



www.twotrees3d.com

Try and transcend, We are thirsty for terrific

LETTER FROM TWOTREES 致客户的一封信

Dear Customers,

Thank you for choosing us.

It's customer-oriented idea, continuous innovation and pursuit of excellence that enable everybody to have wonderful experience in using process.

We believe that this manual will be helpful.

Hope you enjoy the good time with TwoTrees.

If you have any problems, please feel free to contact us via

Website: www.twotrees3d.com

Facebook: <https://www.facebook.com/groups/twotrees3Dprinter/>

For general inquiry: info@twotrees3d.com

For technical support: service@twotrees3d.com

We will contact you within 24 hours.

Sincerely yours,

TwoTrees Team

亲爱的客户:

感谢您选择了我们品牌。

我们一直以客户为导向,不断创新,追求卓越,使每个人都能在使用过程中拥有丰富的体验。

希望您能享受与俩棵 tree 相伴的好时光。

如果您有任何问题,请随时与我们各购买平台的客服联系。

其他联系渠道有:

网站:www.twotrees3d.com

售后邮箱:service@twotrees3d.com

咨询邮箱:info@twotrees3d.com

我们将在24小时内联系上您。

祝您生活愉快!

俩棵 tree 团队

PRECAUTIONS 注意事项

For a better experience in using our product, please read this page carefully.

为了更好地使用我们的产品, 请仔细阅读本页。

1. Please ensure that the packaging is complete before confirming receipt.

确认收货前请确保包装完整;

2. After unpacking, please check the parts list and accessories carefully.

开箱后请仔细核对零件清单及附件;

3. If any problems, please feel free to contact us.

如有任何问题, 请随时与我们联系。

SAFETY GUIDELINES 安全指导

When the machine is operating, do not place the printer near any heat source or flammable or explosive objects. We suggest placing it in a well-ventilated, low-dust environment.

机器运行时, 不要将打印机放在任何热源或易燃易爆物体附近。我们建议将其放置在通风良好、低尘的环境中。

Adult supervision: Ensure machine is not accessible to young children.

成人监督: 确保幼儿无法接触到机器。

Hot Surface Hazard: Do not touch the nozzle or printing surface during operation as they may be hot. Keep hands away from machine while in use. Hot surface may cause burns or personal injury.

烫伤危险: 操作过程中请不要触摸喷嘴或打印表面。使用时, 手应远离机器, 以防烫伤或其他伤害。

The printer with 220VAC / 110VAC and other high-voltage power interfaces. Do not use any other power cable except the one supplied. Please operate with care.

打印机具有 220VAC / 110VAC 和其他高压电源接口。除所提供的电源线外, 请不要使用任何其他电源线。

Ensure that the terminals are firmly connected to avoid sparks due to loose wiring. Do not leave the machine unattended when in operation.

确保终端牢固连接, 以避免因线路松动而产生火花。运行时, 请尽量不要让机器处于无人看管的状态。

When cleaning debris from the printer hot end, always use the provided tools. Do not touch the nozzle directly when heated; cause personal injury.

在清理打印机热端的碎屑时, 请使用所提供的工具。加热时不要直接触摸喷嘴, 以防造成不必要的伤害。

The printer is a kind of mechanical equipment. Please keep away from moving parts during machine operating so that free from potential safety problem.

机器运行时, 请远离运行中的部件, 以避免安全隐患。

Please regularly lubricate and maintain the guide rails.

