TRONXY

user's manual

X5SA-500-PRO

Installation Manual

Thank you for choosing TRONXY products!

We will serve you whole heartedly!

Please read the instruction carefully

Please visit tronxy.com for more information

TEL：+86-755-89968500

Relevant information is stored in SD card,please check

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X5SA-500Pro Install video QR Code

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Pay attention

Please read this instruction carefully and follow the safety instruction.

When the 3D printer is working, it will produce high temperature.Do not touch working parts or extruder directly.After printing, the working part may still be in the high temperature state.Please wait patiently for the working parts and the print model to cool down before removing the model from the print platform.

Please use the 3D printer in a spacious and well-ventilated environment.

The recommended ambient temperature for 3D printers is 8°C-40°C, and the humidity is 20%-80%. Using outside this range may bring bad printing effects.

In case of emergency, could turn off the power of the 3D printer directly.

3D printers contain working parts that move at high speeds, so be wary of pinching your hands.

When removing the model from the print platform, be careful not to swipe sharp objects at your finger.

Assemble the 3D printer or polish the model. suggest Wear goggles.

Please pay attention to the protection of 3D printer against rain and moisture.

Keep children away from the machine when it running
It is not recommended to run a 3D printer when left unattended.

Use wires must be connected to the earth

Catalogue

1. Machine parameter

Print parameters

Print principle: FDM (Fused deposition molding)

Print size: 500× 500×600 (mm3)

Print accuracy: 0.1-0.4 mm

Positioning accuracy: X/Y0.00625mm，Z 0.0125mm

Nozzle quantity: 1

Nozzle size: 0.4 mm

Print speed: 20~100mm/s (suggest 60mm/s)

Moving speed: 100mm/s

Filament: PLA, TPU, ABS, wood etc.

Temperature parameters

Environmental temp: 8°C - 40°C

Nozzle temp: Max260℃

Heat bed temp: support

Software

Slice software: Cura

Input format: .STL .OBJ

Output format: GCode

Connection: TF card, USB cable(Suitable for skilled users)

Power supply

Power input: 110V/220V AC, 50/60Hz

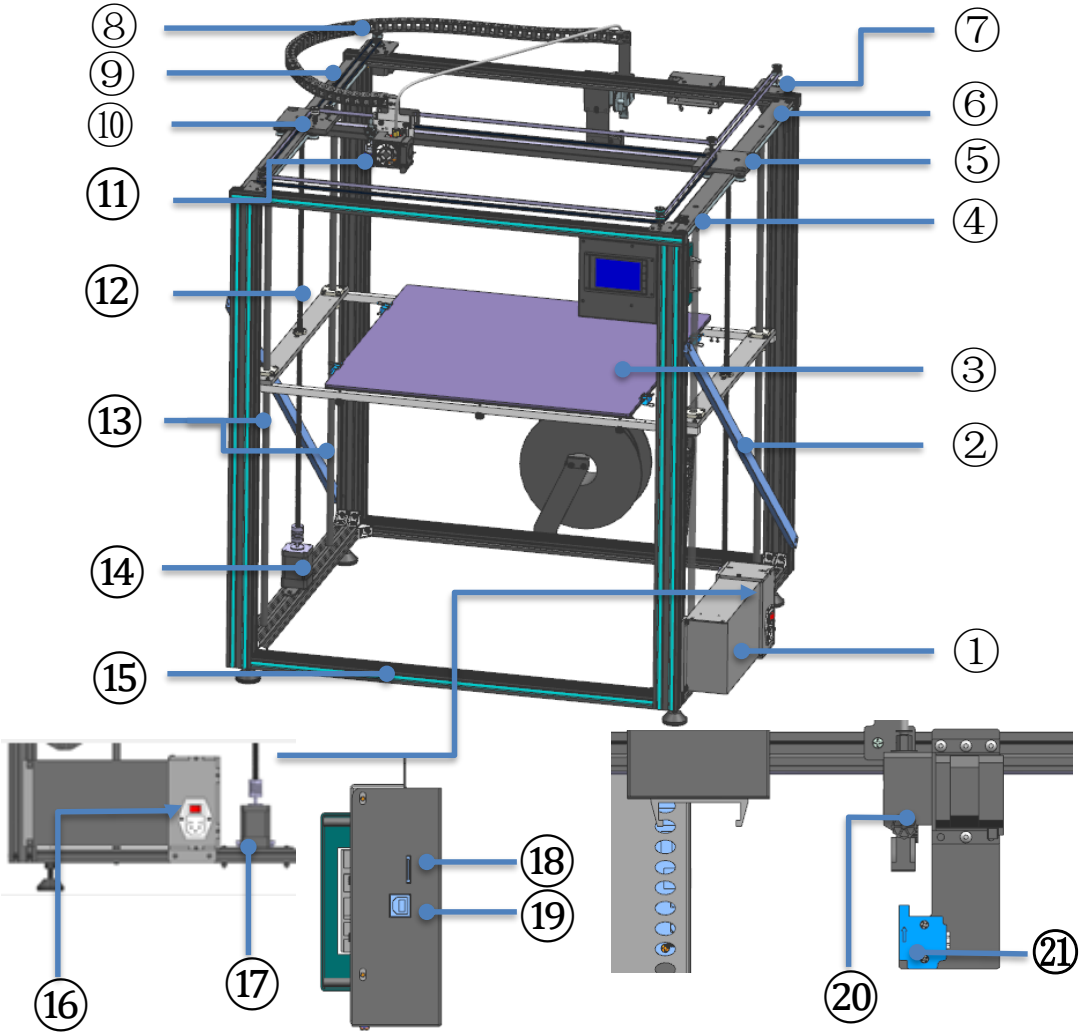
Power output： 24V/21A DC

Physical parameter

Machine size: 810mm×812mm×915mm

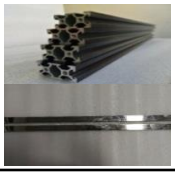
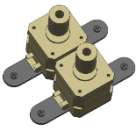
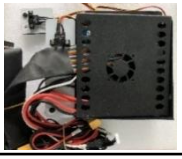
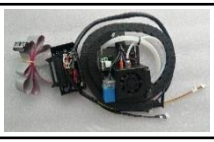
Machine weight: ~28.5kg

2. Introduction to machine structure



1.Power Supply	2.Stainless steel pipe	3.Heatbed	4.Y axis switch
5.Y- right skateboard	6.Y-right guide rail	7.Xmotor	8.Ymotor
9. Y-left guide rail	10.Y- right skateboard	11. extruder head	12.polish rod
13.lead screw	14.Z2motor	15.aluminum frame	16.power switch
17.Z1motor	18.TF interface	19.USB interface	20.Titan extruder
21.filament run-out detection			

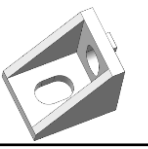
3. Packing list

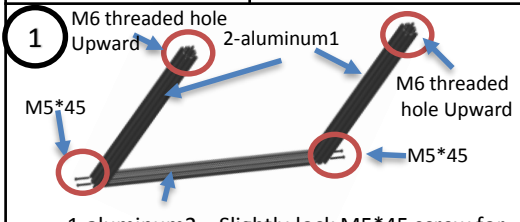
				
2040aluminum profile 630mm 2PCS 660mm 2PCS	2020aluminum profile 740mm 2PCS	4040aluminum profile 780mm 4PCS Stainless steel pole 2PCS	OSG External double axis guide rail -Y axis 670mm 2PCS	OSG External double axis guide rail -X axis 650mm 1PCS
				
beams/footlock 2pcs	left and right sliding parts	polished rod 760MM 4PCS lead screws 665MM 2PCS	left /right belt pulley parts	X/Y axis motors
				
Zaxis motor parts	Titan extruder	component bag	controller + touch screen	belt bag
				
filament+seal（Color random）	Power Supply	print head	aluminum plate with balck sticker	heat bed
				
screws bag 4PCS Corner code bag 1PCS	shovel（Color random）	USB cable+ power line	Tools bag	reader+TFcard
			**After receiving the goods, please check the accessories according to the packing list. If you have any questions, please contact customer service.**	
Yswitch parts 1PCS	filament run out detection parts 1PCS	Double limit plate 2pcs		

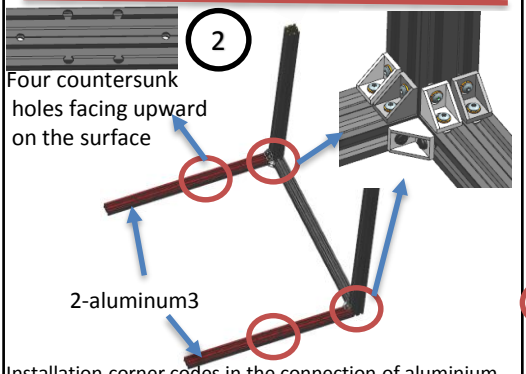
4. Installation instructions

Step 1： base frame assembly

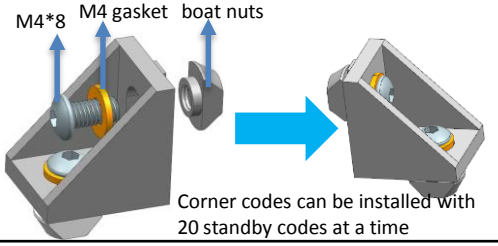
Assembly material specification and quantity：

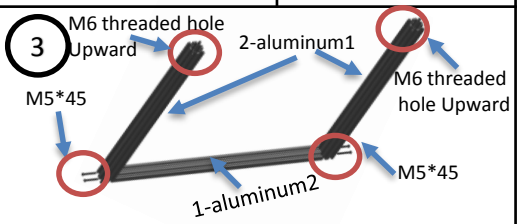
			
aluminum1 40*40*780 4PCS	aluminum2 40*20*660 2PCS	aluminum3 40*20*630 2PCS	Corner code 20PCS
			
screws M4*8 40PCS	gasket M4 40PCS	boat nuts M4 40PCS	screws M5*45 8PCS



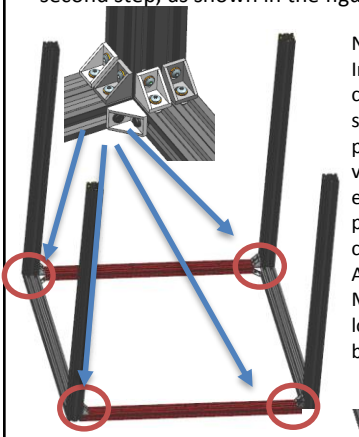


Installation corner codes in the connection of aluminium profiles, it is necessary to keep the vertical and parallel locking angle codes between the various aluminium profiles.

