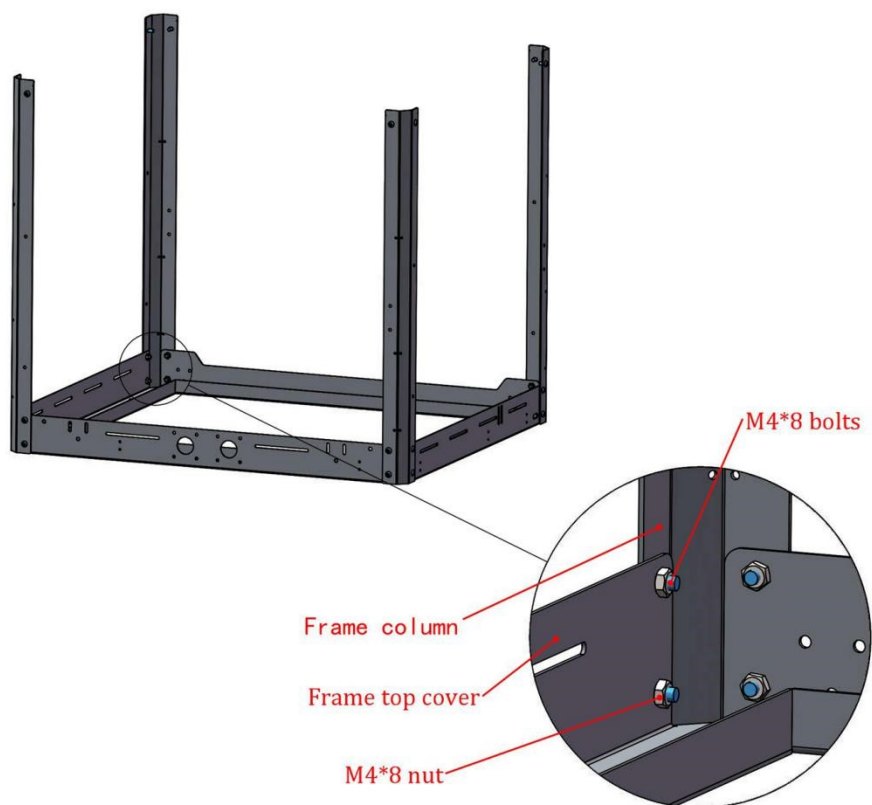


Flyingbear-Tornado Installation Manual

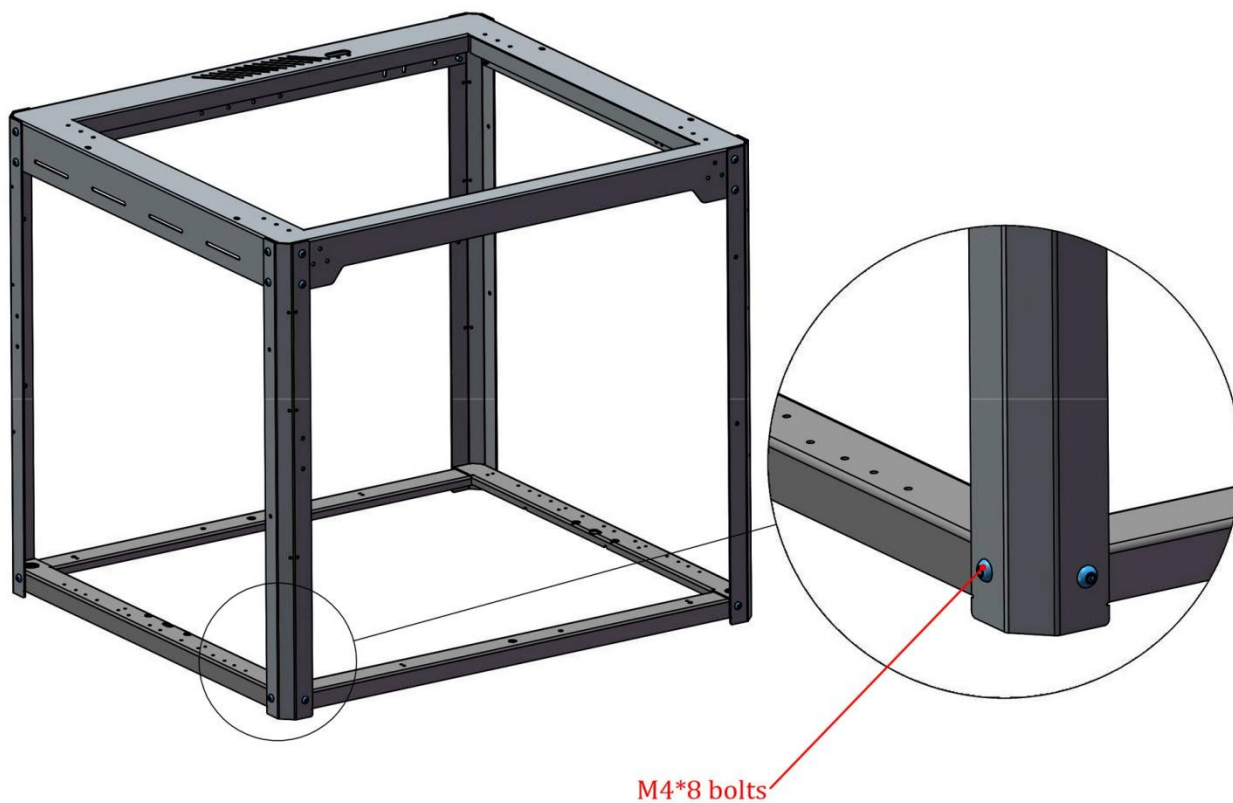
1.Frame installation-----	1
2.Driving wheel and idler wheel installation-----	2
3.Y-liner guide rail installation-----	3
4.X-linerguider rail installation-----	5
5.Z-hot bed installation-----	10
6.LCD and other parts installation-----	13
7.Power installation-----	15
8.Synchronous belt installtion-----	16
9.Nozzle and tank chain-----	17
10.Extruder installation-----	18
11.Auto leveling installation(only if you have TL touch option)-----	19
12.Wring diagram-----	20
13.Setting up slicing software-----	21
14.Setting auto leveling sensor-----	23
15.First print model-----	24

