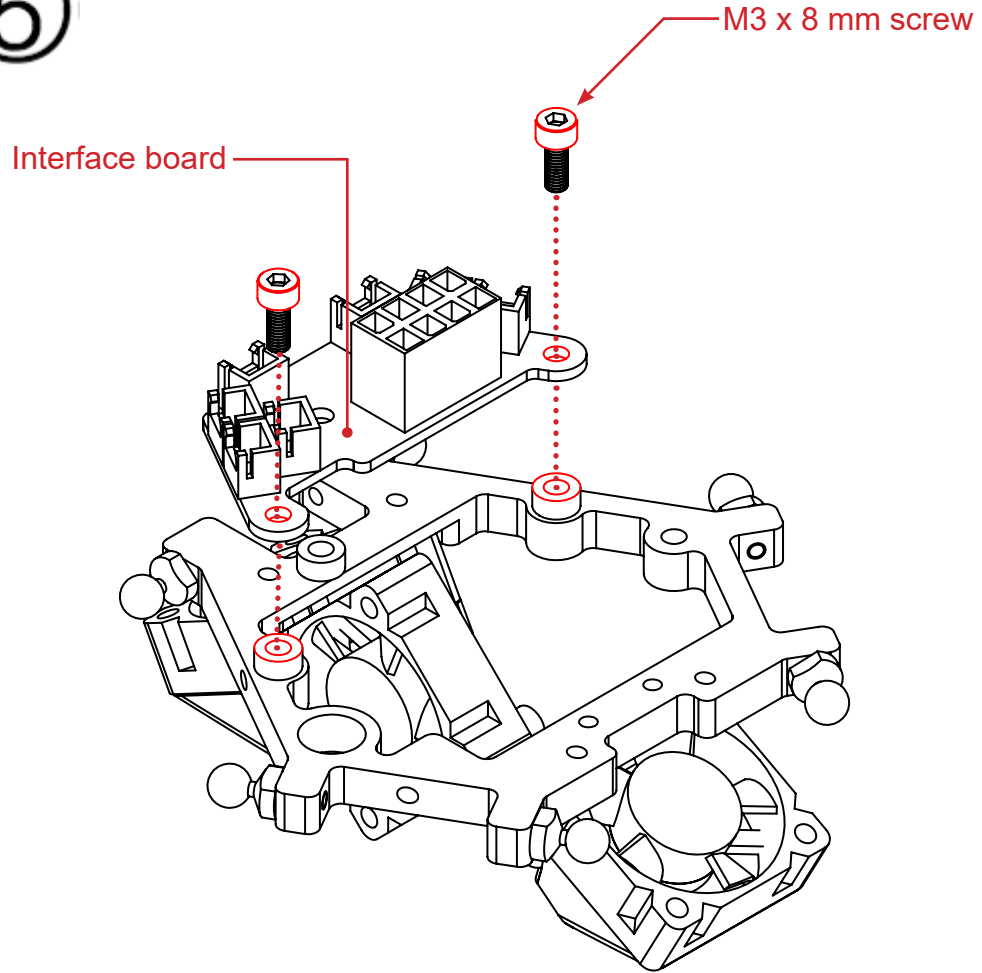


Pay attention to the orientation of the fans.

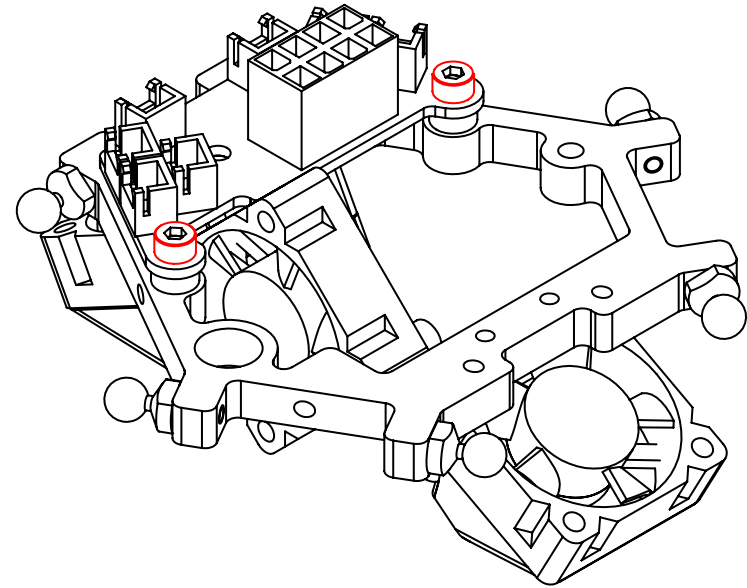
Target : mount the interface board on the core



5



Result



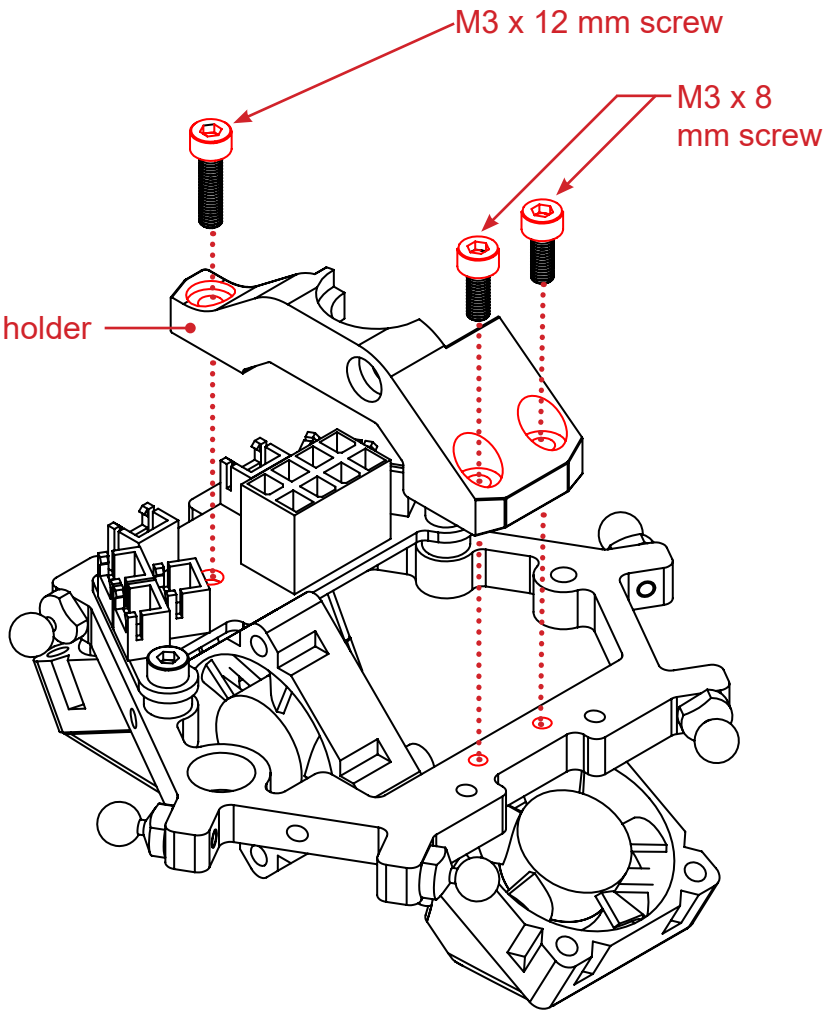
Target : mount the Hexagon holder on the core

⑥

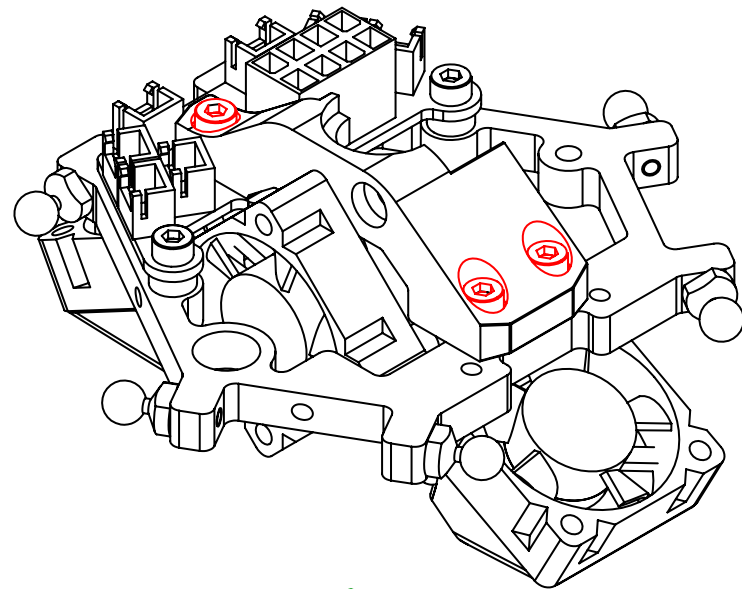
Hexagon holder

M3 x 12 mm screw

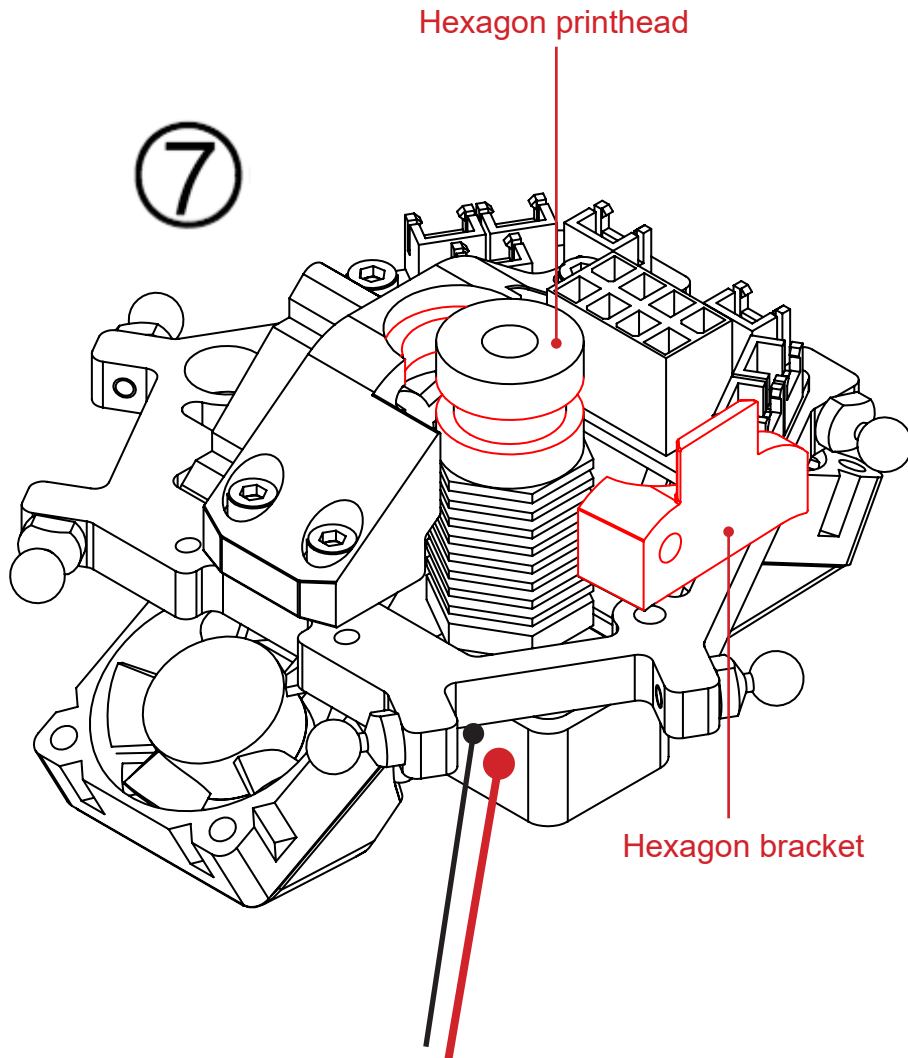
M3 x 8 mm screw



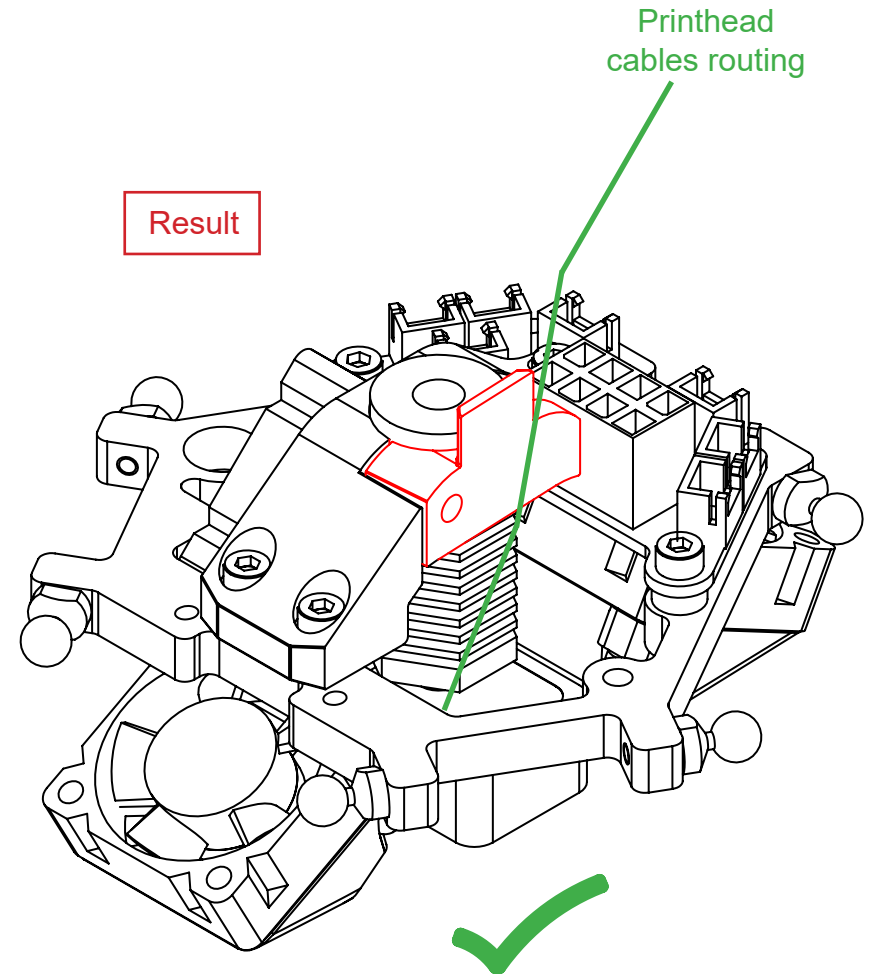
Result

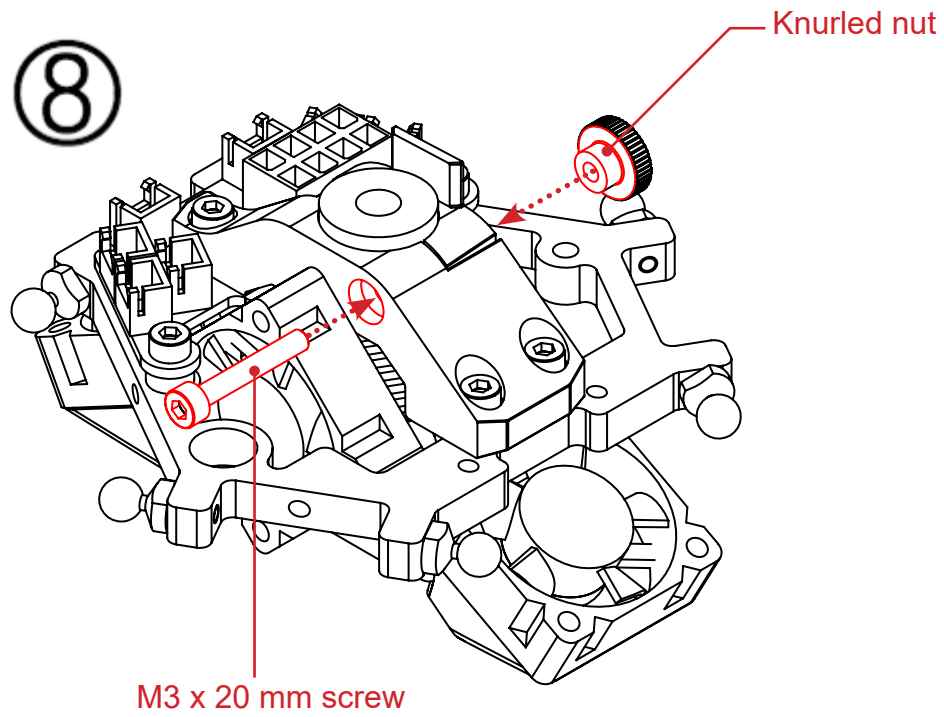


Target : mount the printhead and the bracket

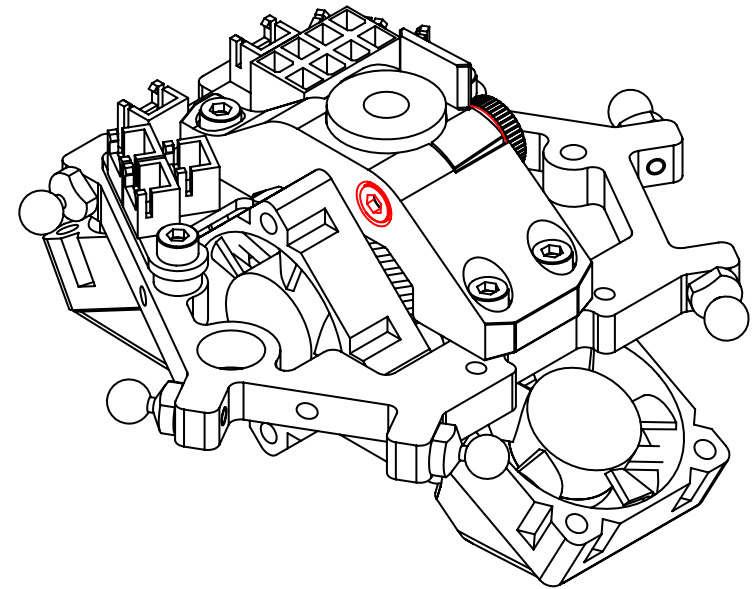


Printhead cables side (thermistor and heating cartridge). To use as reference for the printhead orientation.

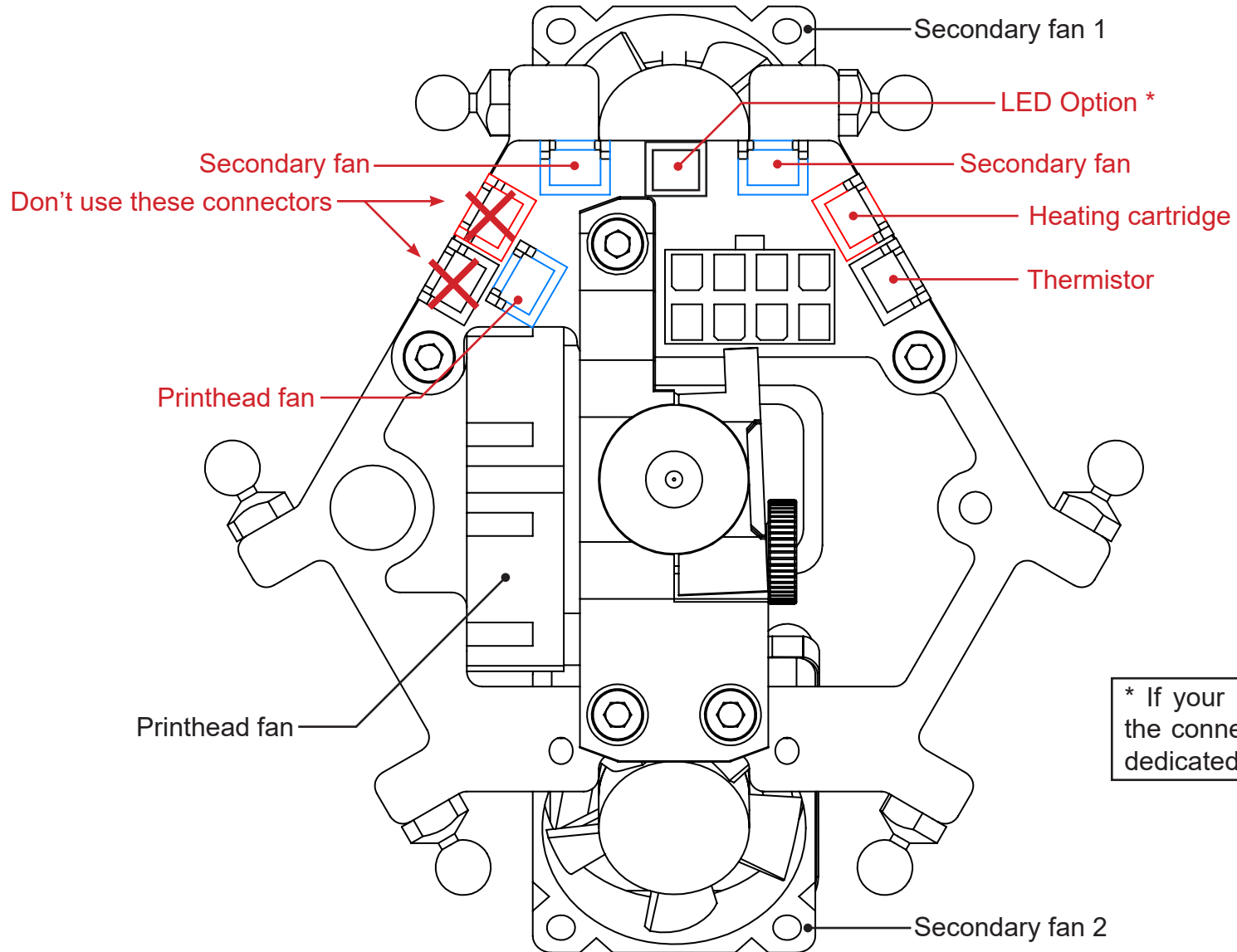




Result



Target : connect core's components on the interface board



* If your board does not have the connector, please read the dedicated post on our blog.

FINAL ASSEMBLY

Needed parts :

- 1 x Lower plate
- 1 x Upper plate
- 1 x Cowling
- 6 x Smooth rod
- 12 x M6 x 16 mm screw
- 7 x M3 x 8 mm screw
- 3 x Slider
- 1 x Extruder
- 1 x Core extension
- 3 x GT2 belt
- 11 x Cable clamp
- 6 x Connecting rod
- 1 x PTFE tube
- 2 x Olive compression fittings
- 3 x Elastic band

Target : assemble the machine and each of the pre-assembled elements

Do not tighten the screws yet.

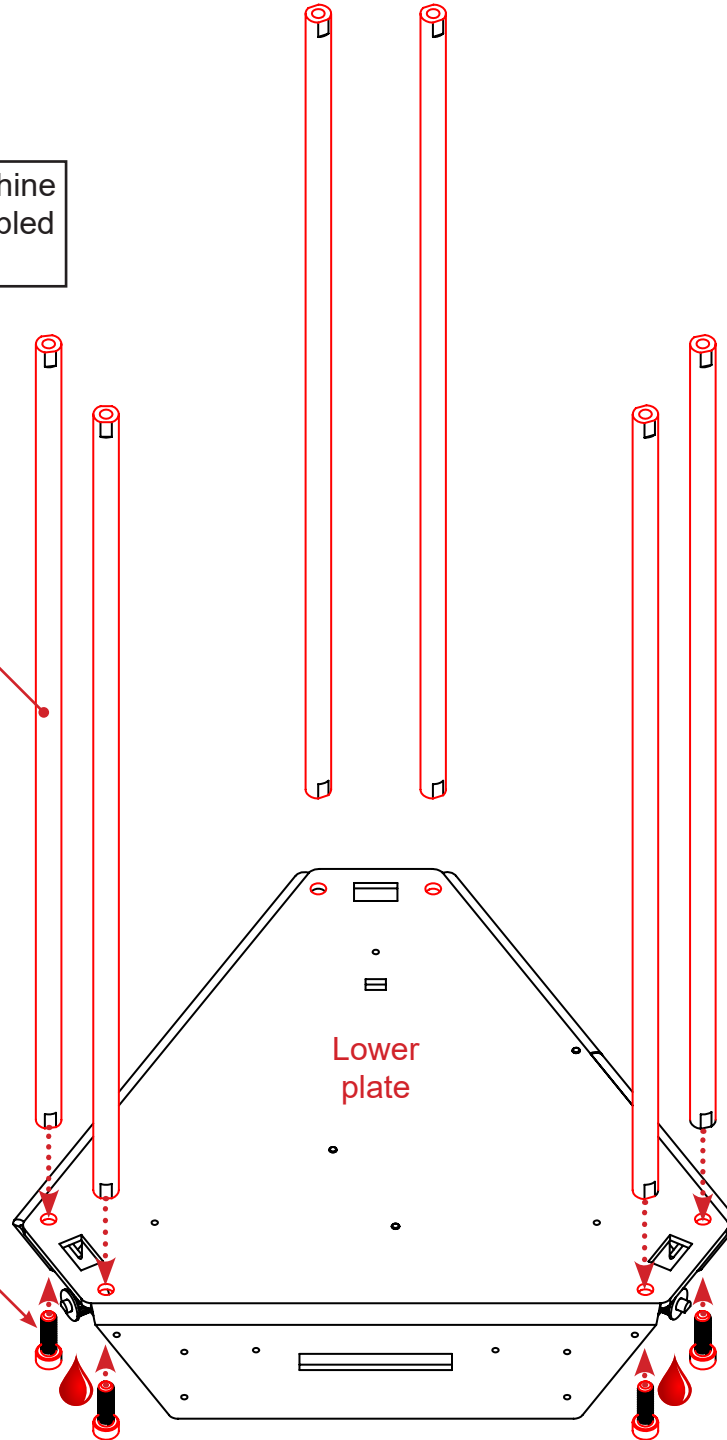
①

Smooth rod

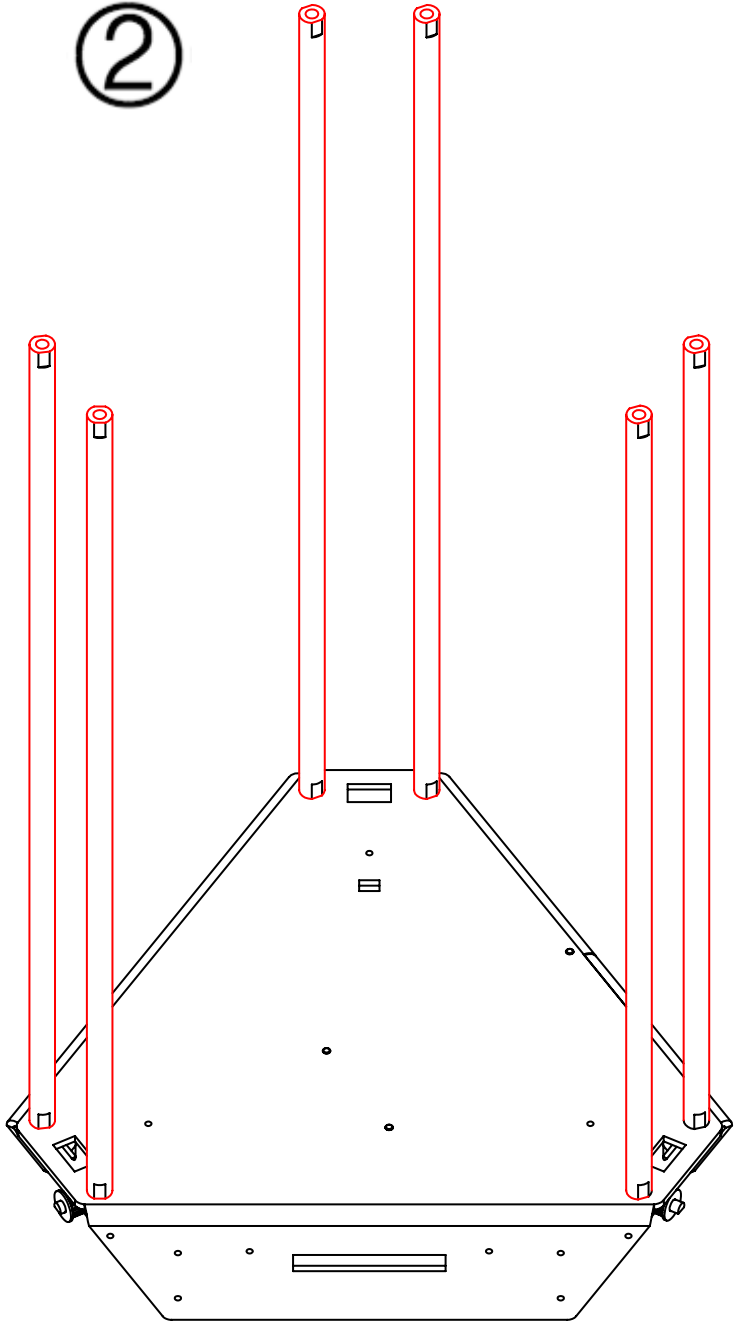
M6 x 16 mm screw

Lower plate

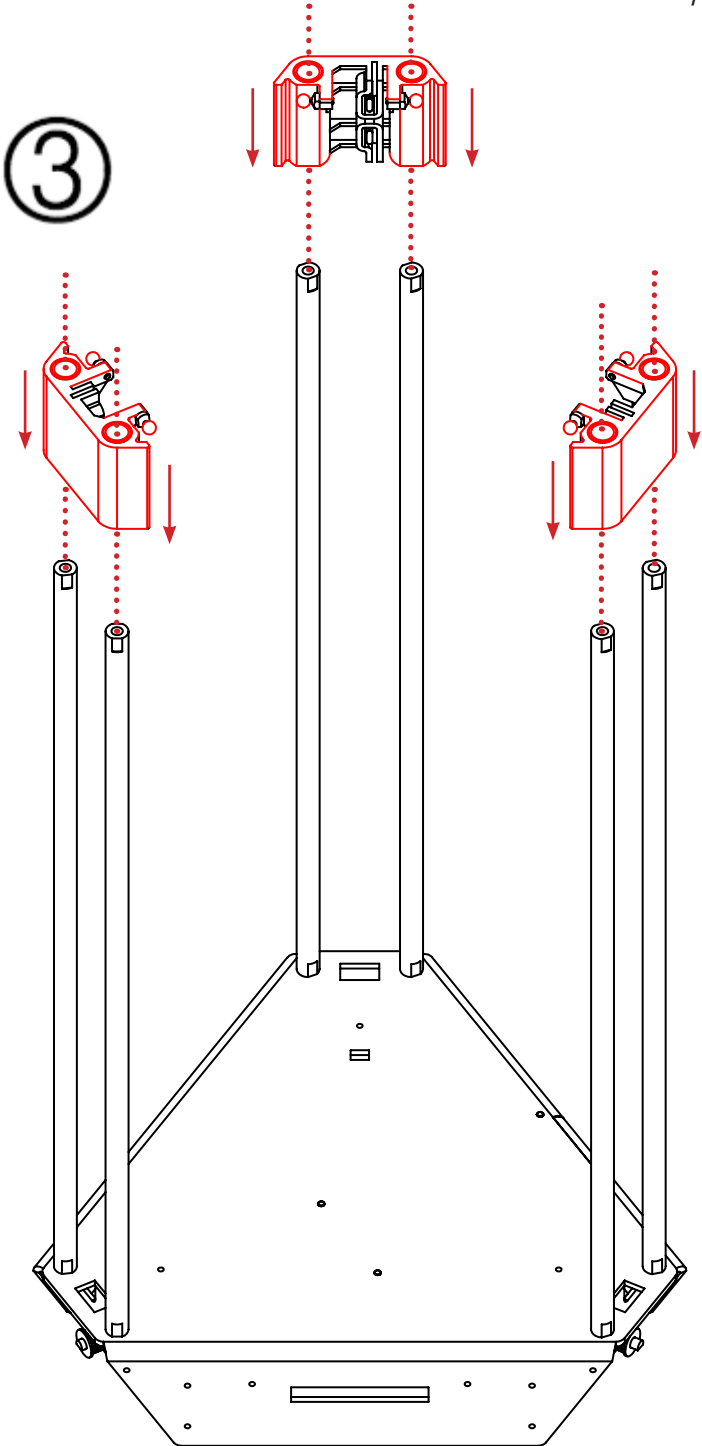
 = add one drop of threadlocker to each thread