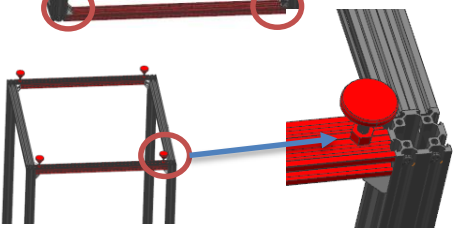




The first step is to install the frame. After the installation, the frame is assembled with the second step, as shown in the figure.



Note: Installation corner codes should be kept parallel and vertical between each aluminium profile without clearance. Adjustment of M5*45 can be loosened slightly before locking.

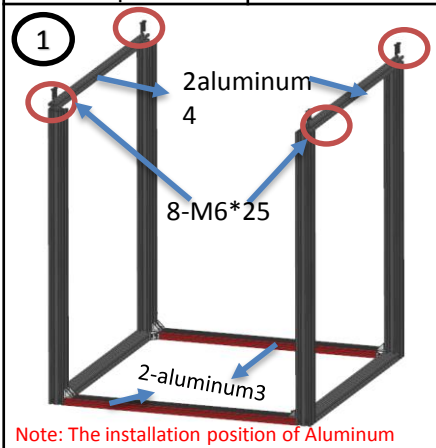


Step 2: Sliding plate assembly

Assembly material specification and quantity：

				
base frame 1pcs	aluminum4 20*20*740 2PCS	L skateboard 1PCS Y left guide 1PCS	R skateboard 1PCS Y right guide 1PCS	screwsM6*25 16PCS

1

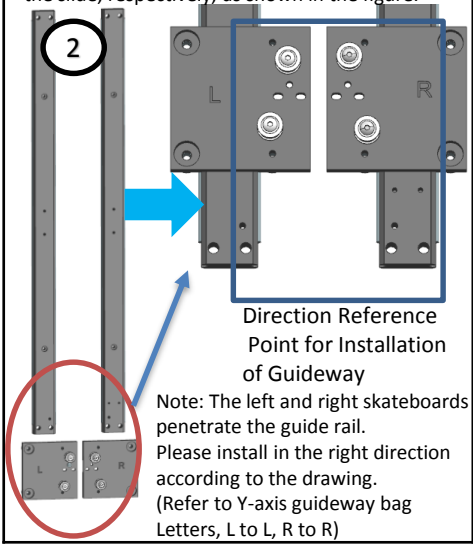


Note: The installation position of Aluminum Profile 4 and the bottom Aluminum Profile 3 (with countersunk head holes) are in the vertical direction. Do not misfit them.

Aluminum profile 4 aligns bottom frame, slightly locking M6*25 screw, no locking is needed to facilitate subsequent adjustment and installation.

Take out the Y-axis guide rail and penetrate into the left component and the right component of the slide, respectively, as shown in the figure.

2

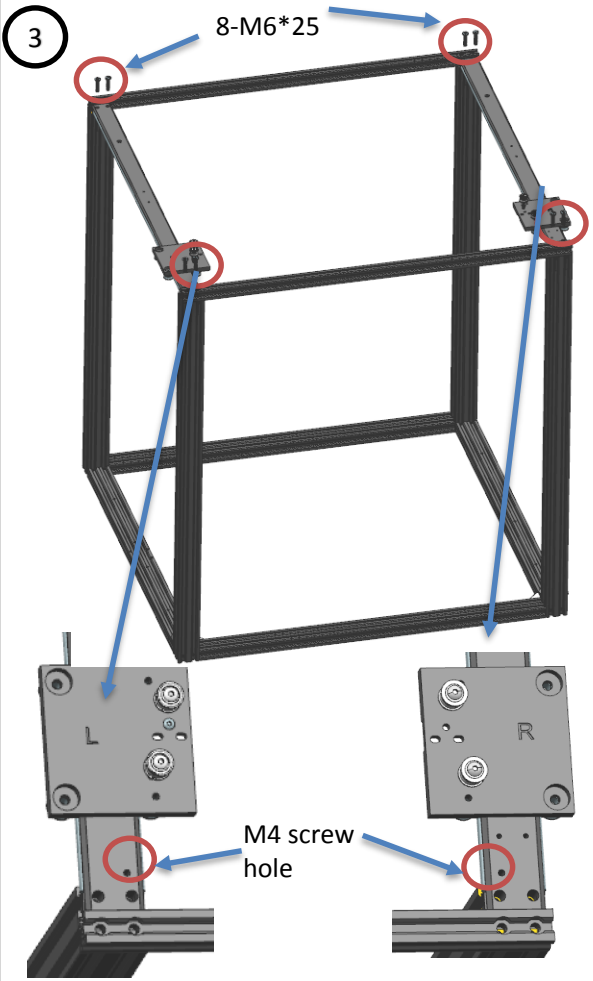


Direction Reference Point for Installation of Guideway

Note: The left and right skateboards penetrate the guide rail.
Please install in the right direction according to the drawing.
(Refer to Y-axis guideway bag Letters, L to L, R to R)

The screw M6*25 is slightly locked on the Y-axis guide rail to facilitate subsequent adjustment.

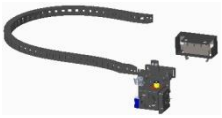
3



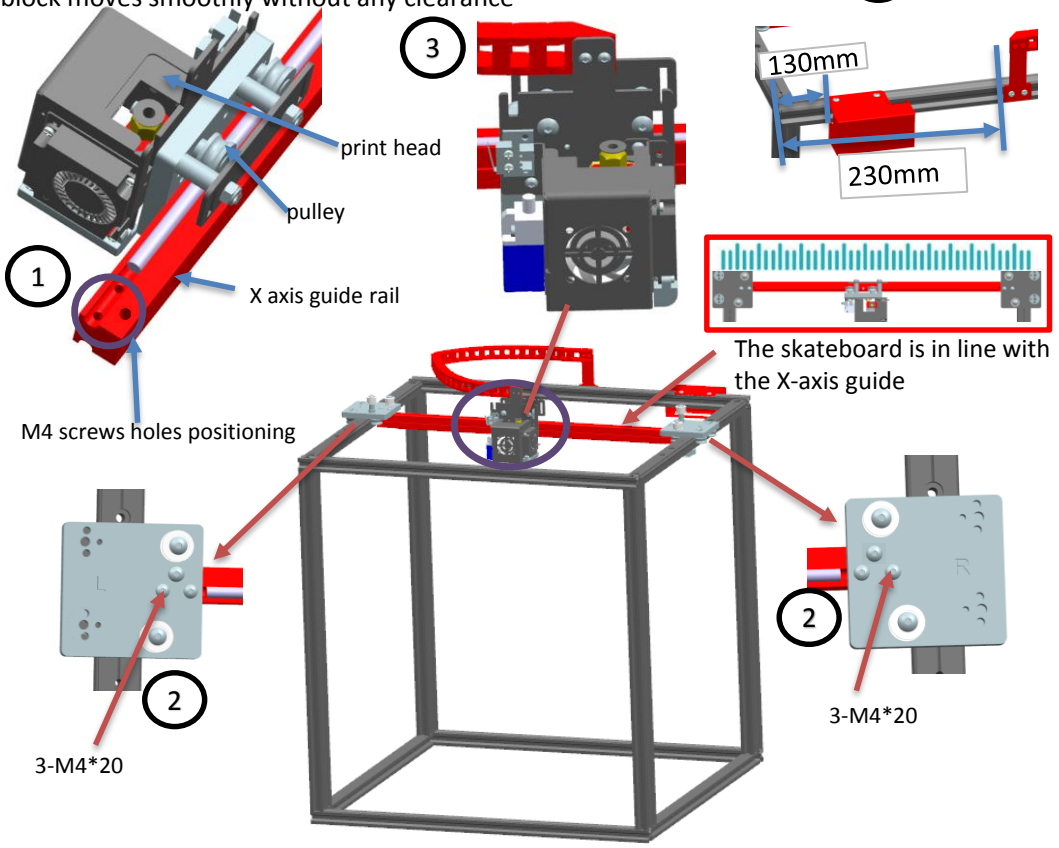
When installing Y-axis guide to the frame, please note that M4 screw holes are in the same direction, and use this to determine the front of the 3D printer.

Step 3: Sliding plate assembly

Assembly material specification and quantity：

				
basic frame 1pcs	X axis guide rail parts 20*18*650 1PCS	Print head parts 1pcs	drag chain plate 1pcs	screws M4*20 6PCS

As shown in the figure, the pulley on the print head runs through the X axis guide rail and the slide block moves smoothly without any clearance



1.Insert the print head into the X-axis guide rail, pay attention to the direction of the M4 screw hole, as shown in Figure 1.

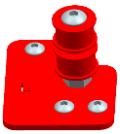
2. Insert the X-axis rail assembly into the alignment hole of the chassis, and tighten the screw RM4*20 without locking it, as shown in Figure 2.

3. Move the left and right sliders to confirm that the X-axis rail assembly moves flexibly after locking the RM4*20 screw.

4. After adjustment, lock the screw of RM5*25 on the Y-axis guide and move the X-axis guide assembly again. Repeat the adjustment to ensure that the slide is flexible and has no gap after the locking screw.