1、Frame installation

Step 1 -----

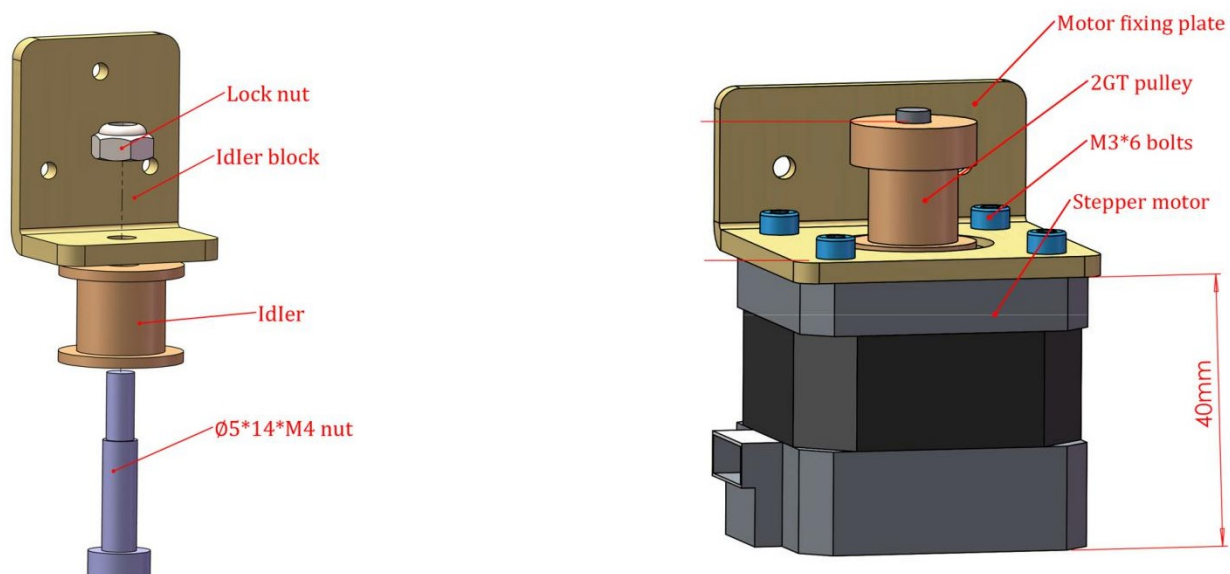


Step 2 -----

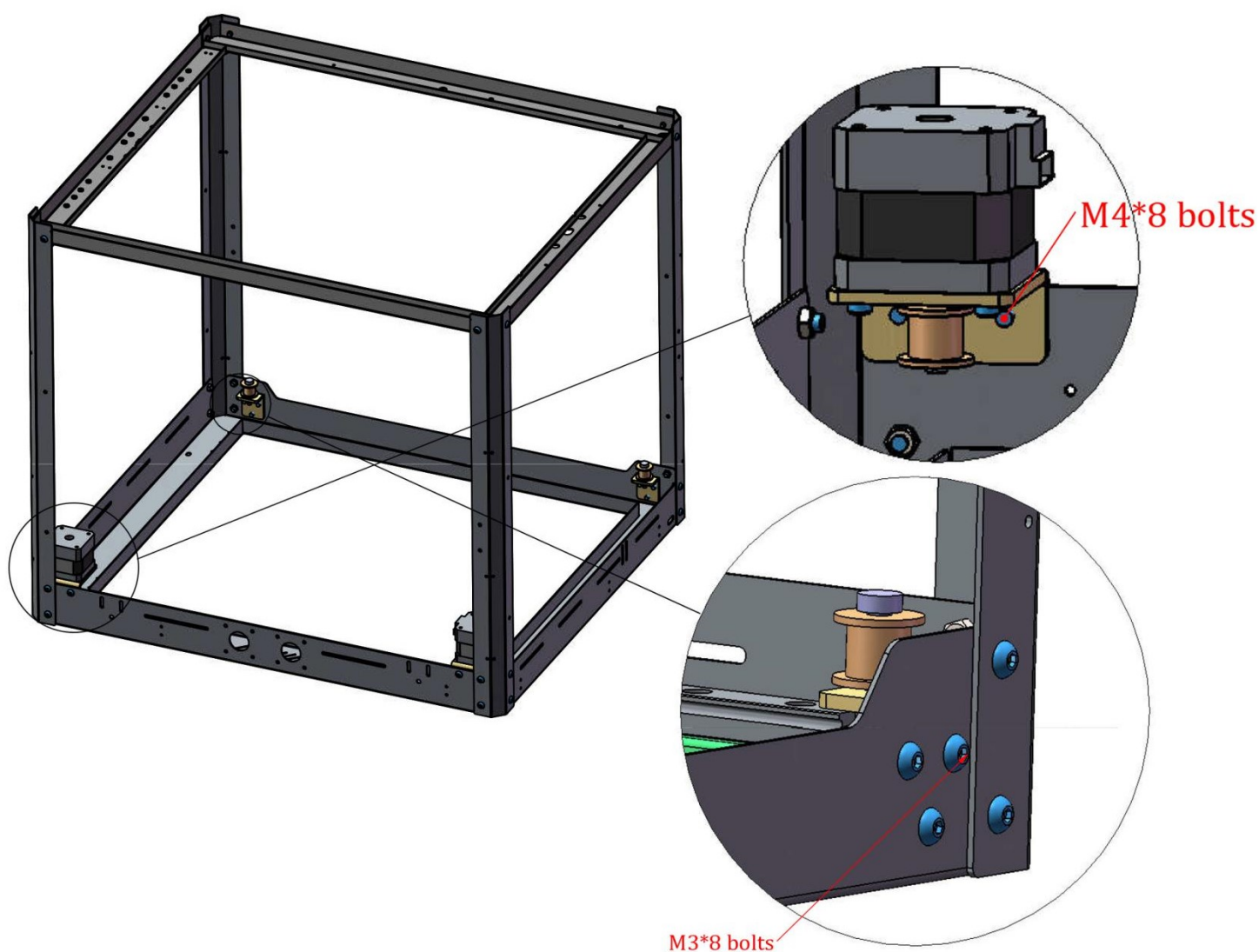


2、Driving wheel and idler wheel installation

Step 1 -----

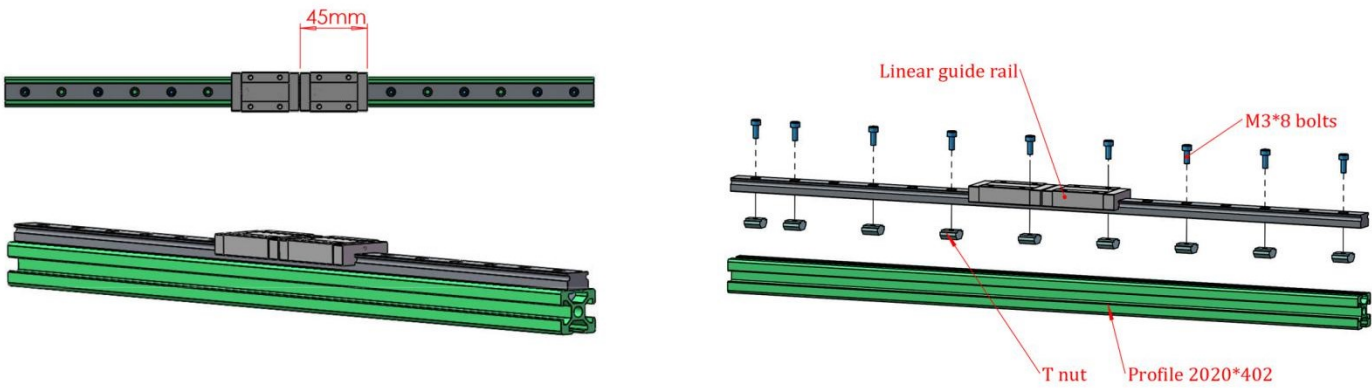


Step 2 -----

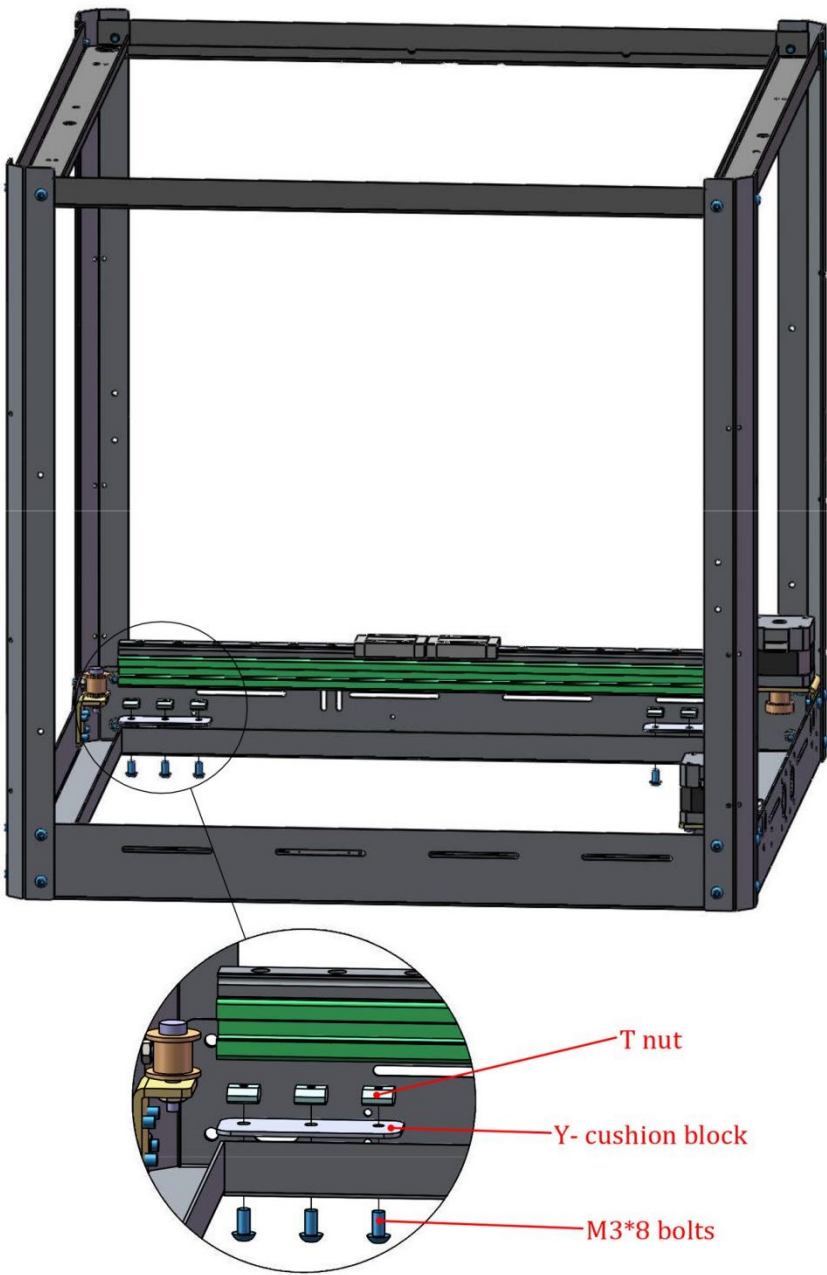


3、Y- linear guide rail Installation

Step 1 -----

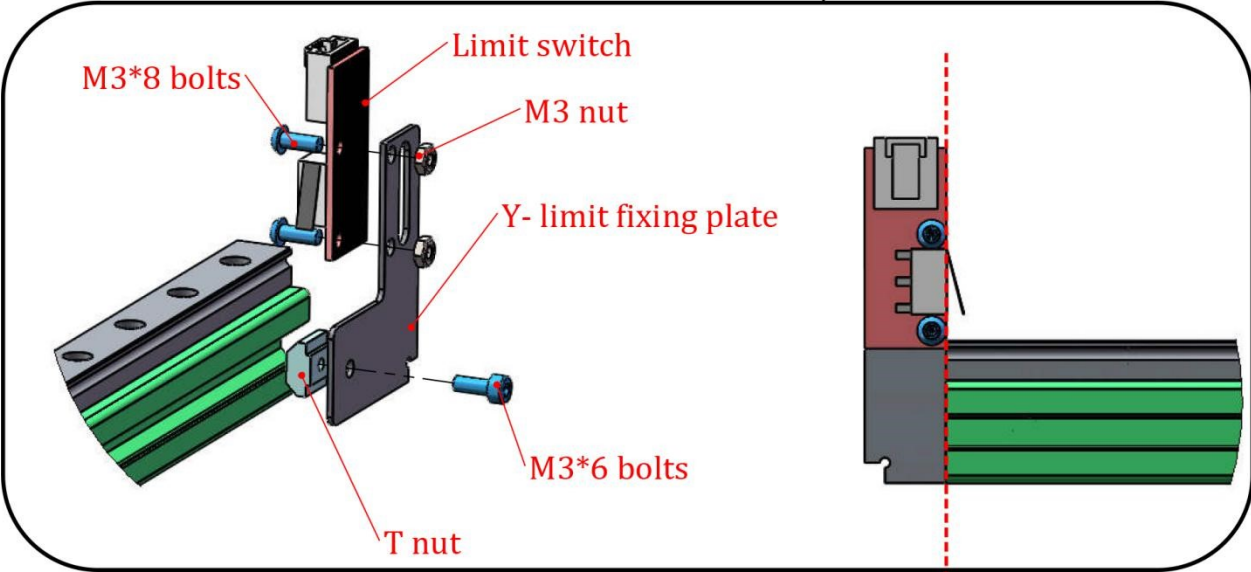
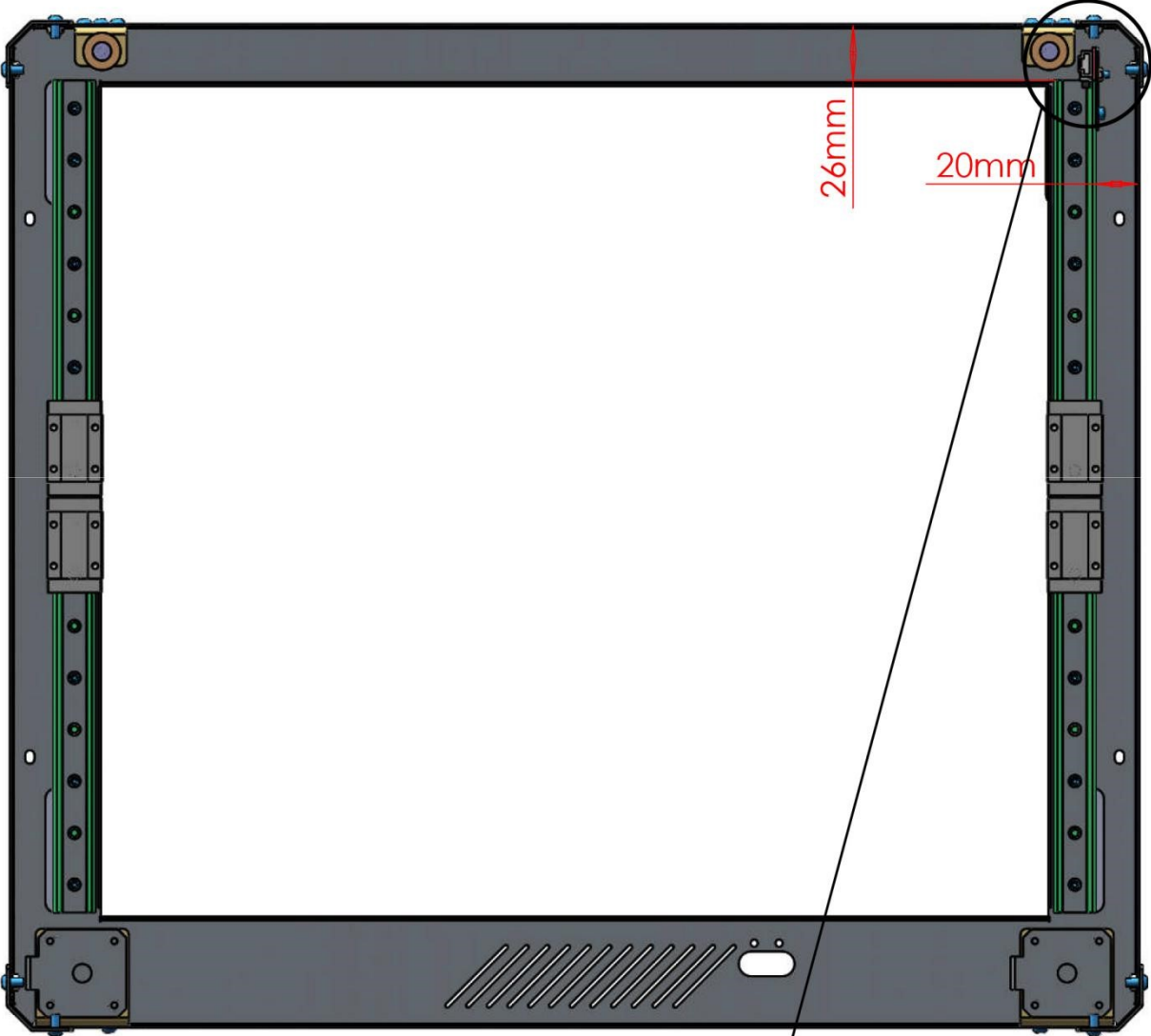