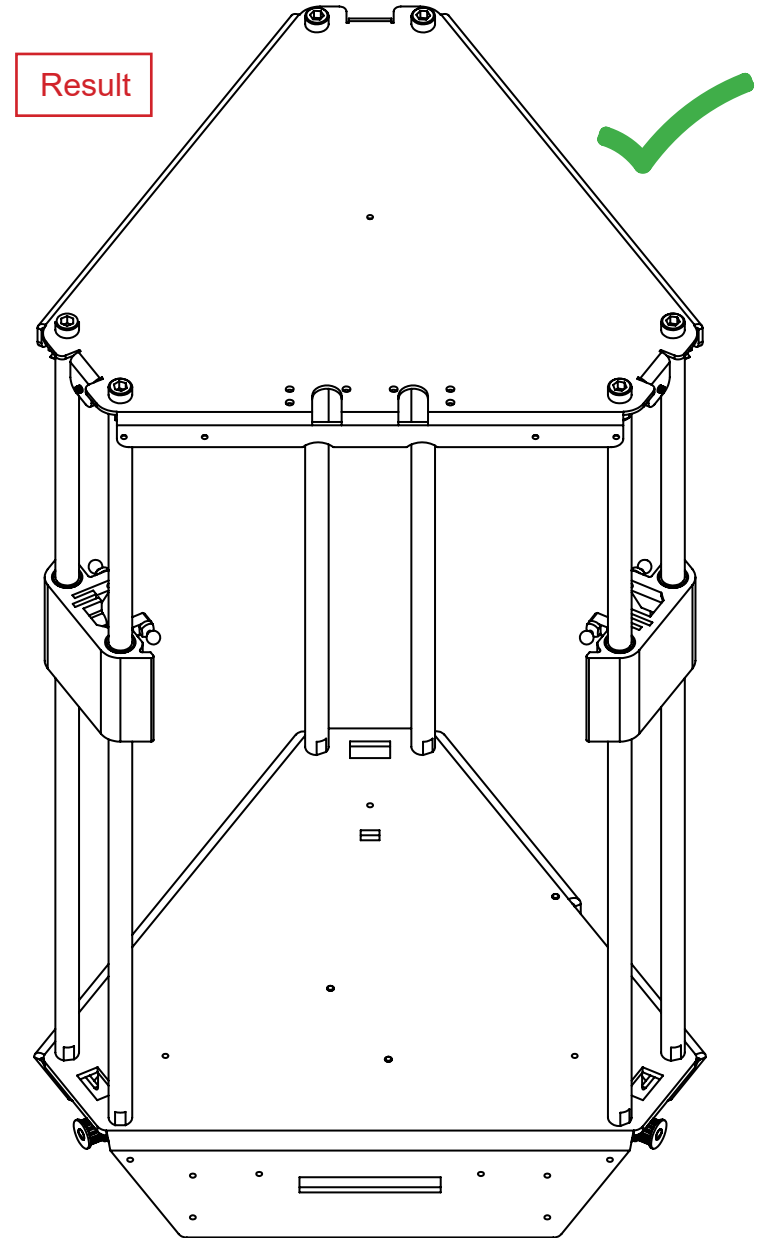
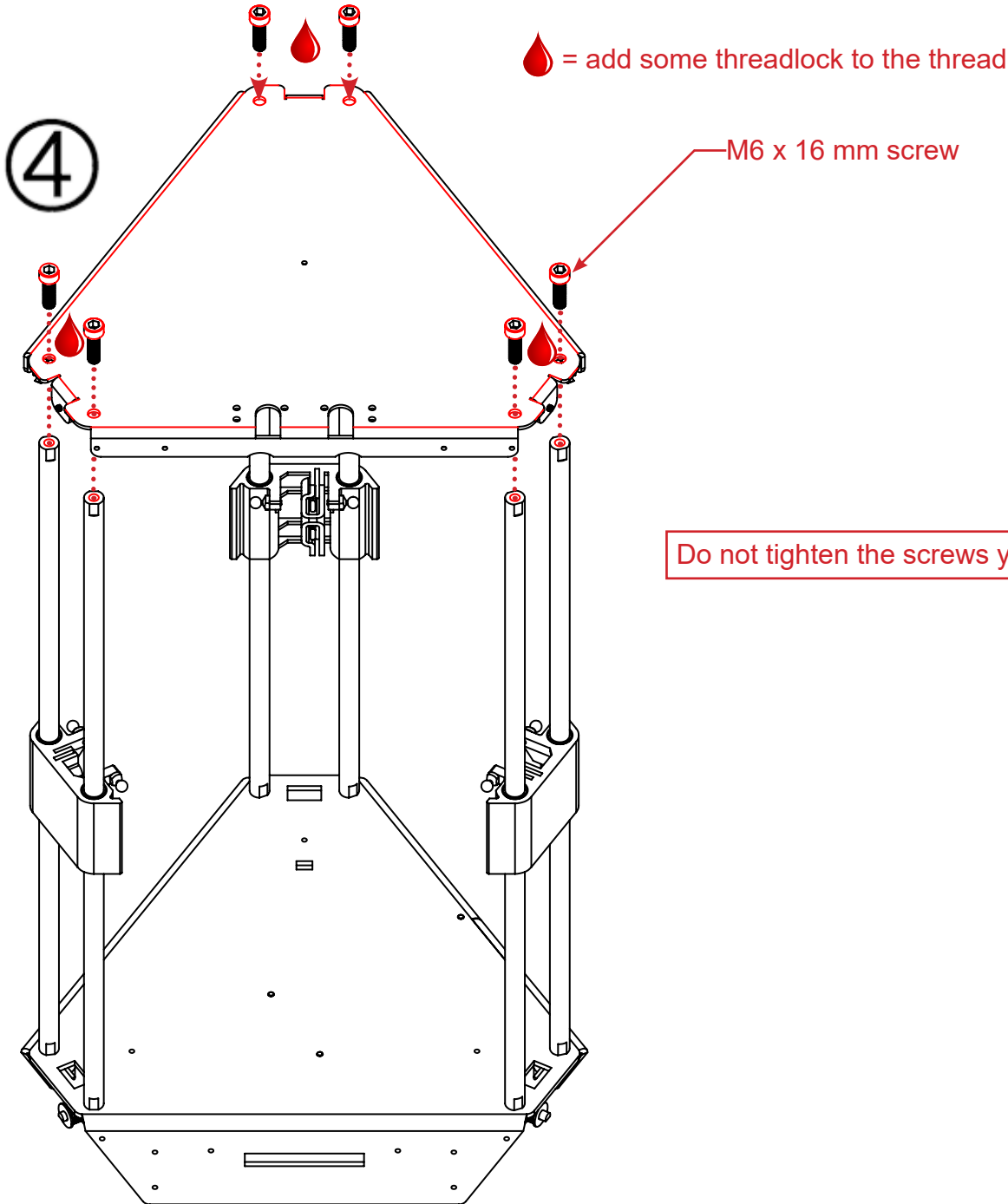


②



③





Target : tighten the smooth rods and check that sliders slide as free as possible.

Warning: this step is very important. It is imperative for the proper functioning of translations in order to obtain the best printing quality.

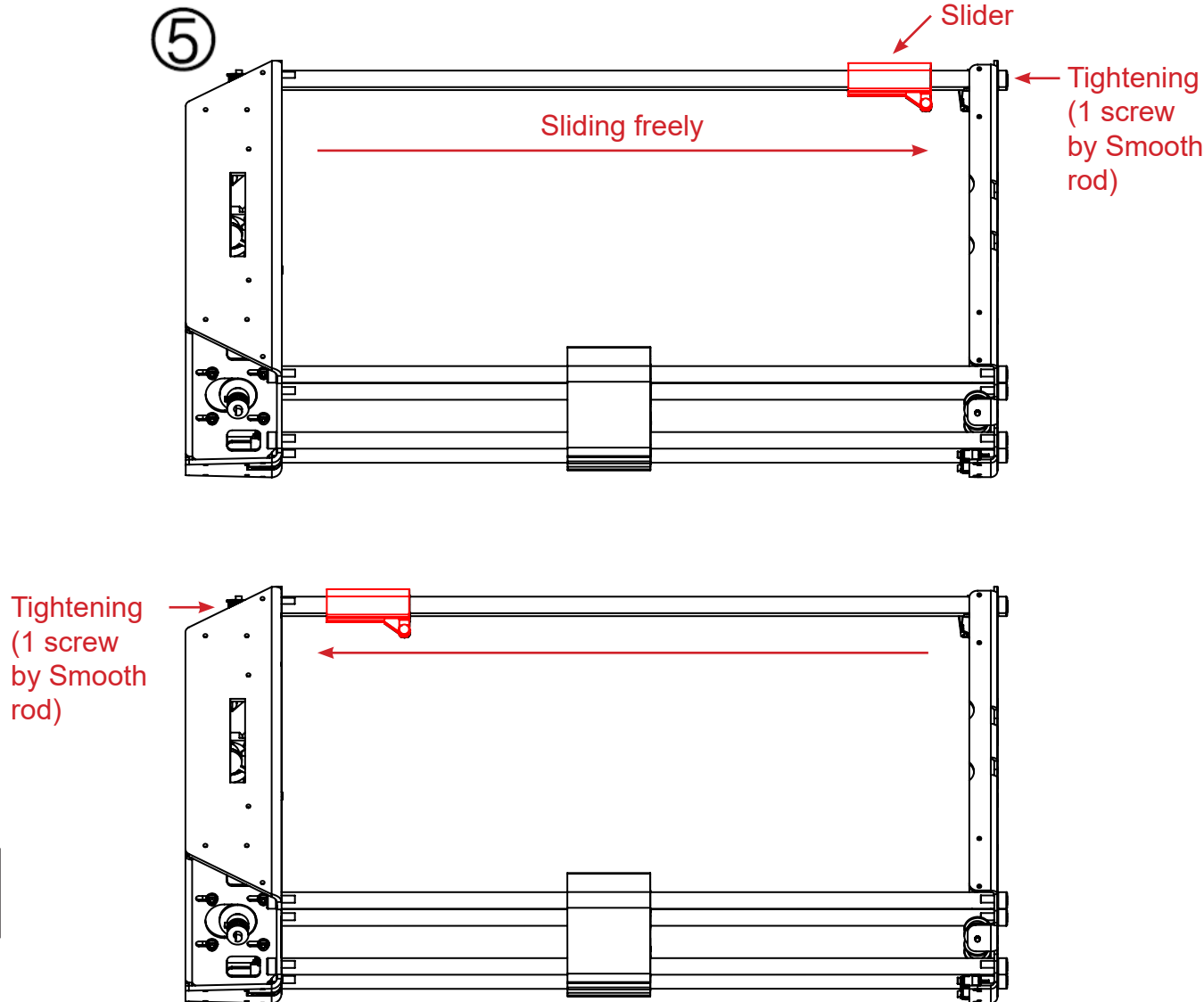
Adding WD40 to the rods and plain bearings will greatly assist sliding.

Process description

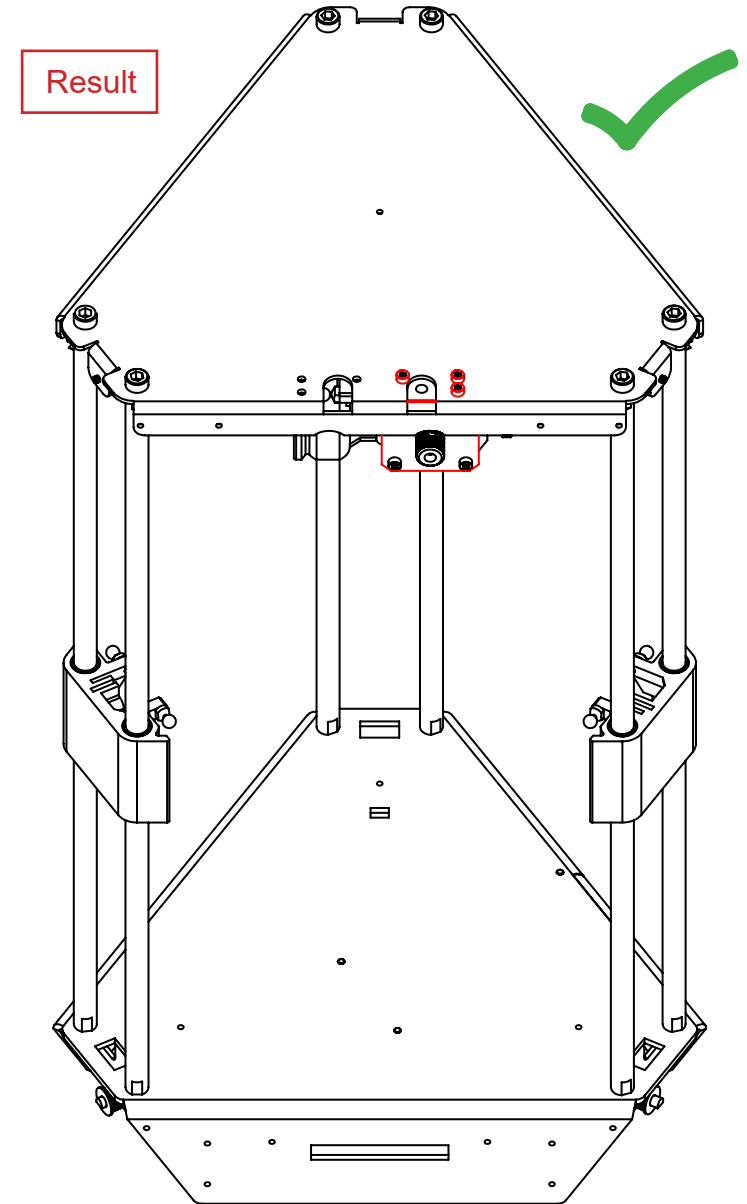
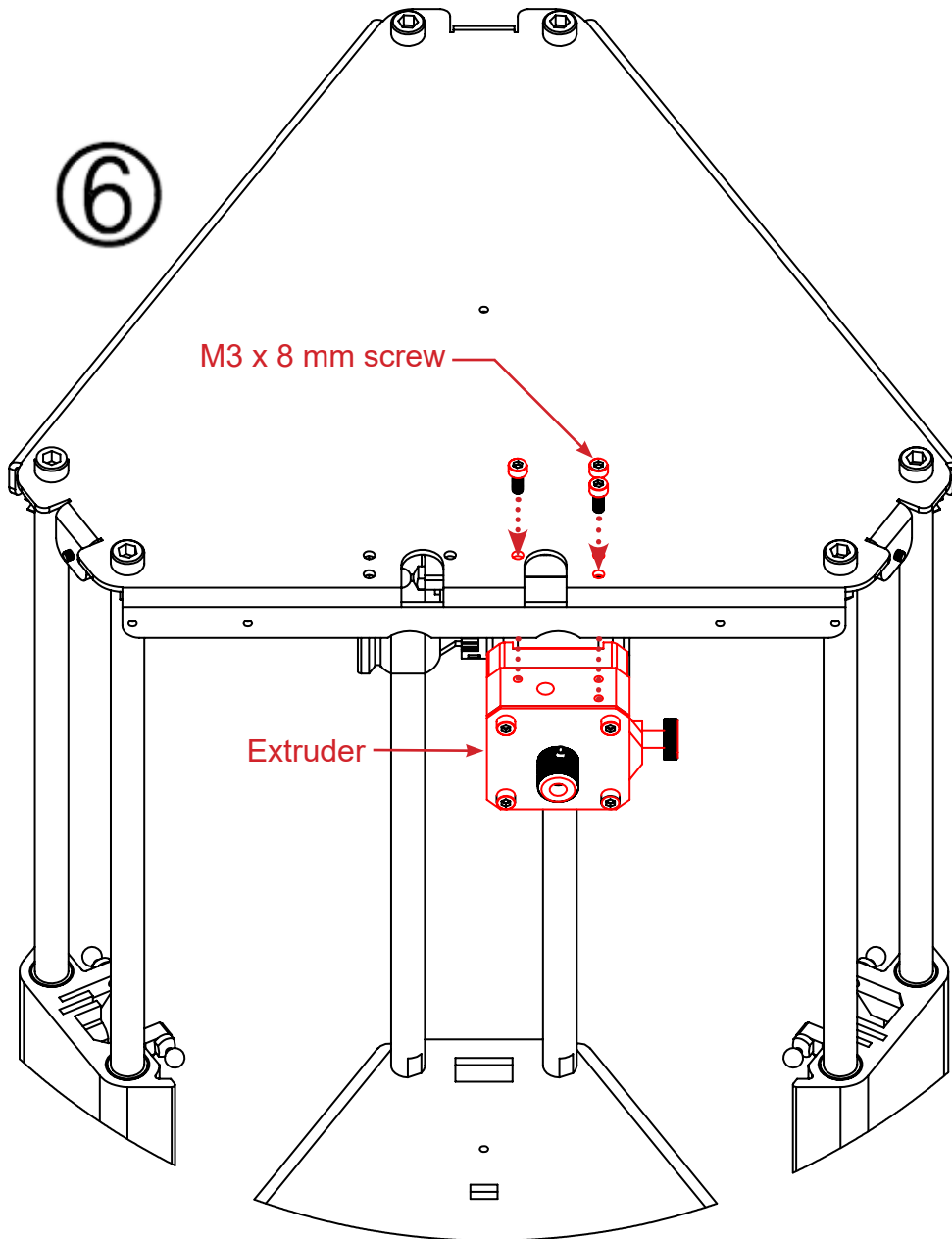
- 1) Lay the printer on its side as shown in Figure # 5.
- 2) Push the slider to the far right and tighten screws on this side.
- 3) Push the slider to the far left and tighten the screws on the **left side**.
- 4) Push the slider again **to the far right** and check that it slides well. If it is not the case, loosen the right screws and re-tighten.
- 5) Push the slider again to the left and check that it slides well. If this is not the case, loosen the left screws and re-tighten.
- 6.) Repeat this process as many times as necessary until the slider slide freely. Low resistance on the left side is ok (next to the bottom plate).

Repeat this process for each axis.

Note: if the sliding of a slider forces: you may need to remove one plane bearing of the 4 in the slider.