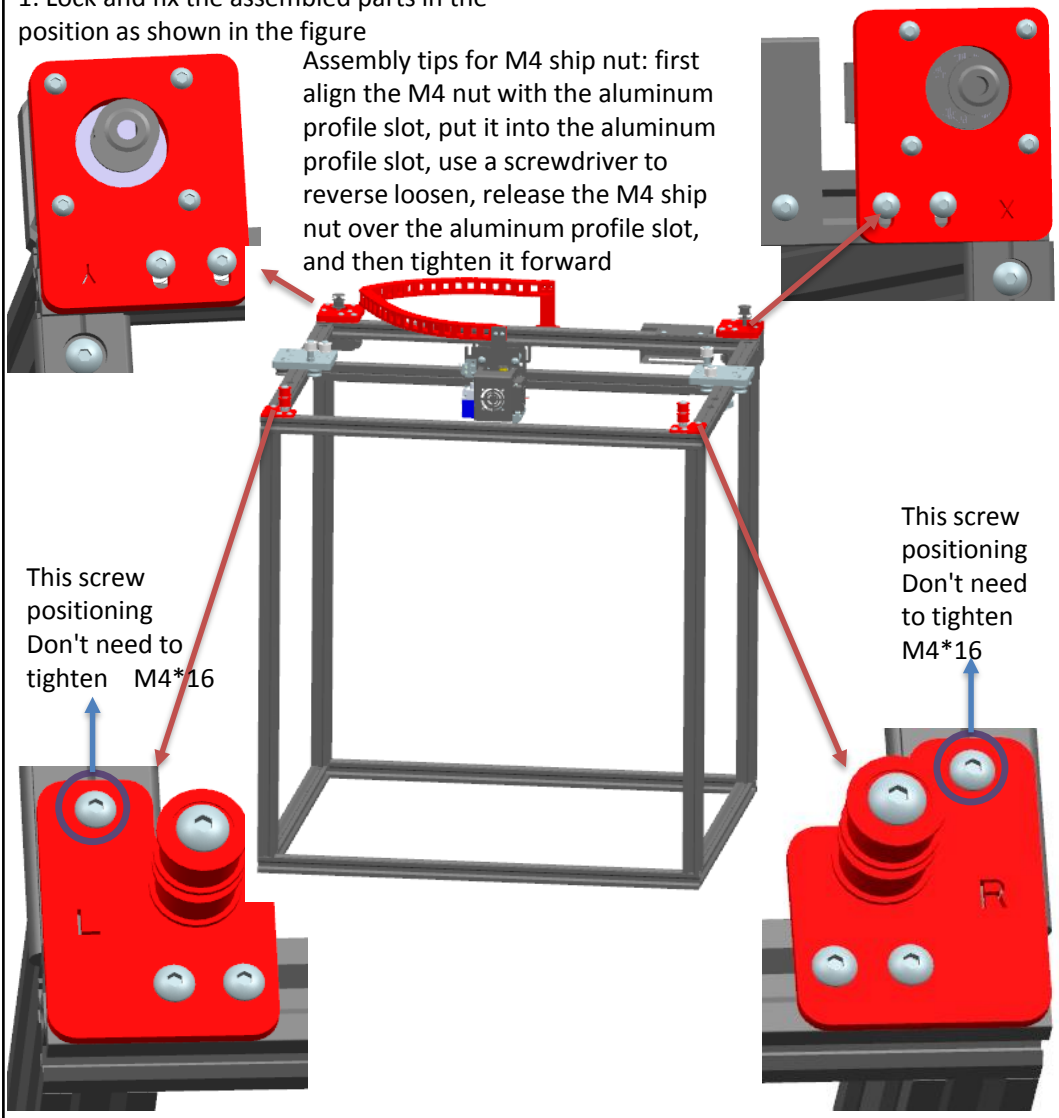
Step 4： XY axis motors and wheels assembly

Assembly material specification and quantity：

				
basic frame parts 1pcs	right wheel parts 1pcs	left wheel parts 1pcs	X motor 1pcs	Y motor 1pcs

1. Lock and fix the assembled parts in the position as shown in the figure

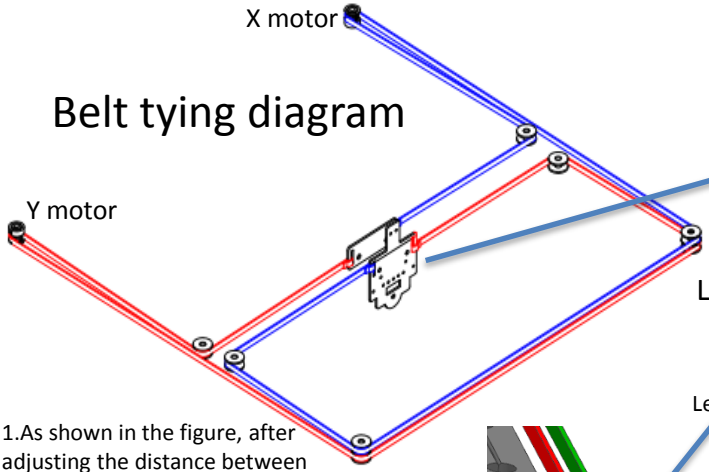
Assembly tips for M4 ship nut: first align the M4 nut with the aluminum profile slot, put it into the aluminum profile slot, use a screwdriver to reverse loosen, release the M4 ship nut over the aluminum profile slot, and then tighten it forward

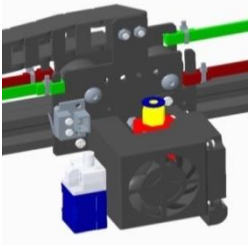


Step 5： Belts assembly

Assembly material specification and quantity：

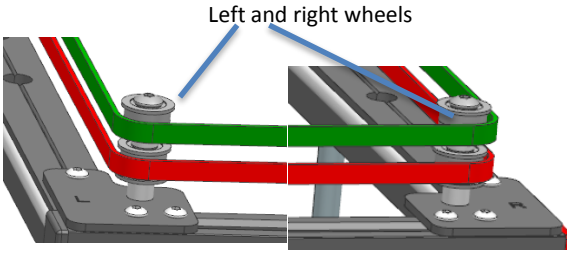
				
basic frame 1pcs	Belt 2pcs	Ties		





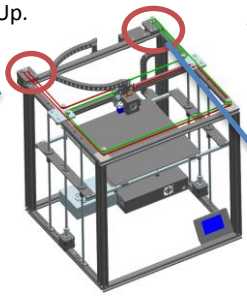
Location of Print Head Band

1.As shown in the figure, after adjusting the distance between the motor gear and the belt, lock the 2 rice screws on the gear.
2. Also assemble the second belt, the tension of the second belt should be equal.

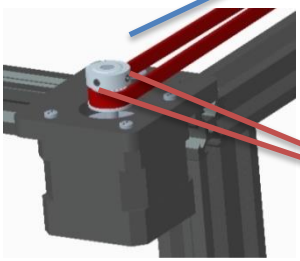


Note: Synchronization wheels on X, Y axis motors
Height should be adjusted by itself.
Be sure to install the belt
Each belt is on the same planeUp.

Note: When the machine prints normally after assembly.If the belt is too loud when moving,The height of the left and right wheel assembly can be adjusted by increasing and reducing the gaskets.
During the printing process, the leather belt has a slight sound, which is normal.

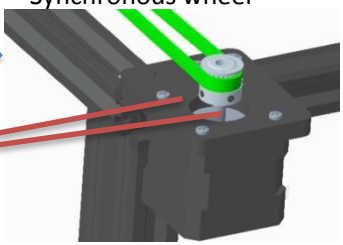


Synchronous wheel



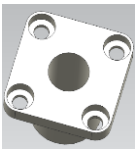
4-M3*3

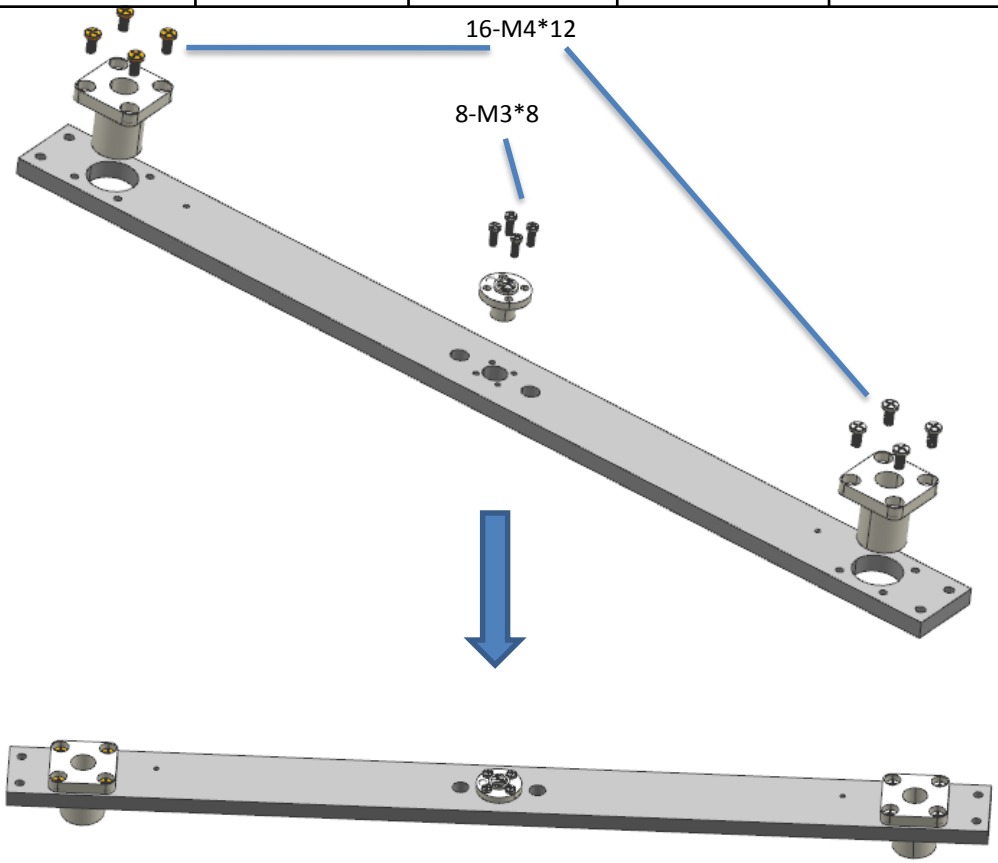
Synchronous wheel



Step 6： Linear bearing assembly

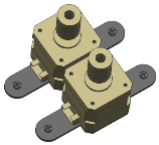
Assembly material specification and quantity：

				
beams 2pcs	Linear bearing 4pcs	copper linear bearing 2pcs	screws M4*12 16pcs	screws M3*8 8pcs