Step 2 -----



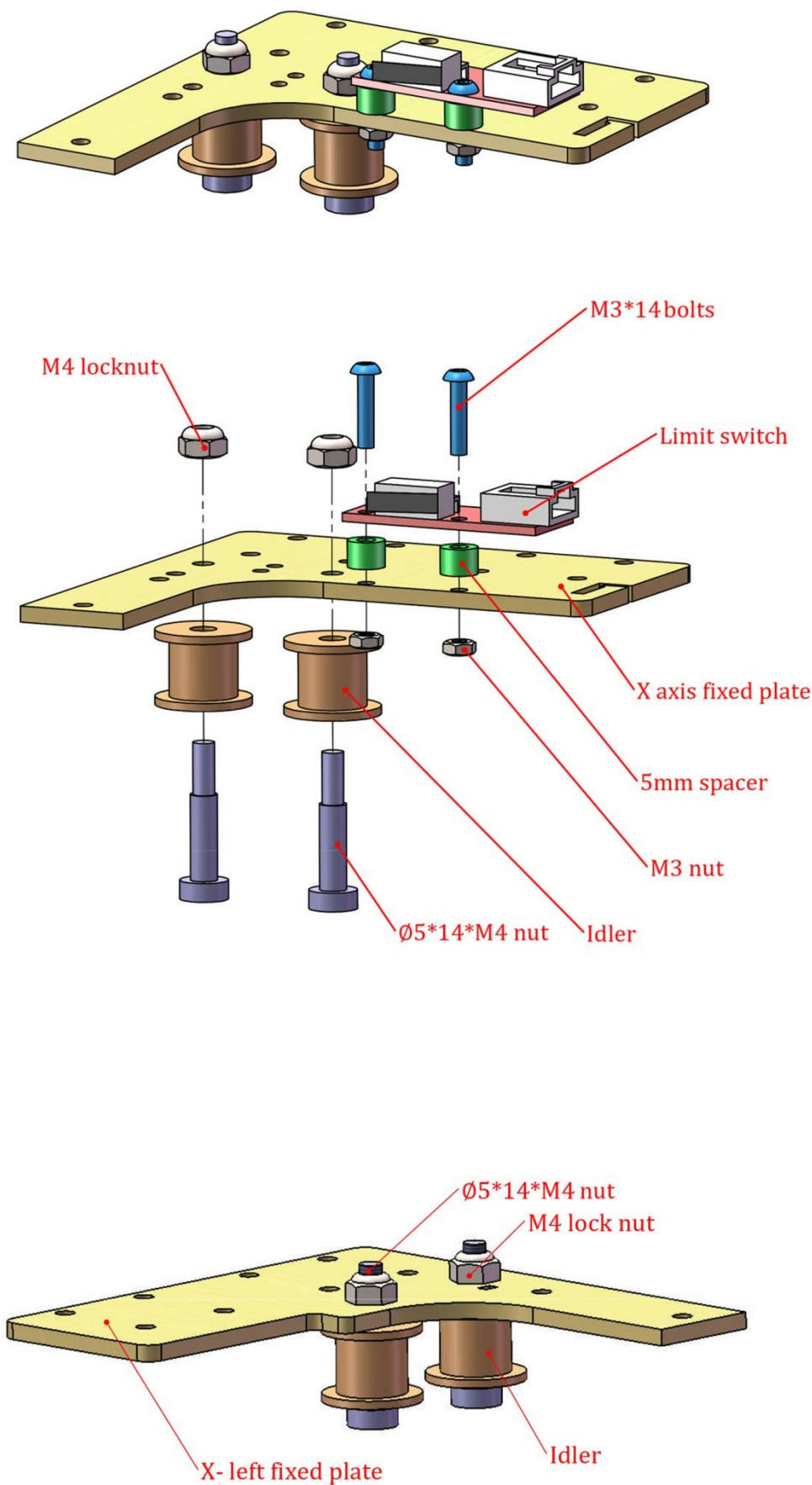
3、Y- linear guide rail Installation

Step 3 -----



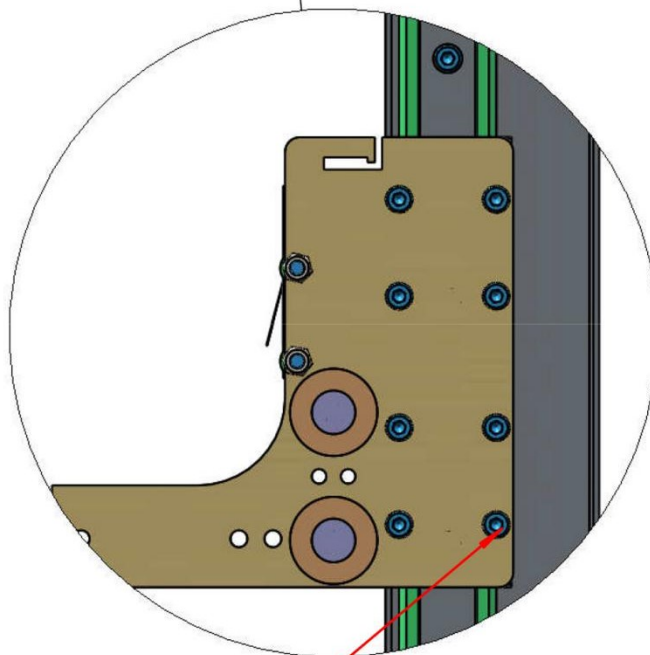
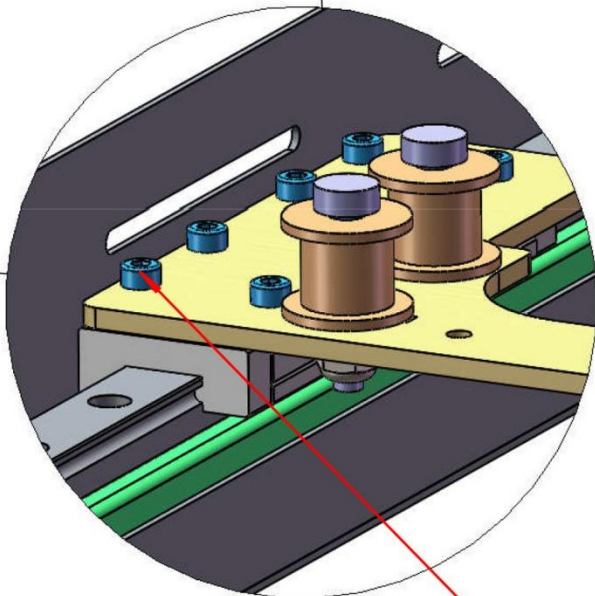
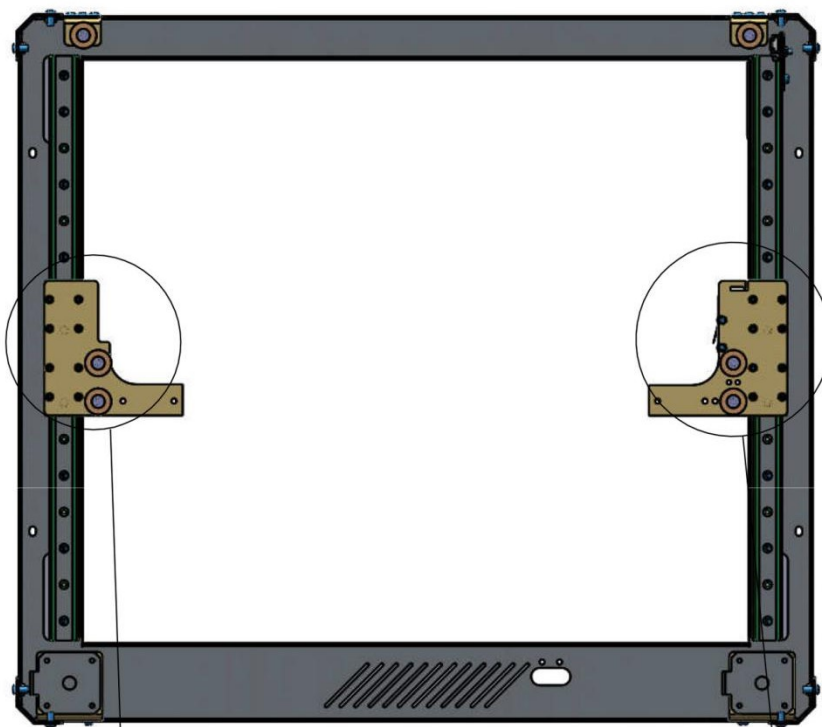
4、X- linear guide rail Installation