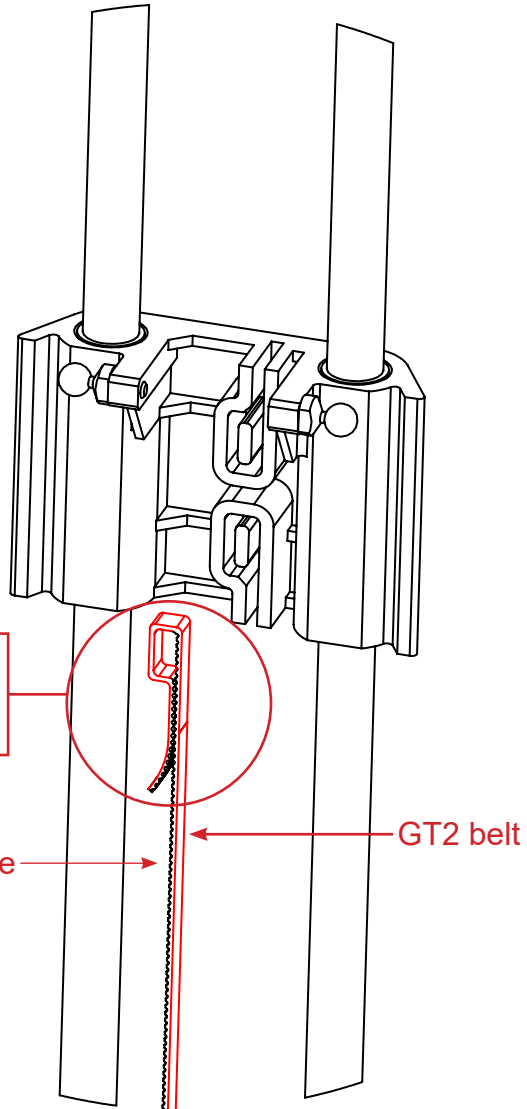


Target : mount the filament driving system on the upper plate

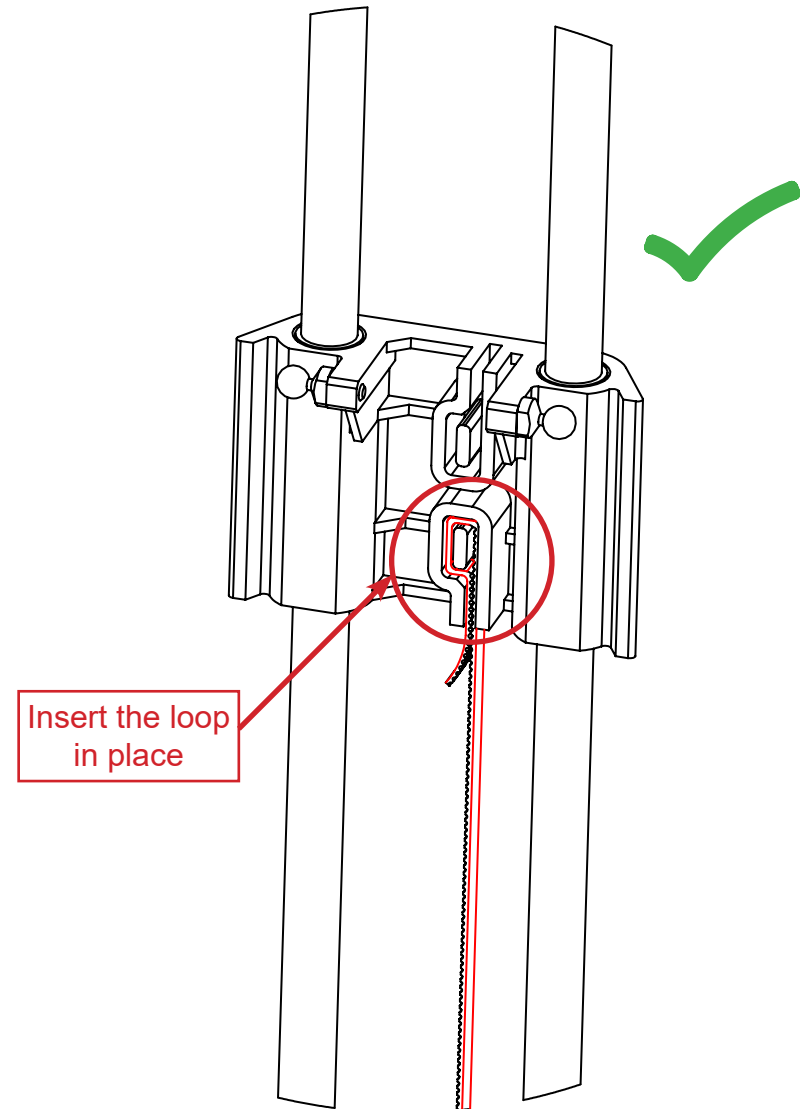


Target : mount the belts on each sliders

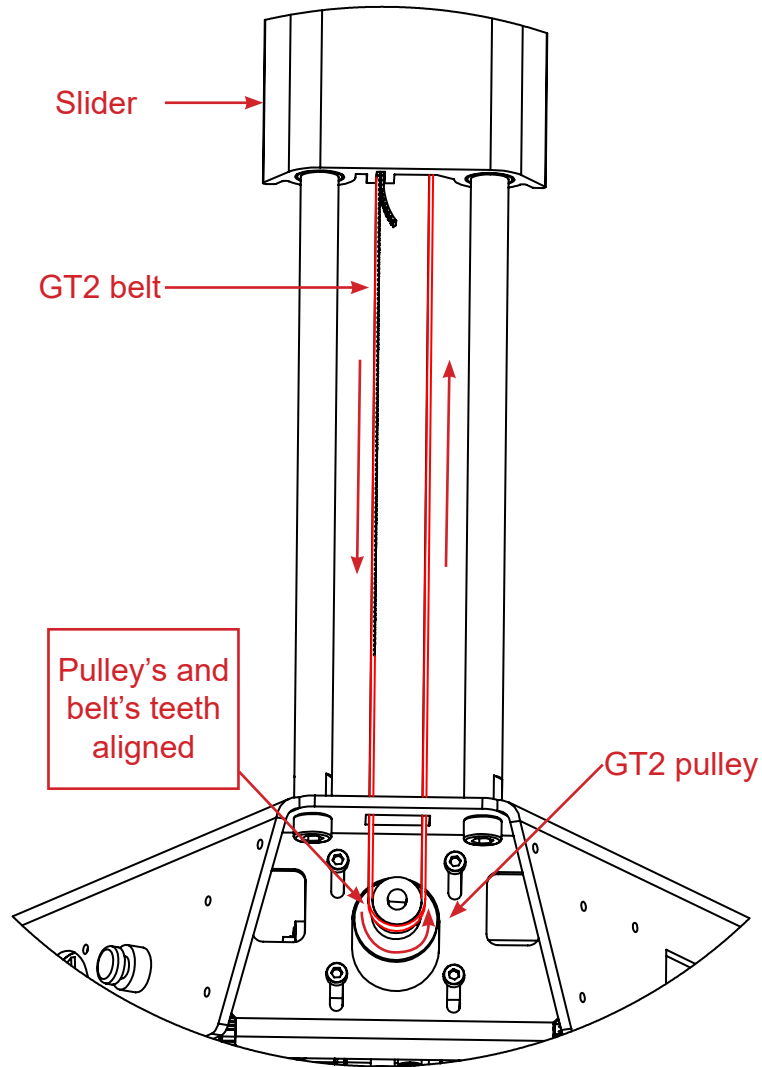
7



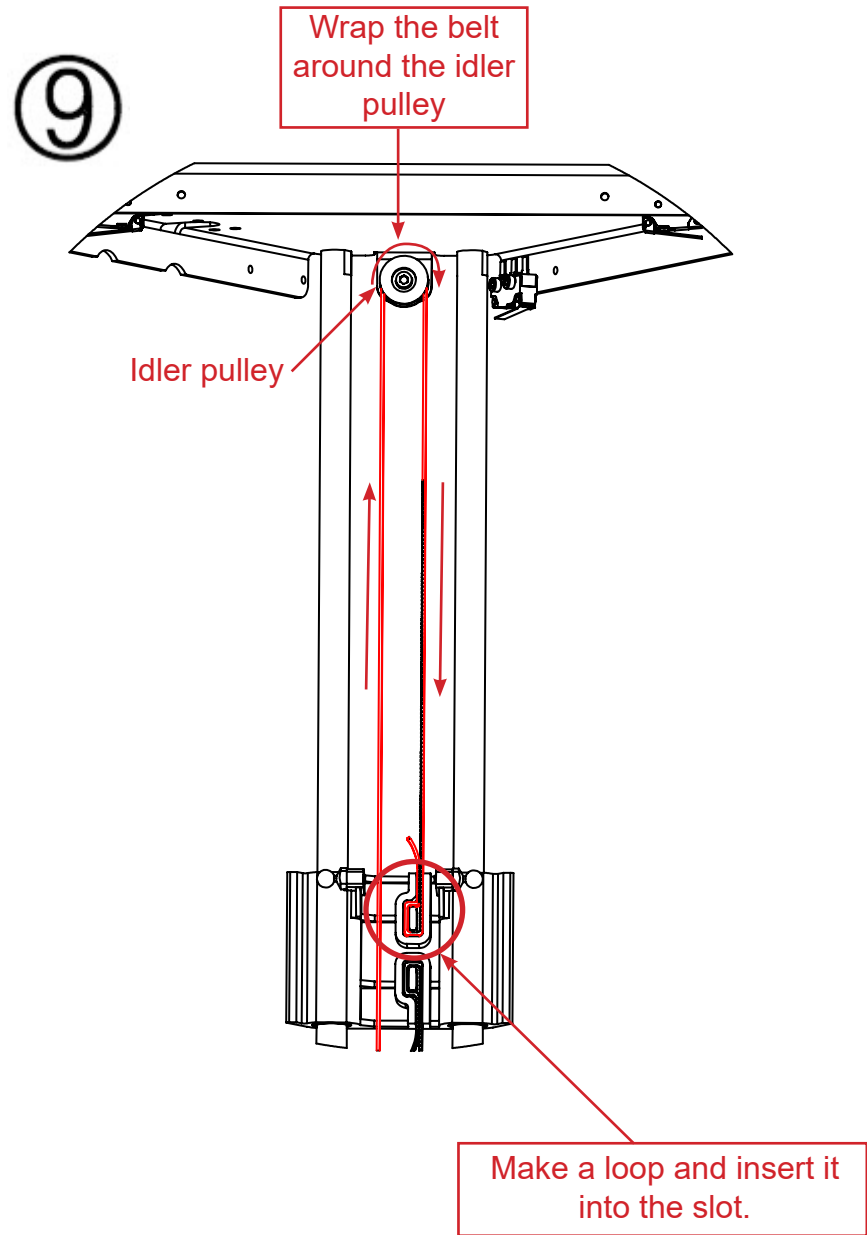
Result



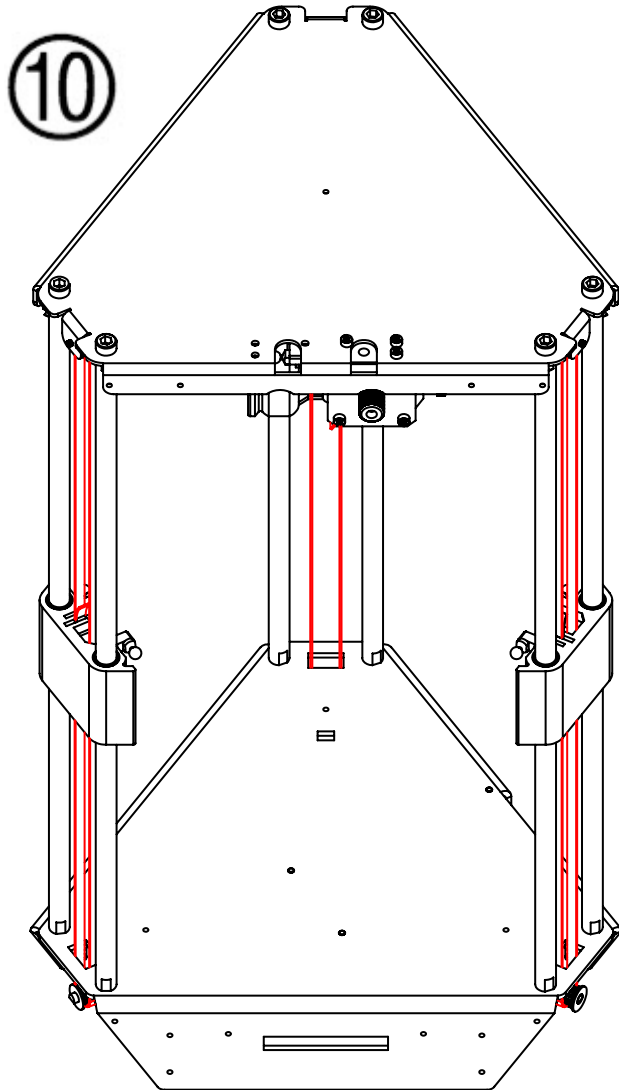
⑧



⑨

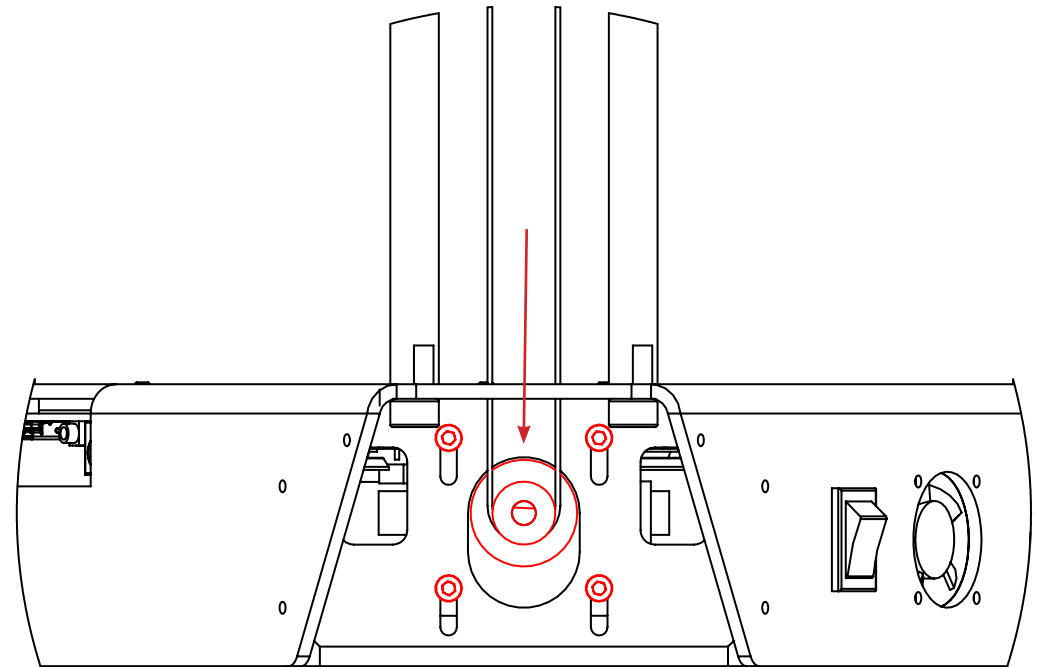


Mount a belt on each axis.



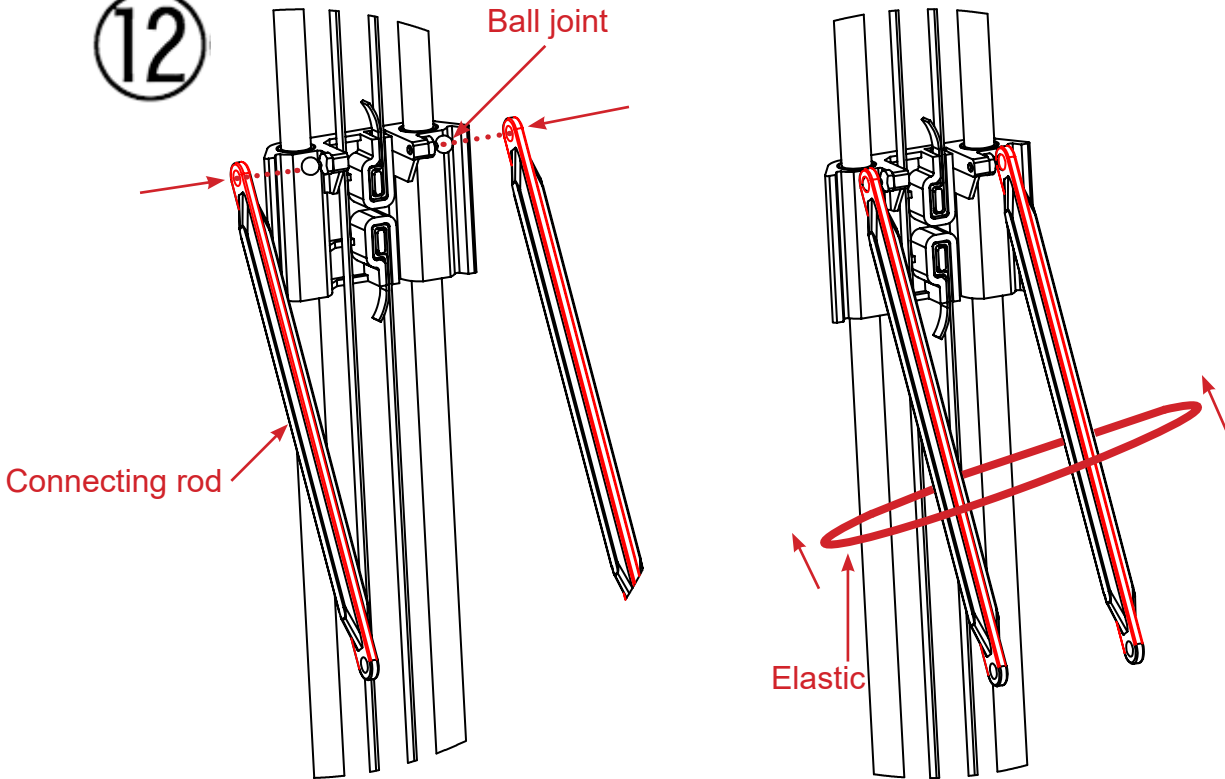
11

- 1) Loosen the screw holding the motor
- 2) Press the motor down **for tensioning the belt**
- 3) Tighten the four screws



Target : clip the connecting rods on the sliders ball joints

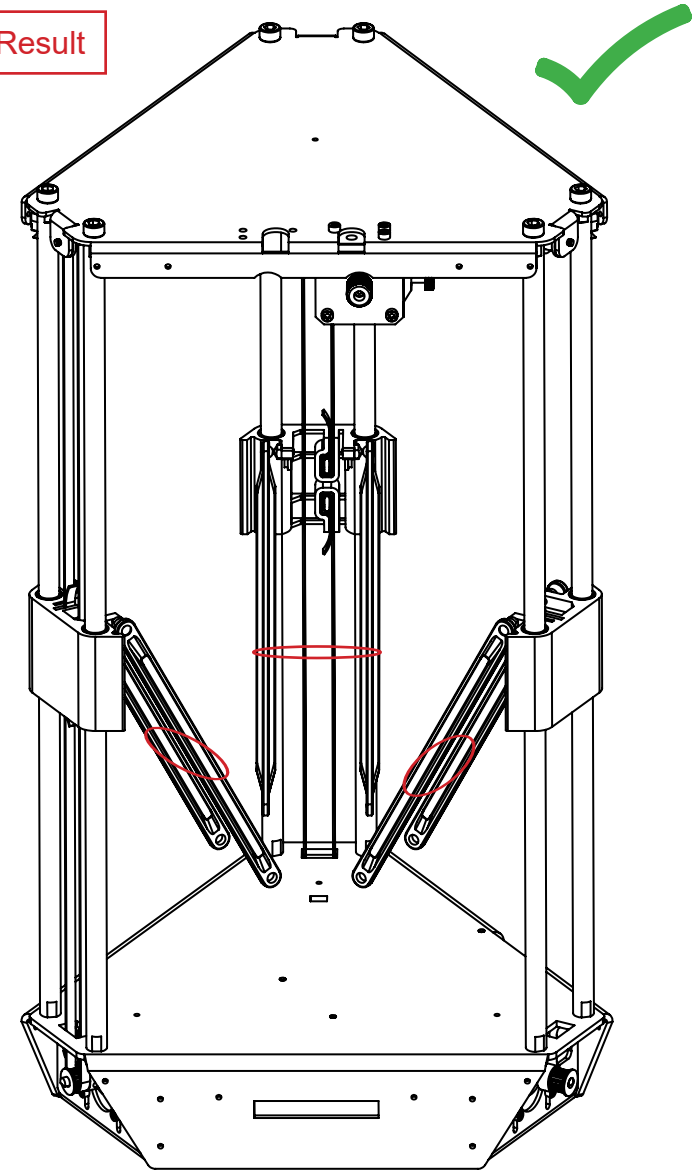
12



3X*

- Clip the connecting rods on the ball joints
- Put the 3 elastic bands around the connecting rods.

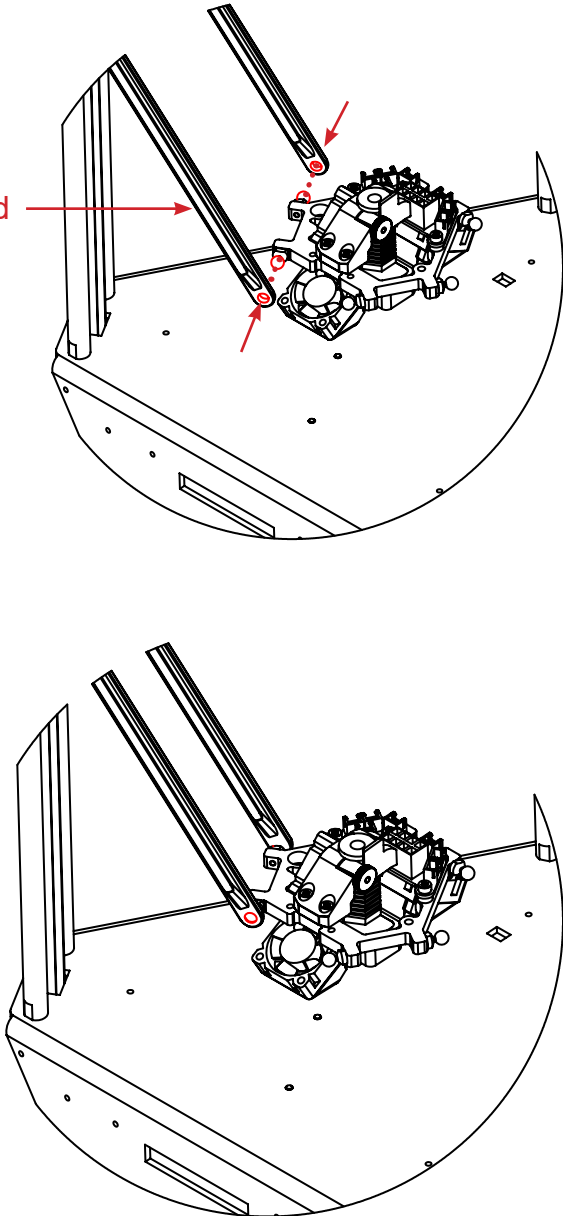
Result



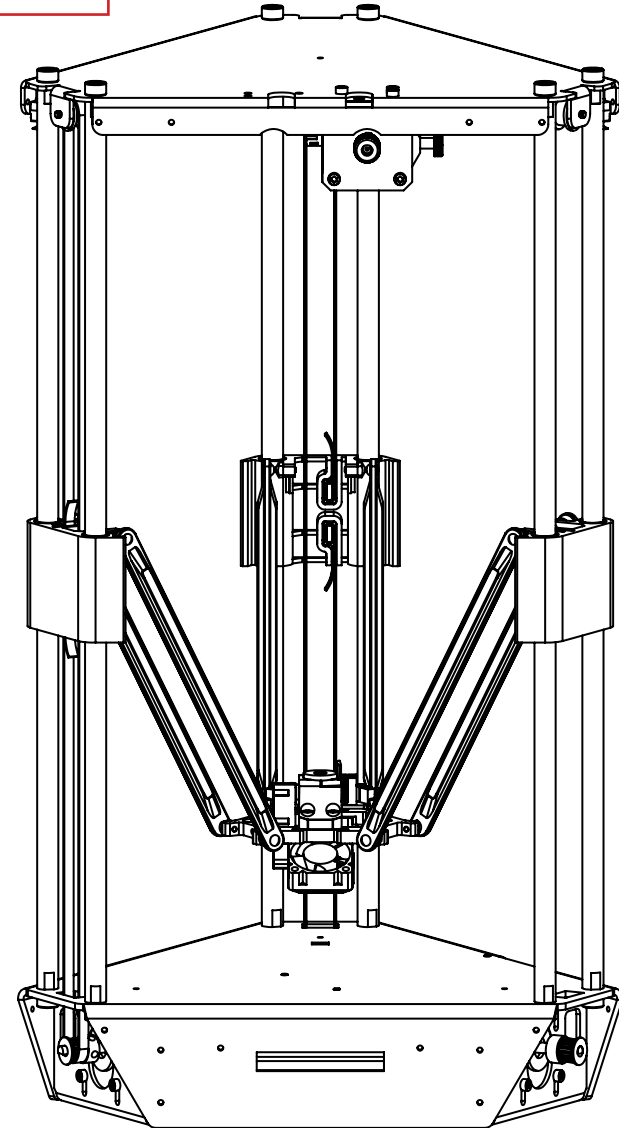
Target : clip the connecting rods on the ball joints of the core

13

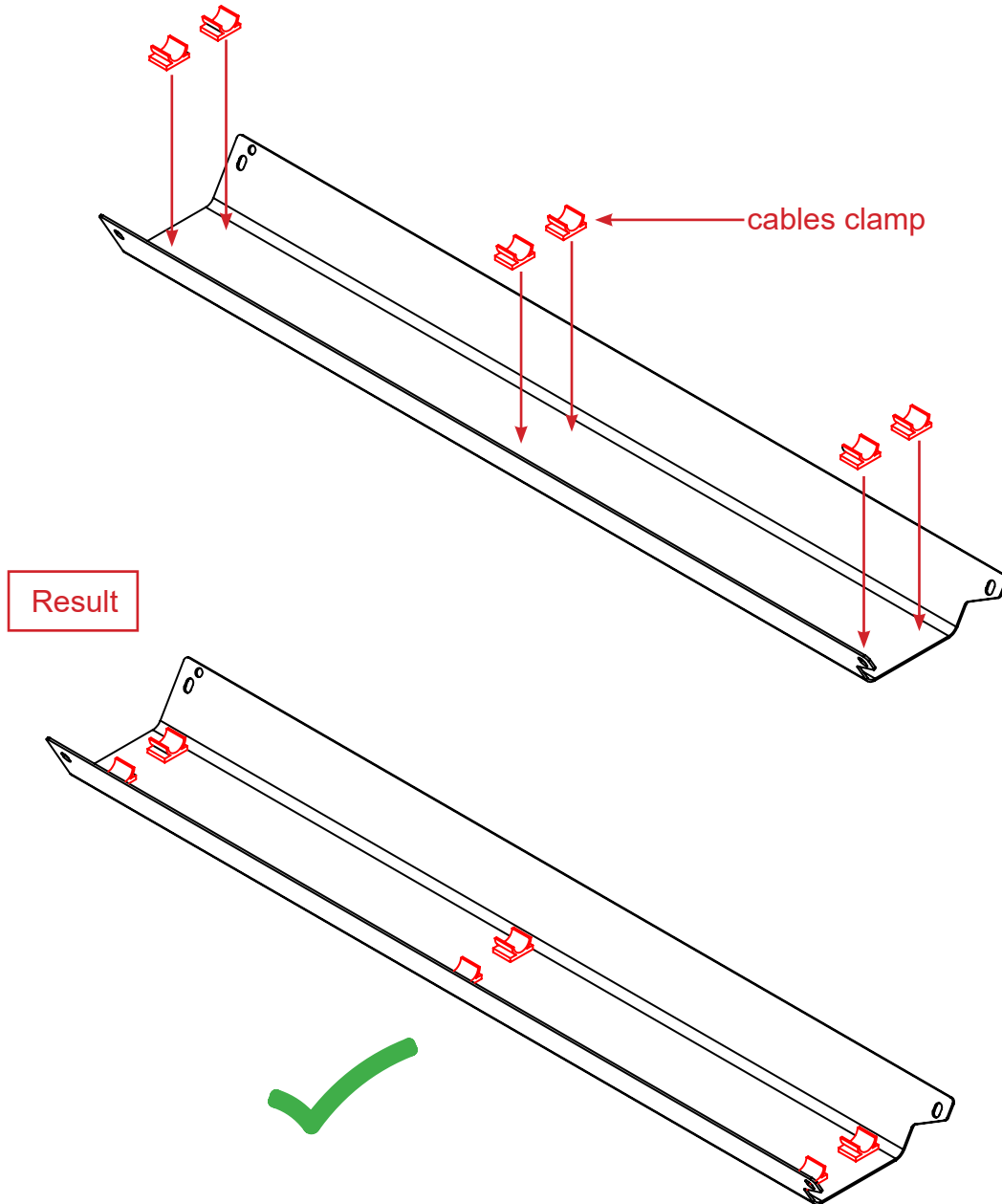
Connecting rod



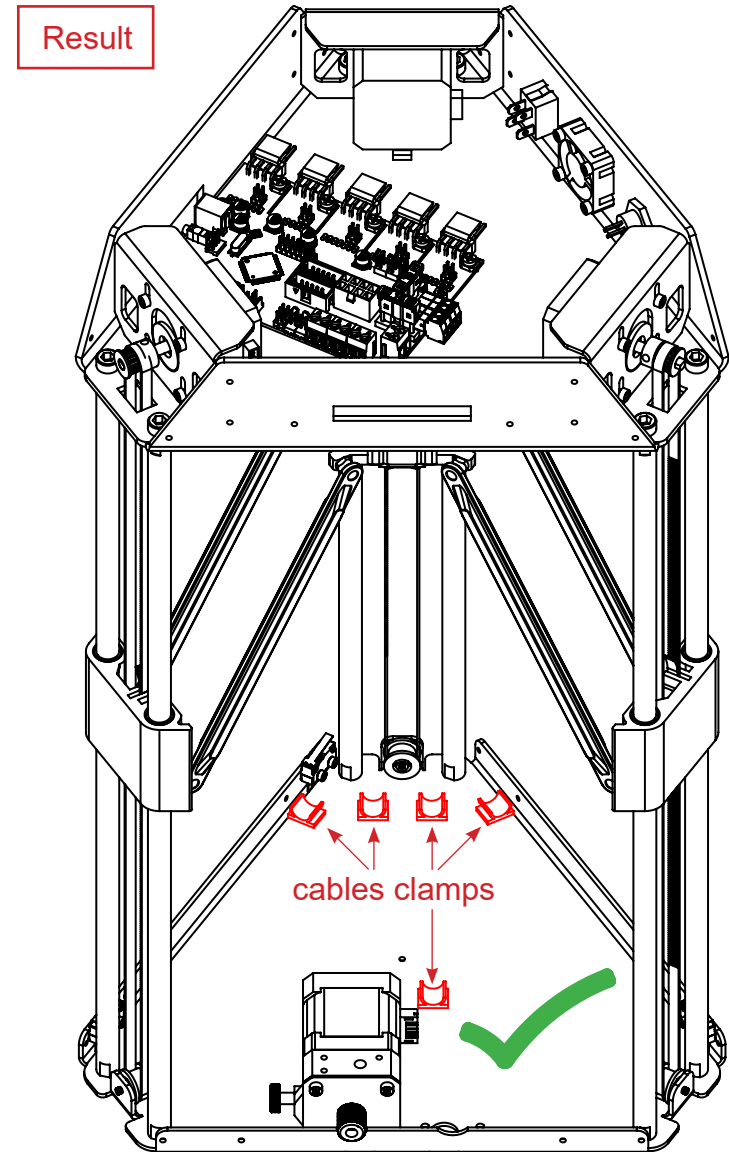
Result



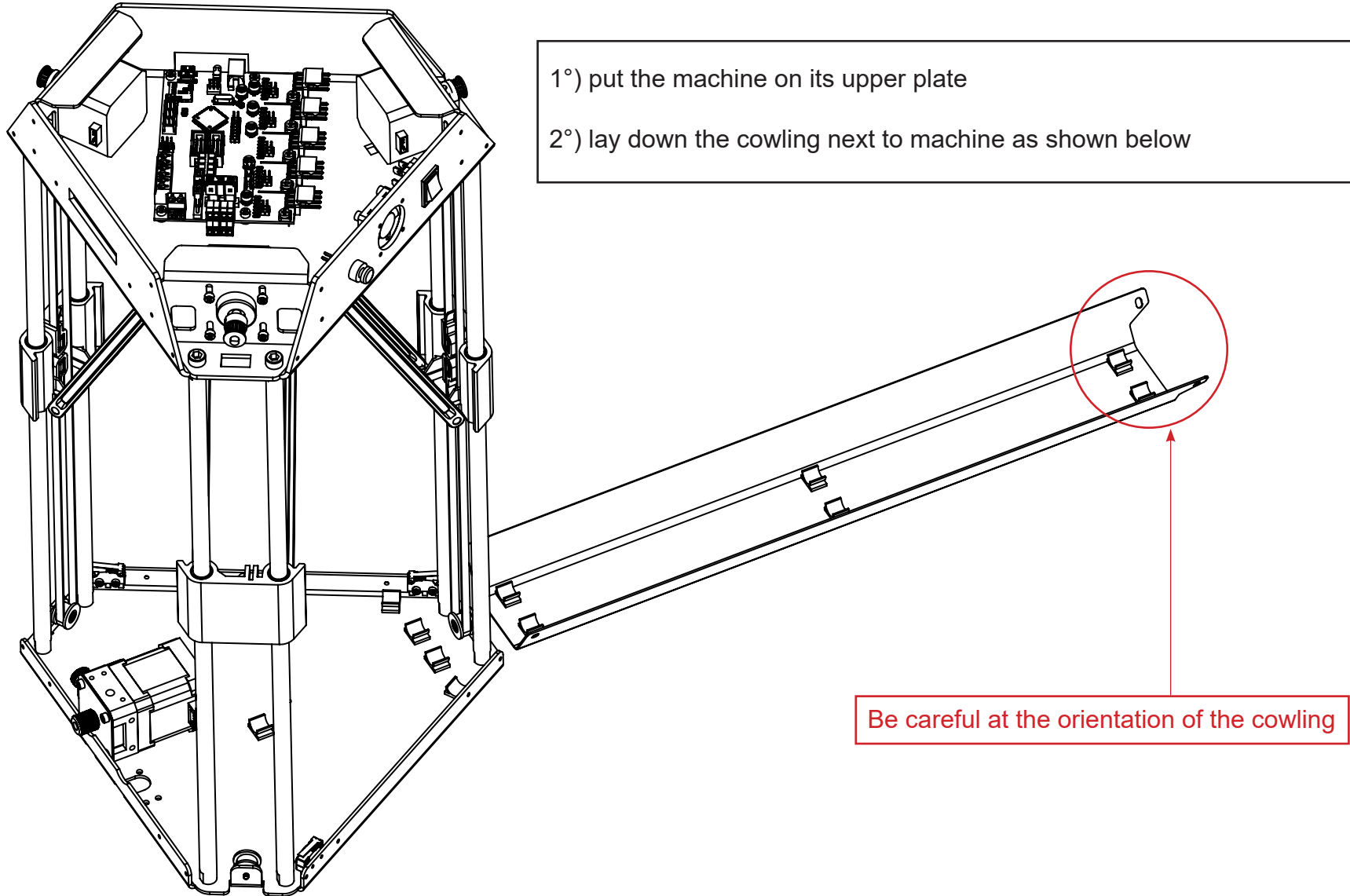
Target : stick cable clamps on the cowling



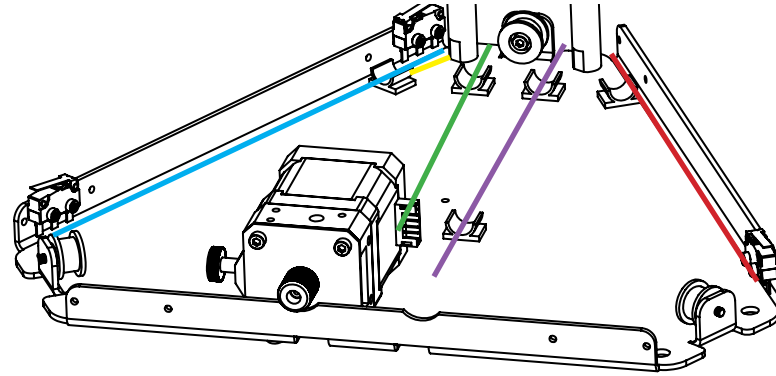
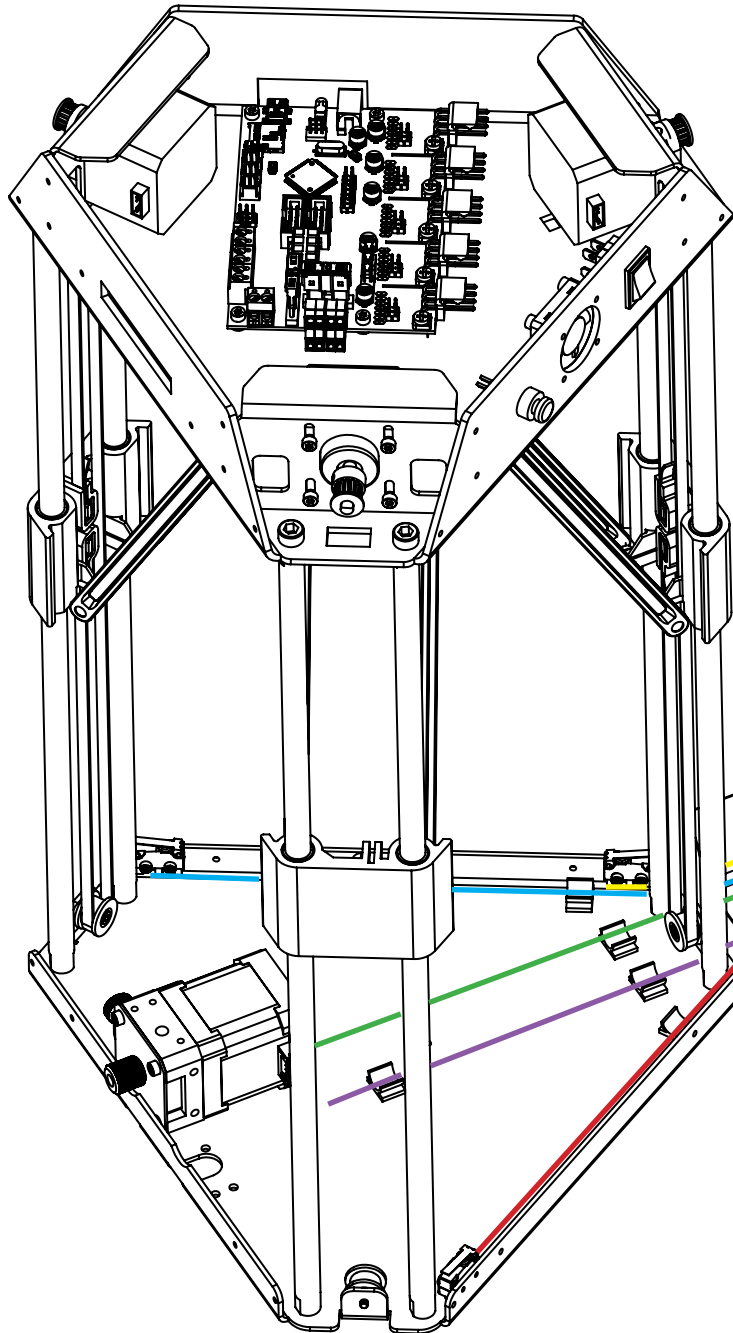
Target : stick the cable clamps on the upper plate