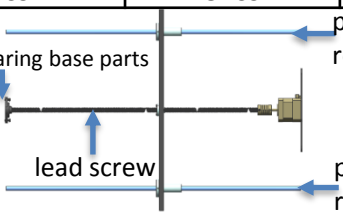


Step 7： Z axis parts assembly

Assembly material specification and quantity：

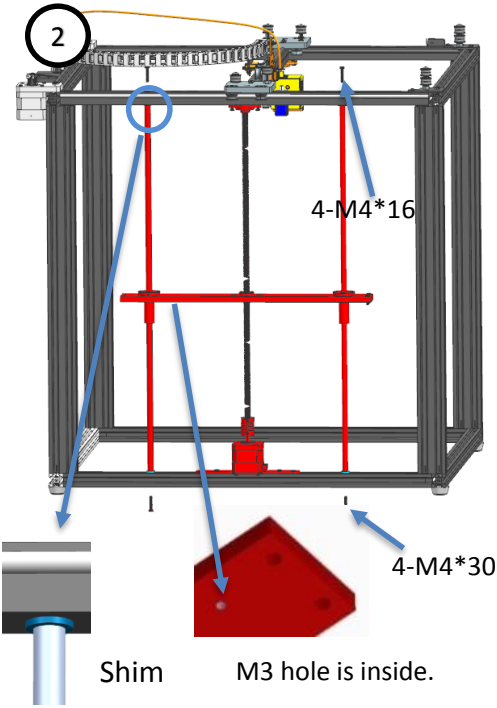
				
basic frame 1pcs	Z axis motor parts 2pcs	foot lock parts 2pcs	bearing base parts 2pcs	polish rod Φ8*760 4PCS
				
lead screwT8*665 2PCS	screws M4*30 8PCS	screws M4*8 4PCS	screws M4*16 4PCS	

1

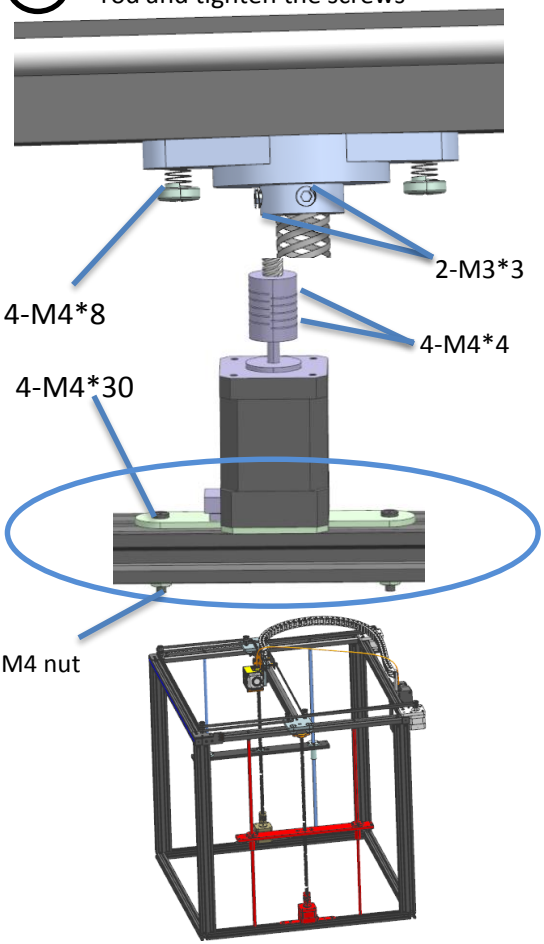


As shown in Figure 1, assemble the assembly, put the assembly into the frame as shown in Figure 2, and align the holes to lock the screws.

2

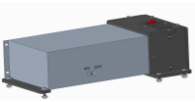
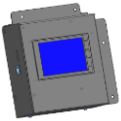


3 Adjust the verticality of the polished rod and tighten the screws

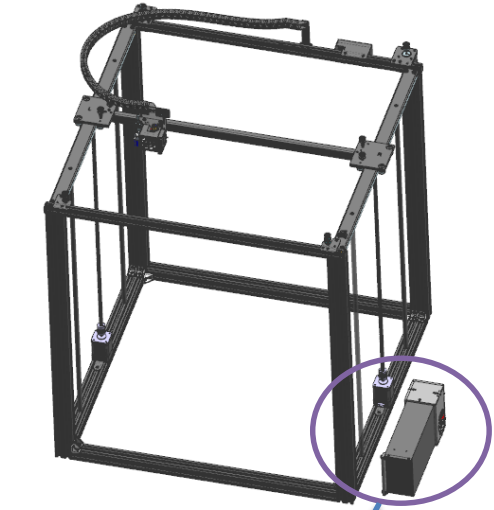


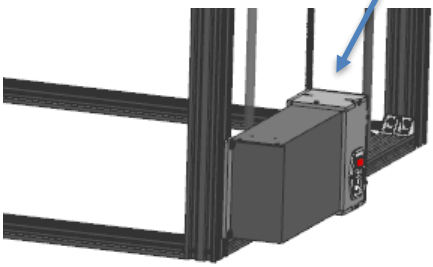
Step 8： Controller box assembly

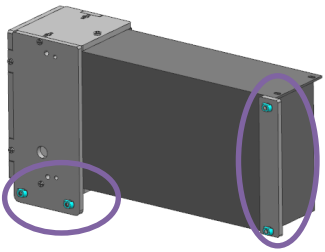
Assembly material specification and quantity：

				
basic frame 1PCS	Power Supply 1PCS	controller box 1PCS		

1 Install the power supply in the lower right corner of the front of

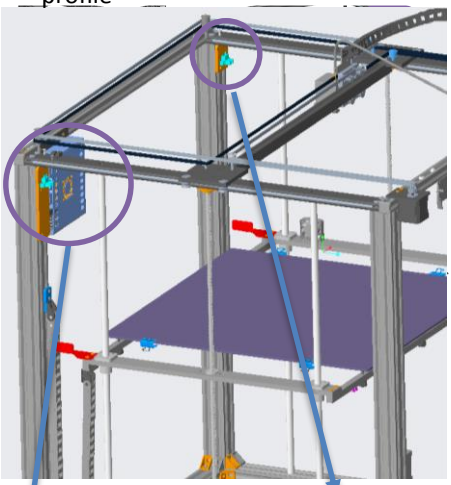


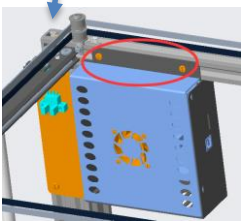


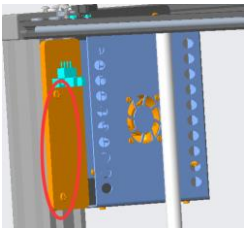


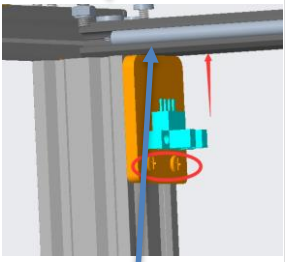
boat nuts

2 Install the main control box on the right (facing the machine) profile (including a photoelectric switch), and the other photoelectric switch is fixed on the left profile









Align

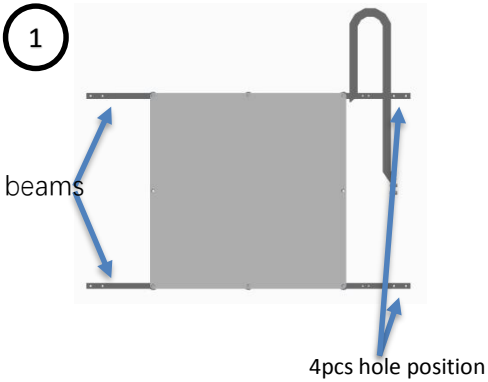
boat nuts

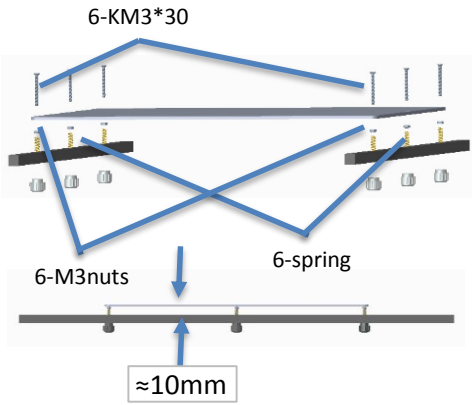
Step 9： Print plate assembly

Assembly material specification and quantity：

				
basic frame 1pcs	heat bed parts 1pcs	beams 2pcs	plastic nuts M3 6pcs	screws M4*12 8pcs
				
spring 6pcs	nuts M3 6pcs	screws KM3*30 6pcs	Double limit plate 2pcs	

1

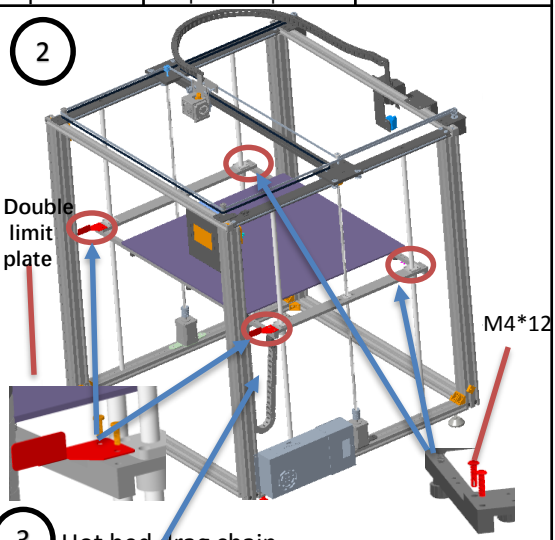




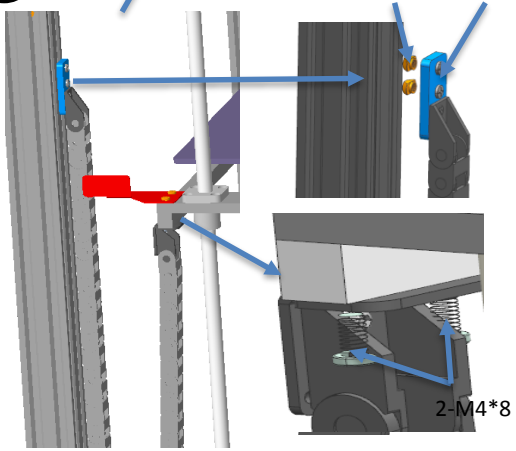
Move the left and right transverse plates on the same plane. Lock the hot bed assembly on the transverse plate according to Figure 2, and fix the tow chain bracket according to Figure 3.