Step 1 -----



4、X- linear guide rail Installation

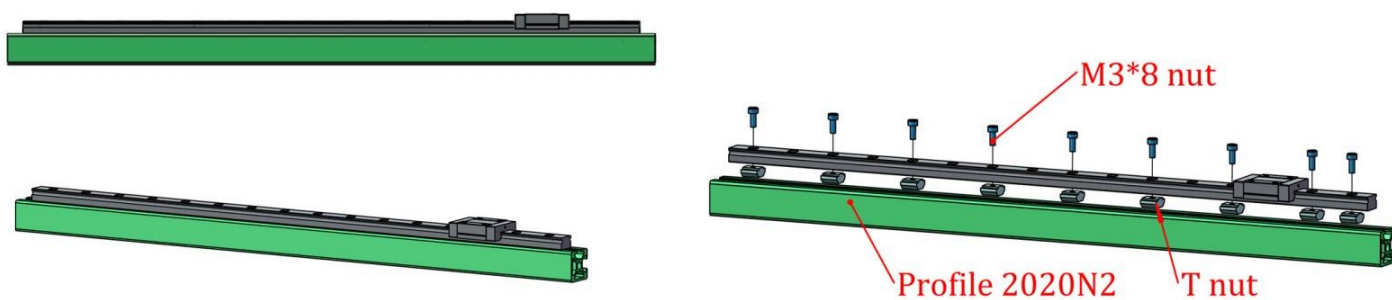
Step 2 -----



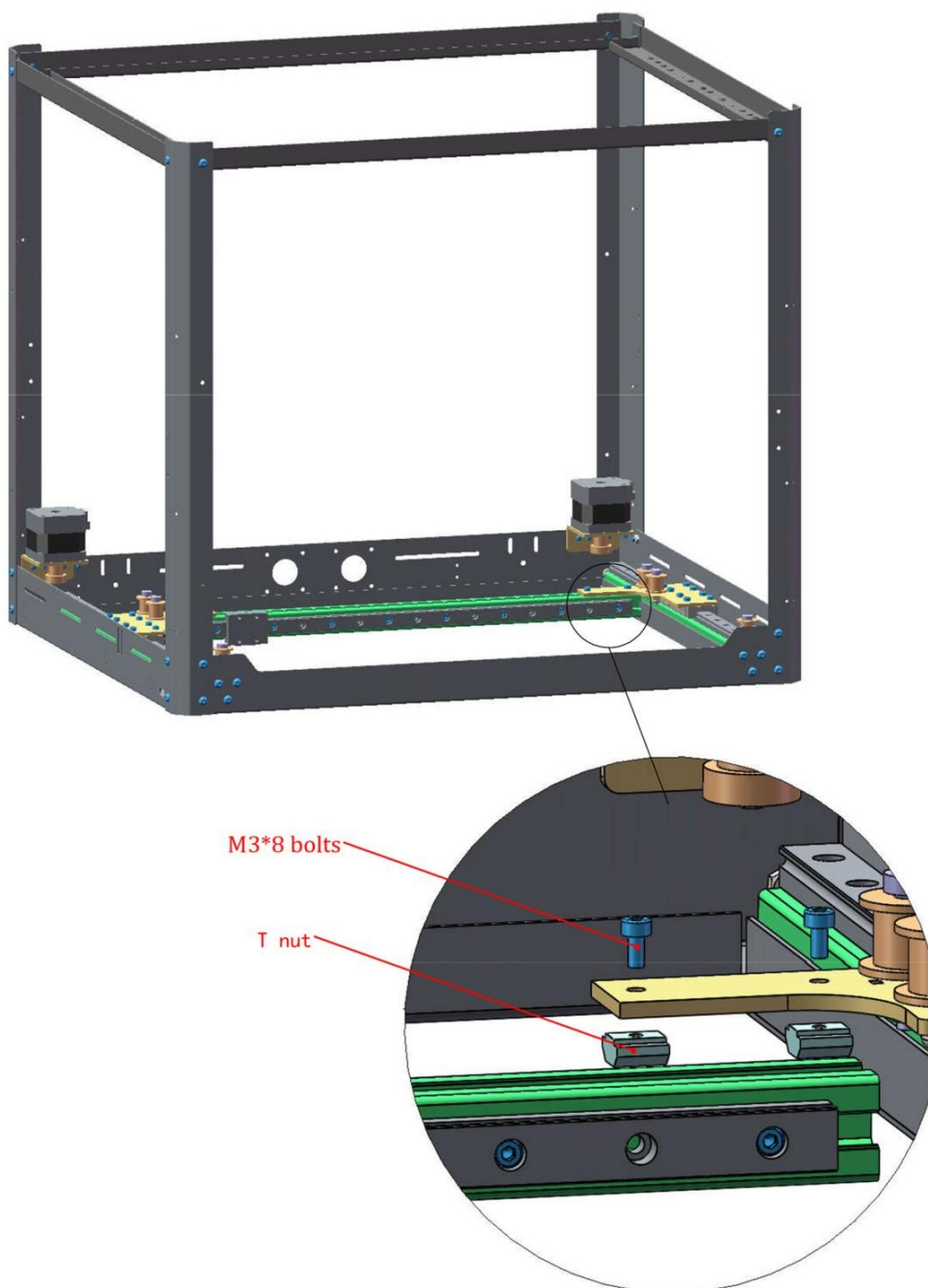
M4*6 bolts M3*6 bolts

4、X- linear guide rail Installation

Step 3 -----

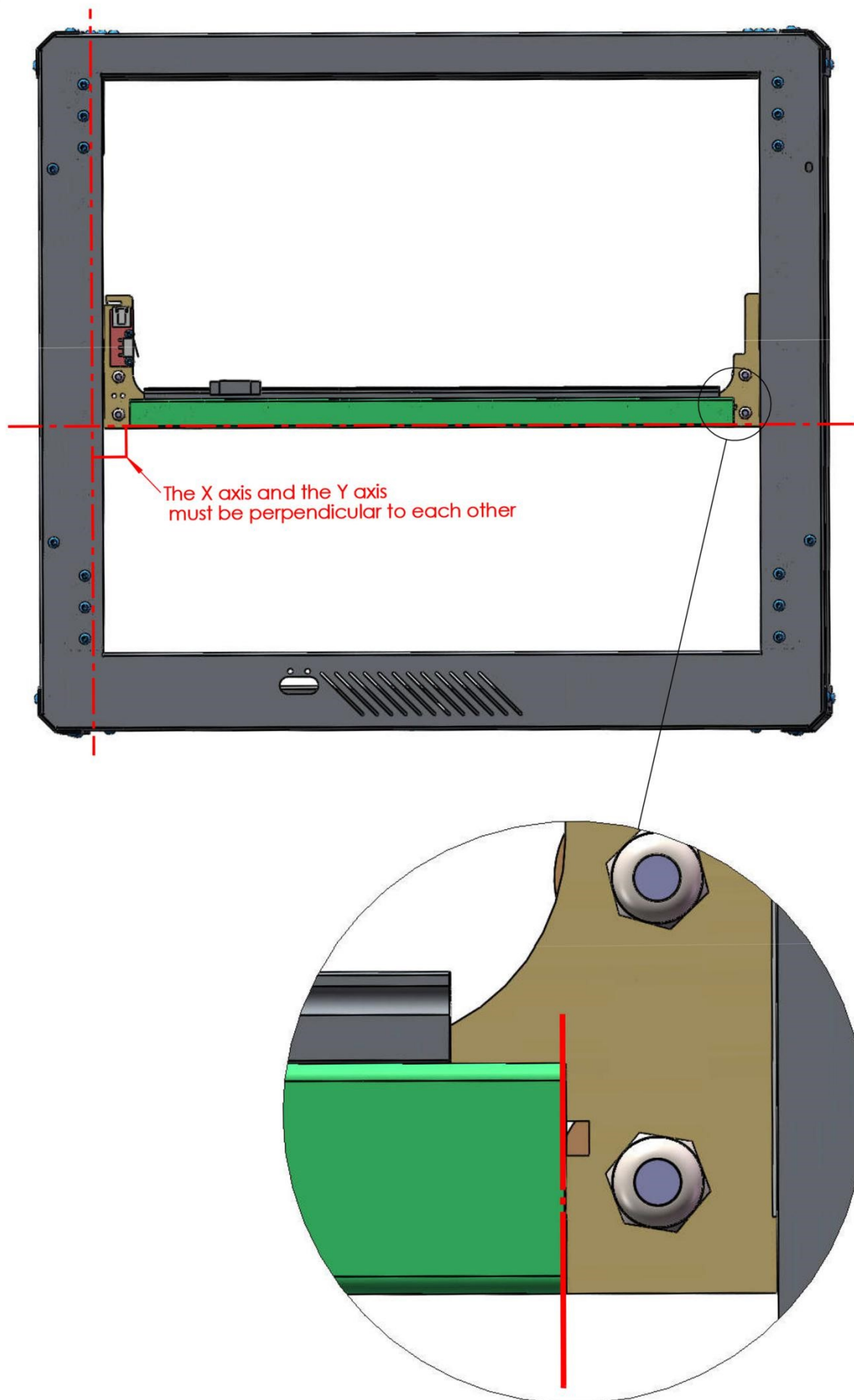


Step 4 -----



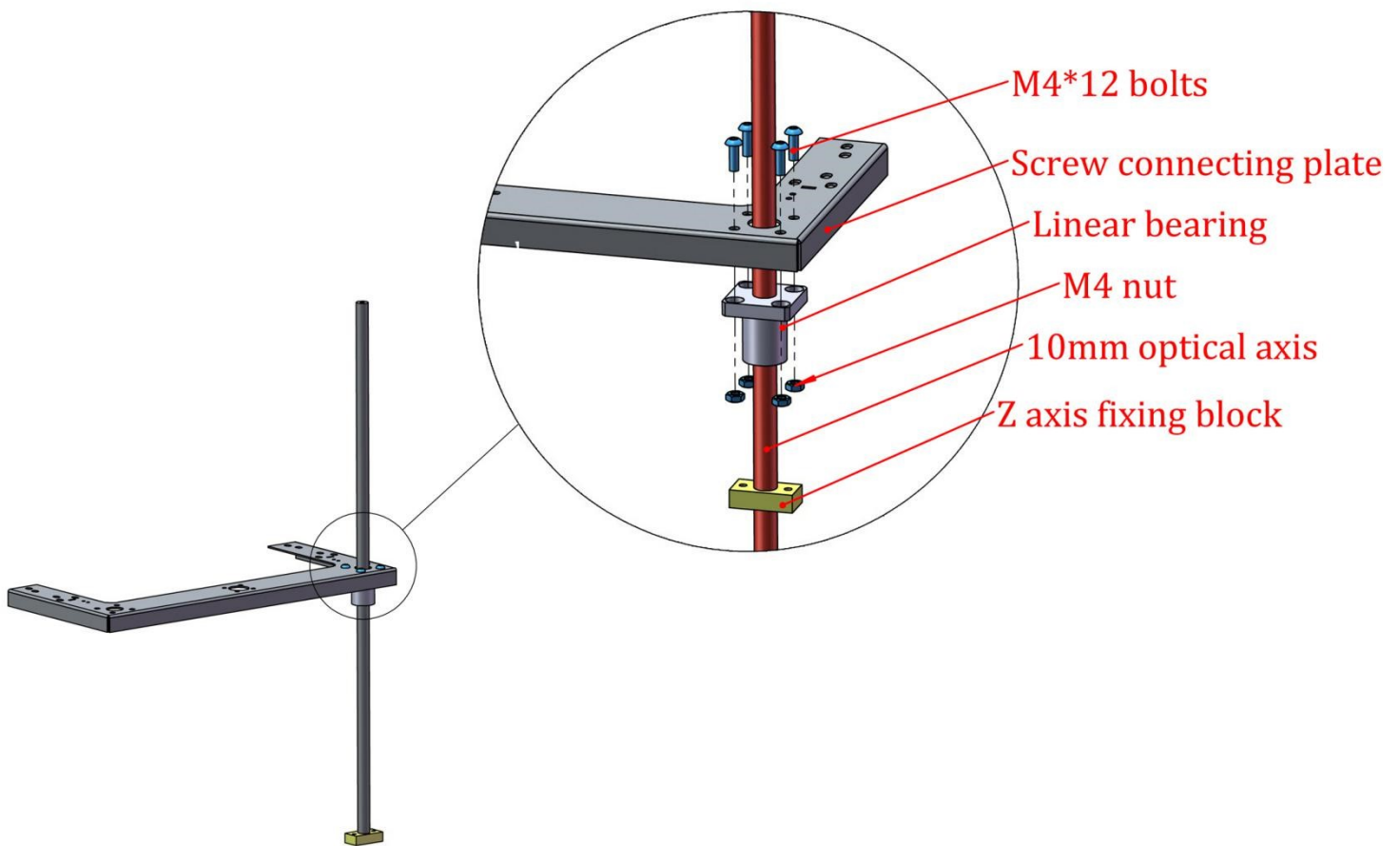
4、X- linear guide rail Installation

Step 5 -----

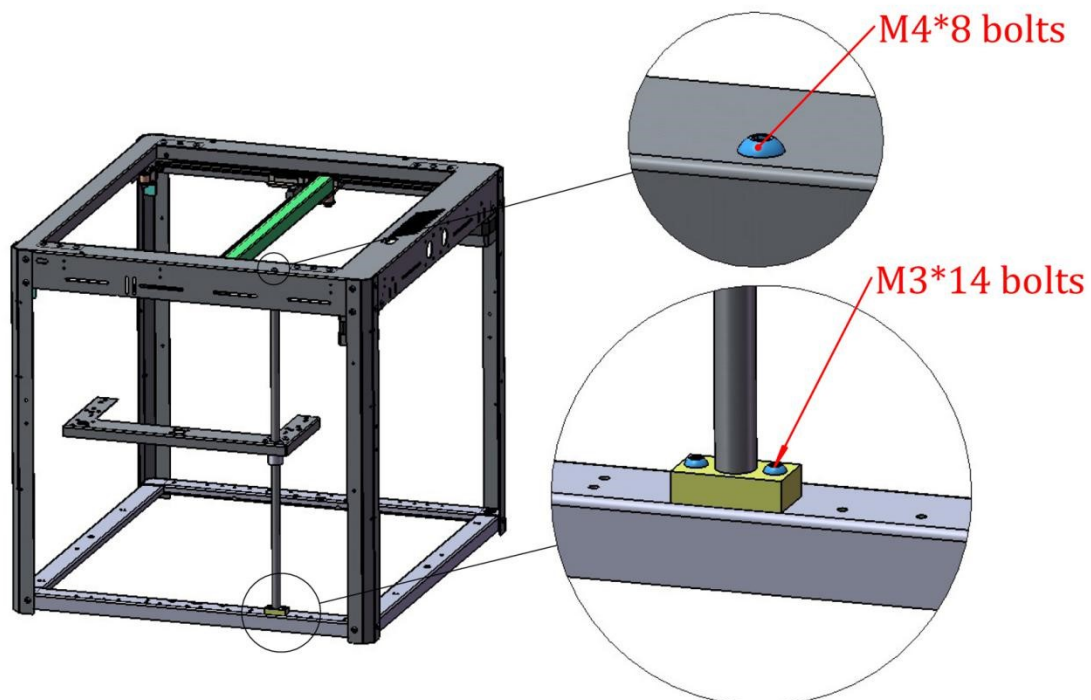


5、Z hot bed installation