Target : prepare the machine and the cowling before wiring



Target : organize the cables from the upper plate through the cowling



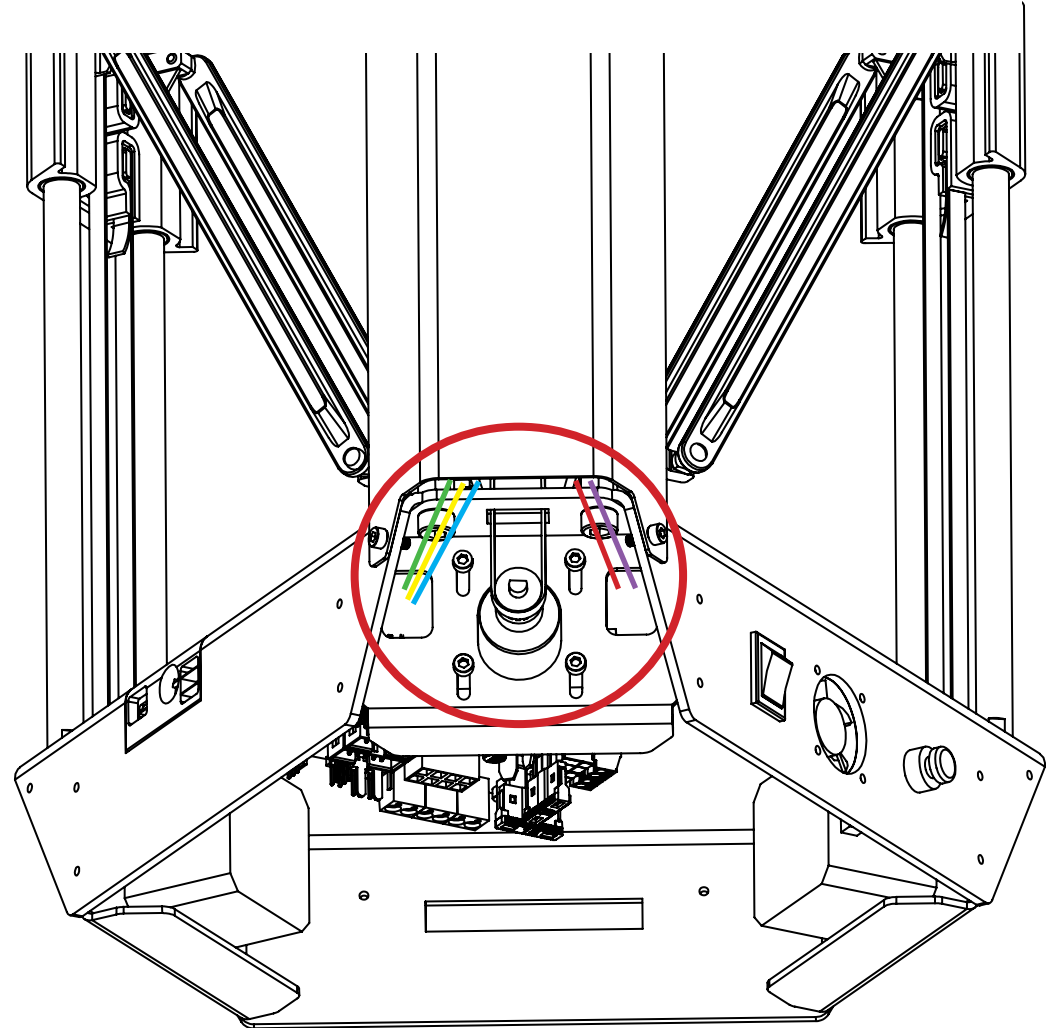
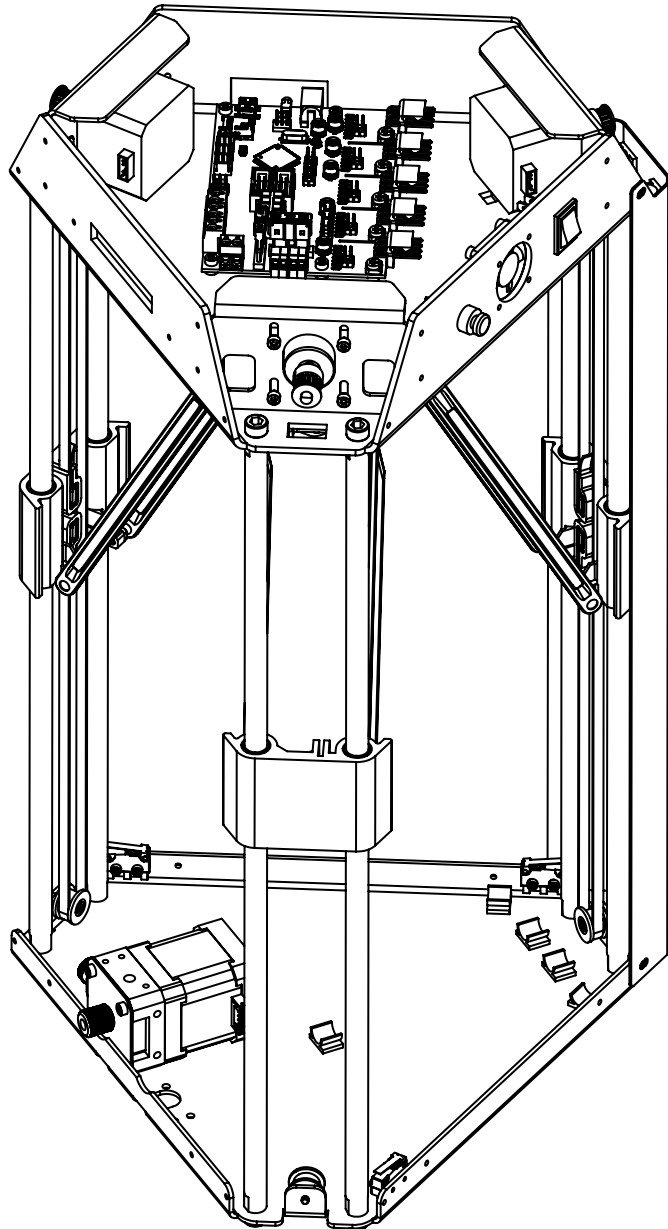
The core's extension must exceed 30 cm from this level.

30 cm

- Red : Alpha axis endstop
- Blue : Bêta axis endstop
- Yellow : Gamma axis endstop
- Purple : core's extension
- Green : extrusion motor wire

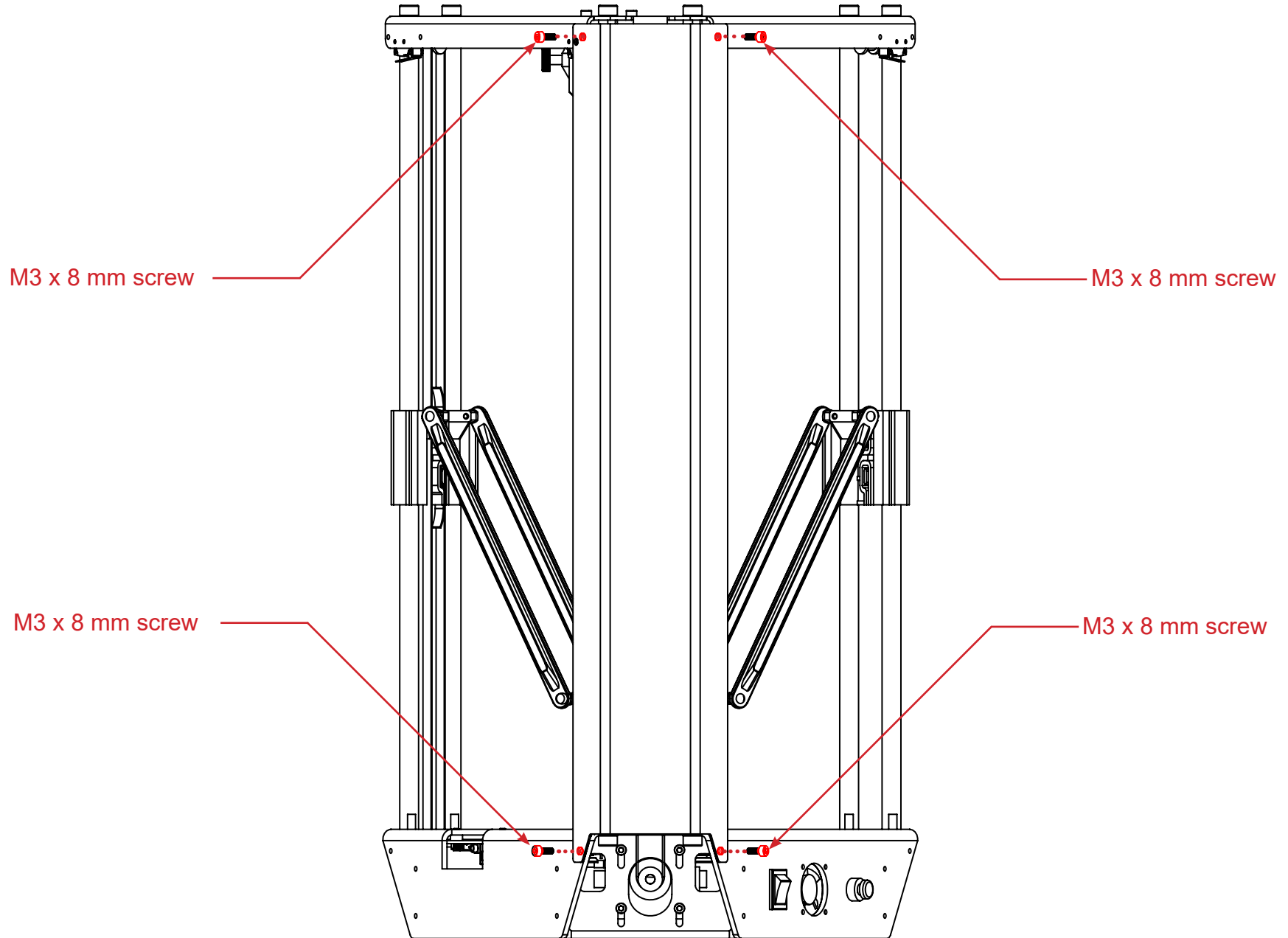
The colors are purely indicative. No cables are colored. Only some connectors are to facilitate further assembly.

Stand up the cowling along the Z axis

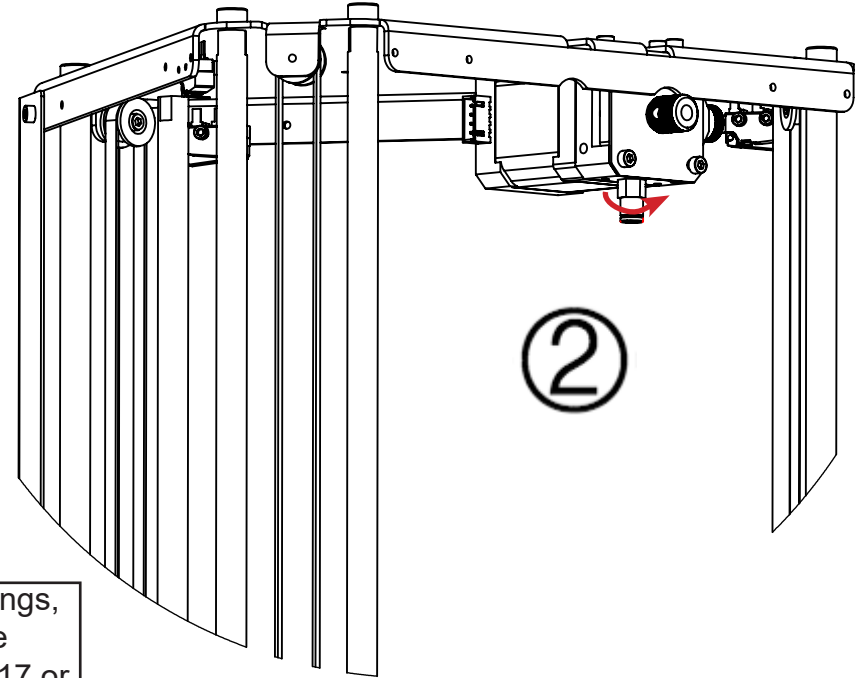
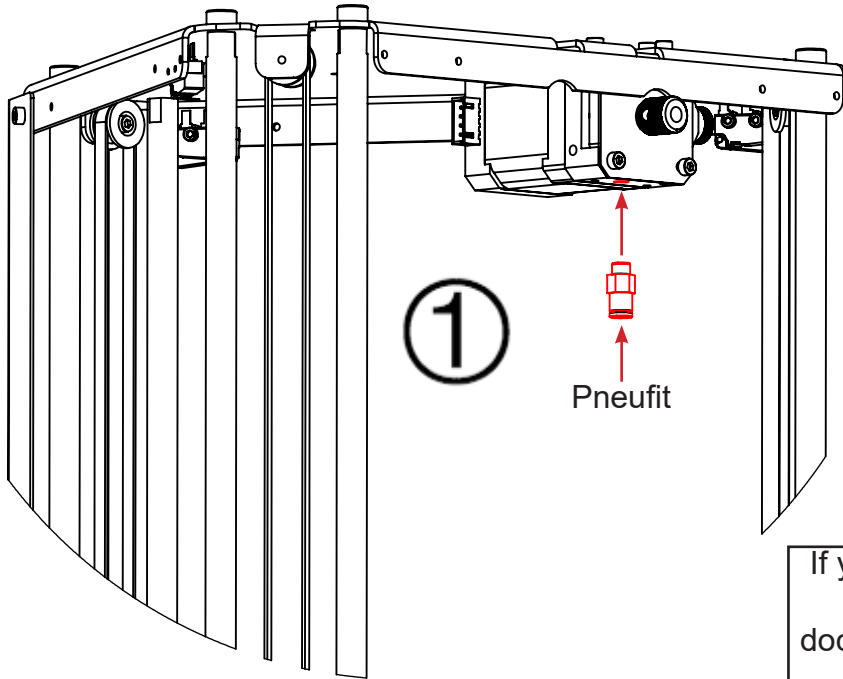


Route the cables through the two dedicated holes as shown above.

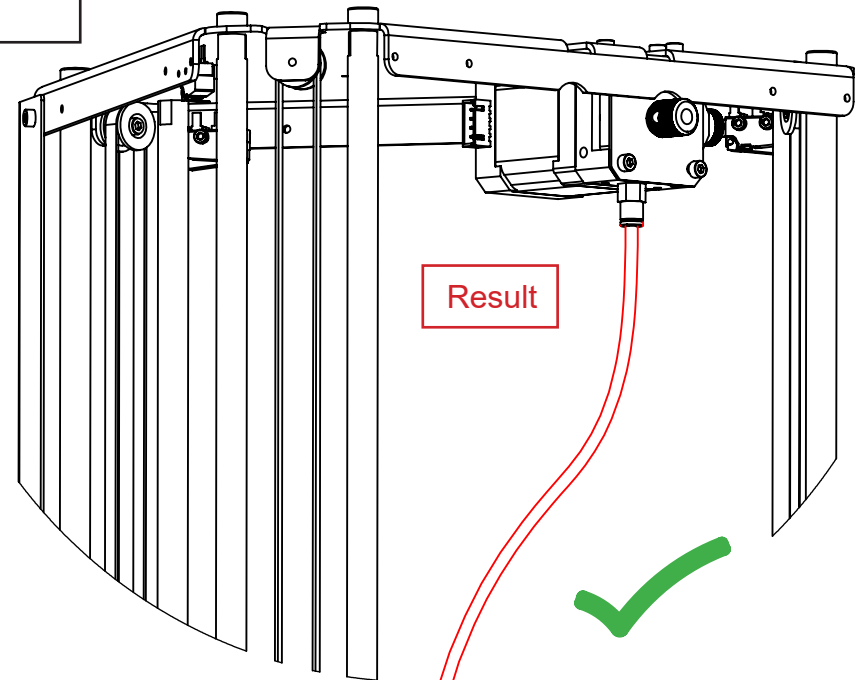
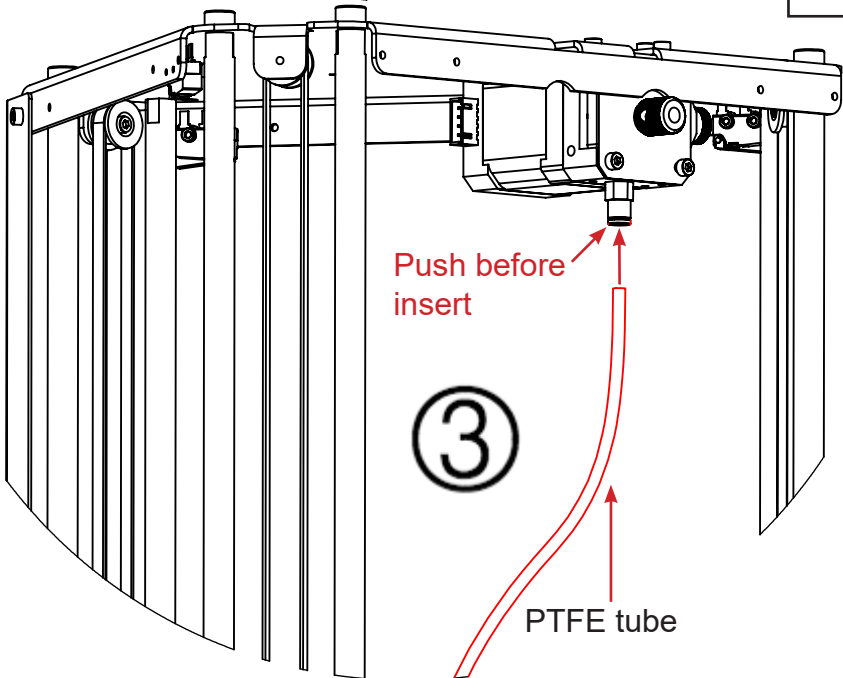
Target : Fix the cowling to the machine

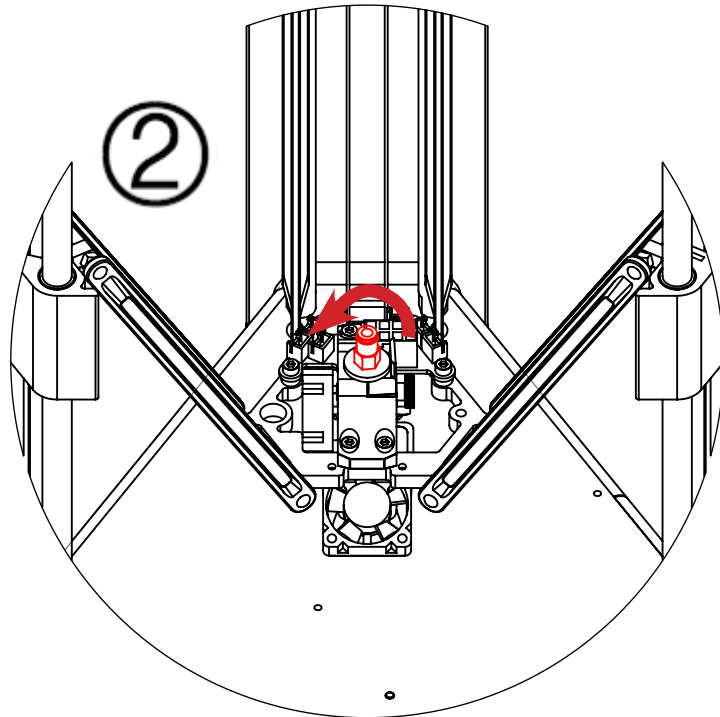
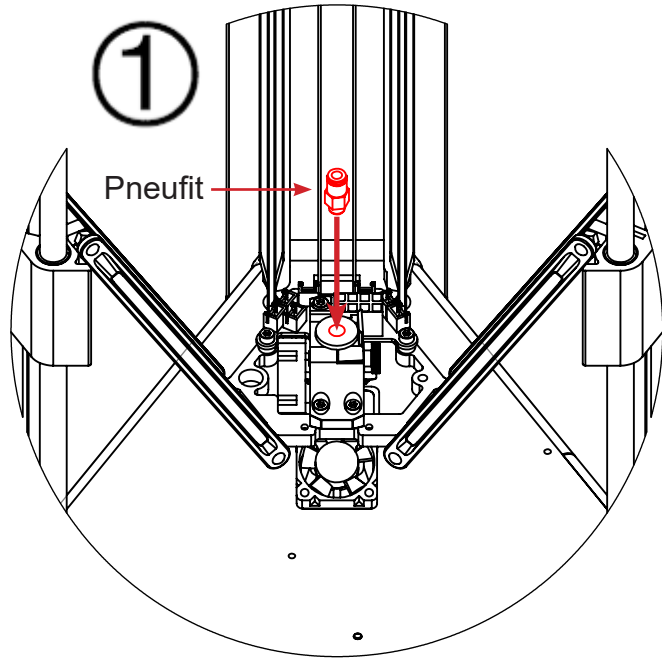


Target : install the PTFE tube and pneufits on the 3D printer

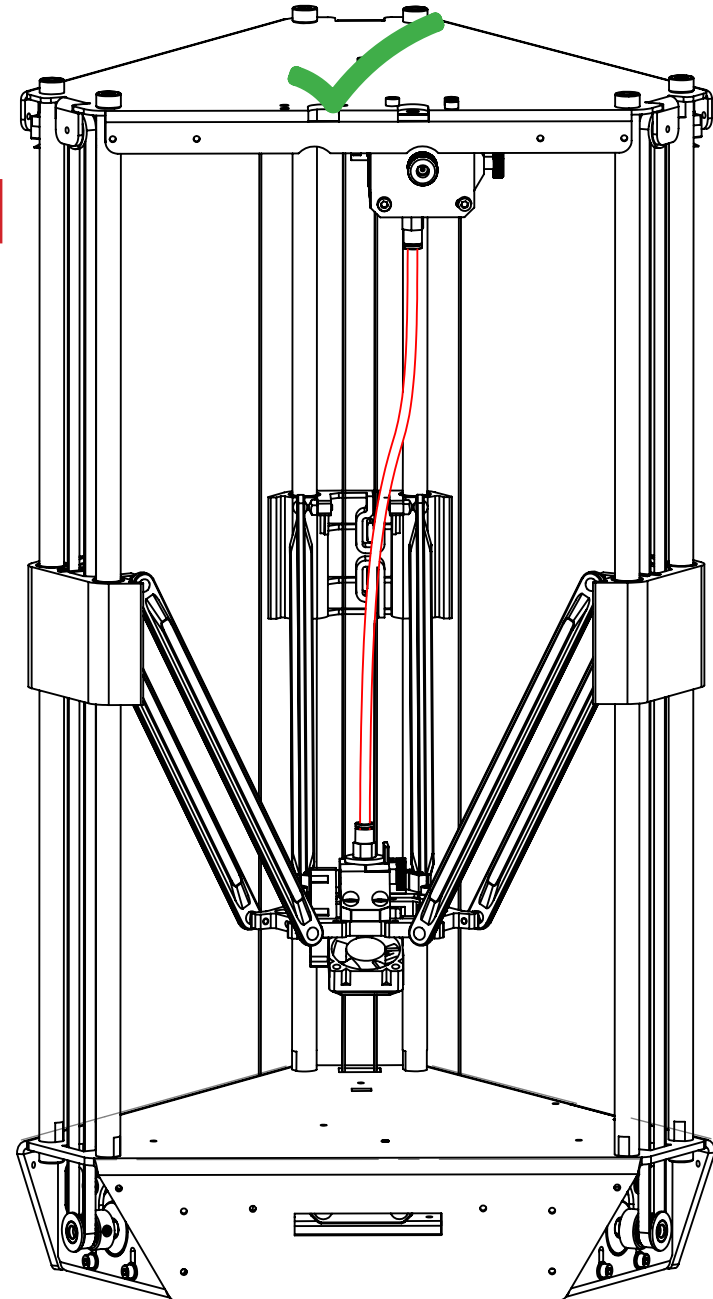


If you have olive fittings,
please follow the
documentation v1.1.17 or
lower

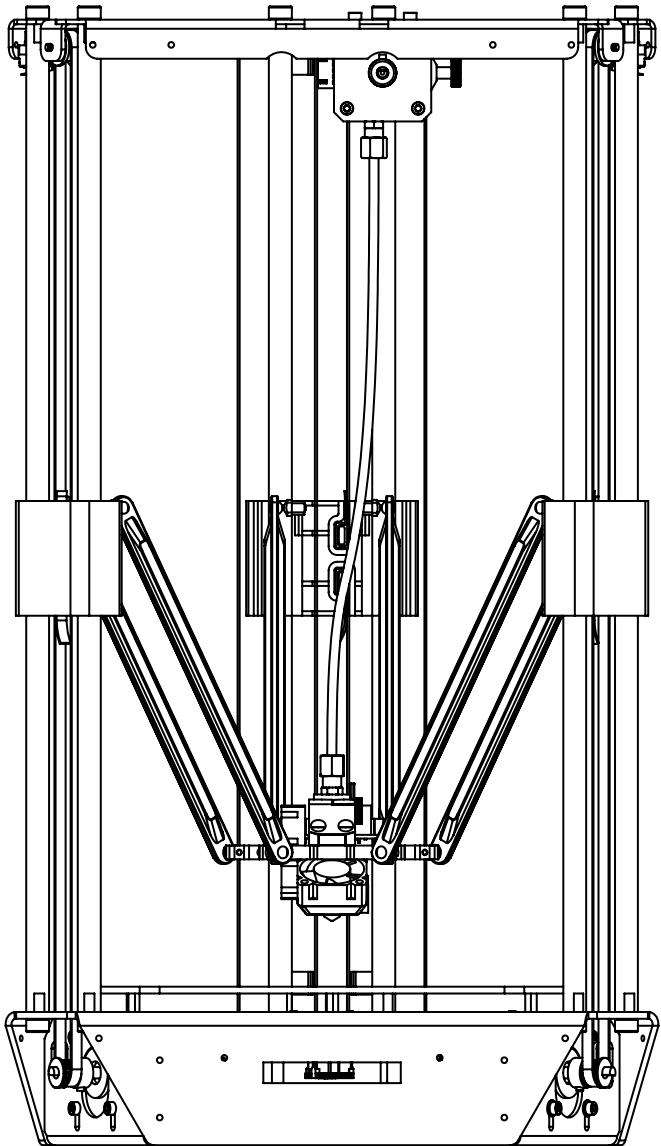




Result

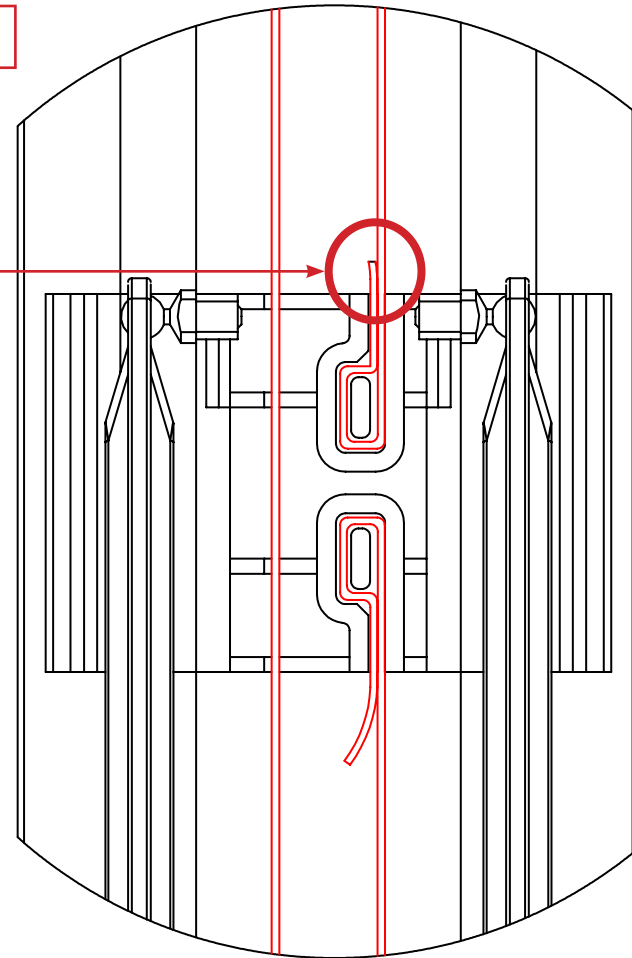


Target : cut the belt to prevent it sticking in the idler pulley



Cut the belt as much as you can of the exceeding belt Maximum 5mm should be left.

Result



BED LEVELING SENSOR ASSEMBLY

Needed parts :

- 1 x Leveling sensor holder
- 1x Bed Leveling sensor
- 2x M2.5x12 screw
- 1x M3x12 screw
- 1x Knurled nut

Target : assemble the bed leveling sensor to perform the bed calibration operation

①

Mount the bed leveling sensor on the leveling sensor holder as shown below. Screw the M3x12 screw in its dedicated place

M2.5x12 screw

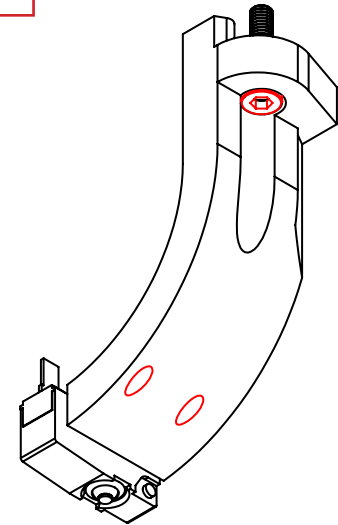
M3x12 screw

Leveling sensor holder

Bed leveling sensor

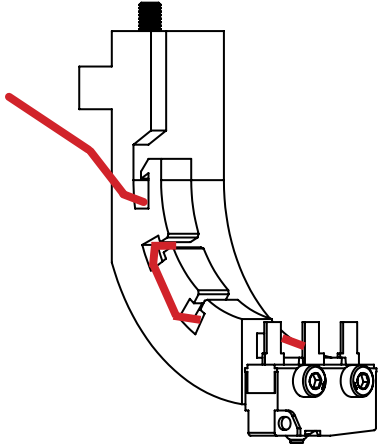
Pay attention to the sensor's orientation

Result



Route the sensor's cable through its dedicated slots on the leveling sensor holder.