Rotate the screw, synchronize the moving platform up and down, confirm the flexible movement, need to adjust the screw PM4*12 and light rod and motor screw.

2

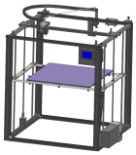


3 Hot bed drag chain

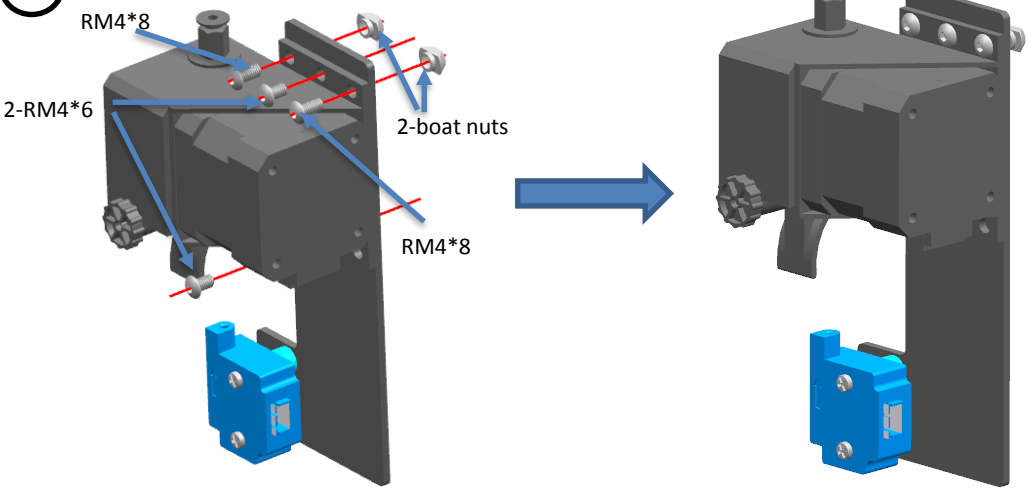


Step 10： Feeding motor assembly

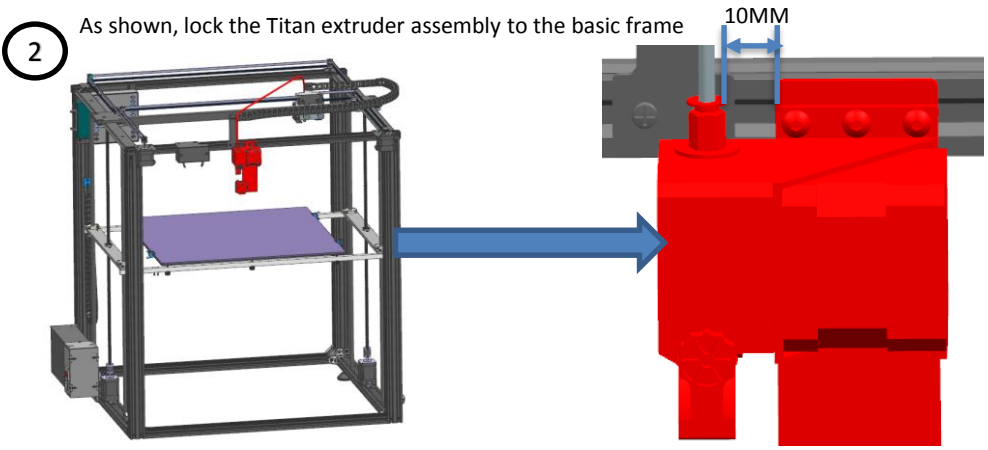
Assembly material specification and quantity：

				
basic frame 1pcs	filament run out detection parts 1pcs	Titan extruder 1pcs	screw RM4*8 2pcs	boat nuts M4 2pcs
				
screw RM4*6 2pcs				

1 Assemble Titan extruder to filament runout detection parts

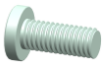


2 As shown, lock the Titan extruder assembly to the basic frame

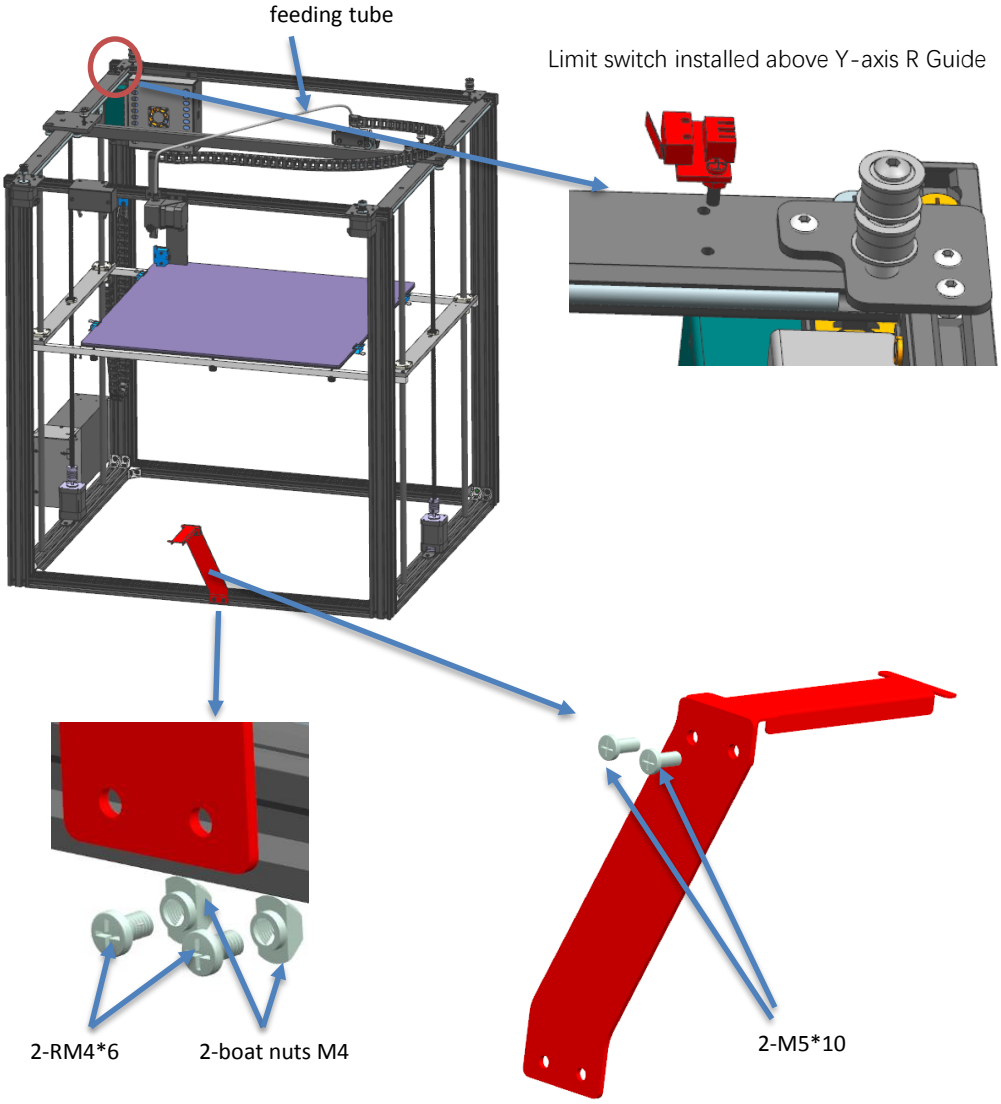


Step 11： Switch and filament bracket assembly

Assembly material specification and quantity：

					
printer 1PCS	Y switch parts 1PCS	bracket part 1PCS	screw PM5*10	screwRM4*6 4PCS	boat nuts M4 2PCS

Note: the feed tube of the print head is not inserted at the bottom, which may lead to blockage.