Step 1 -----



Step 2 -----

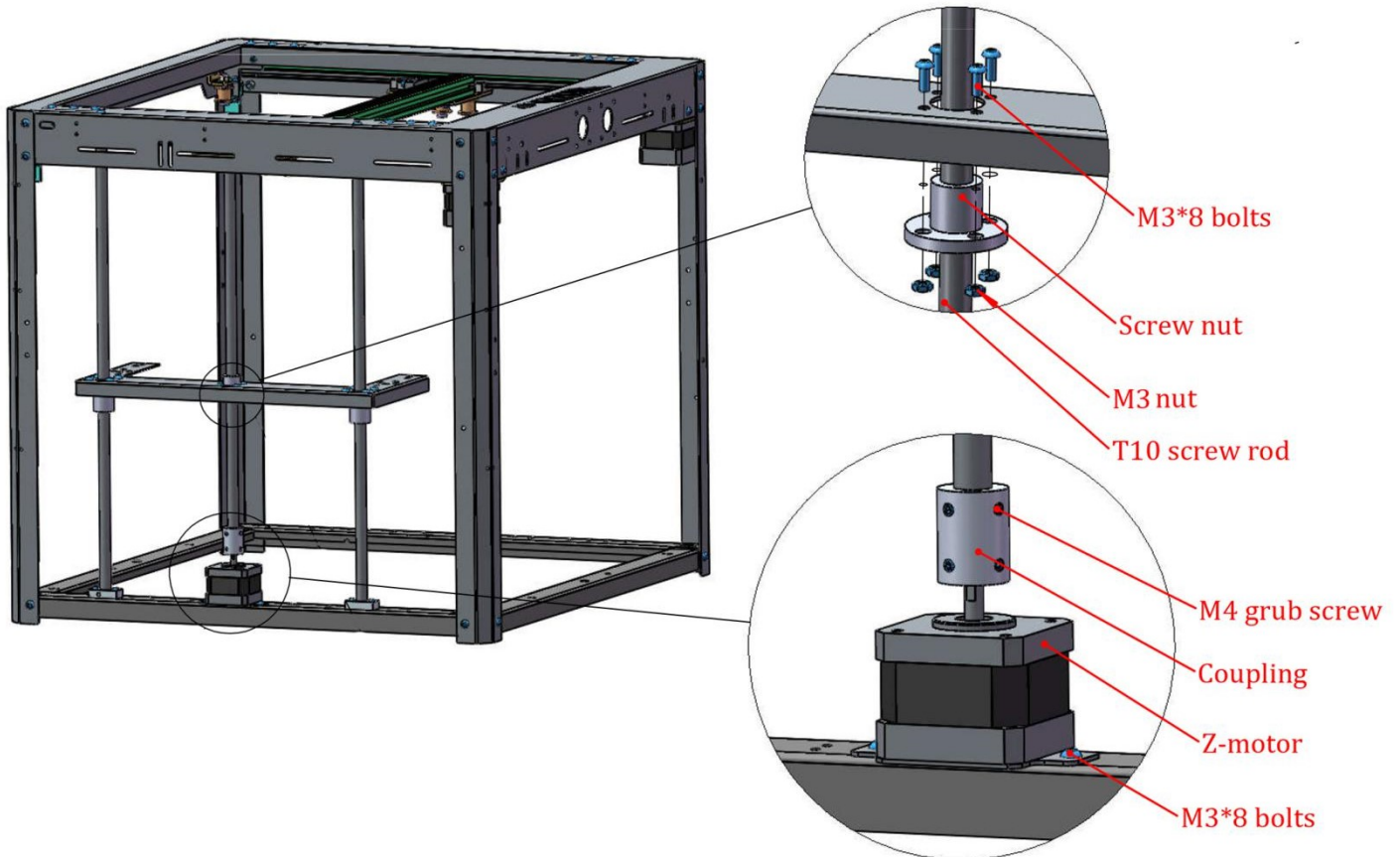


5、Z hot bed installation

Step 3 -----

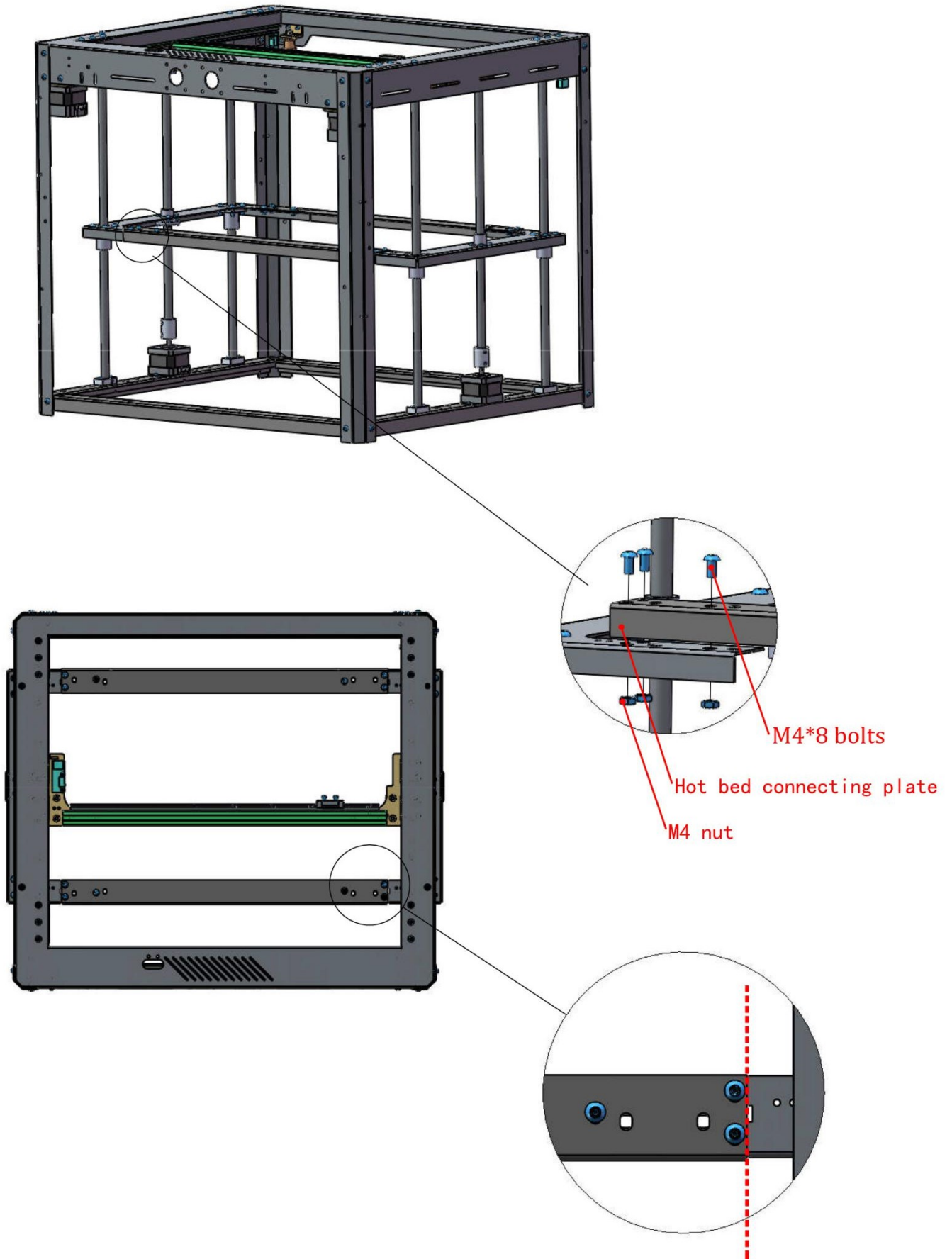


Step 4 -----



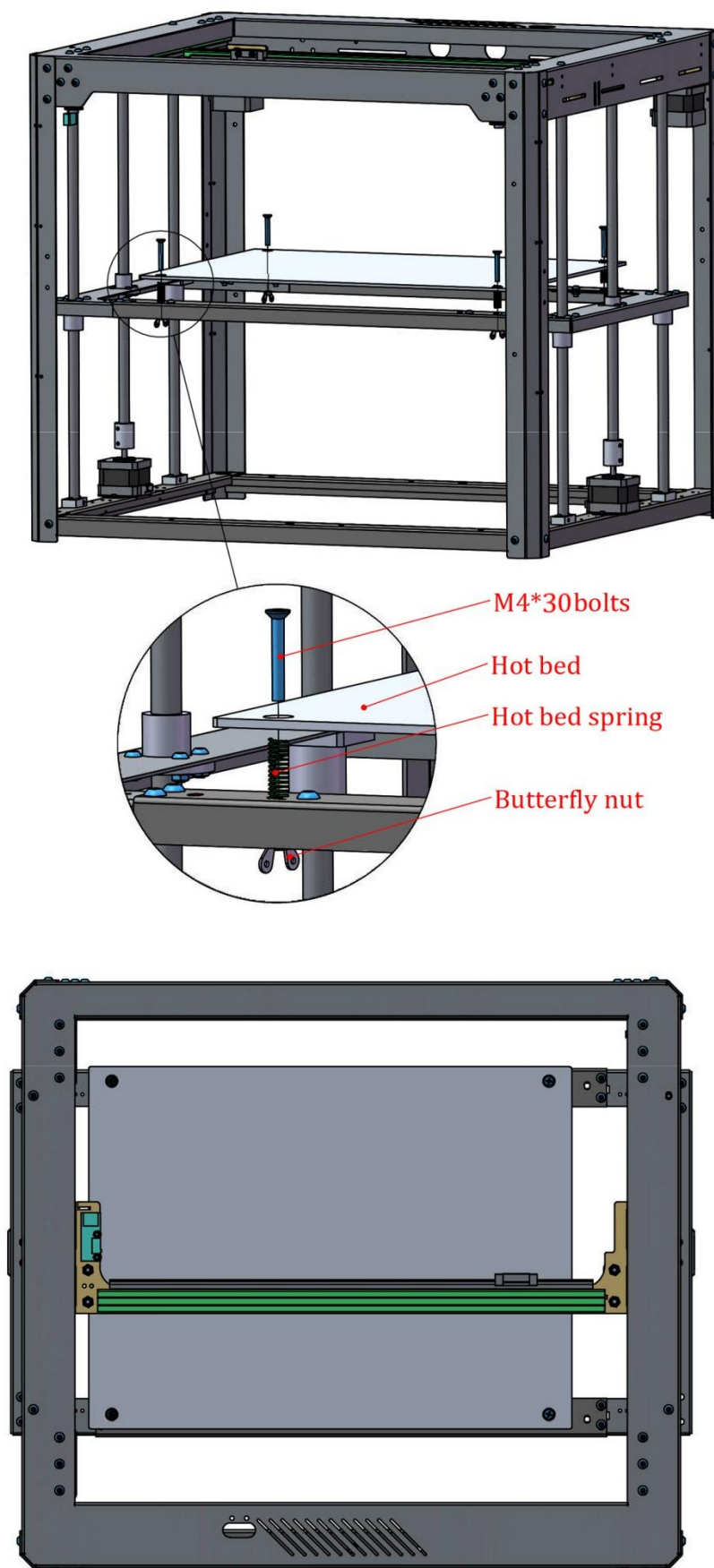
5、Z hot bed installation

Step 5 -----



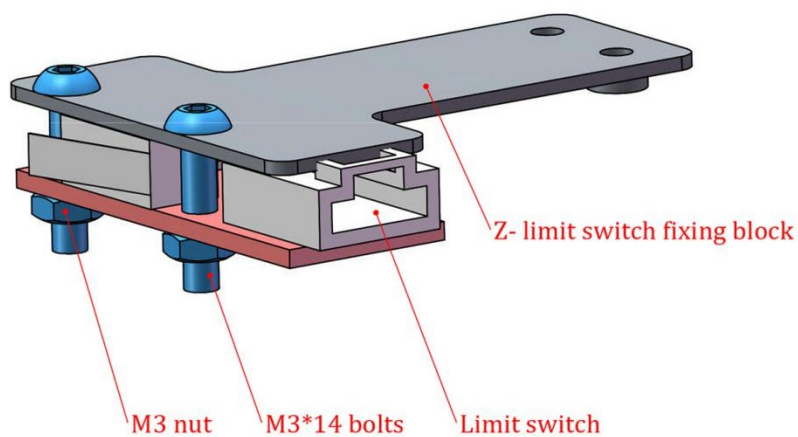
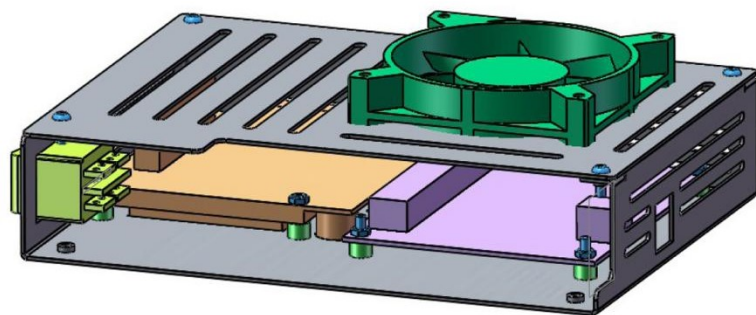
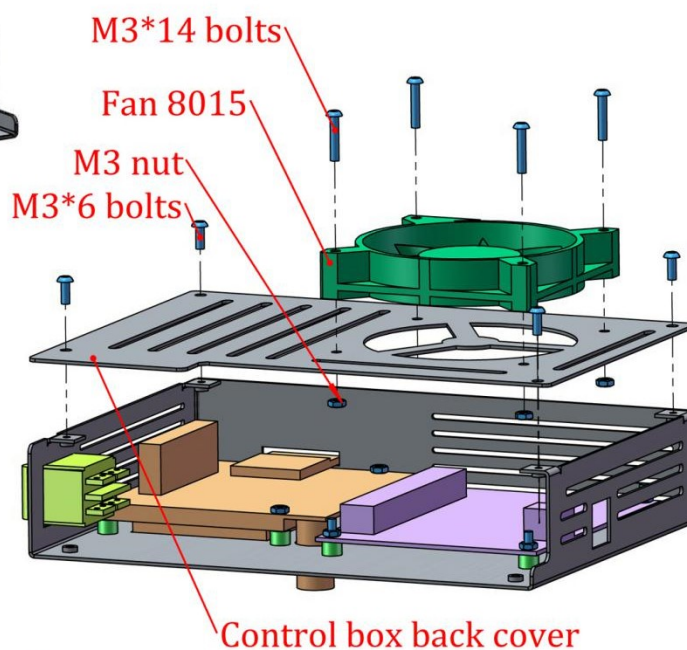
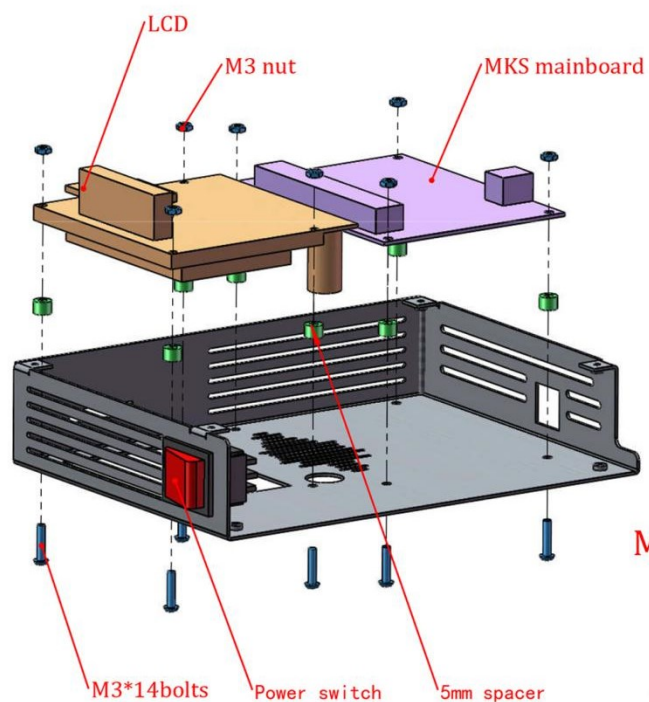
5、Z hot bed installation