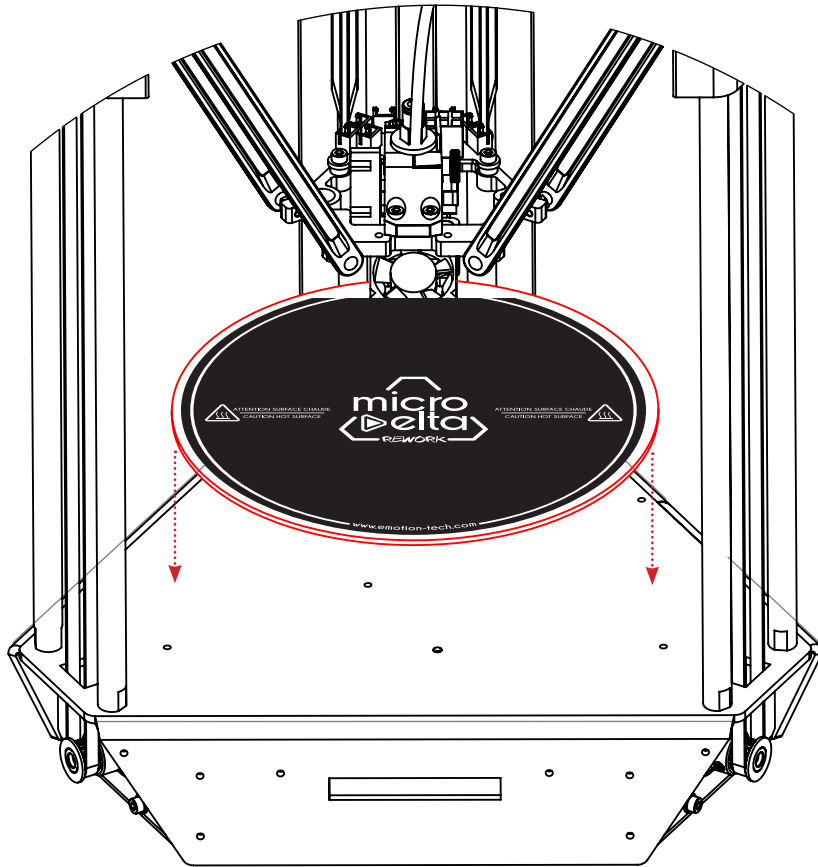
②



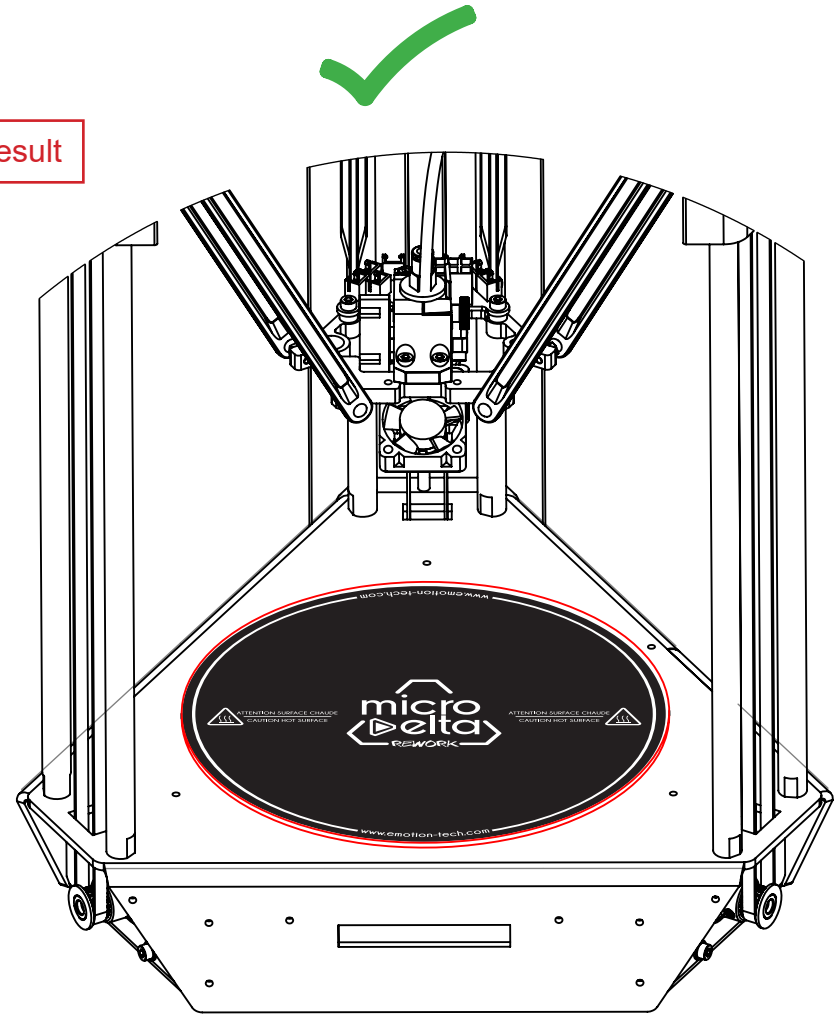
NOTE:

This assembly will subsequently be used to calibrate the printer, more precisely to level the printing surface in order to obtain an identical first layer height over the entire printing plate. Instructions of use of this item will be detailed in the user's guide.

Target: fixation and orientation of the 3dBedFix (in the case of a printer without heaved)



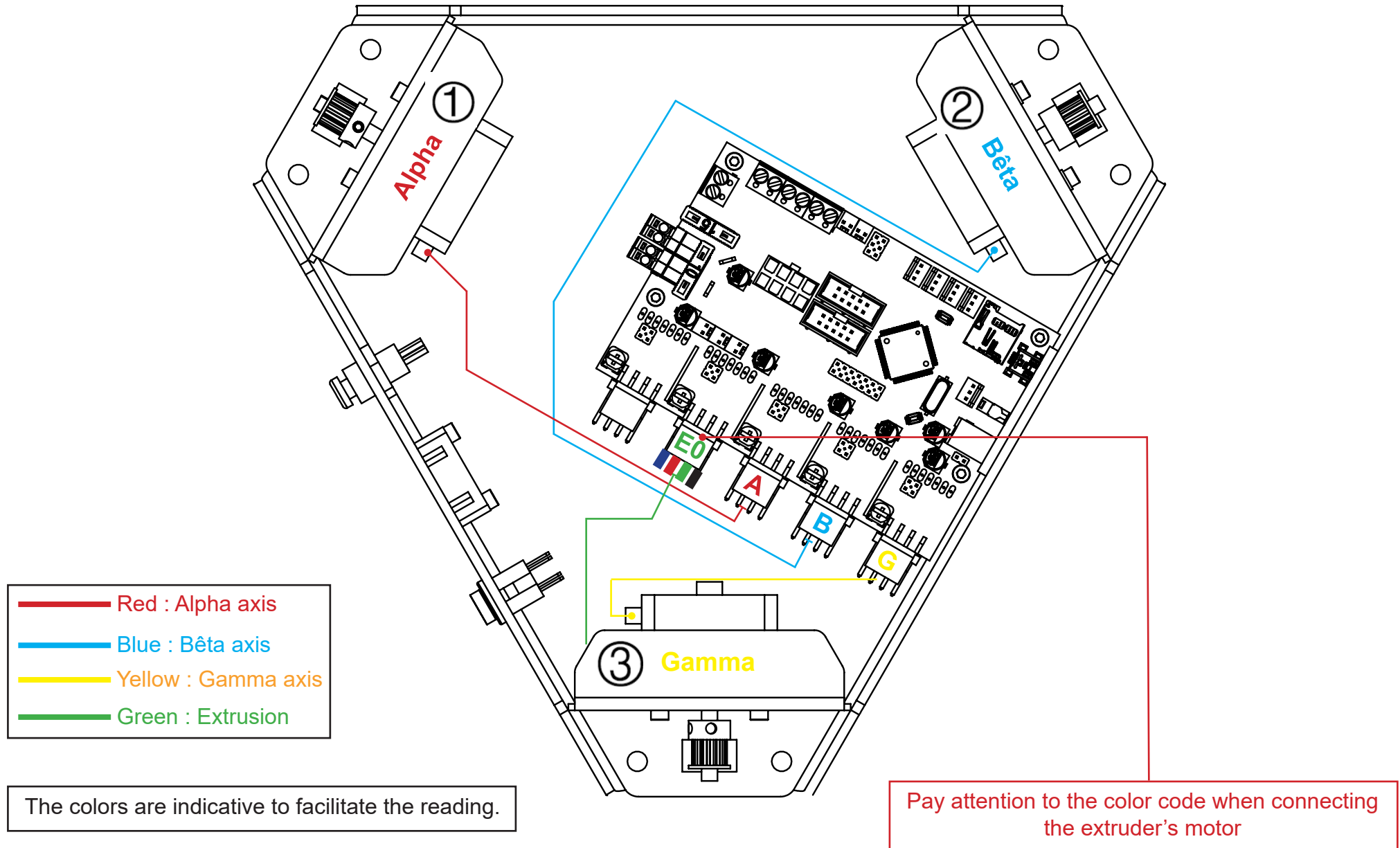
Result



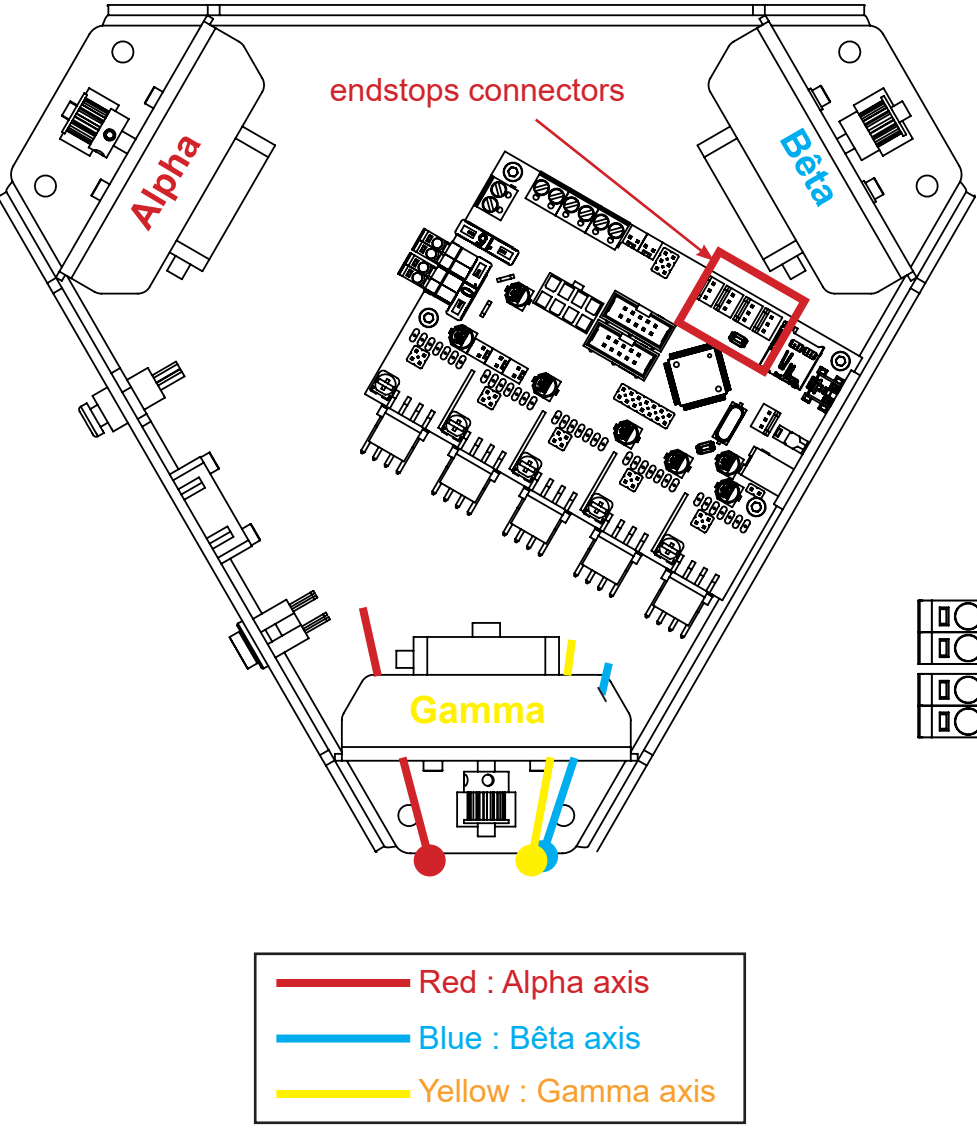


ELECTRONIC ASSEMBLY

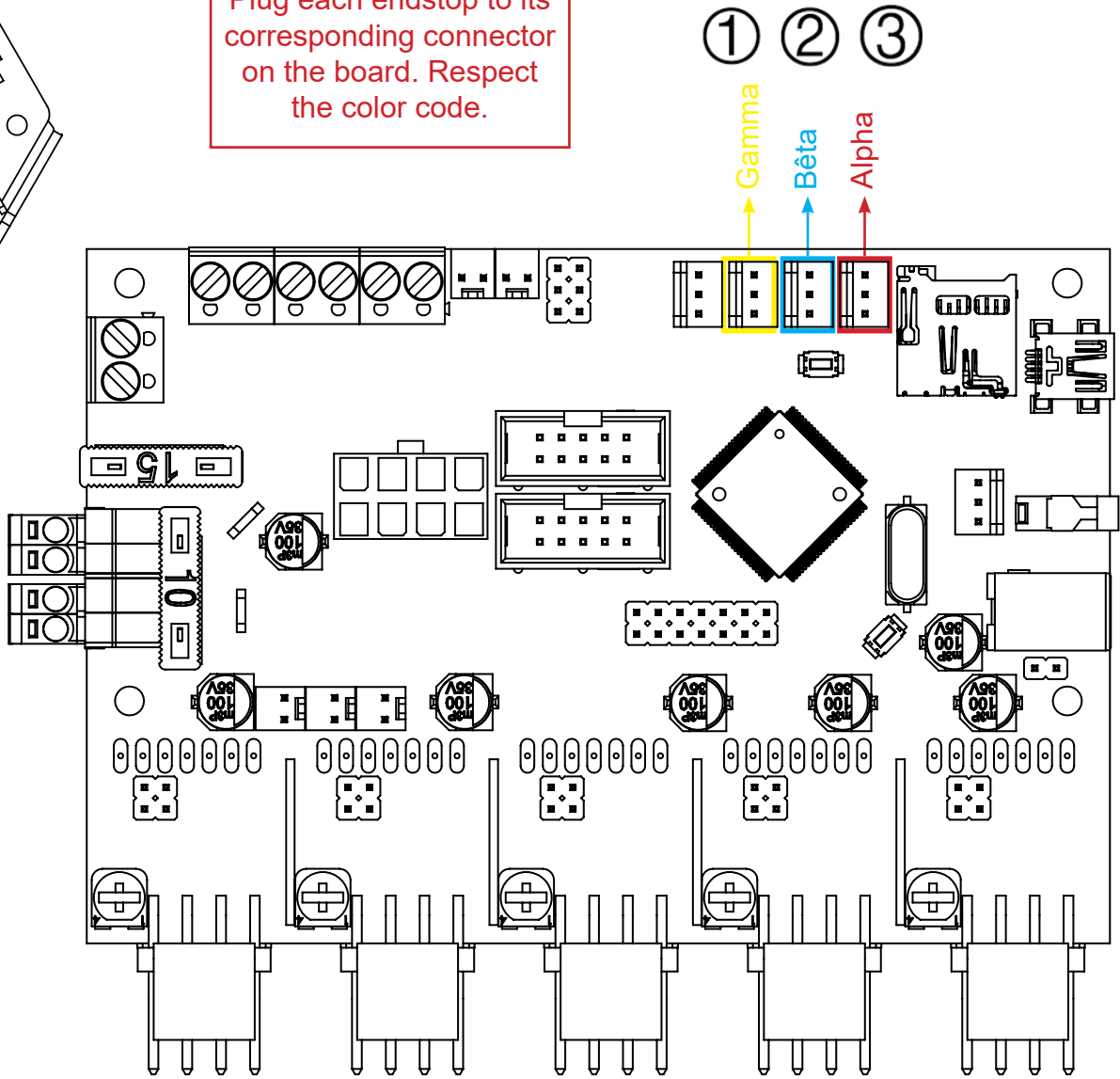
Target : connect the stepper motors to the eMotronic



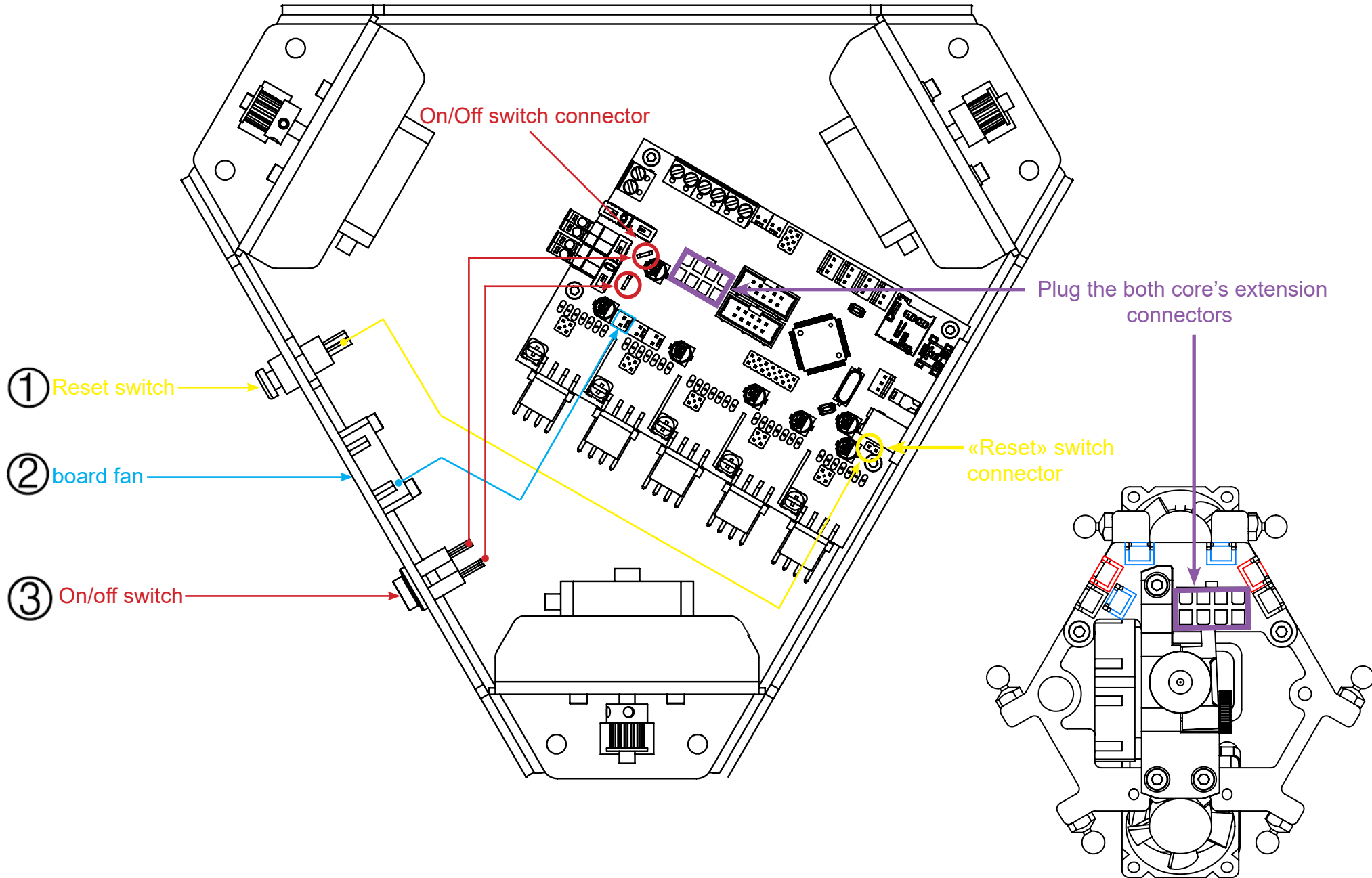
Target : connect the endstops to the eMotronic board



Plug each endstop to its corresponding connector on the board. Respect the color code.



Target : connect the core's extension cable, the «Reset» button, the On/Off switch and the board fan



CONGRATULATIONS !

Your 3D printer is now functional !

If you have options > please follow the dedicated section in the annexe.
If not, you can go to the user guide.



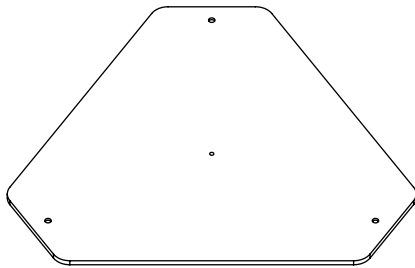


ANNEXE

HEATING BED

Needed parts :

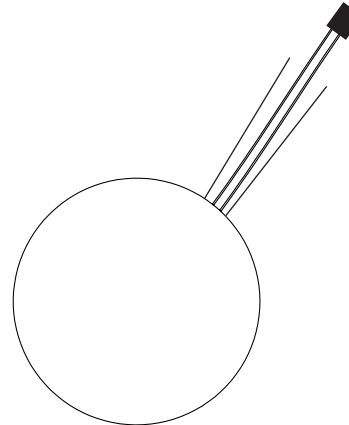
- 1 x Lower plate
- 1 x Heating patch
- 1 x Aluminium plate
- 3 x M3 x 8 mm countersunk screw
- 3 x Standoff spacer
- 1 x Adhesive patch«3dBedFix»



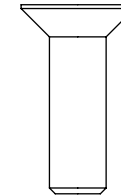
1 x Aluminium plate



3 x Standoff spacer



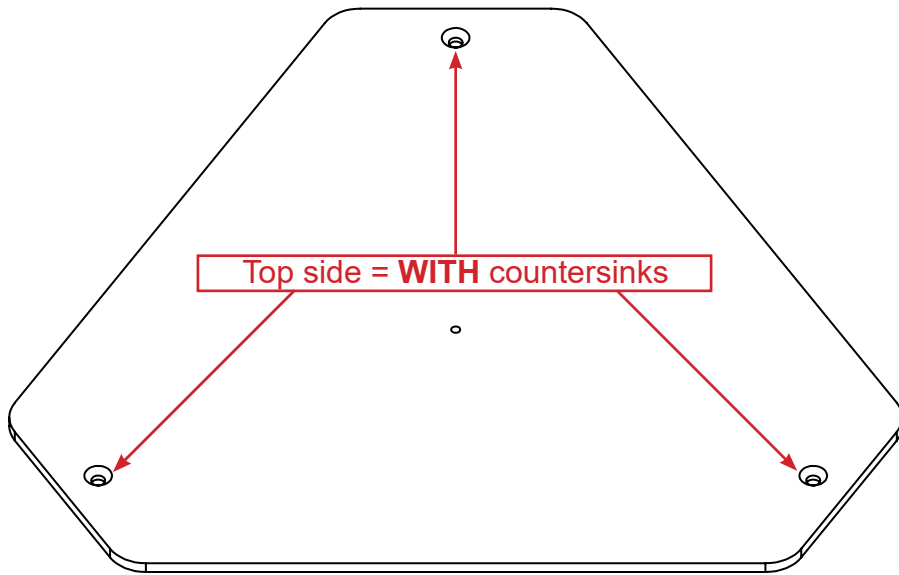
1 x Heating patch



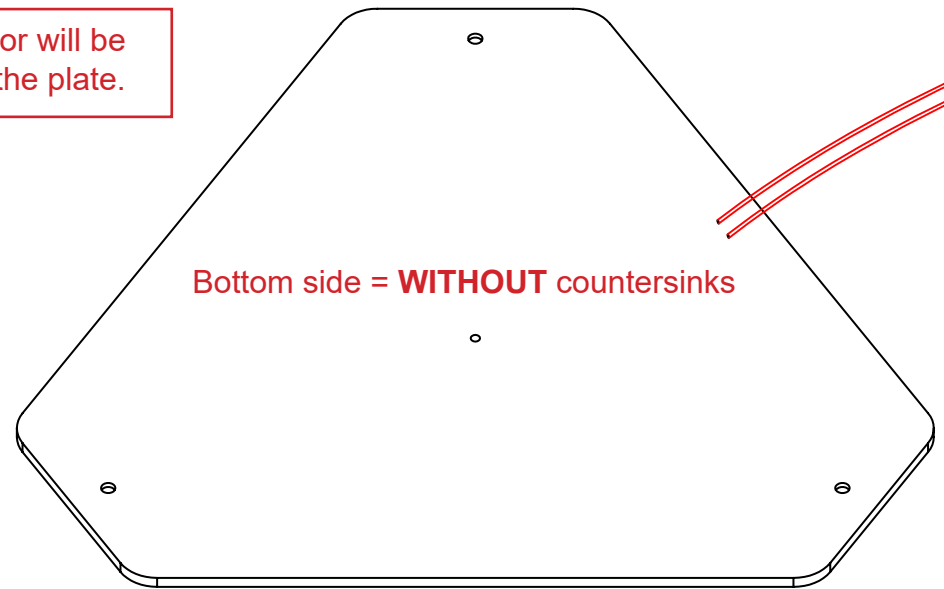
3 x M3 x 8 mm Counter-sunk screws



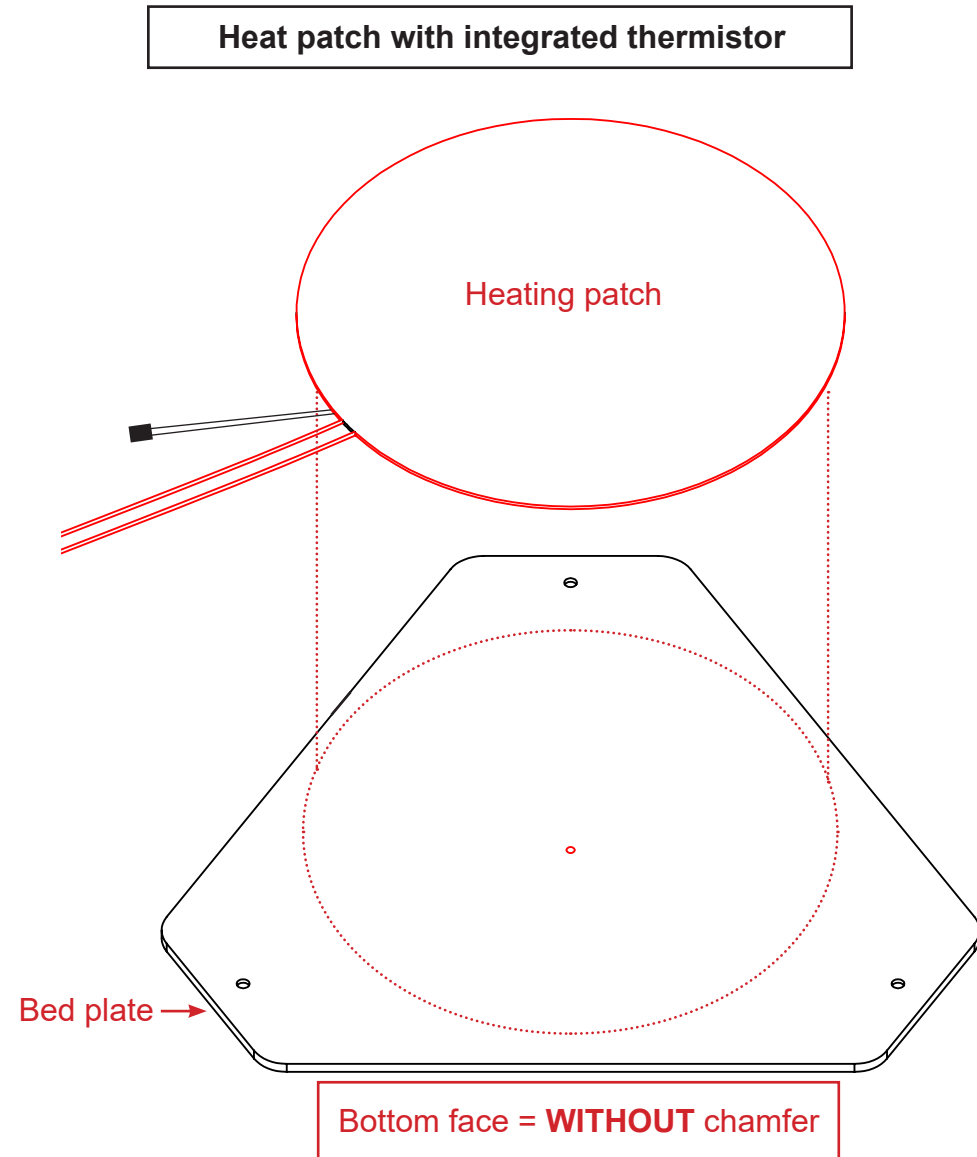
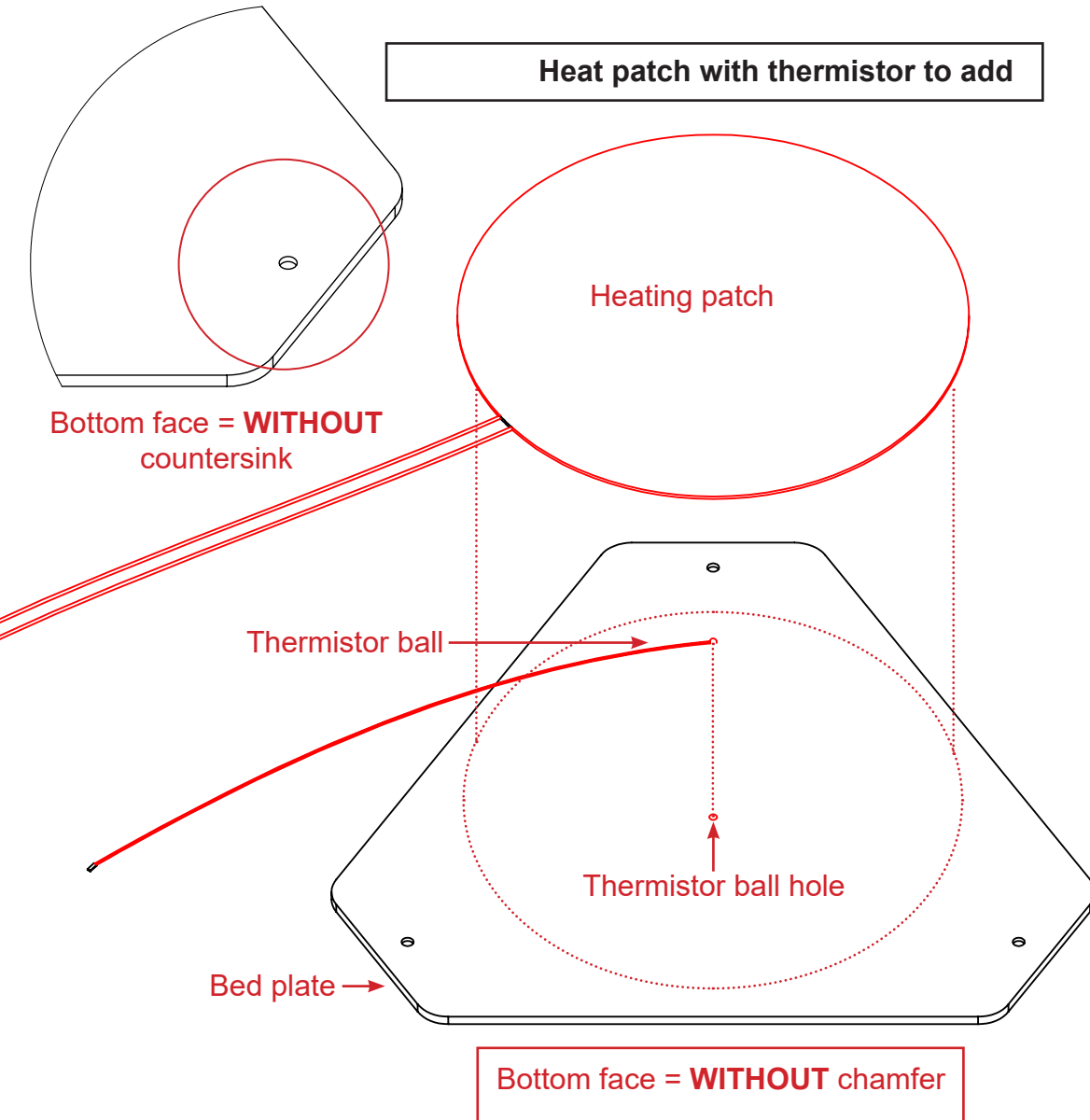
1 x 3DBedFix

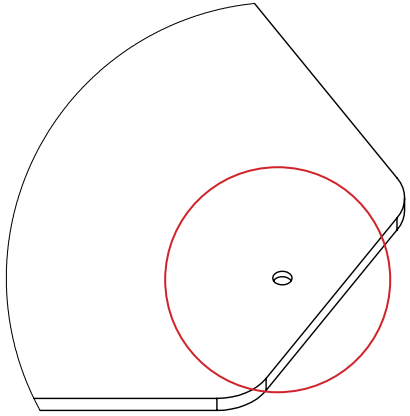


Heating patch and the thermistor will be fixed against the lower side of the plate.