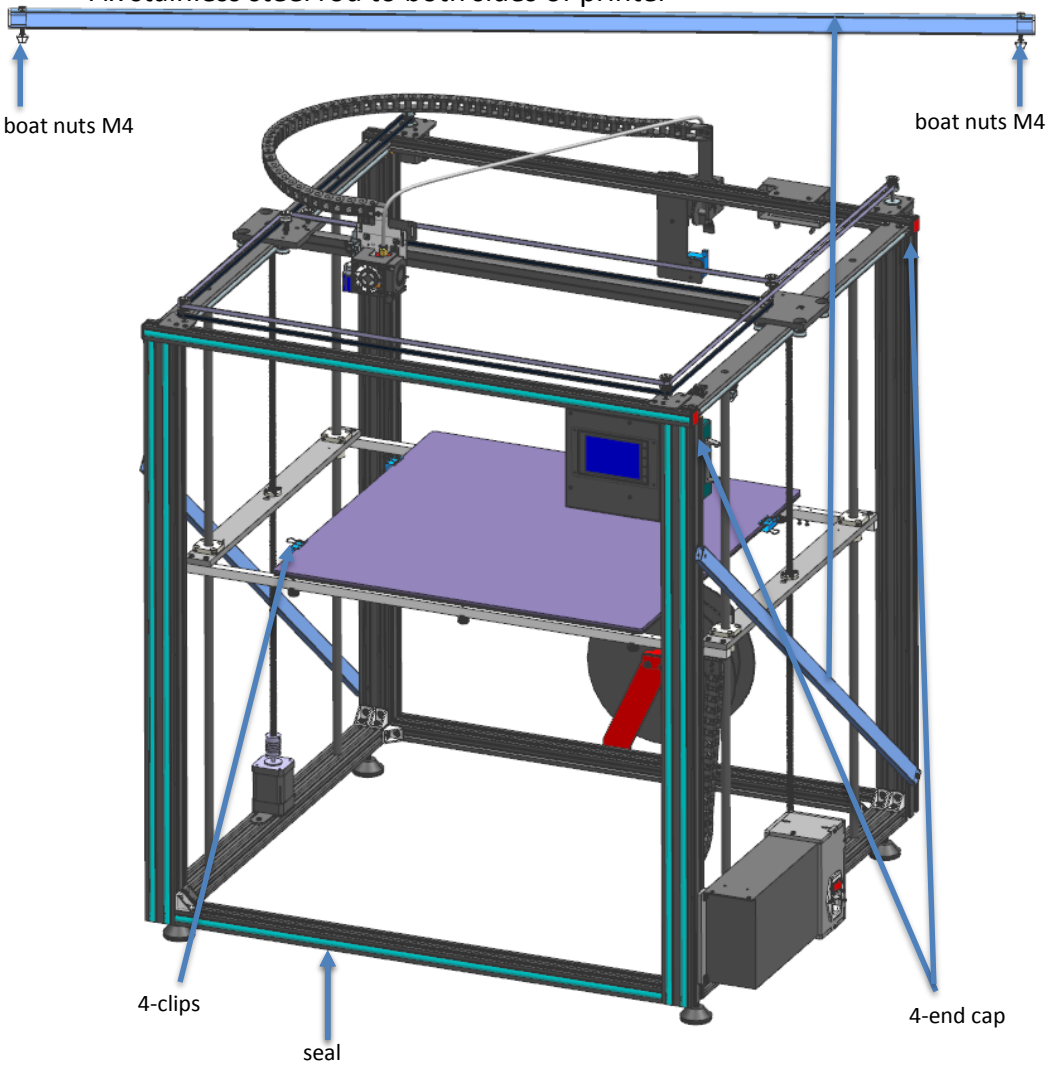


Step 12： Black sticker and seal assembly

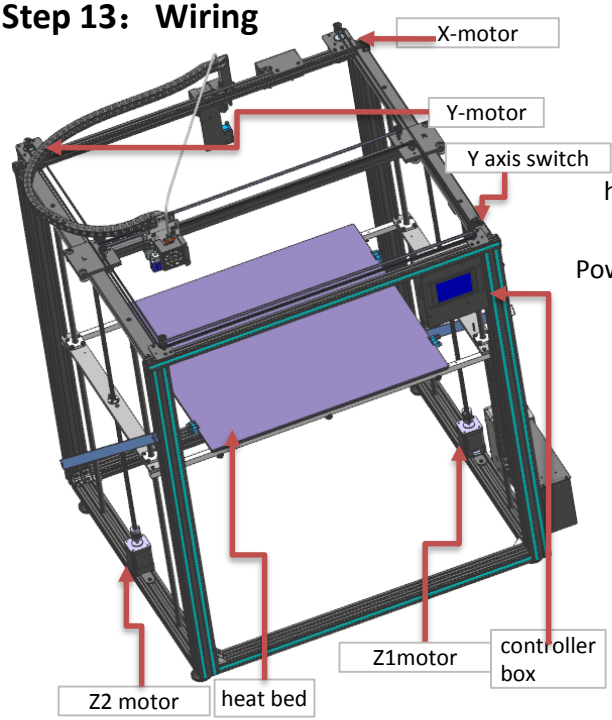
Assembly material specification and quantity：

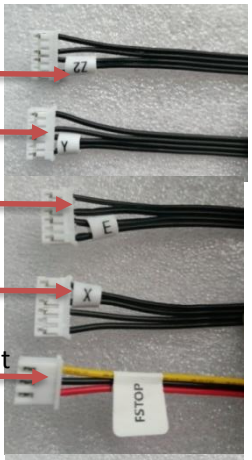
				
printer 1PCS	seal	end cap 4PCS	clips 4PCS	Stainless steel pole 2PCS

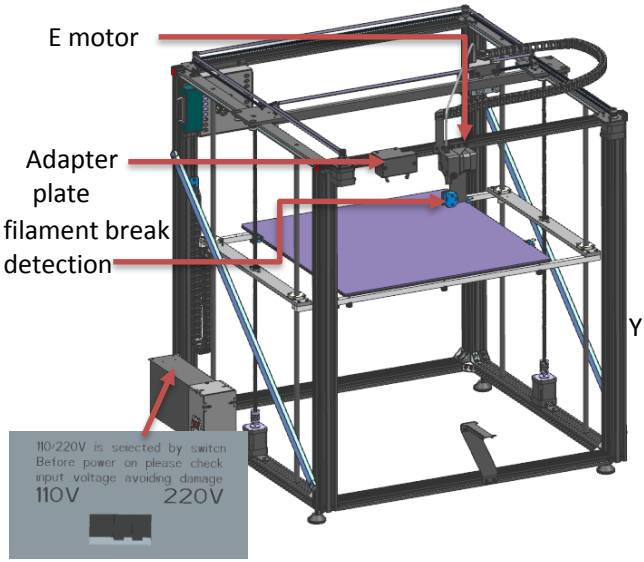
Fix stainless steel rod to both sides of printer