Step 6 -----



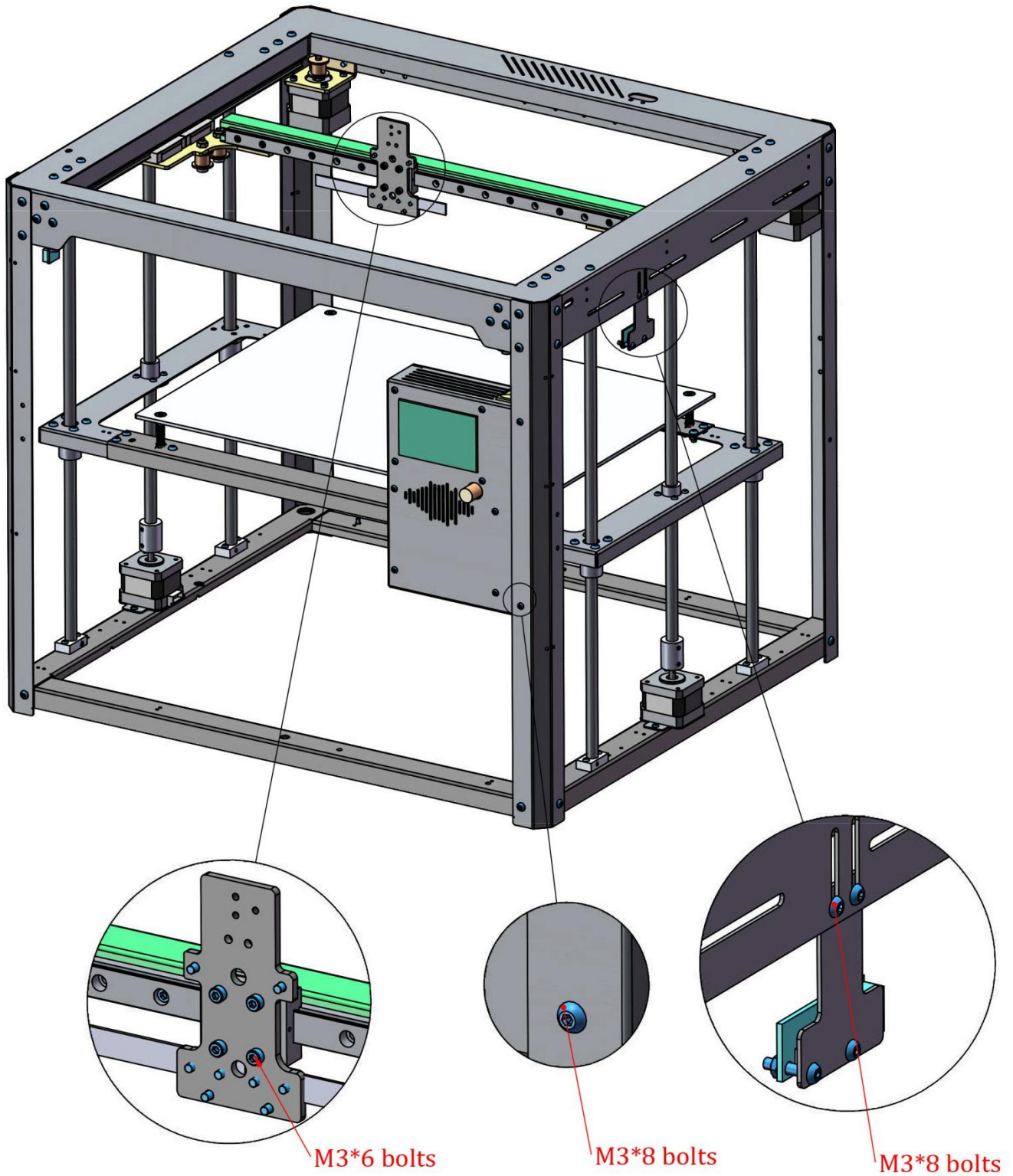
6、LCD and other parts installation

Step 1 -----



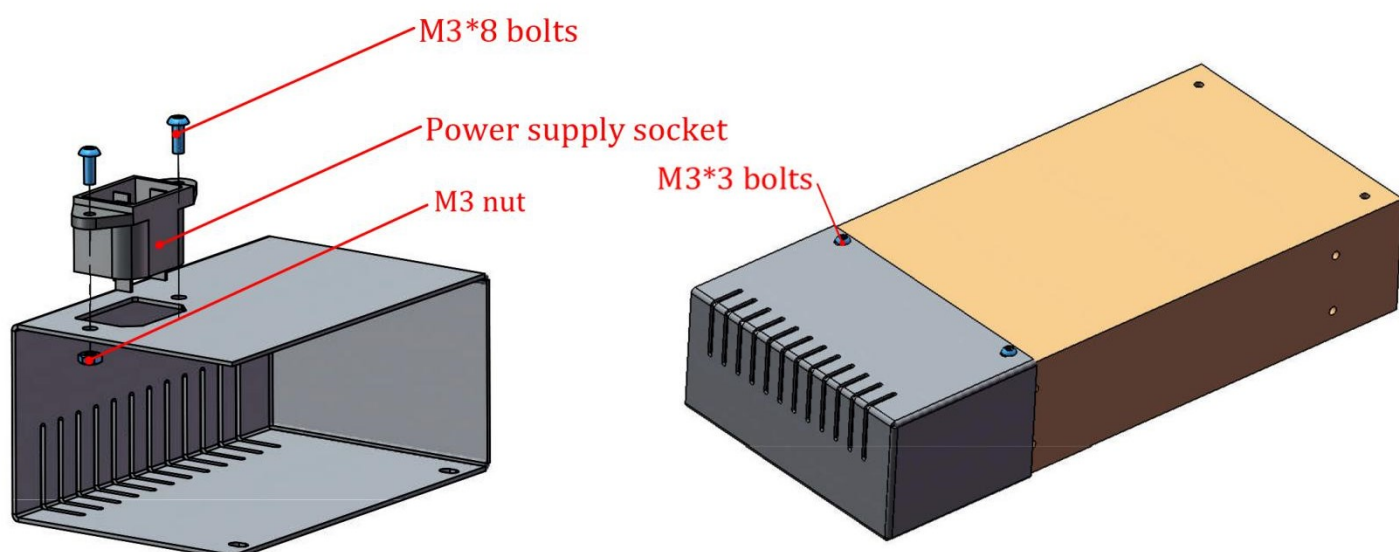
6、LCD and other parts installation

Step 2 -----

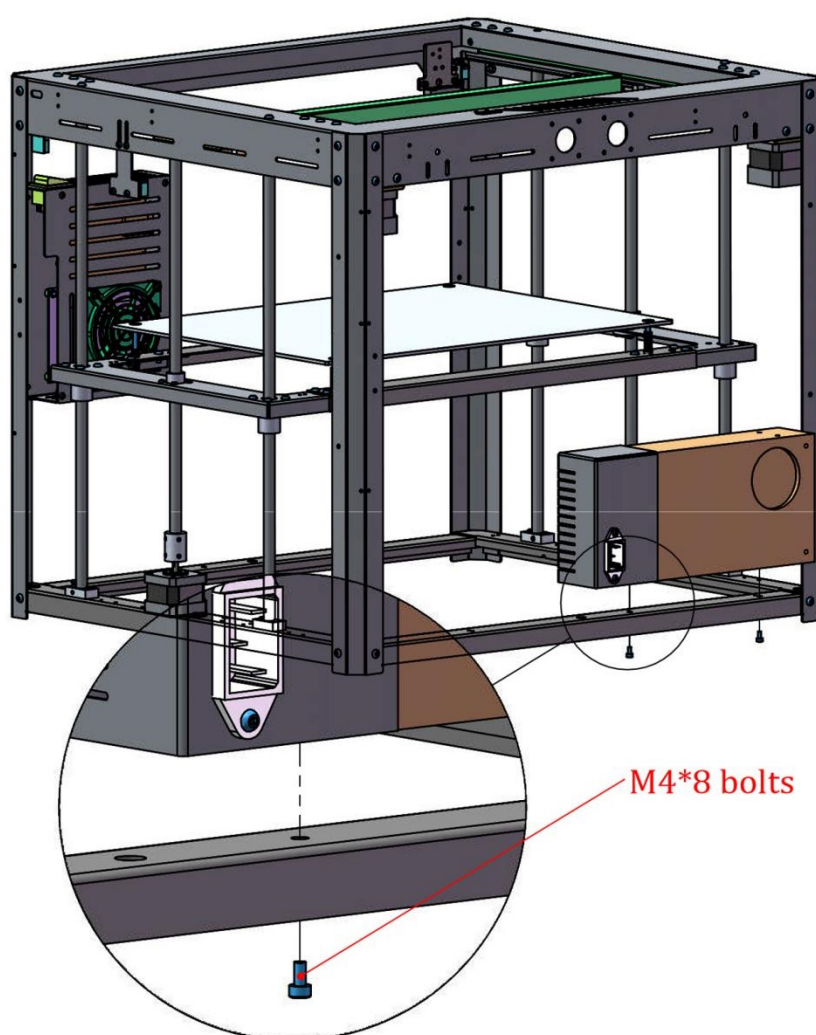


7、Power installation

Step 1 -----

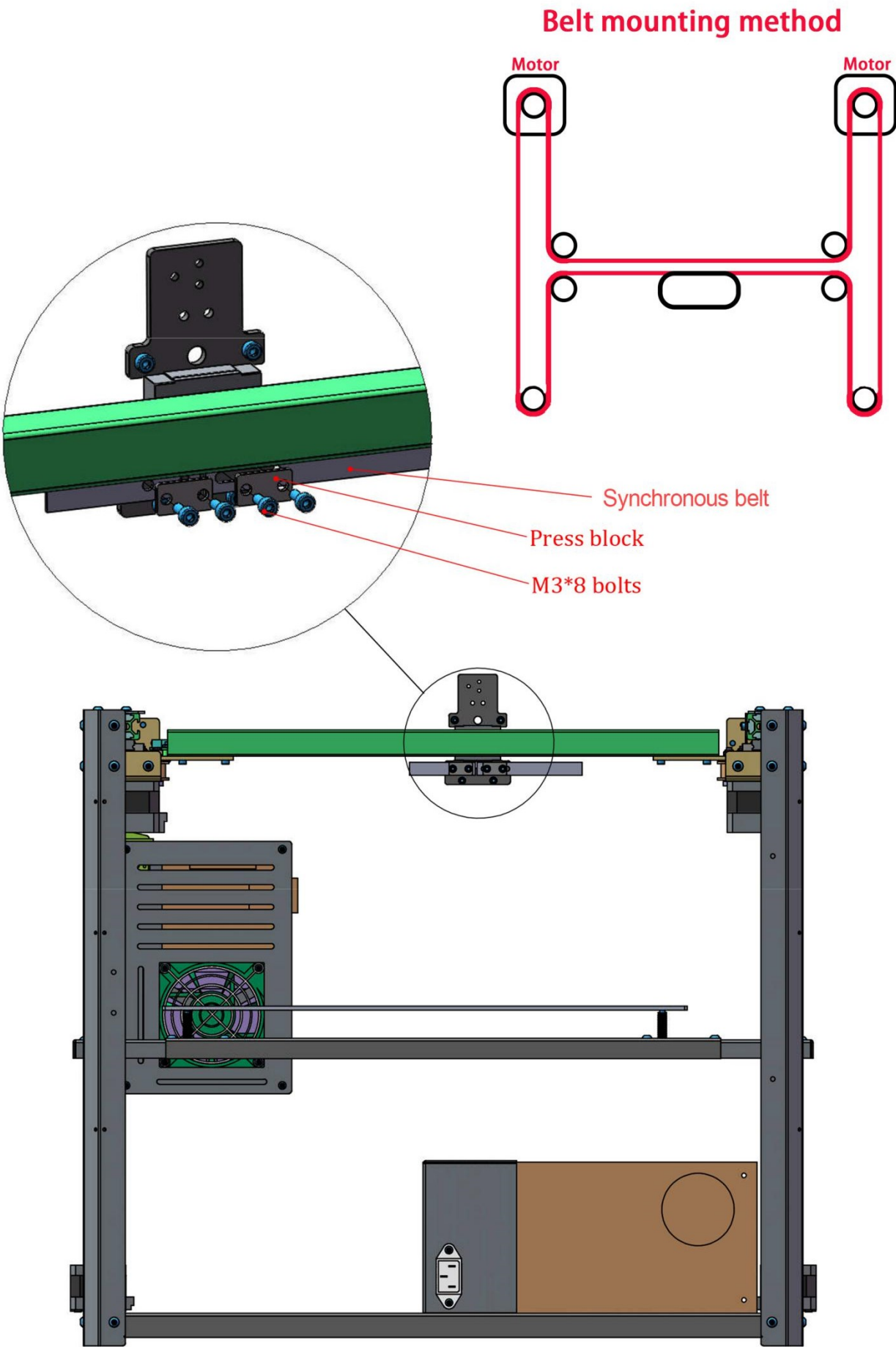


Step 2 -----



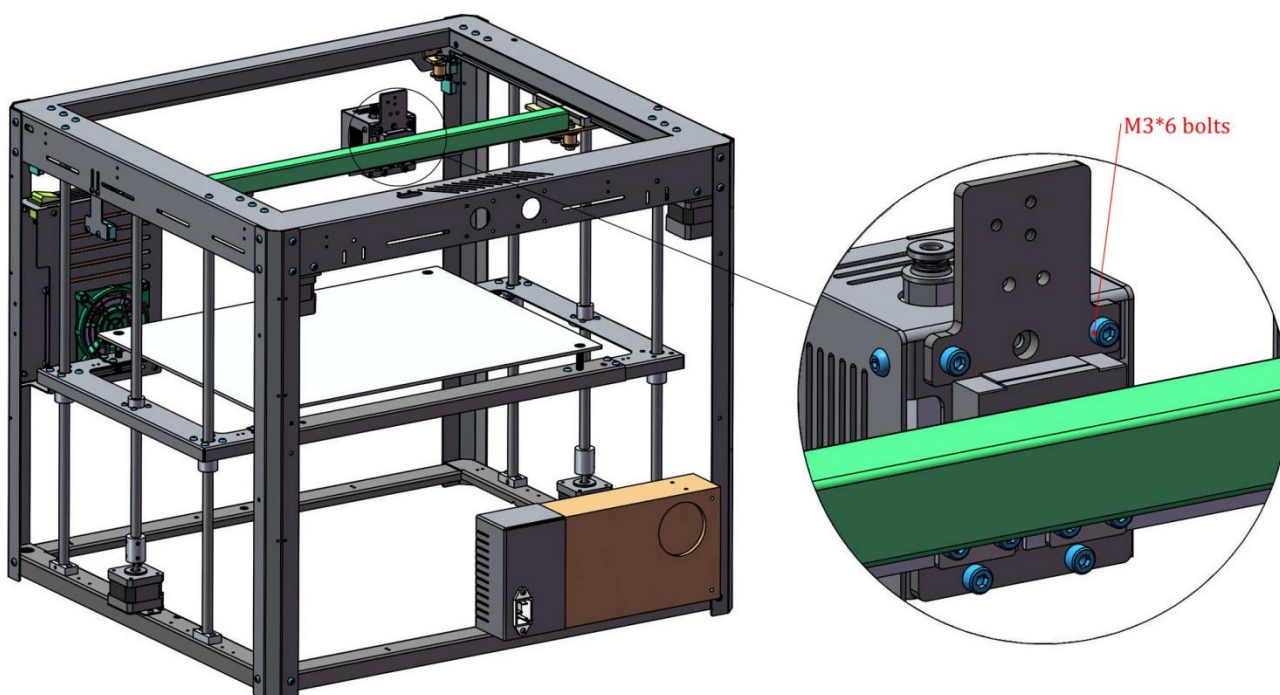
8、 Synchronous belt installation

Step 1 -----

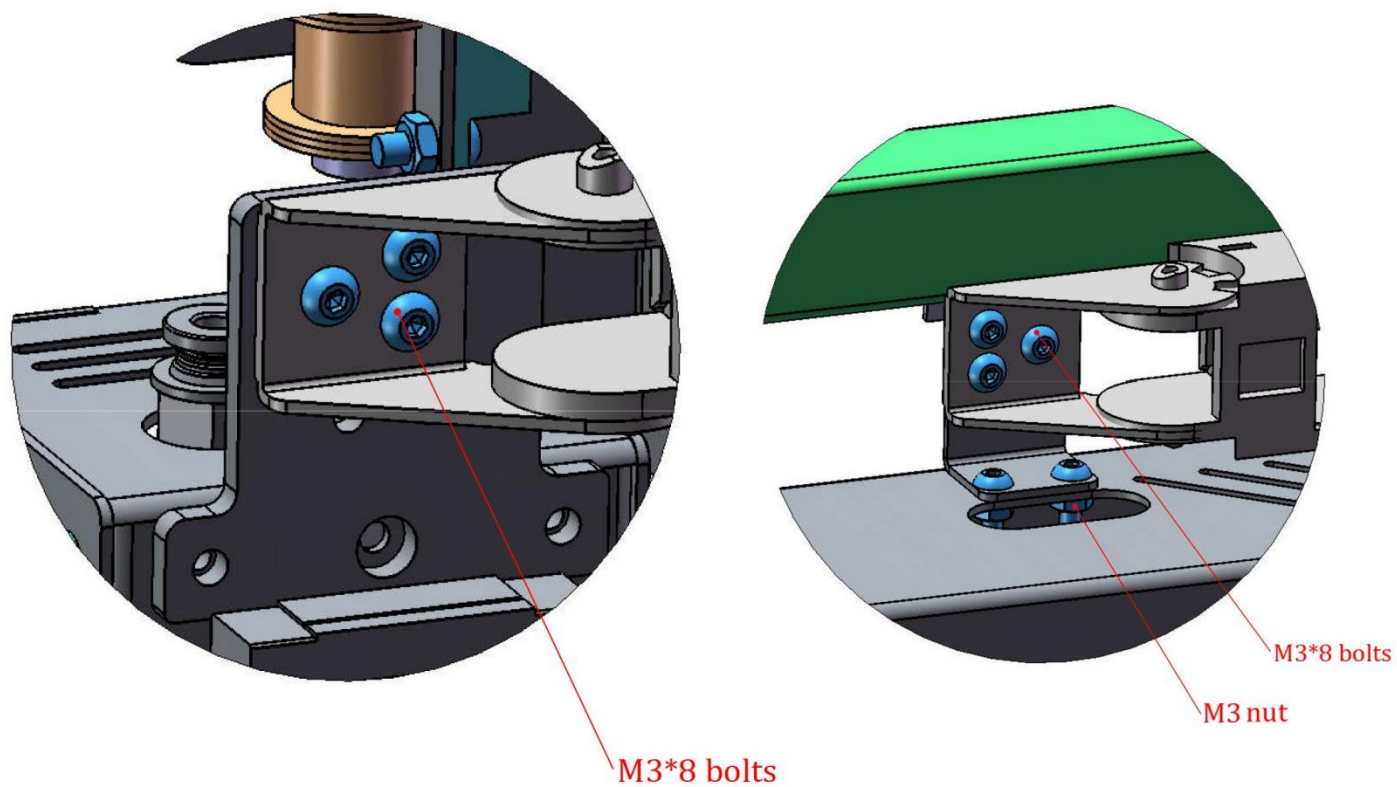


9、Nozzle and tank chain installation

Step 1 -----

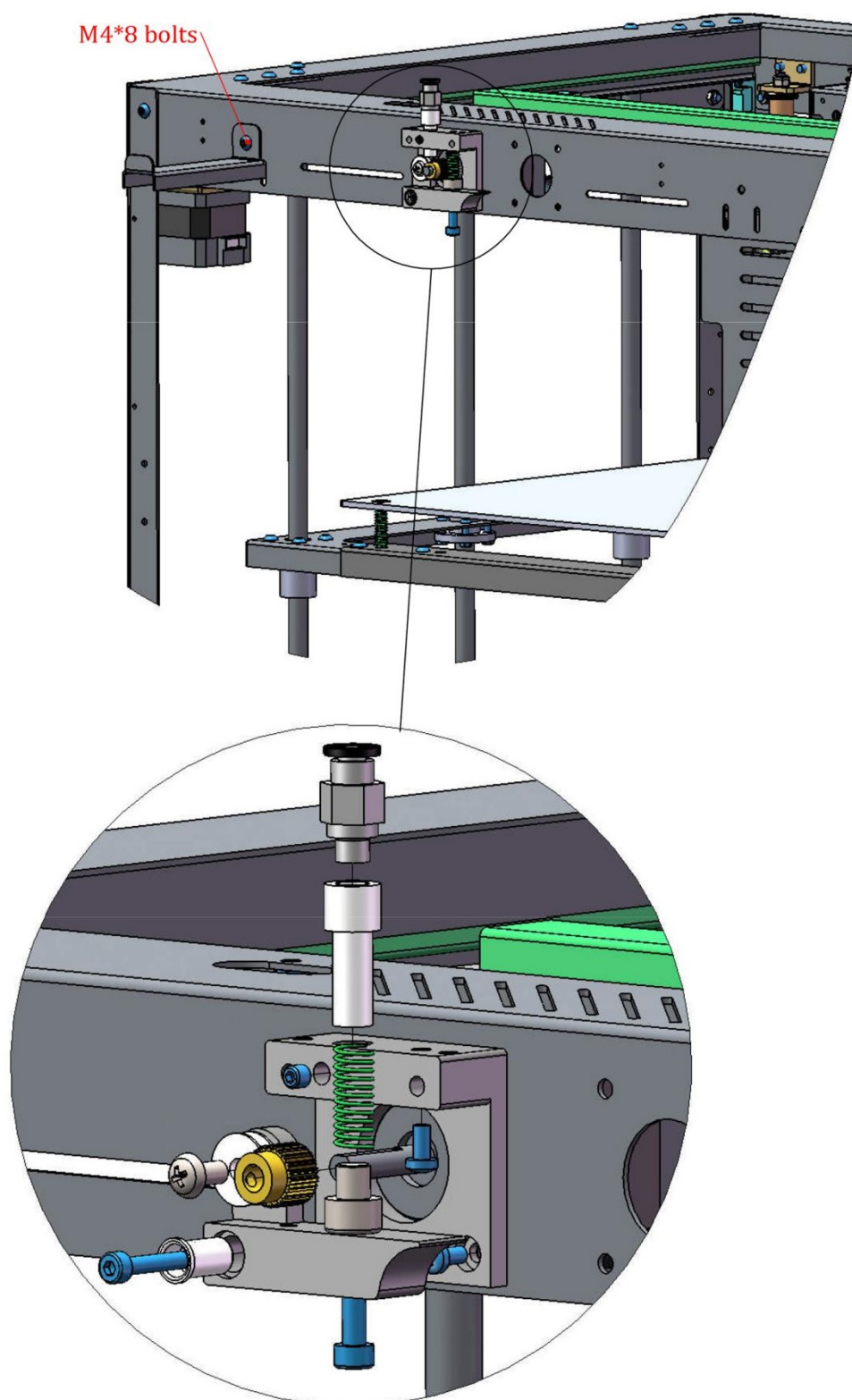


Step 2 -----



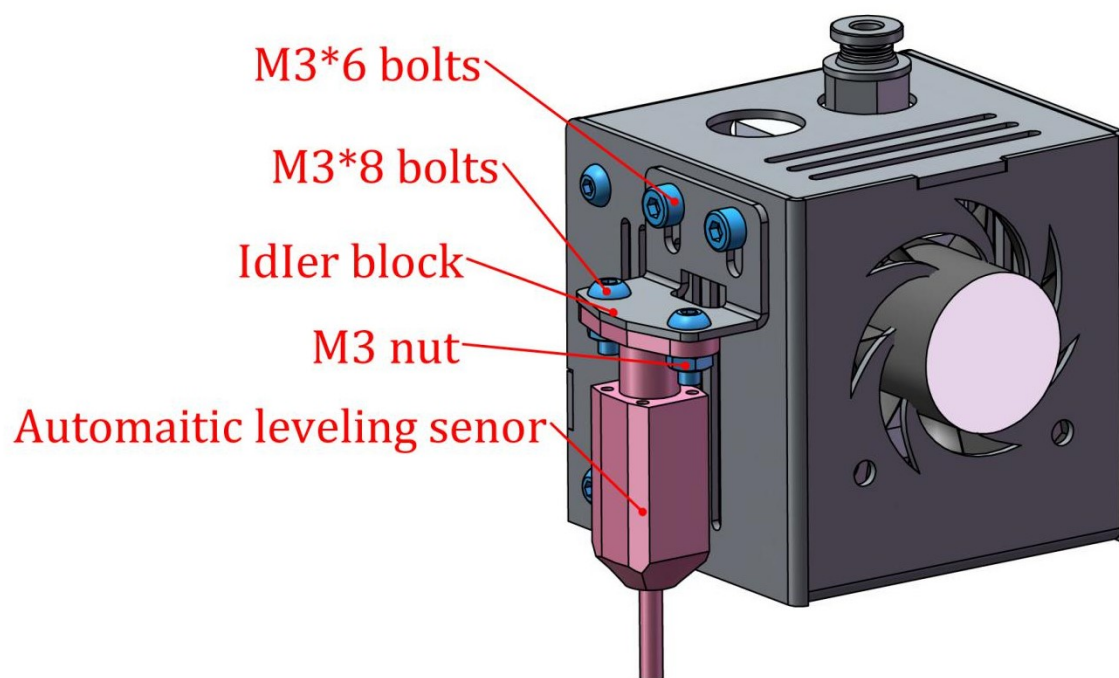
10、 Extruder installation

Step 1 -----

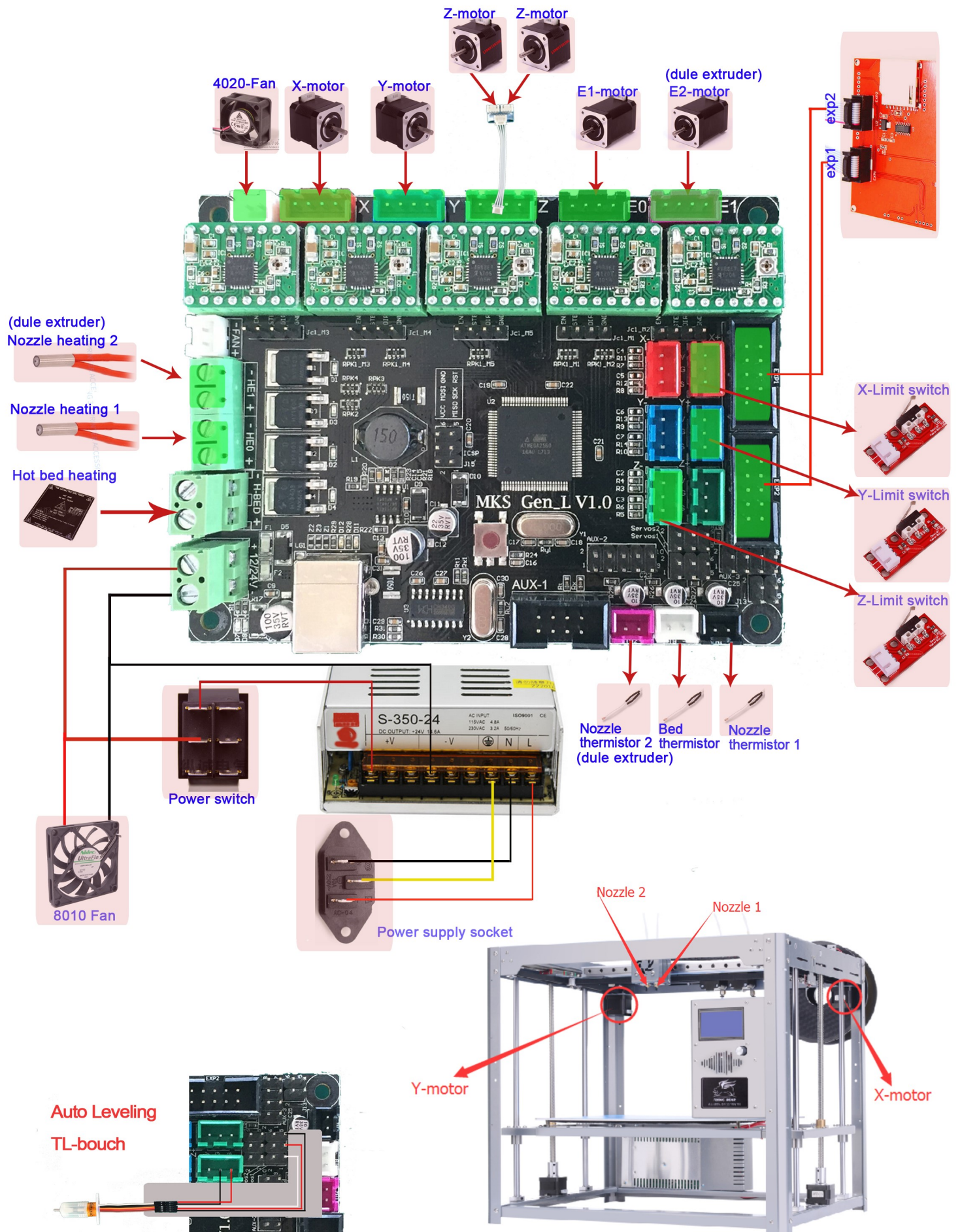


11 、 Auto leveling installation

Step 1 -----



12、Flyingbear-Tornado wiring diagram

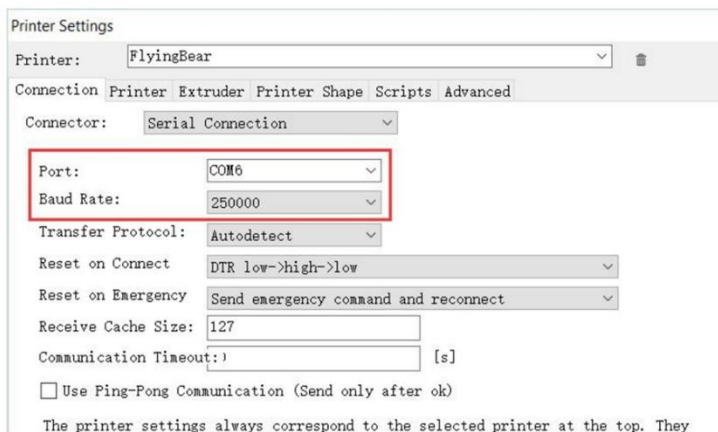
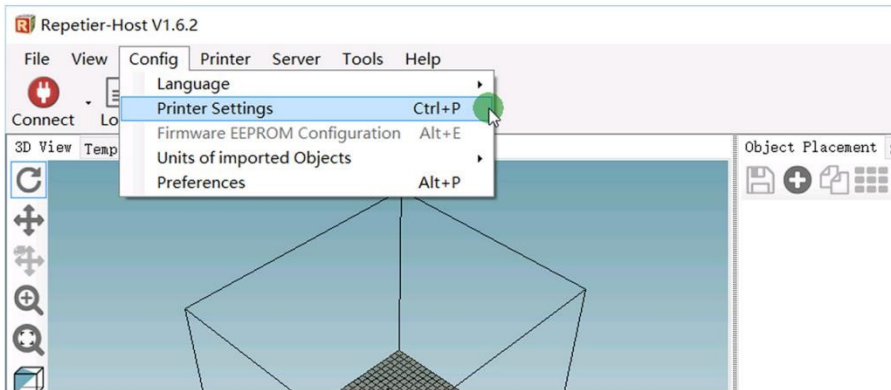


13. Setting up slicing software

3D printers have very many slicing software, such as Cura, simplify3D, and so on, but we only introduce how to use repetier-host.

Software download address: <https://www.repetier.com>

When the software installation is complete, click "printer settings", and then follow the pictures in turn to operate

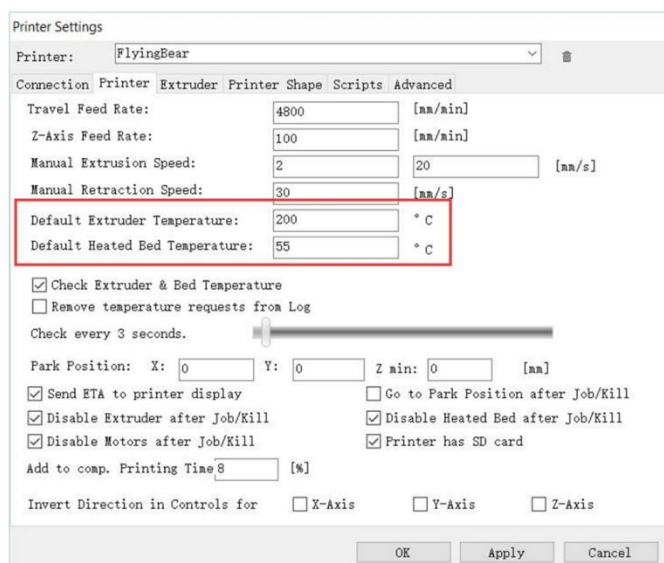


Port :According to the ports in Device manager (COM&LPT) to choose,

(Notice: Each computer is different, my computer is COM5.)

Baud Rate: fill in "250000"

Other parameters remain the same.



Reference temperature:

Print PLA

Extruder temperature: 190°C around

Bed temperature: 40°C around