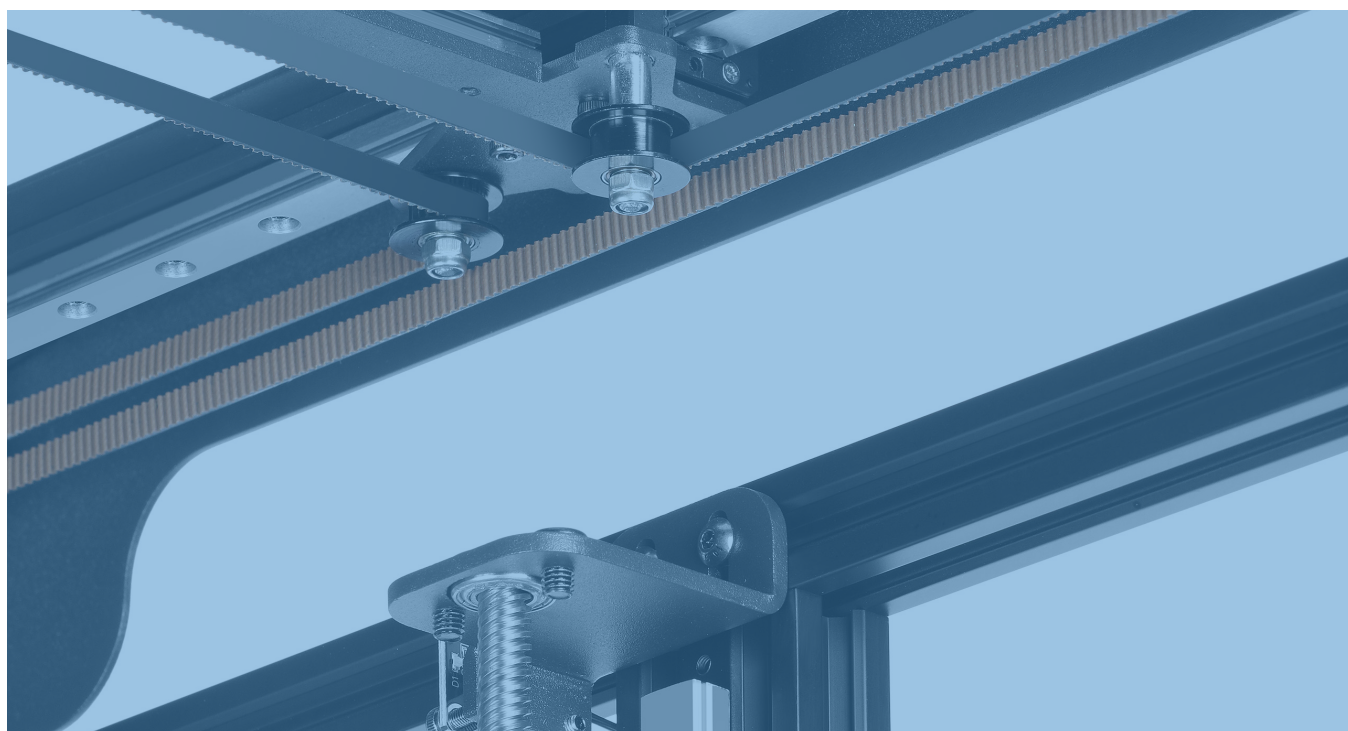
请定期润滑并保养导轨。

Make sure that parts of your body are in contact with the ground before touching the machine to avoid damage of electronic component caused by static electricity.