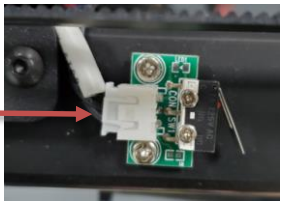


Step 13： Wiring

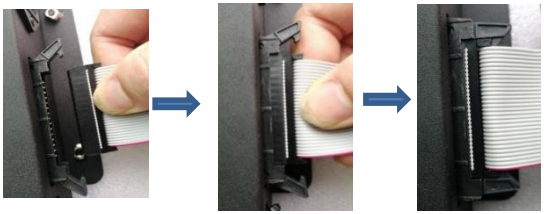






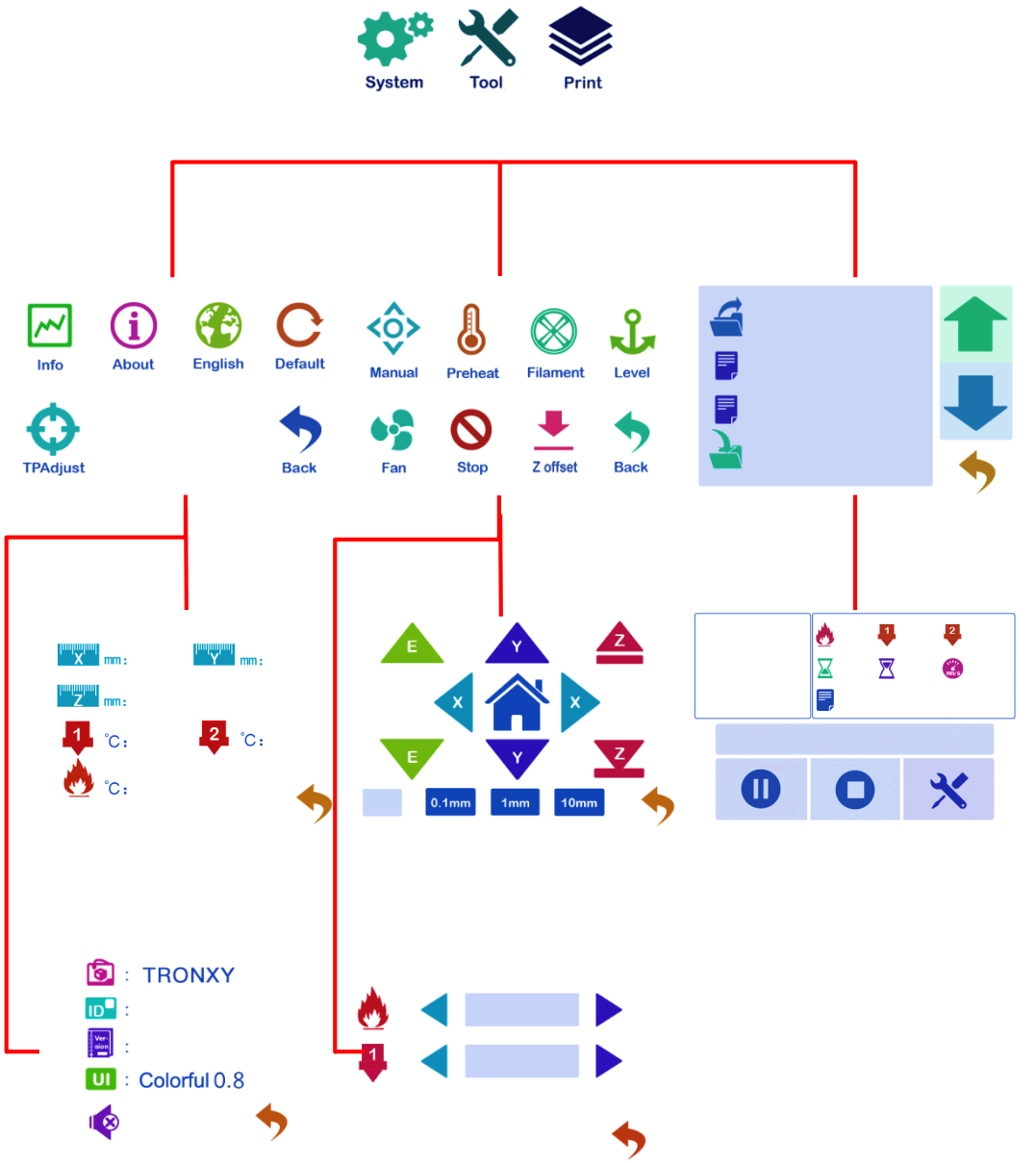


Insertion mode and location of adapter board



Insert a flat cable

5. Interface operation and printing



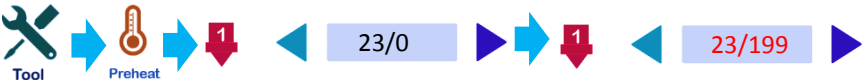
Print test：

Click 

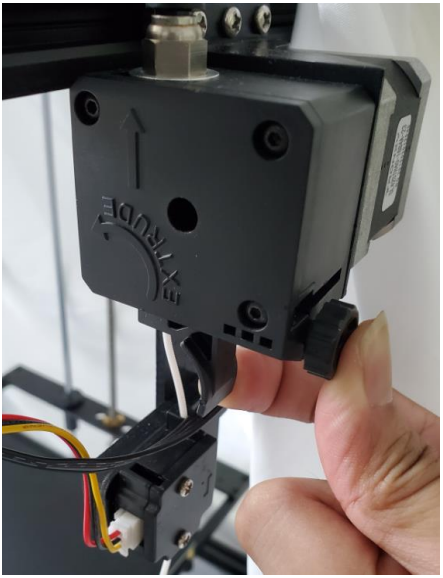
→ “Testing file” →  ， start print。

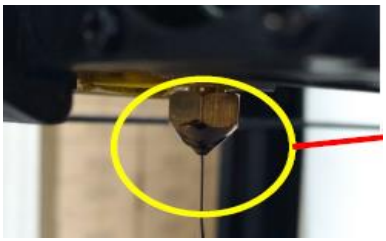
If the first layer is not sticky, the nozzle is on the high side and the platform can be raised appropriately; If the nozzle has a small amount of thread, the nozzle is on the low side and the platform can be appropriately lowered.

Unload consumables：

Click 

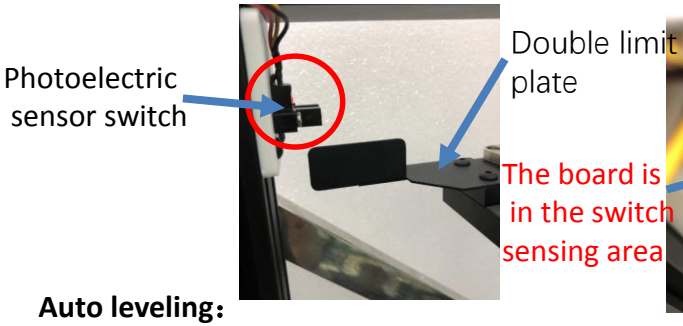
After waiting for temperature up to 180 ℃, consumables through the run out detection, extruder and Feed pipe until the nozzle has consumable extrusion, as shown in the figure below:





Precautions:

Before each zeroing or automatic leveling, the Z axis must be lowered to the position below the photoelectric sensor switch, as shown in the figure below



Auto leveling:

① Automatic leveling for automatic leveling version of the machine, the manual version can not be use. Click the leveling function in the figure to automatically pop up the interface, select "automatic leveling",jump out of the figure (1) interface, and start leveling. After the Detection is completed, the error value of each point will be displayed. If the value is greater than 0.5, adjust the leveling nut in the corresponding area, and then reset until all values are less than 0.5, then the automatic leveling is completed

② Then click “Z offset”, the print head will move to the middle of the platform, observe the height of the nozzle and platform, and then click ①②， make the distance between the nozzle and platform for a piece of A4 paper height, then click ③, reset the zero, so that the end of leveling.

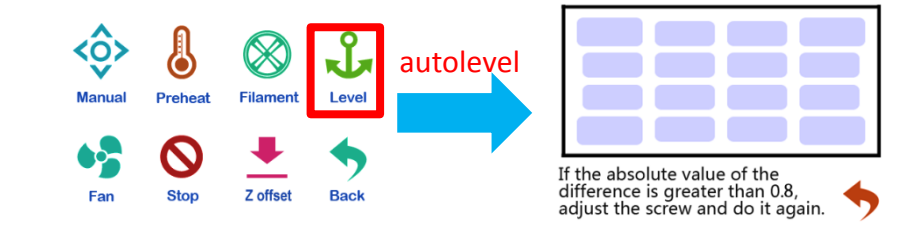
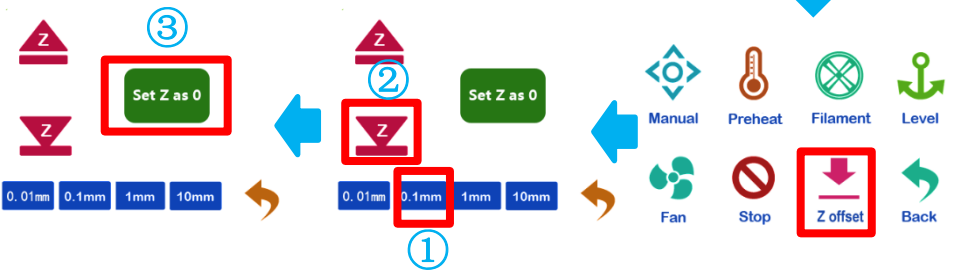