Print ABS

Extruder temperature: 230°C around

Bed temperature: 80~100°C around

Other parameters remain the same.

13. Setting up slicing software

Printer Settings

Printer: default

Connection Printer Extruder Printer Shape Scripts Advanced

Number of Extruder: 2

Max. Extruder Temperature: 280

Max. Bed Temperature: 120

Max. Volume per second 12 [mm³/s]

☐ Printer has a Mixing Extruder (one nozzle for all colors)

Extruder 1

Name: e1

Diameter: 0.4 [mm] Temperature Offset: 0 [°C]

Color: 

Offset X: 0 Offset Y: 0 [mm]

Extruder 2

Name: e2

Diameter: 0.4 [mm] Temperature Offset: 0 [°C]

Color: 

Offset X: 0 Offset Y: 0 [mm]

OK Apply Cancel

For double nozzles, please fill in 2

Number of Extruder: 1/2

Name: P9.2-0.4

Diameter: default it is 0.4, Please fill in it according to your nozzle's diameter.

Other parameters remain the same.

Printer Settings

Printer: default

Connection Printer Extruder Printer Shape Scripts Advanced

Printer Type: Classic Printer

Home X: Min Home Y: Min Home Z: Min

X Min 0 X Max 350 Bed Left: 0

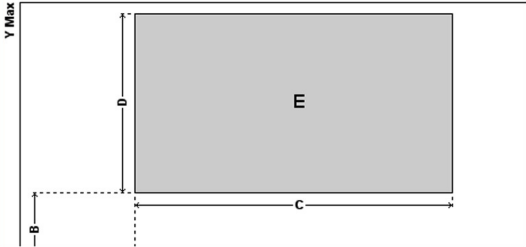
Y Min 0 Y Max 300 Bed Front: 0

Print Area Width: 350 mm

Print Area Depth: 300 mm

Print Area Height: 290 mm

The min and max values define the possible range of extruder coordinates. These coordinates can be negative and outside the print bed. Bed left/front define the coordinates where the printbed itself starts. By changing the min/max values you can even move the origin in the center of the print bed, if supported by firmware.