在接触机器之前, 请确保身体部位是与地面有所接触的, 以避免静电造成的电子部件损坏。

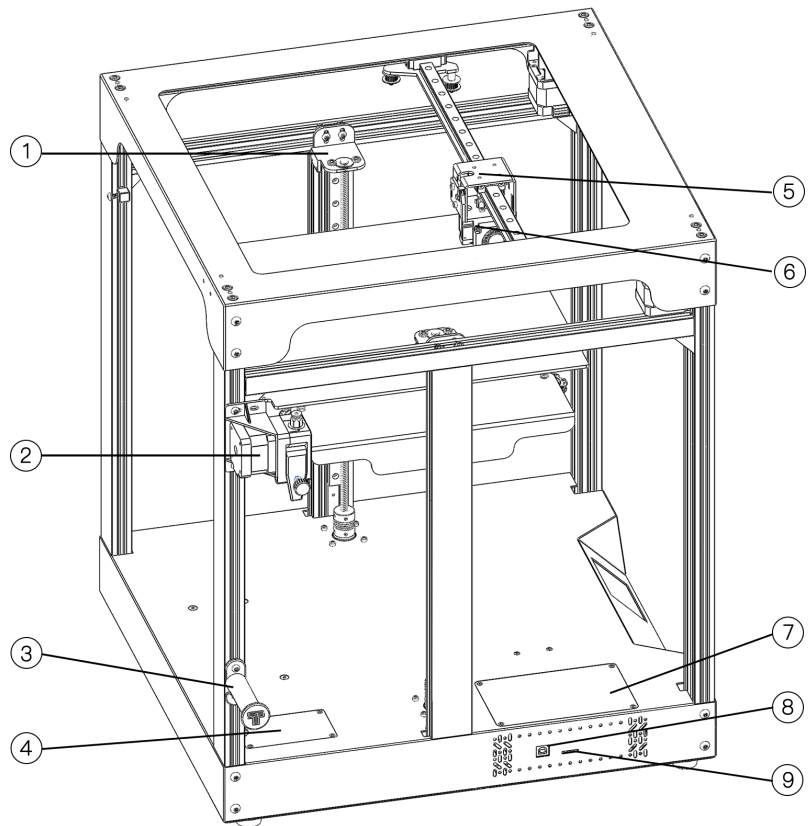
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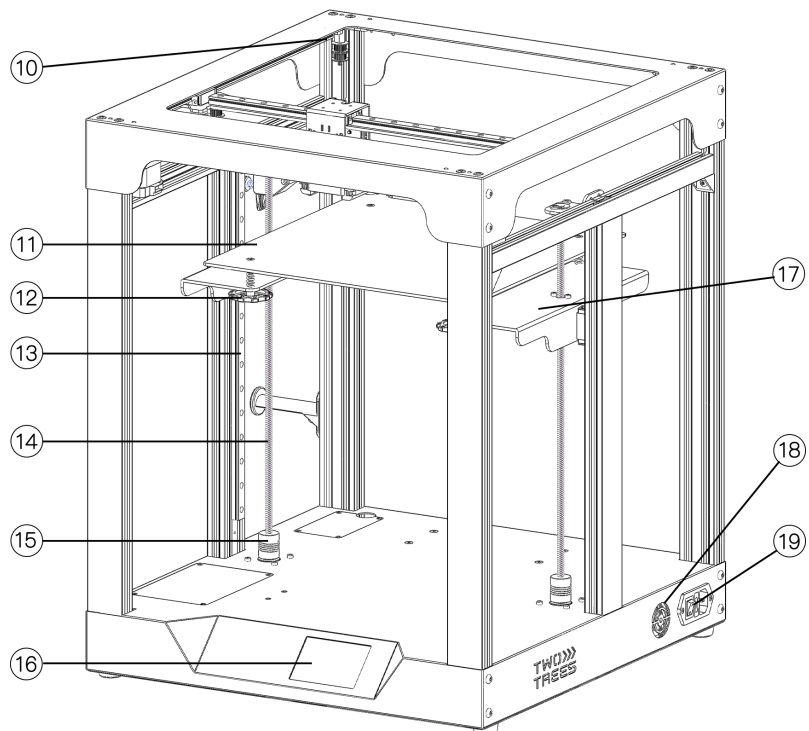


ABOUT YOUR PRINTER

1. T8 Lead Screw Holder
丝杆固定座
2. Double Extrusion wheel
双驱动挤出机
3. Filament Holder
耗材支架
4. Cable Access Cover
走线槽盖板
5. Beam Carriage
横梁马车
6. Extrusion Head Kit
挤出头套件
7. Front Cover
主盖板
8. USB Port
USB 端口
9. TF Card Slot
TF卡插槽



10. Y Axis End stop
Y轴限位开关
11. Heating Plate
热床
12. Leveling Screw Nuts
底座调平螺母
13. Z Axis Linear Rail
Z轴导轨
14. T8 Lead Screw
T8丝杆
15. Coupling
联轴器
16. 3.5" Full Color Touch Screen
3.5英寸全彩触摸屏
17. Heating Plate Support
热床支架
18. Chassis Cooling Fan
机箱散热风扇
19. Power Switch
电源开关