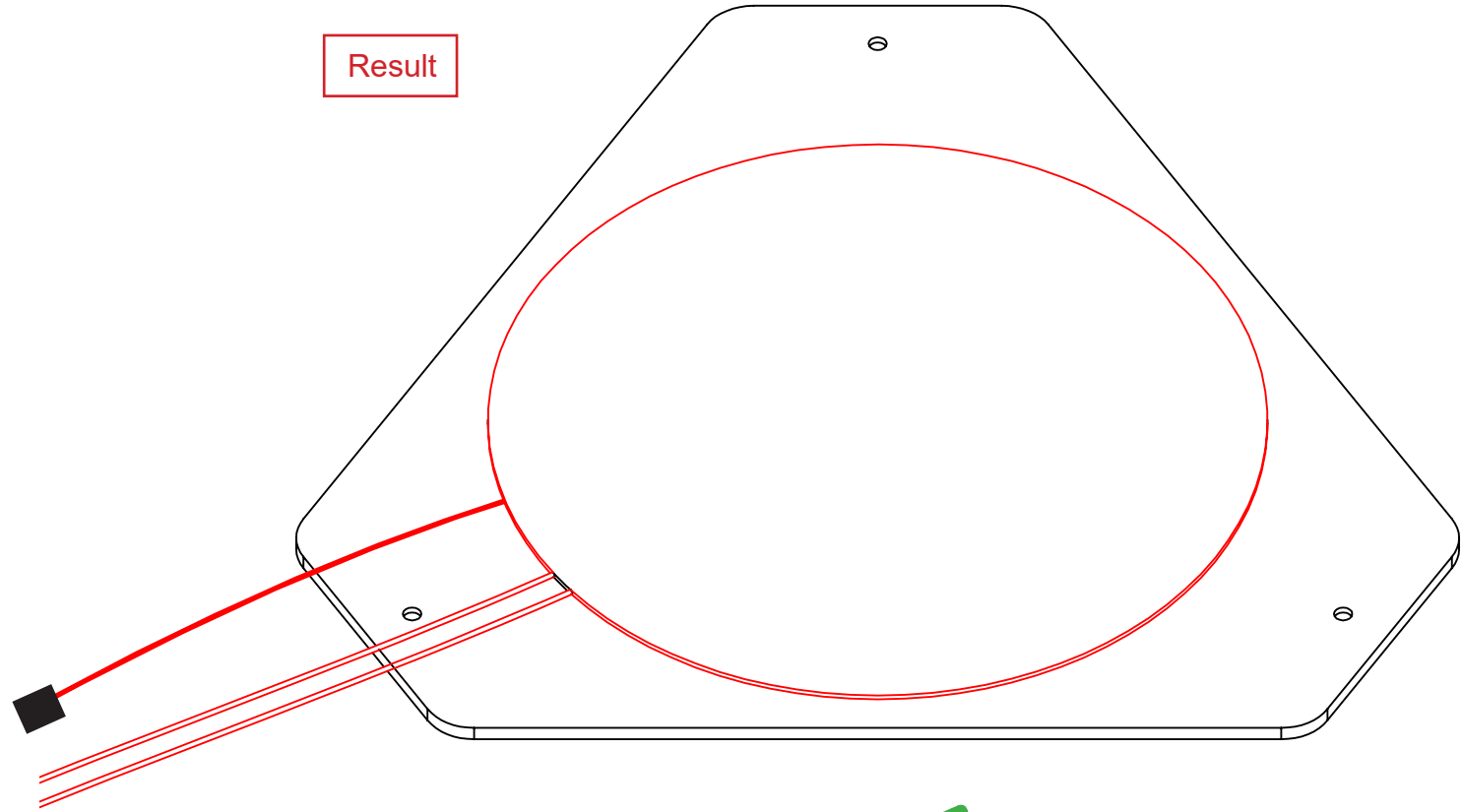
Target : assemble the aluminium plate, the heating patch and the thermistor (2 cases)



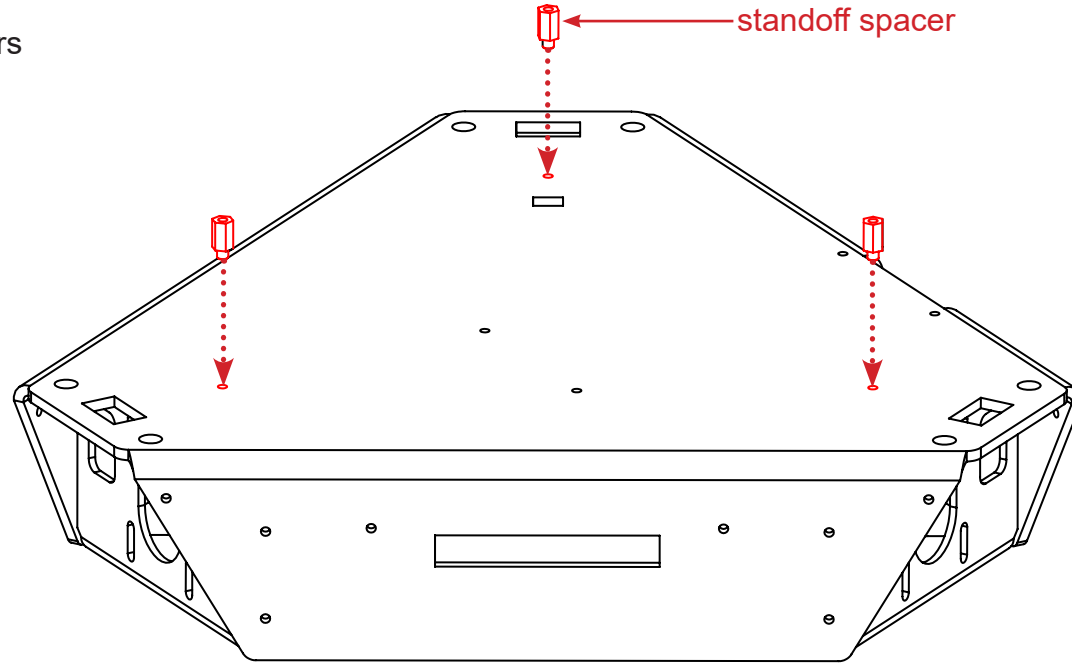


Bottom face = **WITHOUT** countersink

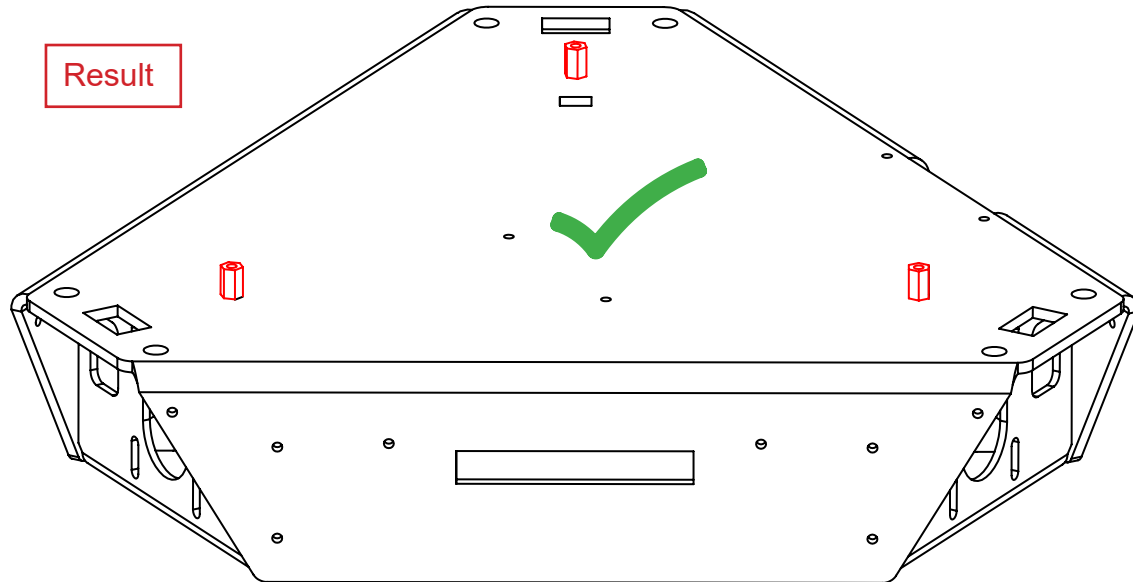
Result



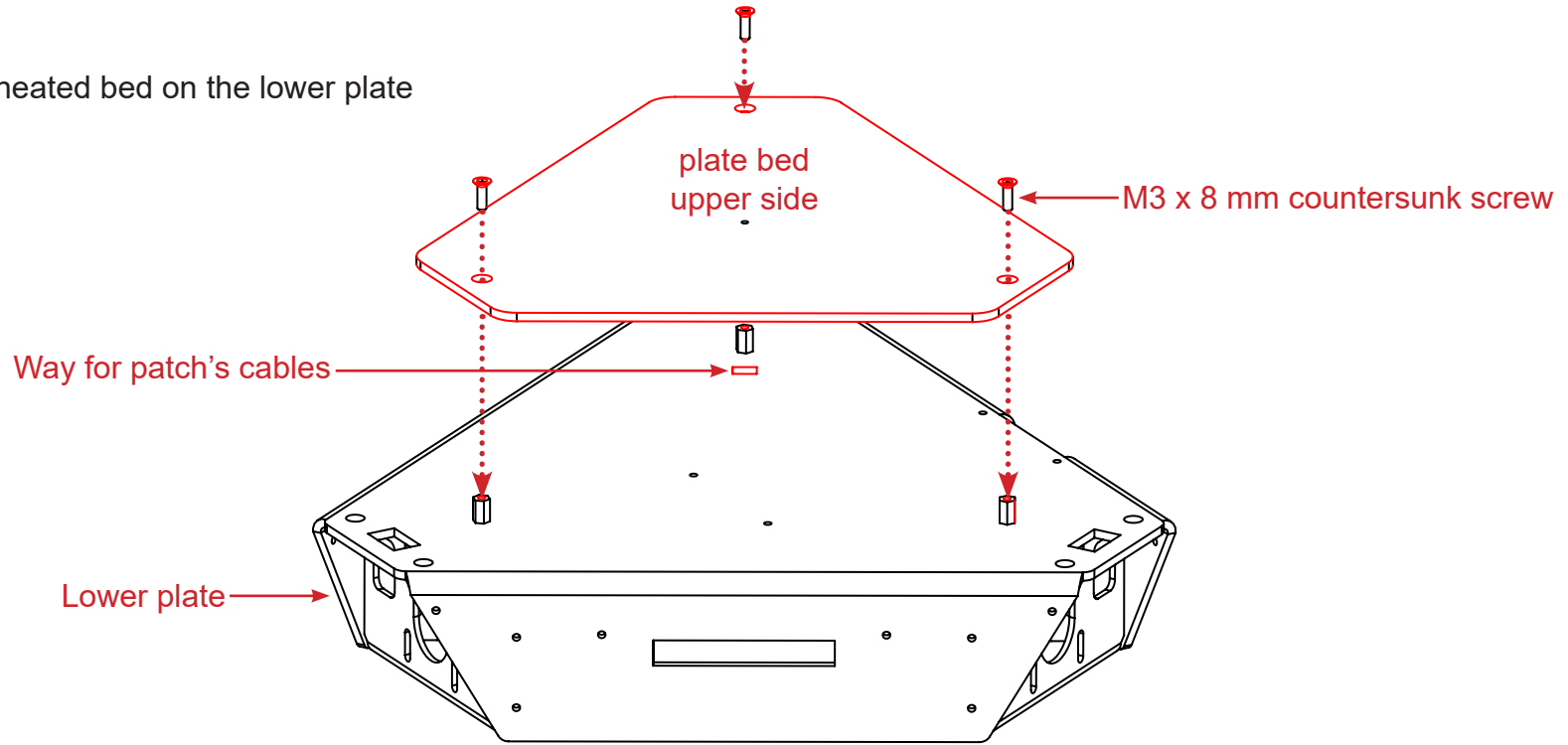
Target : mount the standoff spacers



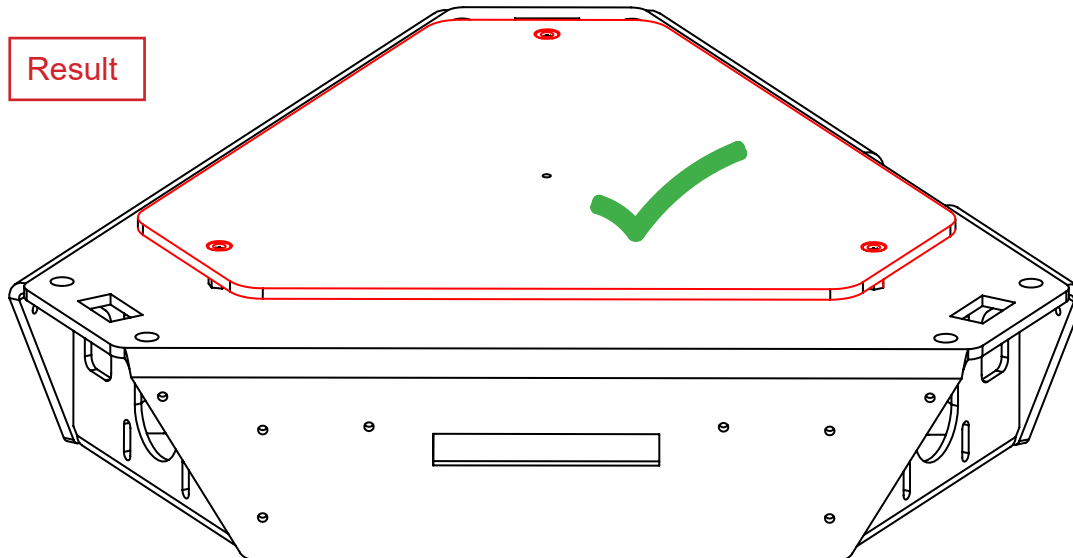
Result



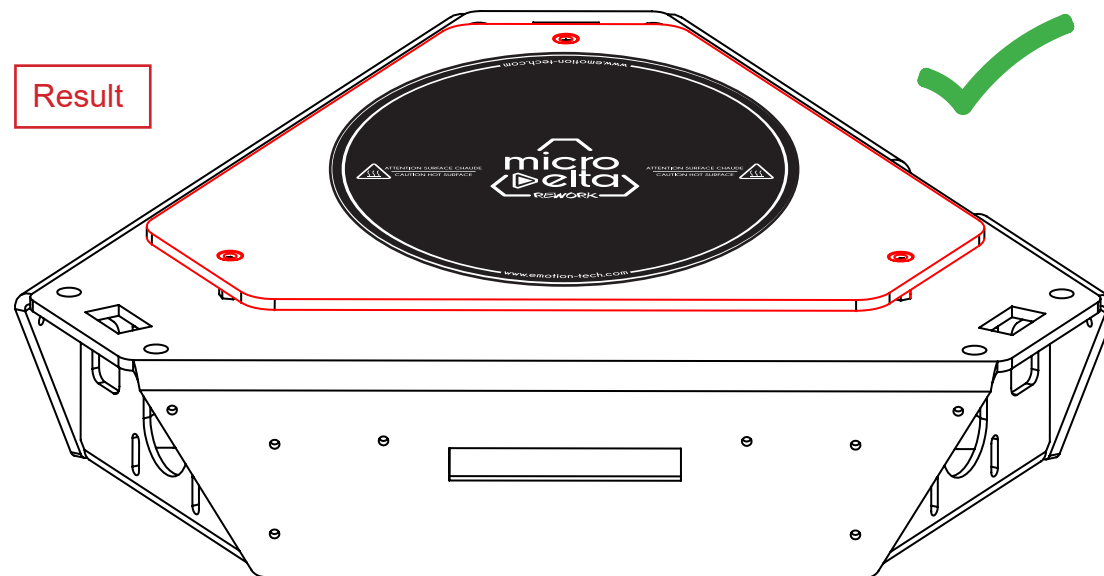
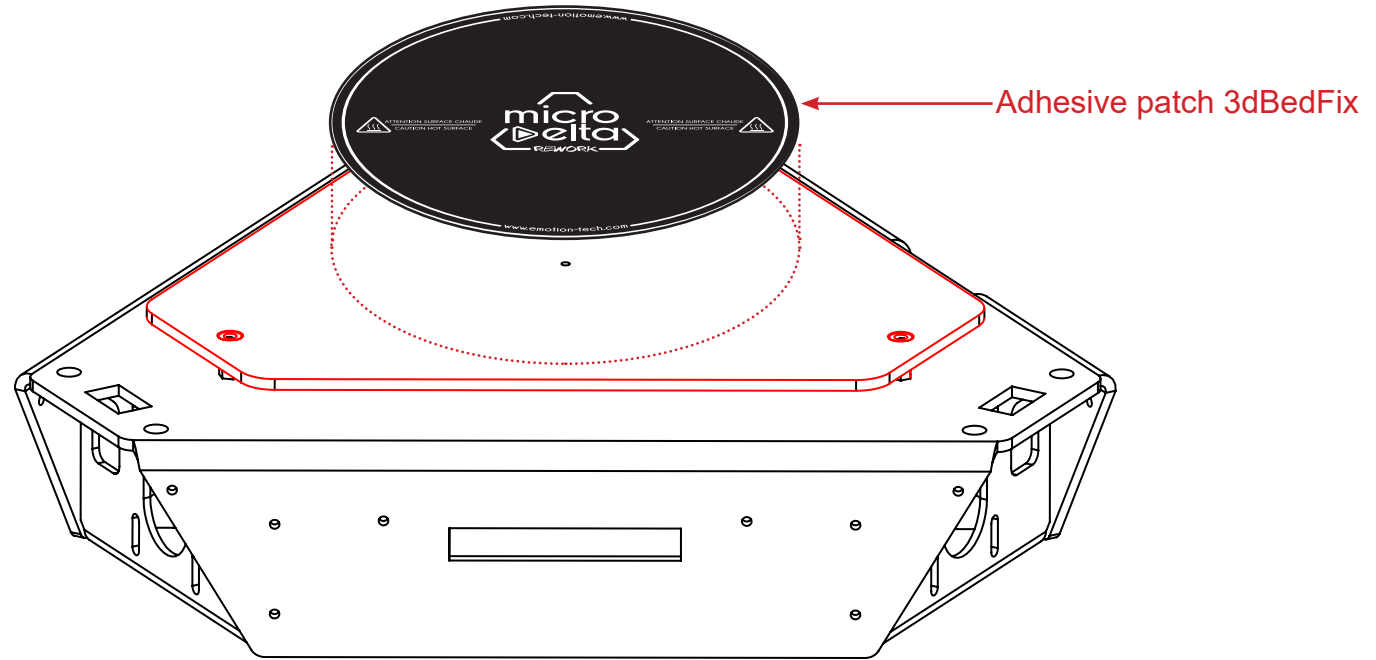
Target : screw the heated bed on the lower plate



Result

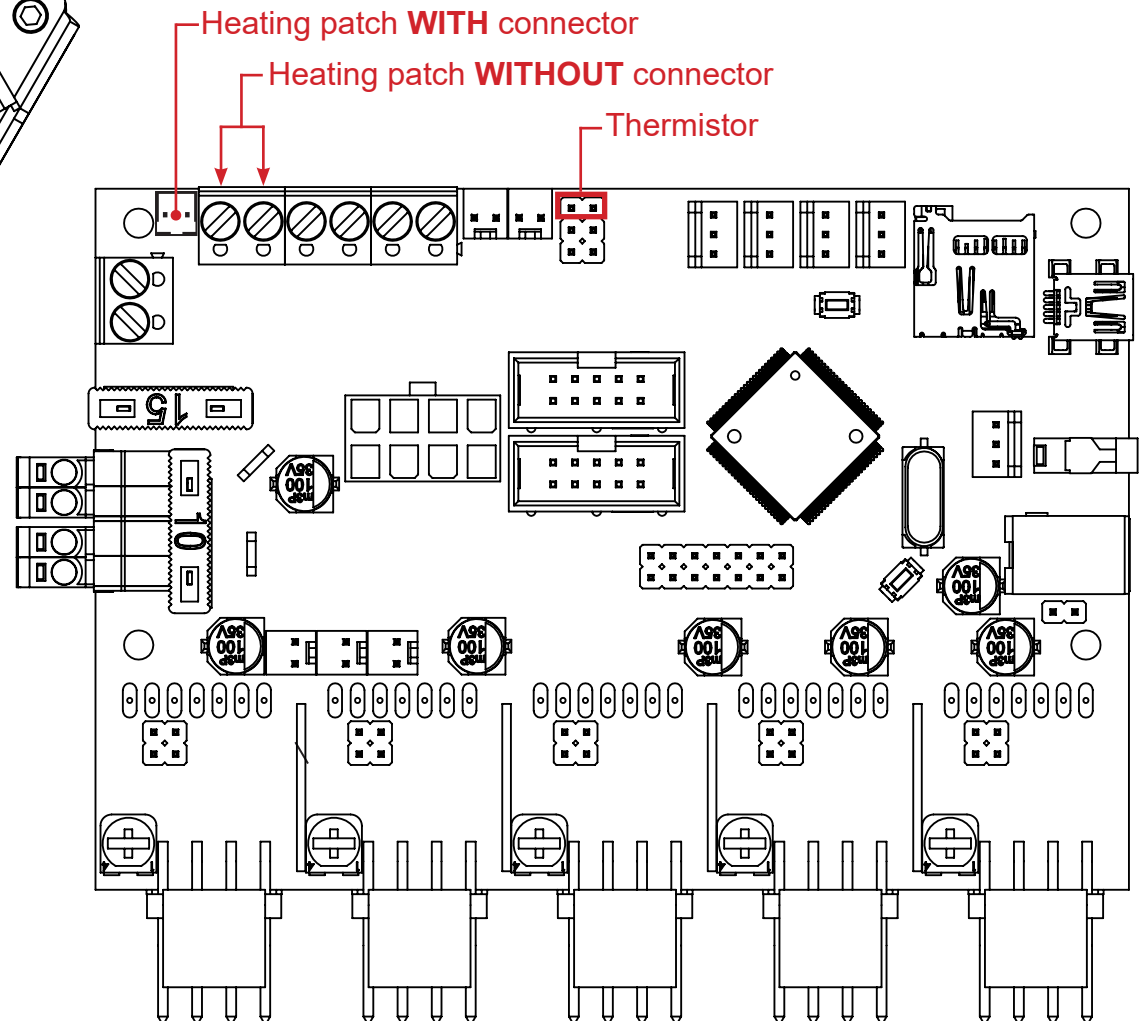
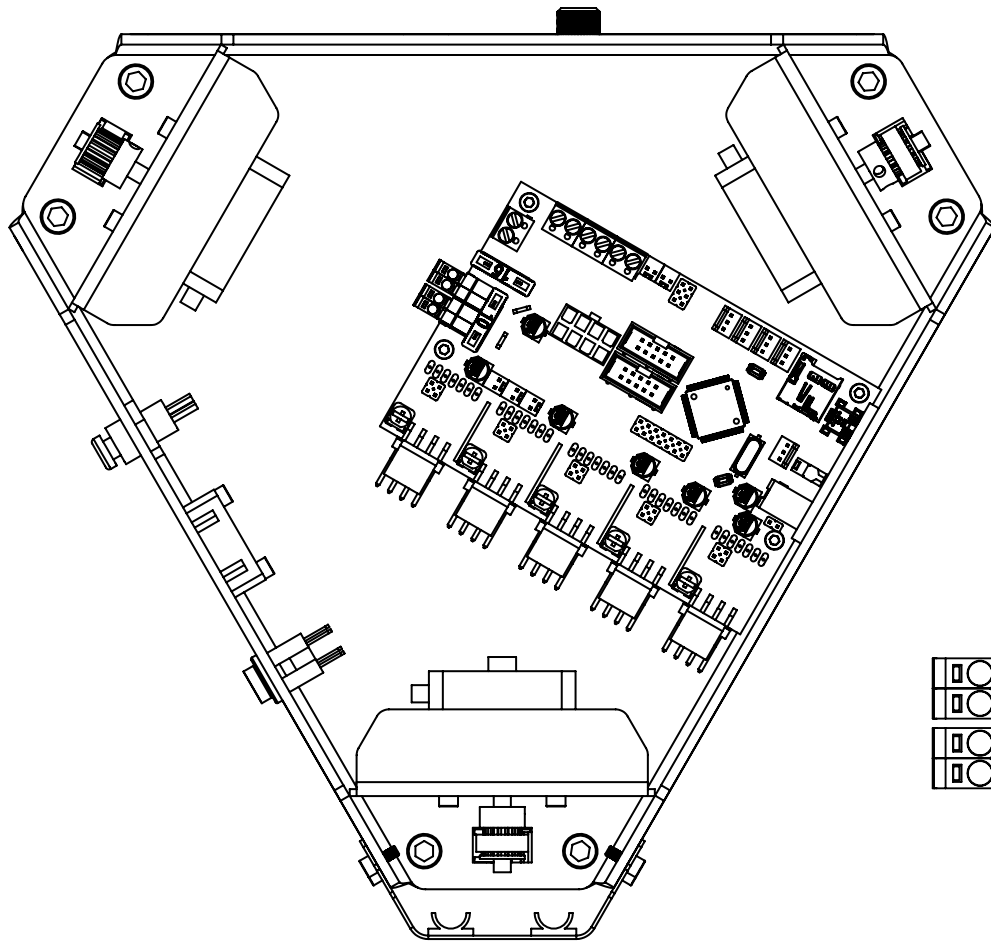


Target : Apply the adhesive patch «3DBedFix» on the heated bed



Target : plug the heating patch and the thermistor of the heating bed

Note: If your eMotronic board does not have the connector, please cut the one from the patch and strip the ends to fix them in the screw terminal block.



Modifying the configuration file:

1°) Go to the Support section of www.emotion-tech.com. In the «MicroDelta Rework / Software / Software / Configuration» tree you will find all the available versions of the configuration file.

Download the version that corresponds to your printer (depending on your options)

2°) Unzip the downloaded file and copy its content into the SD card of the eMotronic board. Replace existing files if necessary.

3°) Press the Reset button.

**Go now to the page 24 for the rest
of the assembly !**

LCD SCREEN (plastic support)

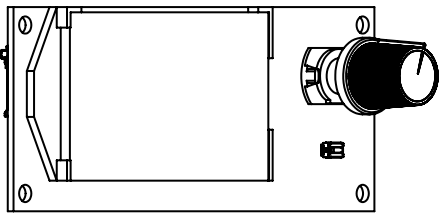
Needed parts :

- 1 x Right side LCD cover
- 1 x Left side LCD cover
- 1 x Front plate LCD cover
- 1 x LCD screen
- 6 x M3 x 12 mm screw
- 2 x Ribbon cable

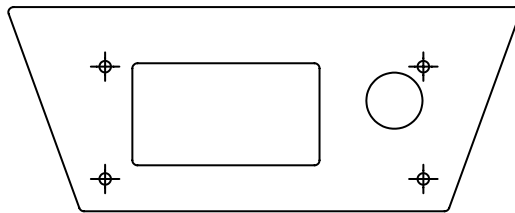
Target : mount the LCD screen on the 3D printer.

Pre-requisites:

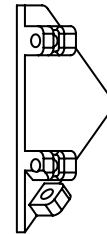
The two screen covers (right and left) are to be printed by yourself. To download these two parts, go to the Support section of www.emotion-tech.com, then go to «MicroDelta Rework / Ressources_3D / Option LCD».