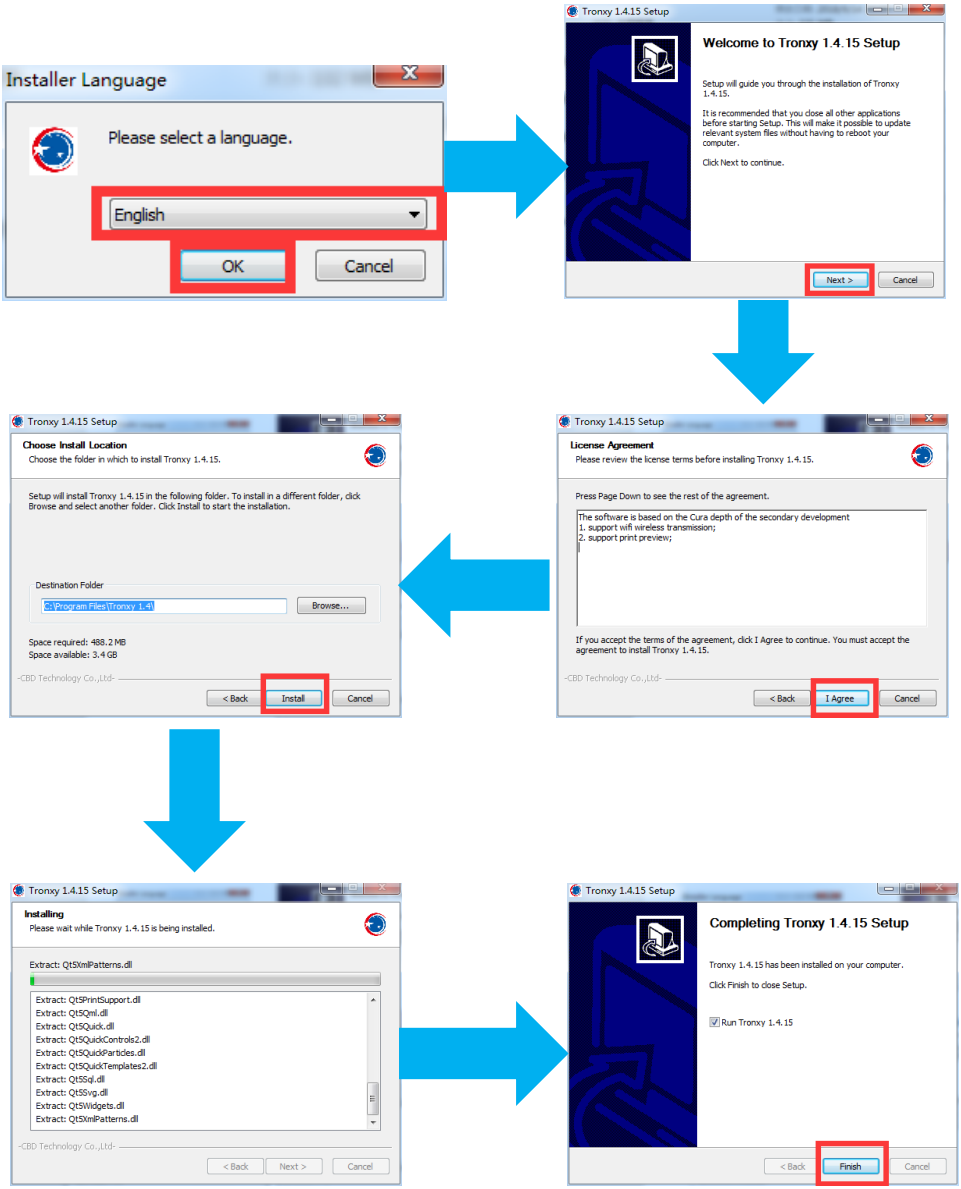
Figure （1）



6.Slice software

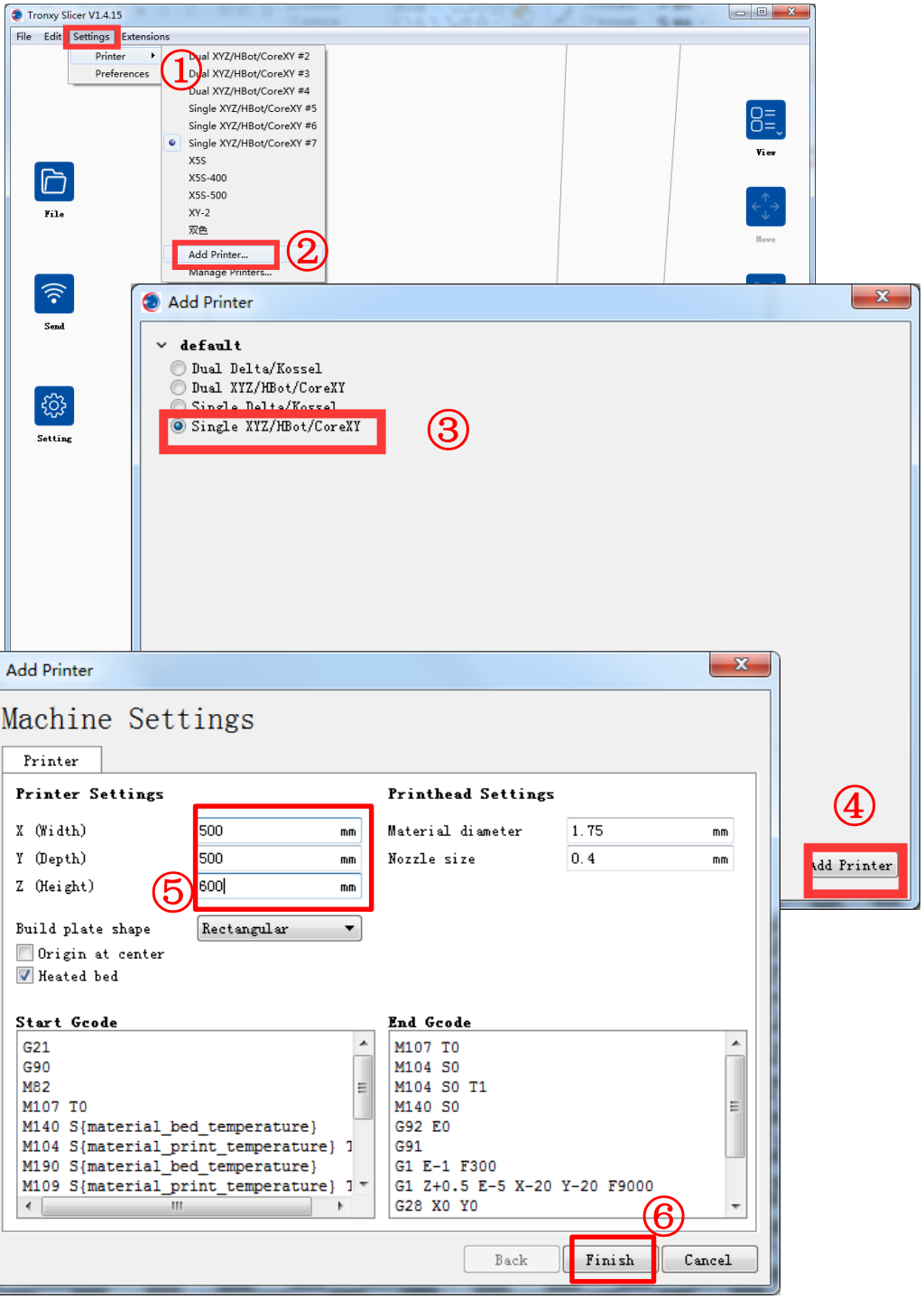
1. Installation

Find out slice software in SD card “TronxyInstall.exe ” double click，
Then follow these steps to complete the installation.

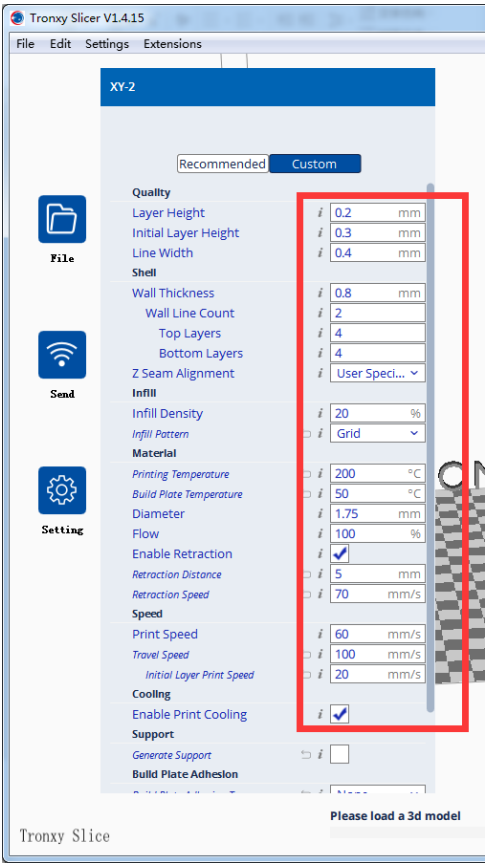


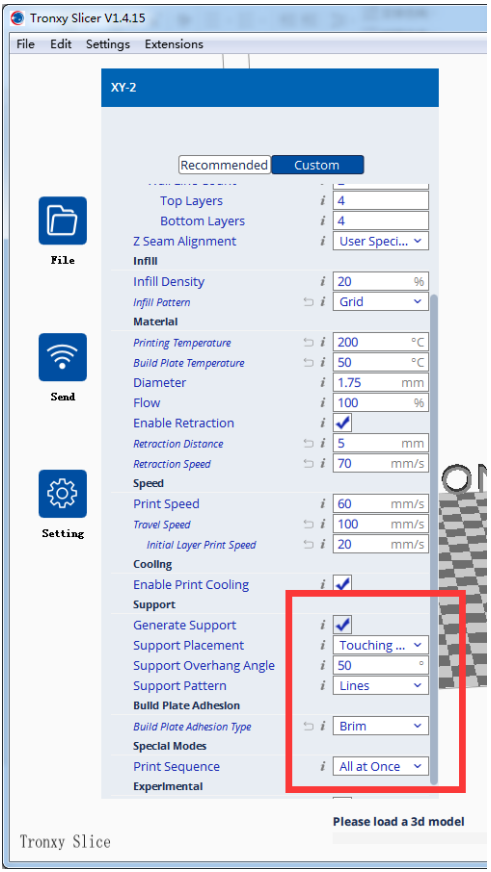
2. How to use slice software

① 、Type setting: follow the steps below to complete the setting.



② 、Parameter setting：（The following figure gives the reference value, according to their own needs can be modified）





Some parameters are set for reference：

Layer thickness ： 0.1-0.3mm
Print temp ： PLA - 200 ℃ ABS - 240 ℃
Heatbed temp ： PLA - 50℃ ABS - 80 ℃
Print speed ： 20-100mm/s （suggest 60mm/s）
Support ： Choose according to the model structure
Platform support： It is recommended to use the model when the bottom contact is small

7.Fault cause analysis

1. Machine cannot start ?

1）Check the power line and other wires connect correct or not.
2）Check whether the supply voltage matches the local standard.
3）Check whether the screen or power supply is damaged and replace in time.
4）Check the wires if damage or breakage.
5）Check whether the power fuse is burnt out.

2. The contents of the SD card cannot be read?

1）Check the card reader if damage.
2）If the connect computer show empty, please format the SD card and try again.
3）Check whether the SD card is inserted into the socket correctly.
4）The filename has an illegal character, please rename it.
5）Please replace the damaged SD card and try again.

3. if the print head does not produce enough material or does not produce enough material?

1）Check whether the print head temperature have not reached 200 ℃ above (PLA), led to consumable cannot squeeze, waiting for the temperature rises to the set target.
2）Check whether the filaments are knotted, which leads to unsmooth feeding.
3）Check whether the filaments or pipes are not inserted in place, resulting in the failure of feeding.
4）Check whether the temperature of the print head is too high, which leads to excessive softening of filaments and can't be extruded normally.
5）Check whether the diameter of filaments is inconsistent with the diameter set in the slicing software, so that the amount of extrusion filaments is not enough.
6）Check whether the consumables are blocked by dirt or nozzle blocked during extrusion.
7）Replace with better quality filaments.

4. If the first layer upwarp ?

1）Check that the hot bed has been leveled.
2）Check the surface of the hot bed for dirt.
3）Check whether the distance between the nozzle and the platform is too high, resulting in insufficient adhesive force.
4）Check the hot bed for adequate temperature.
5）Check the first layer of the slicing software to see if it is printing too fast.

5. The model is not easy to take off？

1）Heating the hot bed to 50-70 ℃, and after cooling to try again, or use the shovel.
2) It is recommended to buy TRONXY magnetic stickers.

6. Can't heat it up?

1）Check the heating rod and thermistor for poor contact or damage.
2) Check that the slice software has set the target temperature.
3) Check whether the thermistor wire falls off.

7. Motor out of step?

1）Check the tightness of the belt, whether the pulley is not locked.
2）Check the current voltage.
3）Check X/Y/Z axis motion is smooth.
4）Print speed too fast.
5）Environment temp too high.
6）Need flash the firmware.

8. Abnormal motor noise or vibration?

1）Check whether the motor line is in bad contact, loose or wrong connection.
2）Motor temperature is too high.
3）Check whether the motor is damaged.
4）Flash the firmware.
5）The printing load is too heavy.

9. Model dislocation and fault

1）Nozzle feeding not smoothly, please clean the nozzle or replace the nozzle

2）Check that if the printing speed is too fast

3）The quality of filaments is poor, please replace with new filaments

10. Abnormal sound and vibration of filaments feeding motor

1）Please check whether the nozzle is blocked

2）The nozzle feeding is not smooth, please clean the nozzle

3）Whether the software Settings are incorrect

4）Check whether the motor does not work

5）Check the motor working or not or feeding gear is not working

11. Screen related questions

1）No screen/blue screen, please restart or check whether the cable is plugged in

2）Touch screen malfunction, check whether the screws are installed too tight

3）Garbled/splash screen, static, ground connection or restart

12. Motherboard related issues

1）The wiring is not responding. Please check the wiring installation

2）Automatic shutdown restart, may be abnormal firmware or module of “resume print after power failure” damaged

3）Lack of heat dissipation, please lower the ambient temperature

4）No response due to motherboard damage

13. Unable to connect to printer

1）Check that the driver is not installed or properly installed

2）The serial port was not selected correctly

3）The software parameters do not match

TRONXY

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