OK Apply Cancel

Printer: Flyingbear- tornado

X Max: 350

Y Max: 300

Print Area Width: 350

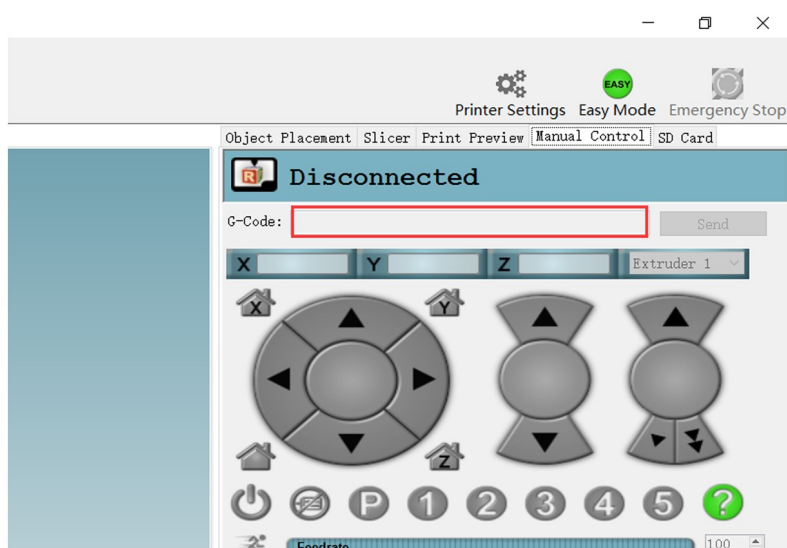
Print Area Depth: 300

Print Area Height : 290 **(Notice: The actual size is 300, but due to each customer's installation is different, it is possible to cause the size is small than 290. So it's more safe to fill in 290.)**

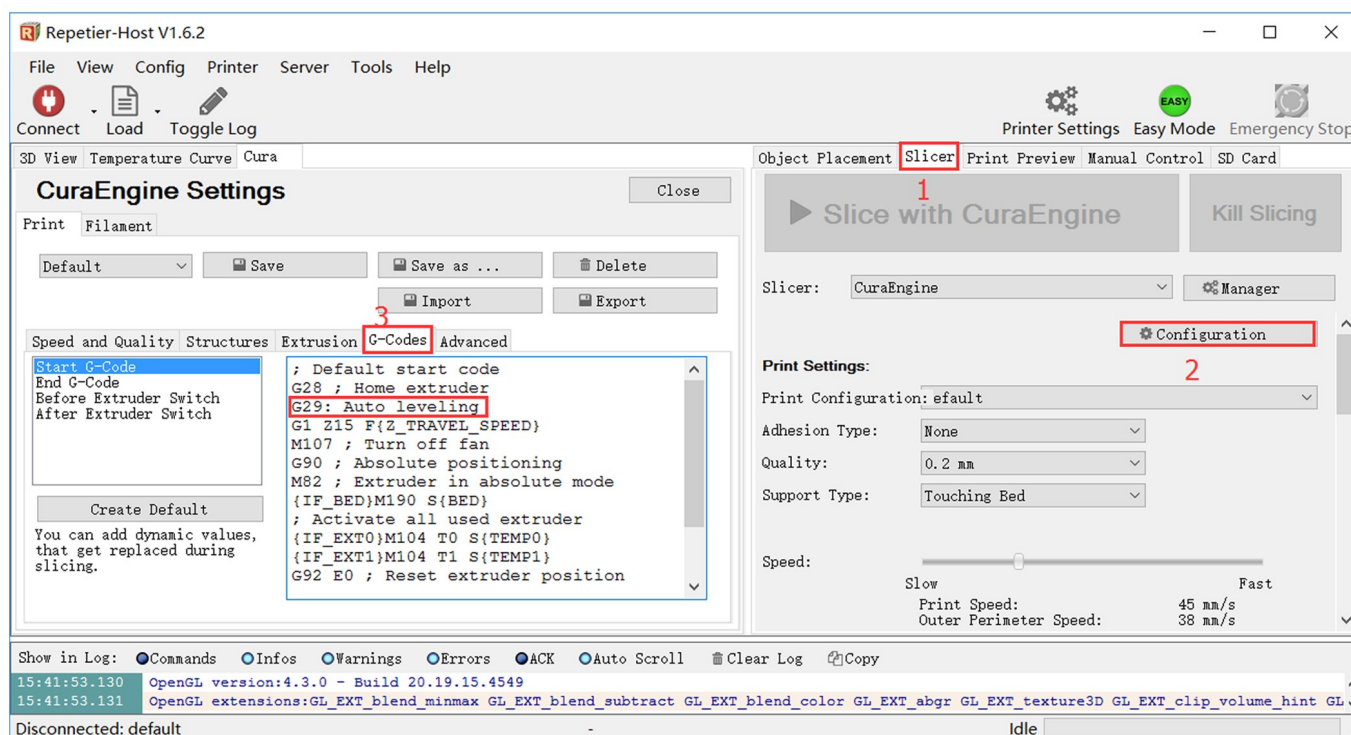
Other parameters remain the same.

14. Setting auto leveling sensor

Open the repetier-host and connect to the printer. select "manual control" tab and you should see "G-Code". Write in this field "G28" and press send button, Then send the G1 Z0, the screen will show that the Z axis is "Z=0". Now you can operate the printer by LCD screen, select "prepare/move the axis / 0.1 mm/move z" according to the menu. Move the Z axis, until the distance between nozzle and hot bed reaches the most suitable distance. (the best distance between nozzle and hot bed is probably a piece of A4 paper). Then record the Z axis numerical that LCD displays (This numerical value should be a negative number, let's assume this value is -1.5). And then we send the G code "M851 Z - 1.5", finally send G code "M500" to save your changes



Before slicing, add the auto leveling "G29" code

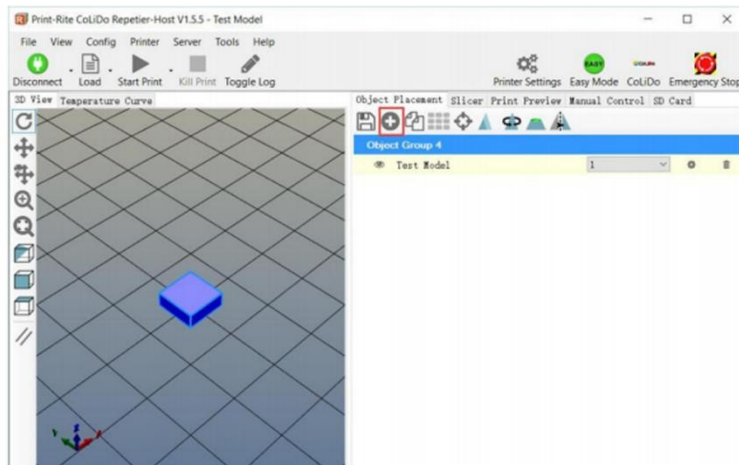


15、First print model

There are two ways to print: use the SD card to print and use the computer to print. It is recommended to use the SD card to print. The computer will be standby or have other abnormal situation to interrupt the printing process when use the computer to print.

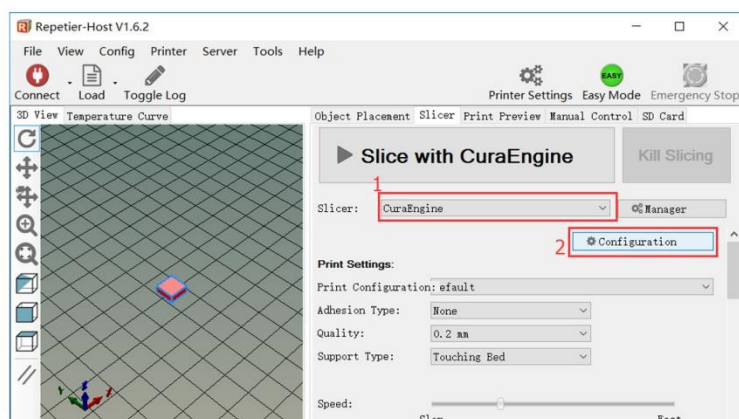
Attention:The hot bed needs to paste the masking tape or painted with the self-adhesive before printing.

Introduction of using SD card to print

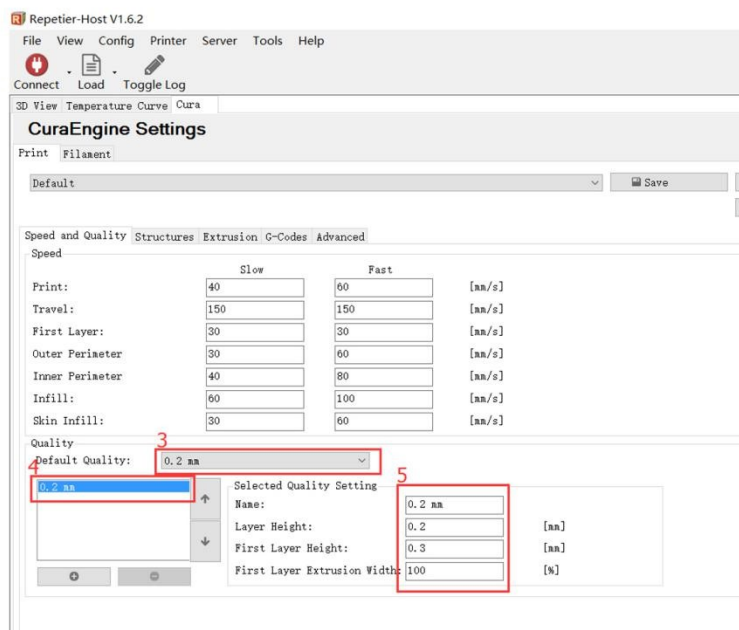


Click the button, load the folder

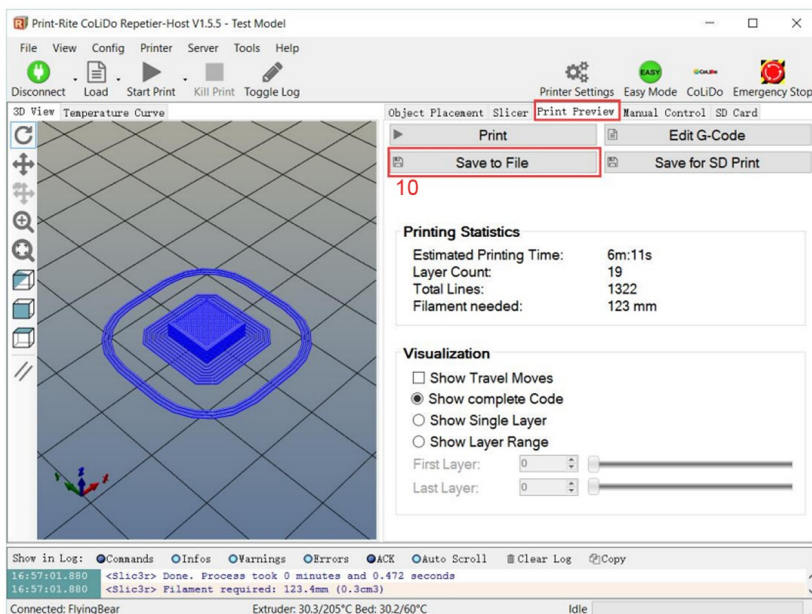
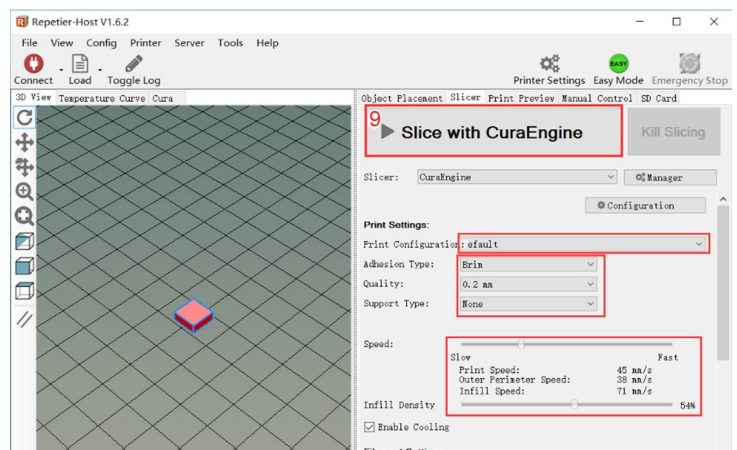
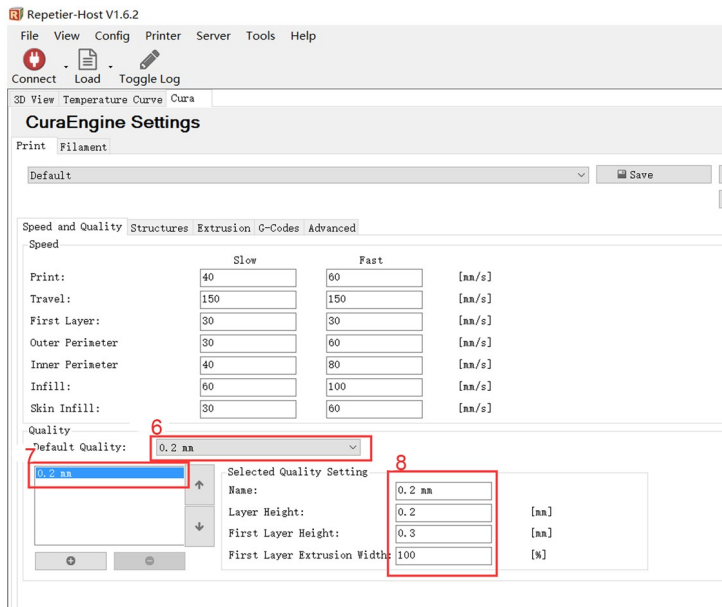
“Test Model” in “FlyingBear-tornado Printer”



Set parameters according to pictures



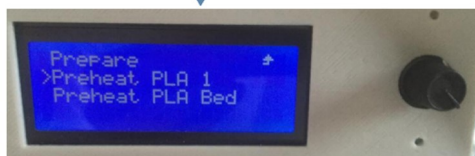
15. First print model



After slice is done, Click "Save to File" to save the file in SD card.



After insert the SD card into LCD, choose "Prepare" ---- "Auto home"



Choose "Prepare" --- "Preheat PLA" ---- "Preheat PLA"



Choose "Print from SD" ----- "Test Model"

Then wait a moment, after the heating process all finished, it will begin to print.