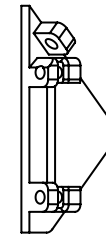
1 x LCD screen



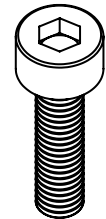
1 x Front plate LCD cover



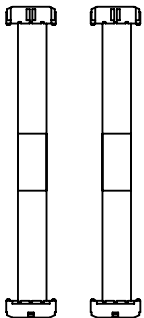
1 x Right side LCD cover



1 x Left side LCD cover

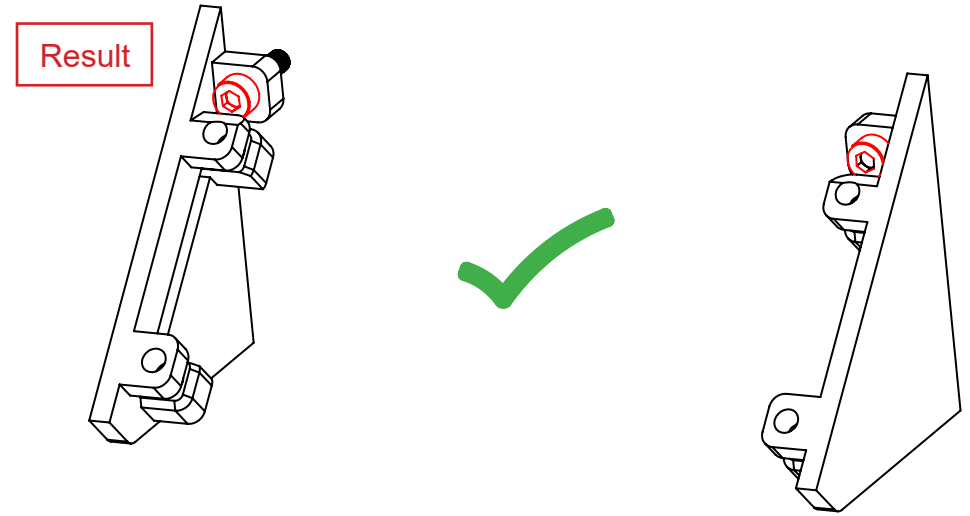
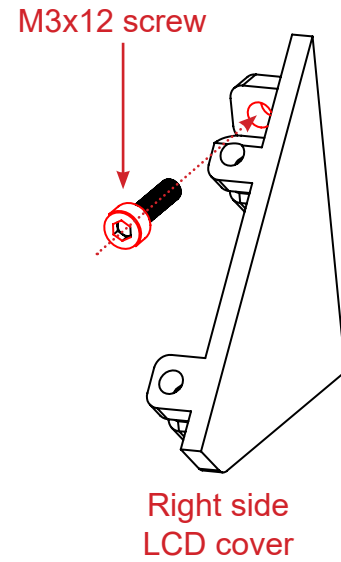
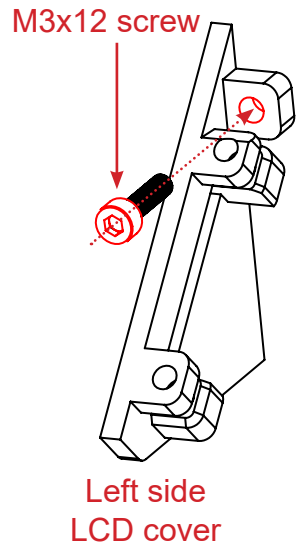


6 x M3 x 12 mm screw

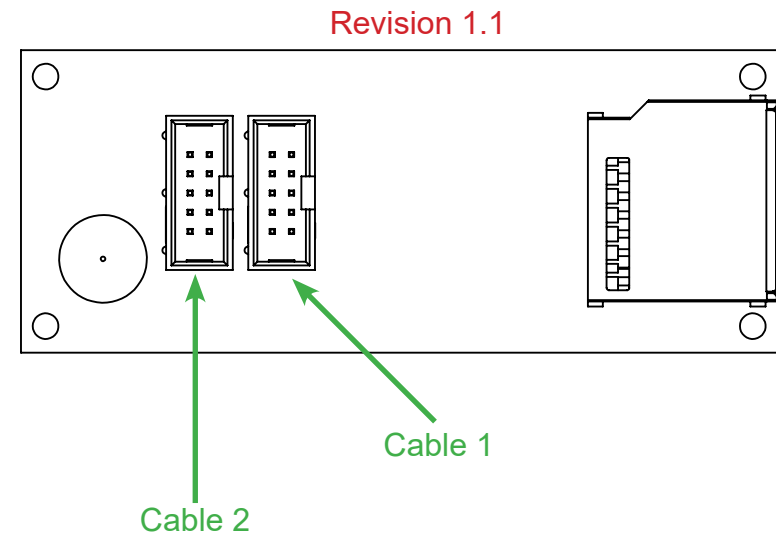
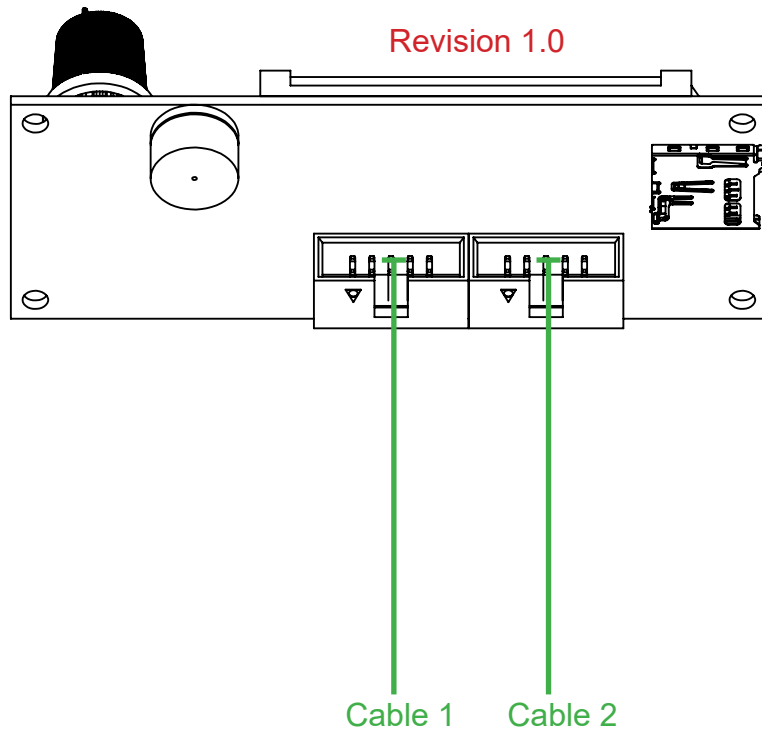


2 x Ribbon cable

Target : preposition the screws in the printed covers

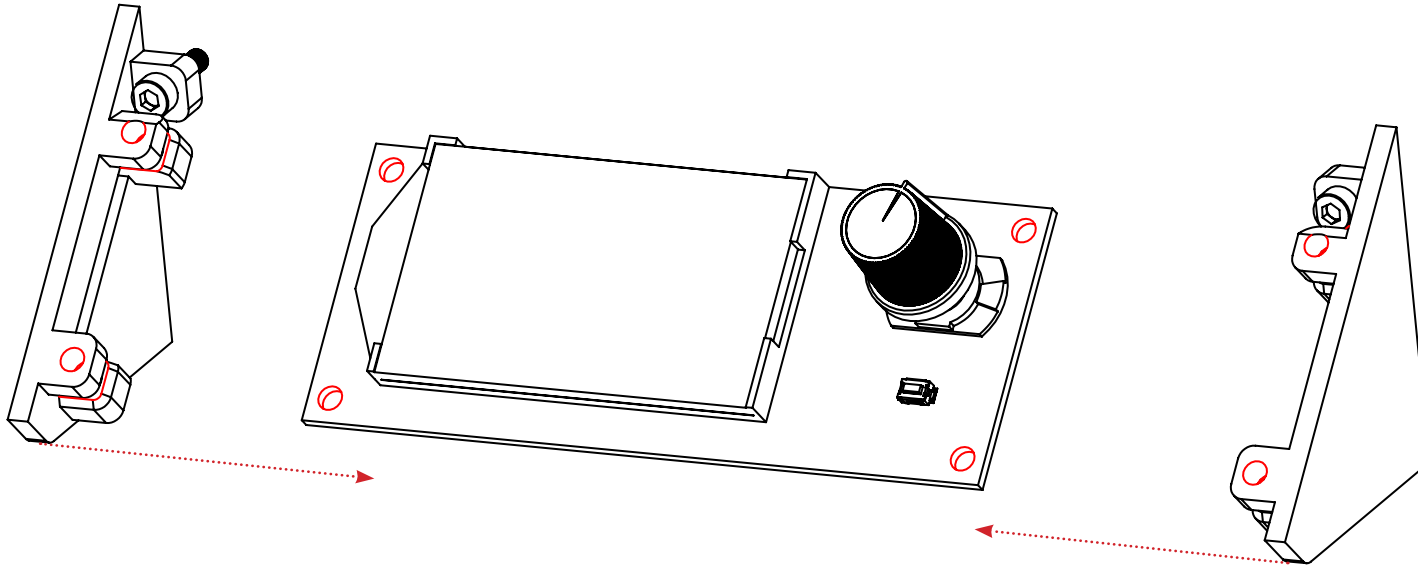


Target: Plug the Ribbon cables on the screen

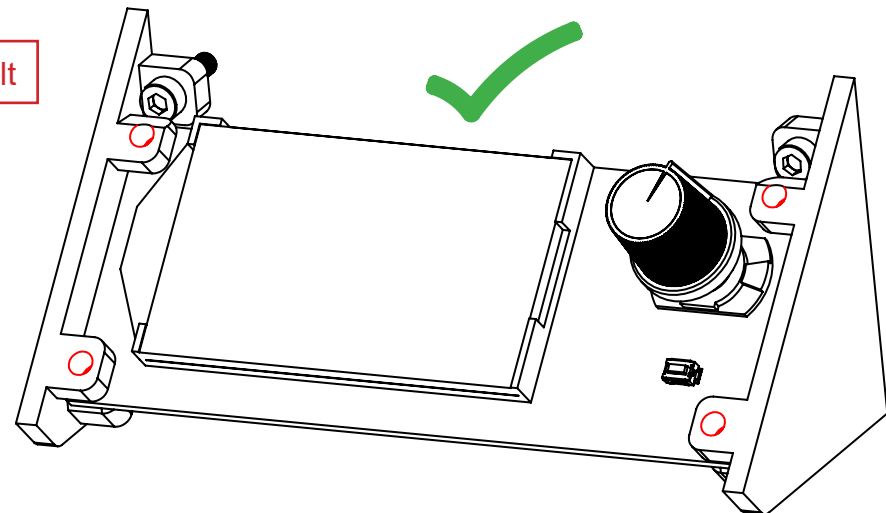


Note: The wiring on the eMotronic board side is shown on page 87.

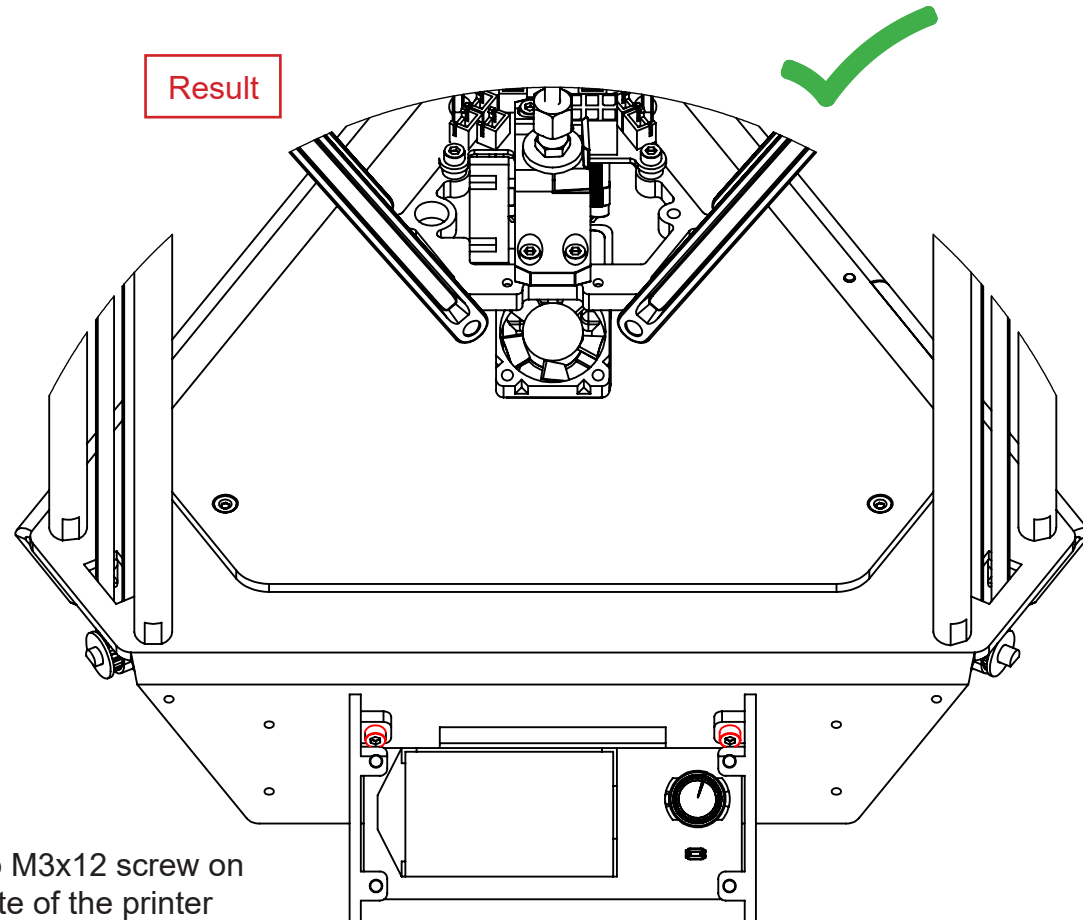
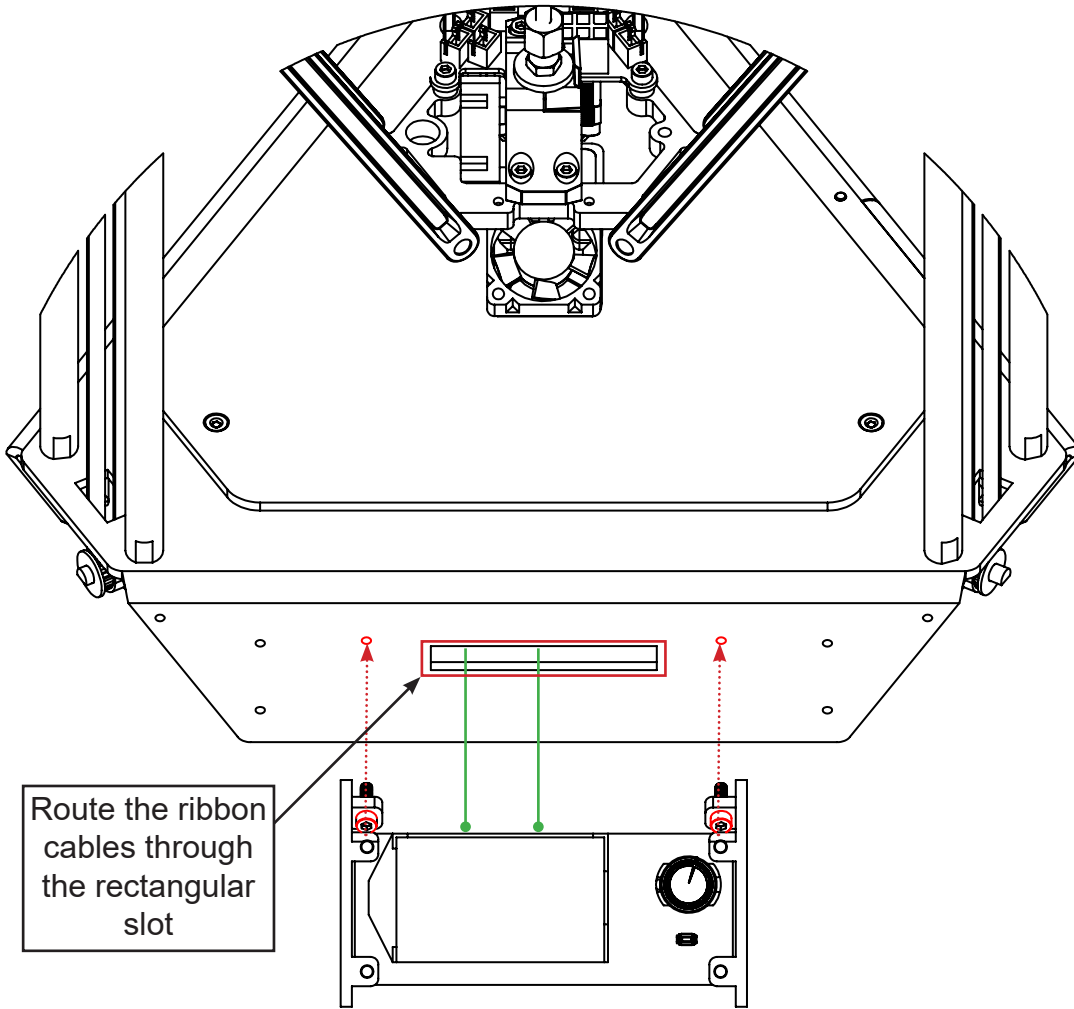
Target : preposition the LCD screen between the two covers (right and left)



Result

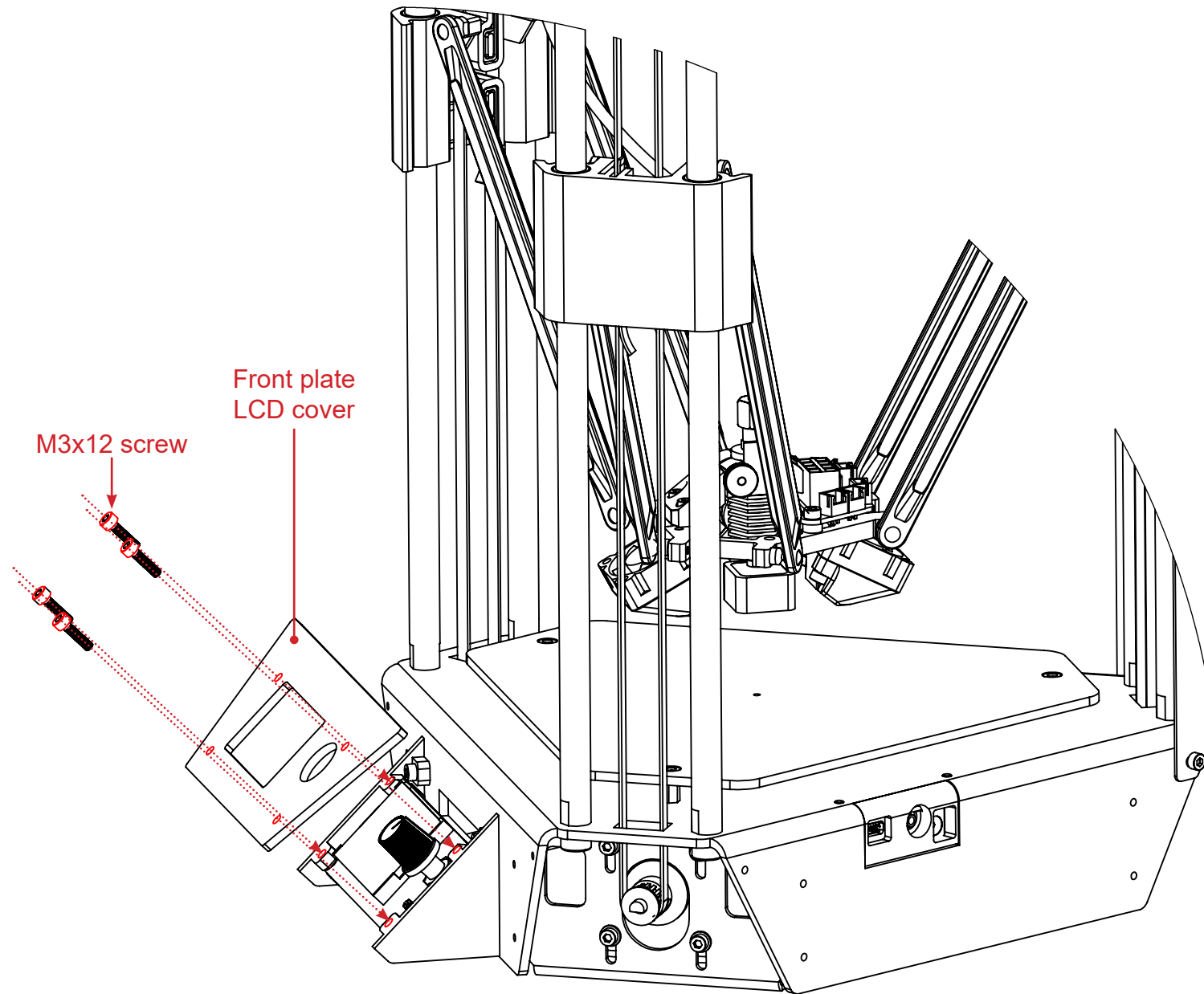


Target : mount the LCD on the printer

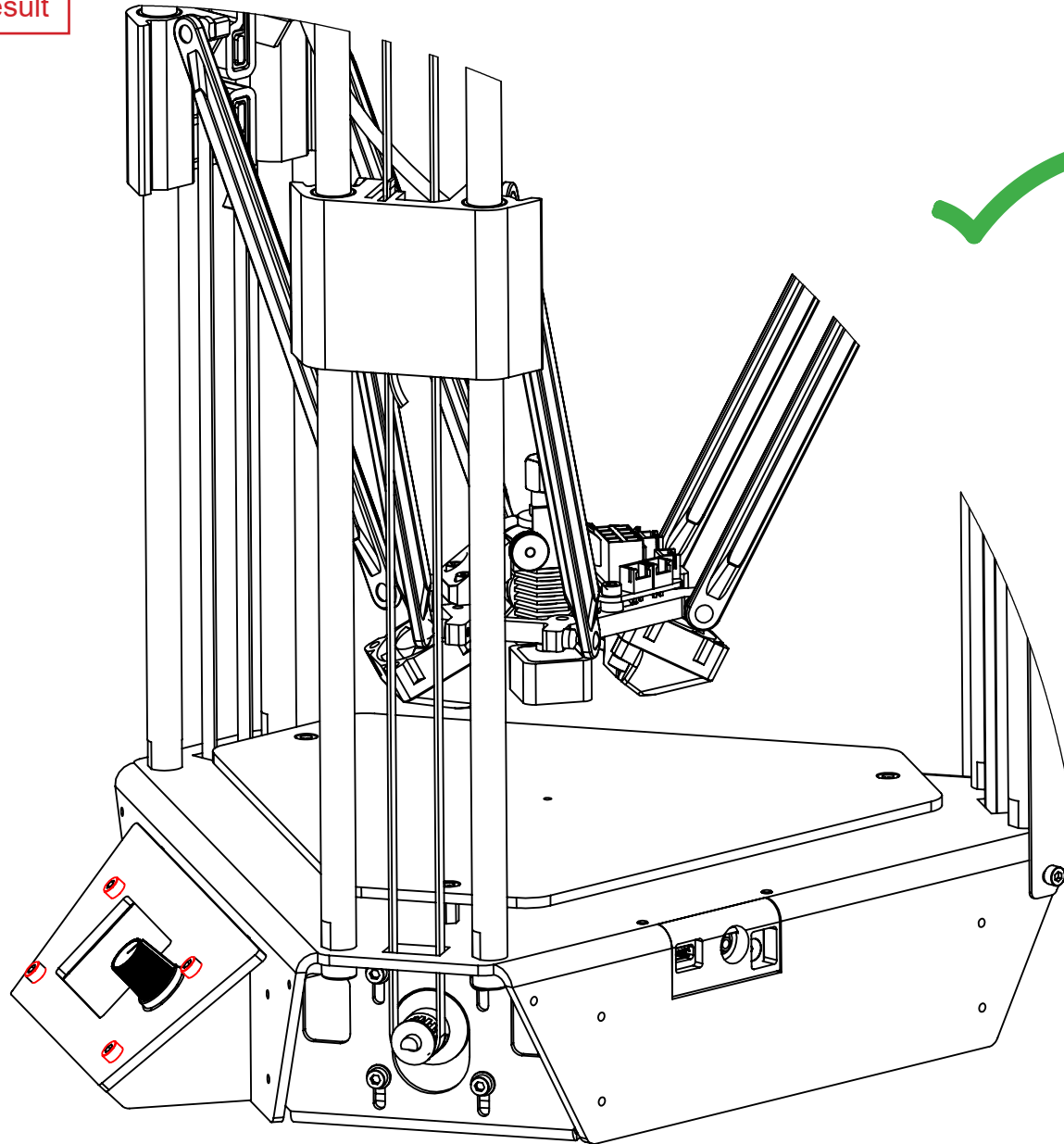


Tighten the two M3x12 screw on the lower plate of the printer

Target : mount the front plate LCD cover



Result

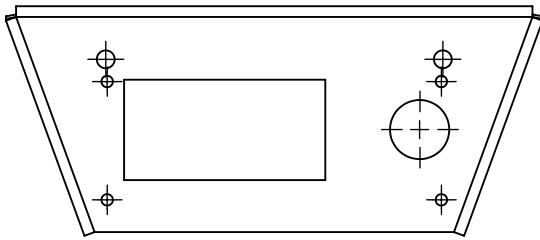


LCD SCREEN (metal support)

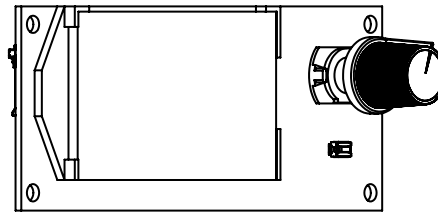
Needed parts :

- 1 x LCD cover
- 1 x LCD screen
- 2 x Ribbon cable
- 6 x M3 x 12 mm screw
- 4 x 5 x 3 mm spacer
- 4 x M3 nut

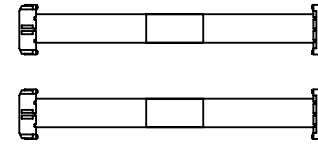
Target : mount the LCD screen on the 3D printer.



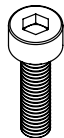
1 x LCD cover



1 x LCD screen



2 x ribbon cable



6 x M3 x 12 mm screw

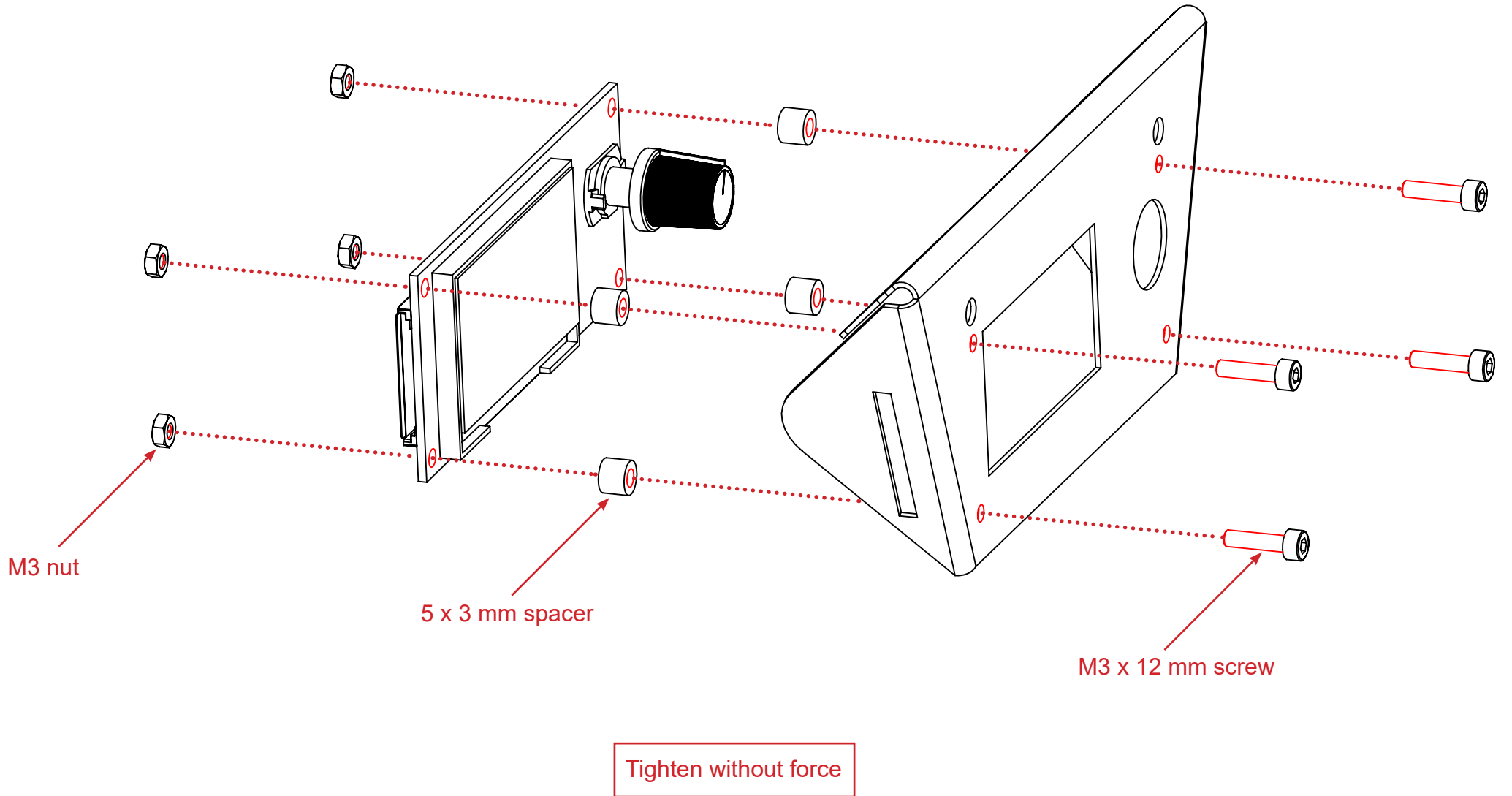


4 x 5 x 3 mm spacer

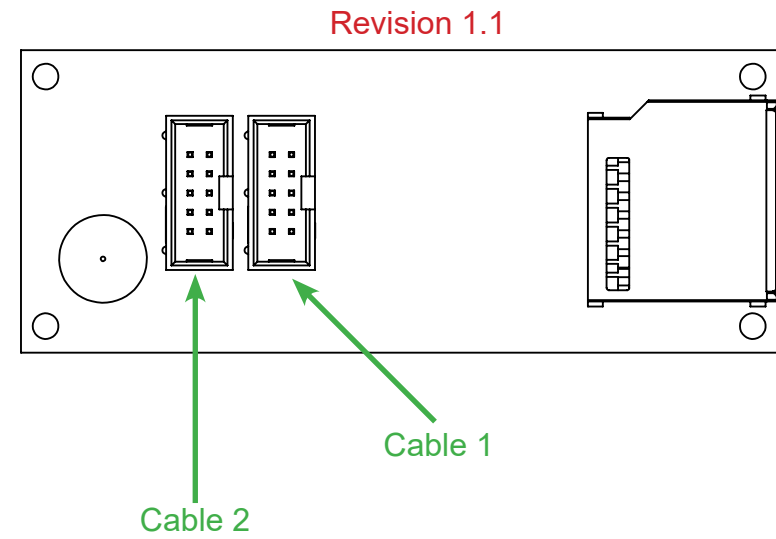
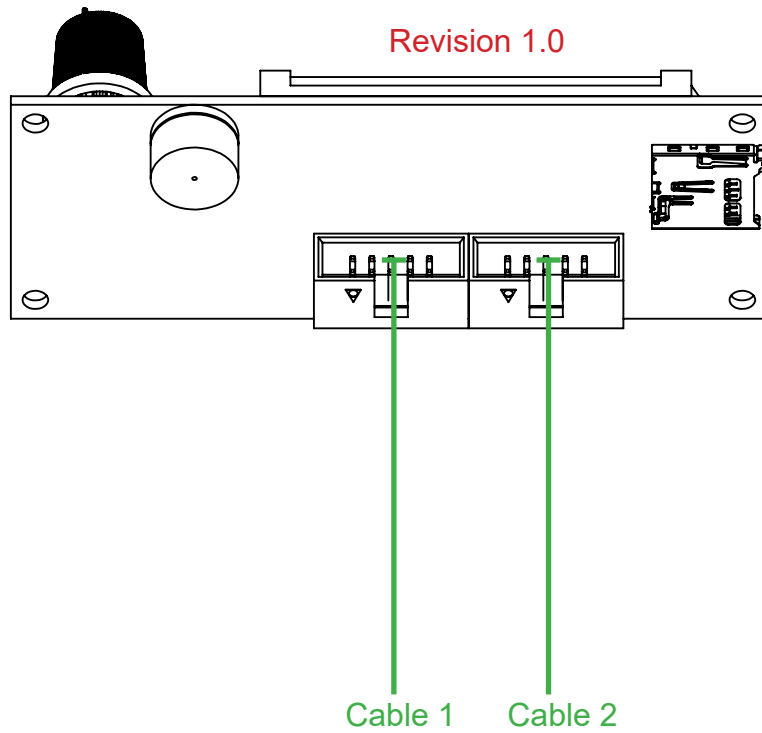


4 x M3 nut

Target : Fix the screen to the cover



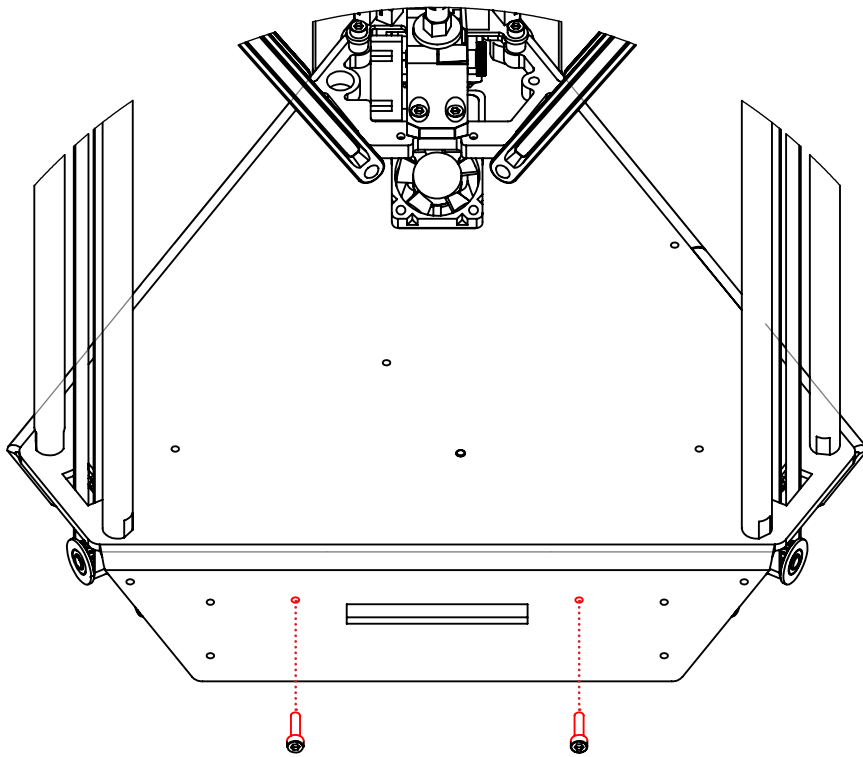
Target: Plug ribbon cables on the screen



Note: The wiring on the eMotronic board side is shown on page 87.

Target : Fix the «cover + screen» assembly to the lower metal part

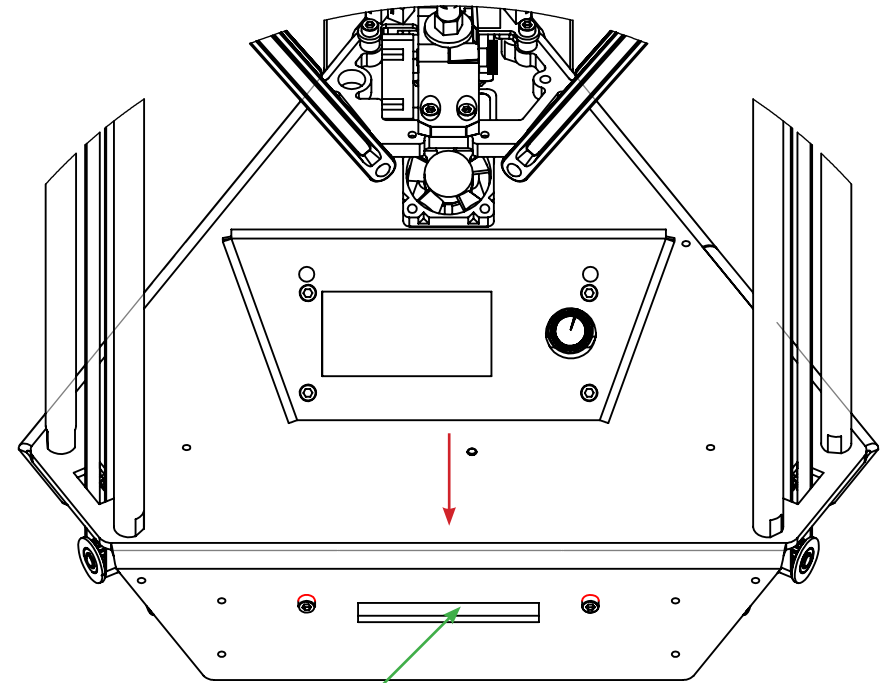
① Positioning the screws to support the screen cover



M3 x 12 mm screw

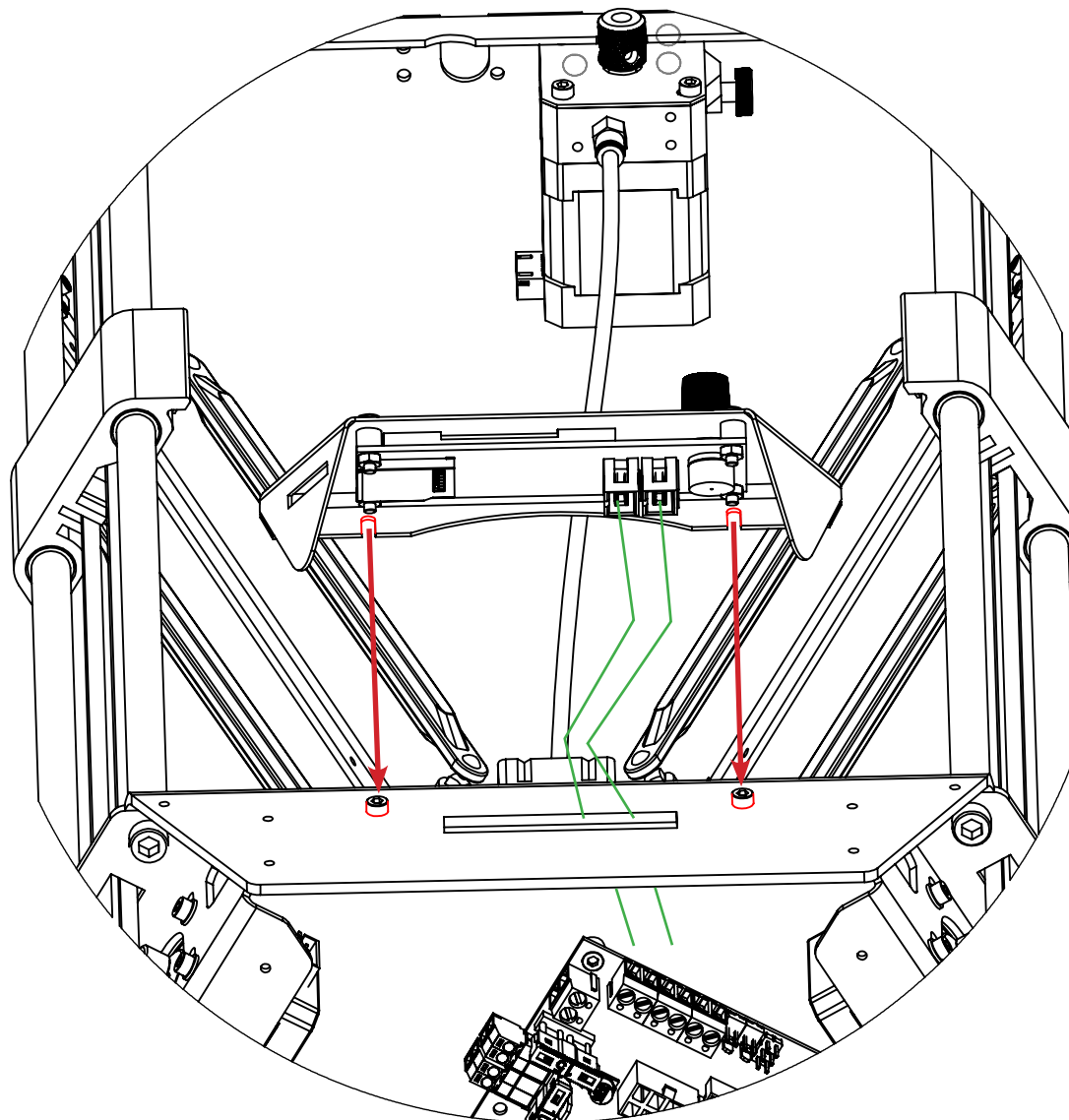
Do not screw into abutment

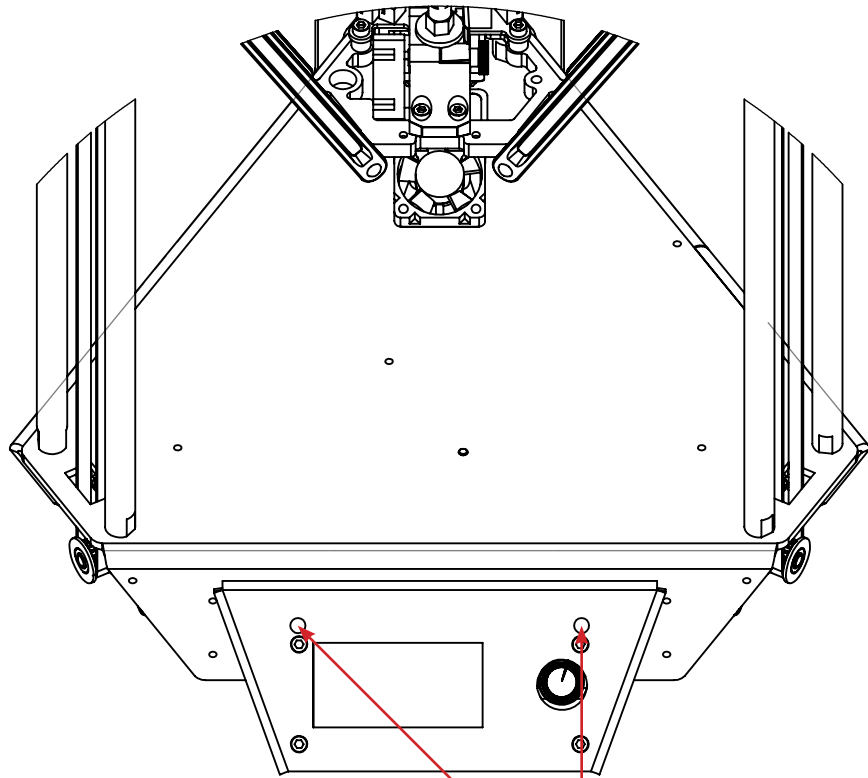
② Passage of the ribbon cables by the notch



Ribbon cables way

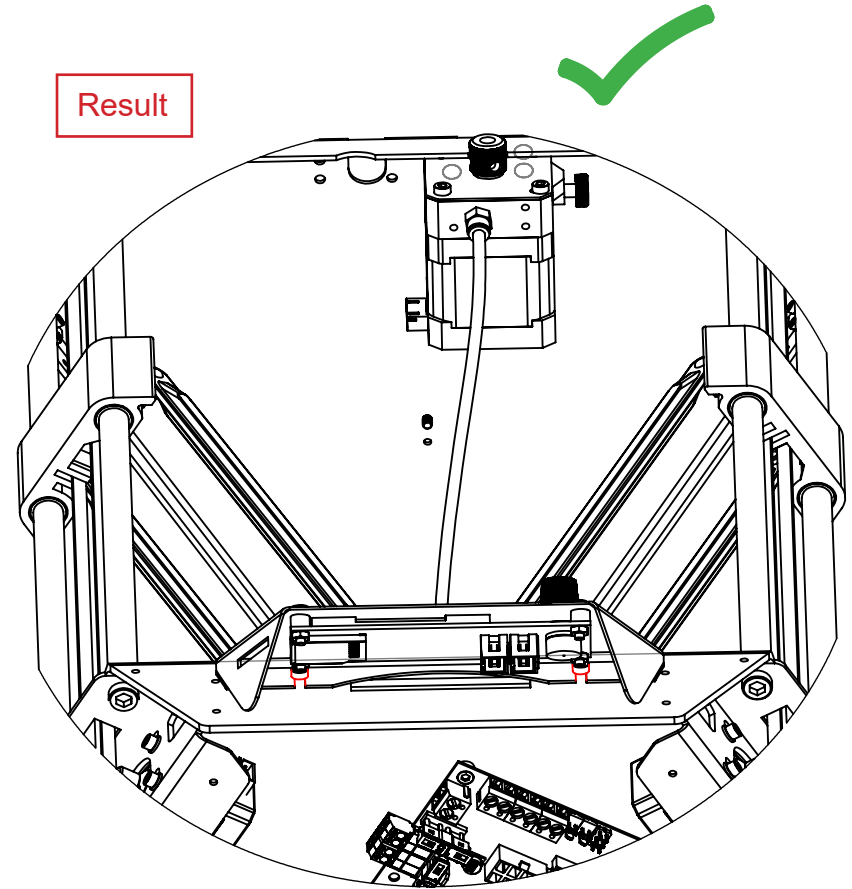
③ Maintaining the screen cover with dedicated screws and notches



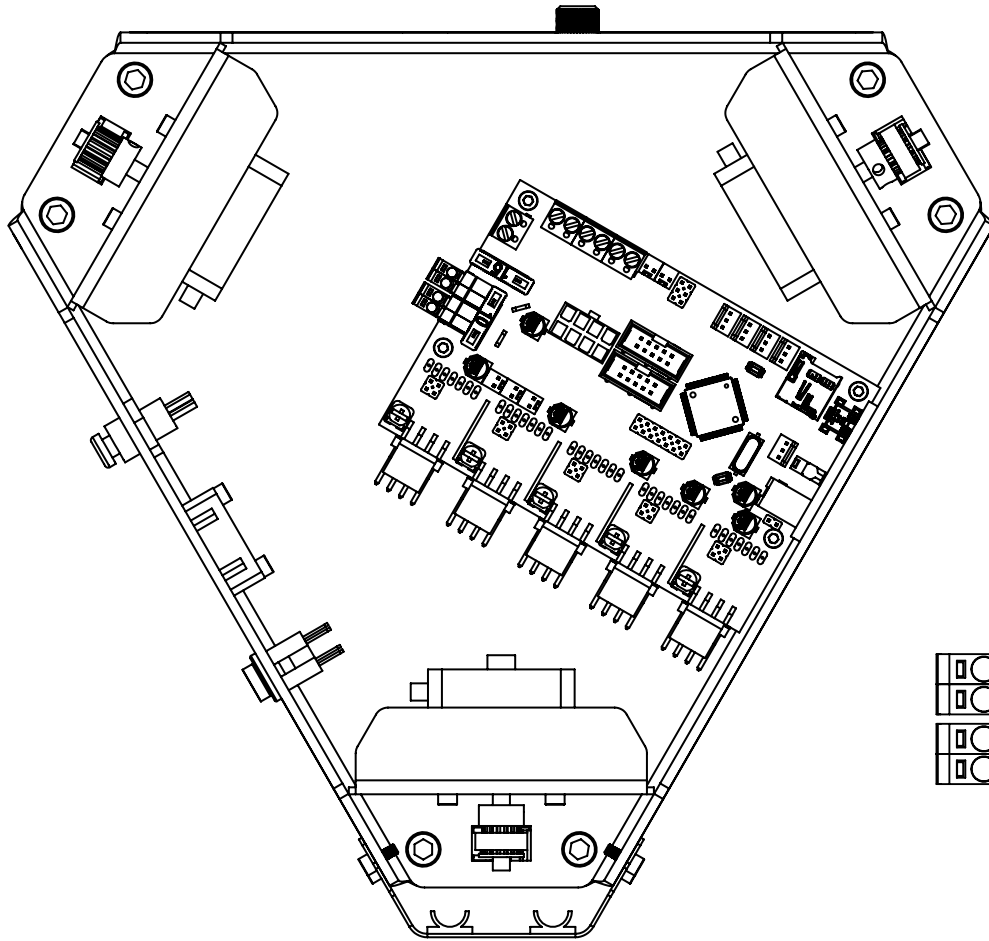


Access screw
tightening screen
cover
(Allen wrench)

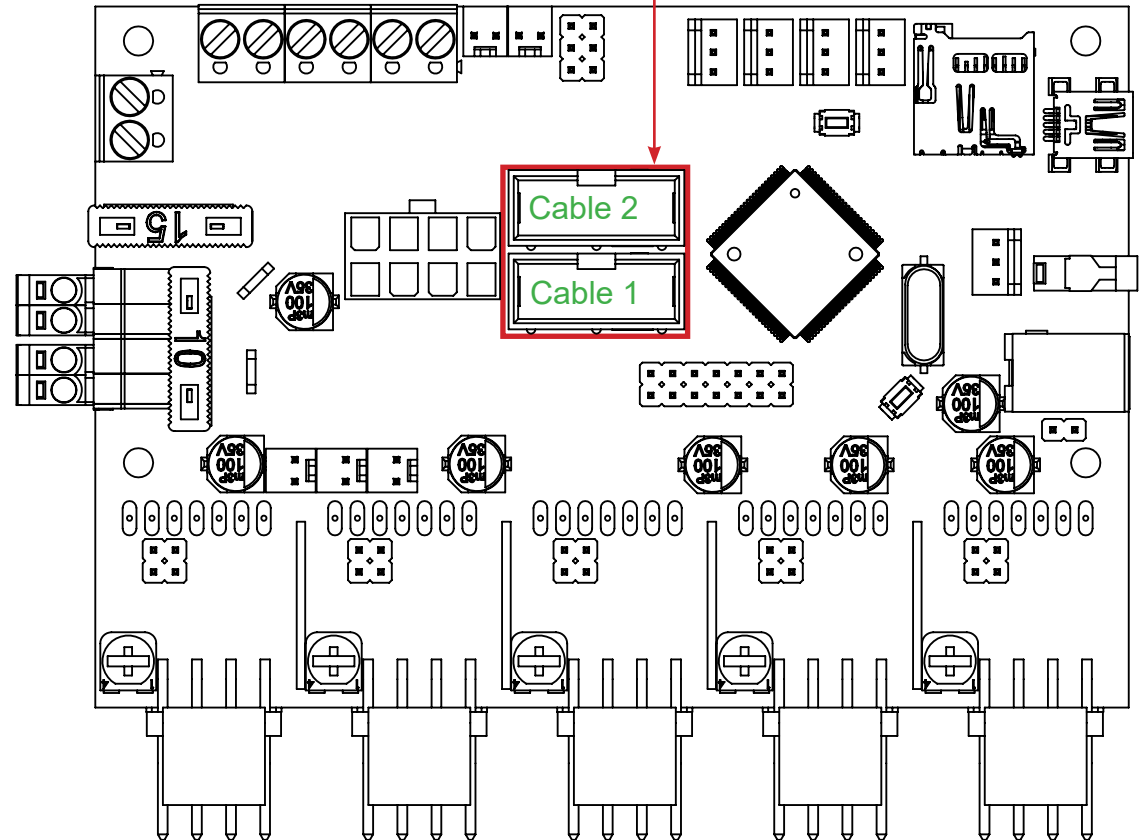
Result



Target : connect the LCD screen to the eMotronic board



Plug both ribbon cables on the emotronic board



Target : modifying the configuration file

Note: Without modification of the configuration files, your LCD screen will be preconfigured on a stable version (and therefore plug & play). However, if you want to acquire the latest version of the firmware, you can follow the following tutorial.

1°) Go to the support section of www.emotion-tech.com. In the «MicroDelta Rework / Software / Software / Configuration» tree you will find all the available versions of the configuration file.

You will notice that two versions are available :

- Firmware EN HeatBed : for machines WITH heated option (with LCD screen or not)
- Firmware EN NoHeatBed : for machines WITHOUT heated option (with LCD screen or not)

Download the version that corresponds to your printer (depending on your options)

2°) Unzip the downloaded file and copy its content into the TF card of the eMotronic board. Replace existing files if necessary.

3°) Press the Reset button.

Target : contrast adjustment

Only the revision 1.0 of the LCD screen requires a contrast adjustment.



rev 1.0



rev 1.1

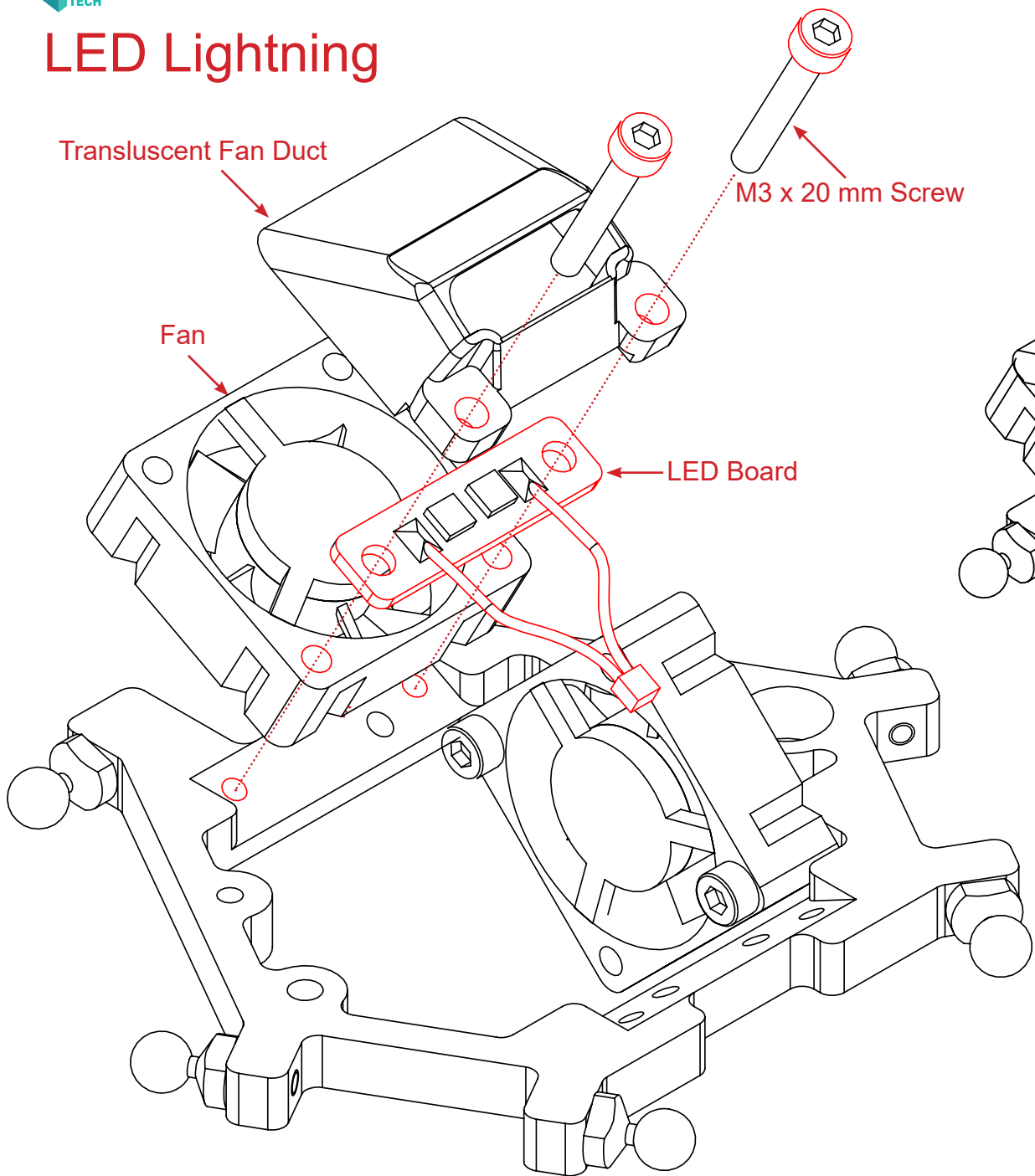
To change the contrast :

- 1) from the Micro TF card, open the file «config.txt»
- 2) find the variable named «panel.contrast»
- 3) change its value from «38» to «19»
- 4) save the file
- 5) press the Reset button

TF/SD card recommendations for the LCD :

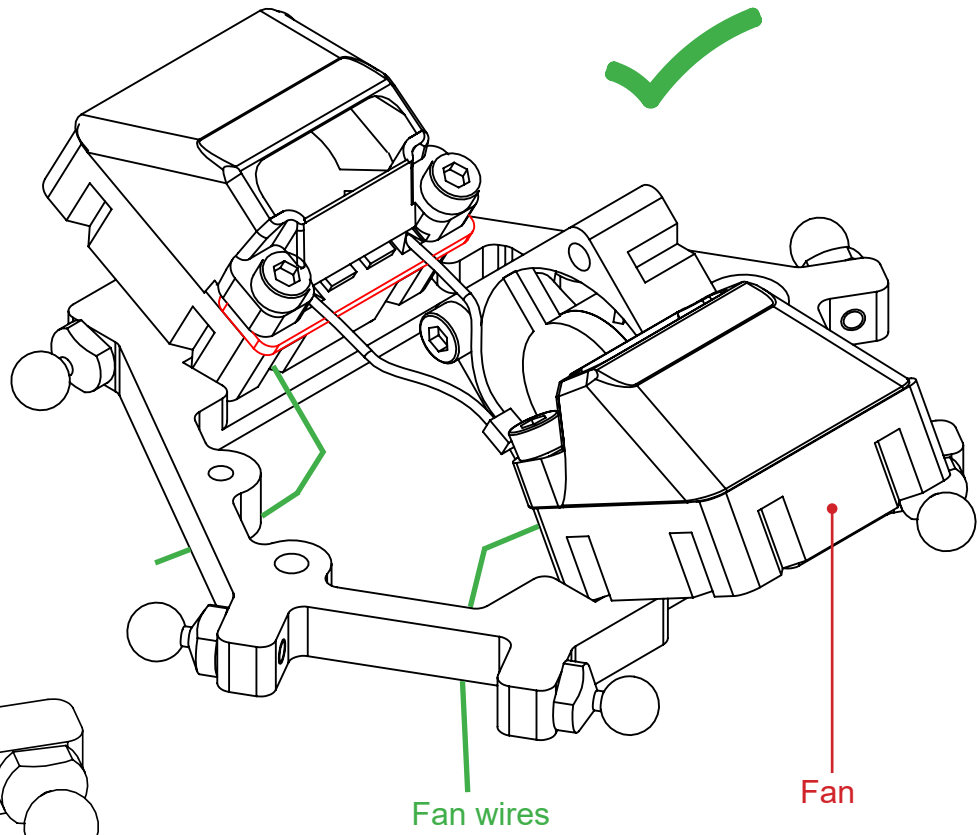
- avoid MLC & TLC type cards
- avoid Transcend & EssentialB Cards
- the cards of class 1 to 10 generally work very well
- SDHC cards from 1 to 32 GB generally work very well

LED Lightning

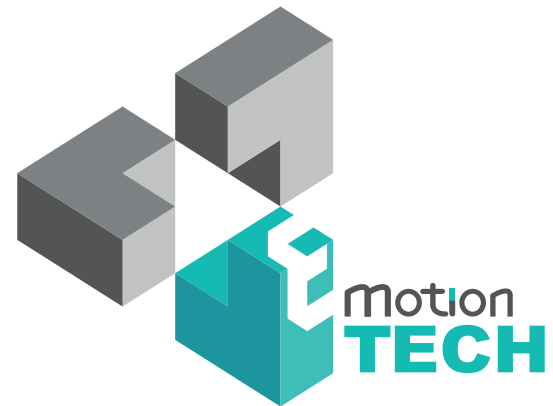


Be careful of the fan orientation !

Result



REMINDER: page 39 to continue assembly
LED wiring : page 44



Thank you for choosing MicroDelta Rework