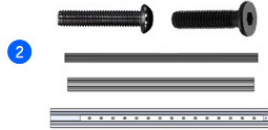


PART LIST

配件表



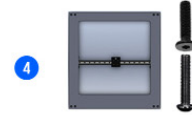
1
Foot Pad 脚垫 x 4
M4*12 Screw 螺丝 x 4



2
M5*10 X 12 M5*16 X 8
2040 Profile 2040型材 X 4
2020 Profile 2020型材 X 2
Z-axis Linear Rail Z轴安装 X 2



3
M5*30 Screw 螺丝 X 4



4
Machine Roof 机顶 X 1
M5*16 Screw 螺丝 X 8
M5*10 Screw 螺丝 X 8



5
Triangle Aluminum 三角铝件 x 4
T-nut T型螺母 x 8
M4*8 Screw 螺丝 x 8



6
Heating Plate Support 热床支架 x 2
M3*6 Screw 螺丝 X 8



7
T8 Lead Screw X 2
T8 丝杆



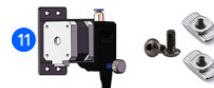
8
T8 Lead Screw Holder 丝杆固定座 x 2
T-nut T型螺母 x 4
M4*8 Screw 螺丝 x 4



9
Leveling Screw Nut 调平螺母 x 4
Spring 弹簧 x 4
Countersunk Head Screw 沉头螺丝 x 4
Heating plate 热床 x 1



10
Extrusion Head Kit x 1
挤出头套件



11
Extruder 挤出机 x 1
M4*8 Screw 螺丝 x 2
T-nut T型螺母 x 2



12
M4*8 Screw 螺丝 x 1
Wire Clip 线夹 x 1
Teflon Tube 四氟管 x 1



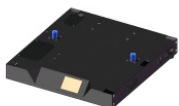
13
Filament Holder 耗材支架 x 1
T-nut T型螺母 x 2
M4*8 Screw 螺丝 x 2



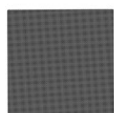
16
Profile Cover Strip X 3
型材封条



18
Filament Sensor X 1
断料检测器



Chassis Plate X 1
机器底部



Heating Plate Glass X 1
晶格玻璃



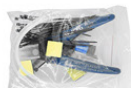
USB Cable X 1
USB 数据线



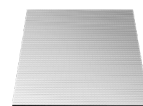
AC Power Cable X 1
AC 电源线
(For local specifications)



Filament 耗材 X 1
(Random Color)
(颜色随机)



Tools Package X 1 工具包
(With TF 包含TF卡)



Insulating Sponge
隔热棉 x 1

MACHINE PARAMETERS

机器参数

Model 型号: SP-5 蓝宝石 PLUS	XY axis positioning accuracy 轴定位精度: $\pm 0.01\text{mm}$
Colour 颜色: Black 黑色	Z axis positioning accuracy 轴定位精度: $\pm 0.01\text{mm}$ Print
Material 材质: Sheet Metal 钣金	material 打印材料: PLA, ABS, PETG Wooden Filament 木制耗材
Number of nozzles 喷嘴数量: 1	Filament diameter 耗材直径: 1.75mm
Nozzle diameter 喷嘴直径: 0.4mm	Language 操作语言: EN, RU, ES, FR, DEKR, ZH-CN
Heating plate 热床: 310*310mm	File format 文件格式: STL, OBJ, JPG
Printing size 打印尺寸: L300*W300*H350mm	Print file format 打印文件格式: G-code
Printing accuracy 打印精度: $\pm 0.1\text{mm}$	Machine size 机器尺寸: L485*W460*H590mm
Layer thickness 层厚: 0.1-0.4mm	Package size 包装尺寸: L630*W540*H250mm
Printing method 打印方式: TF Card / Online Printing(PC)	Machine weight 机器重量: 18kg
Display 显示屏: 3.5" Color touch screen 3.5英寸彩色触摸屏	Package weight 包装重量: 20kg
Recommended speed 推荐速度: 60mm/s	电源参数 Electrical requirement: 220V/110V 360W
Printing speed (MAX) 打印速度(最快): 200mm/s	PC requirement 操作系统: Windows, MAC Support
Nozzle Temperature (MAX) 喷嘴温度(最高): 260° C (500°F)	software 支持软件: Cura, 3DPrinterOS, Repetier-Host and others
Heating plate Temperature (MAX) 热床温度(最高): 100° C (212°F)	Operating environment 工作环境: Temperature 温度: 5-40°C; Humidity 湿度: 20-60% RH

1. Install the Standing Feet 安装脚垫



Foot Pad 脚垫

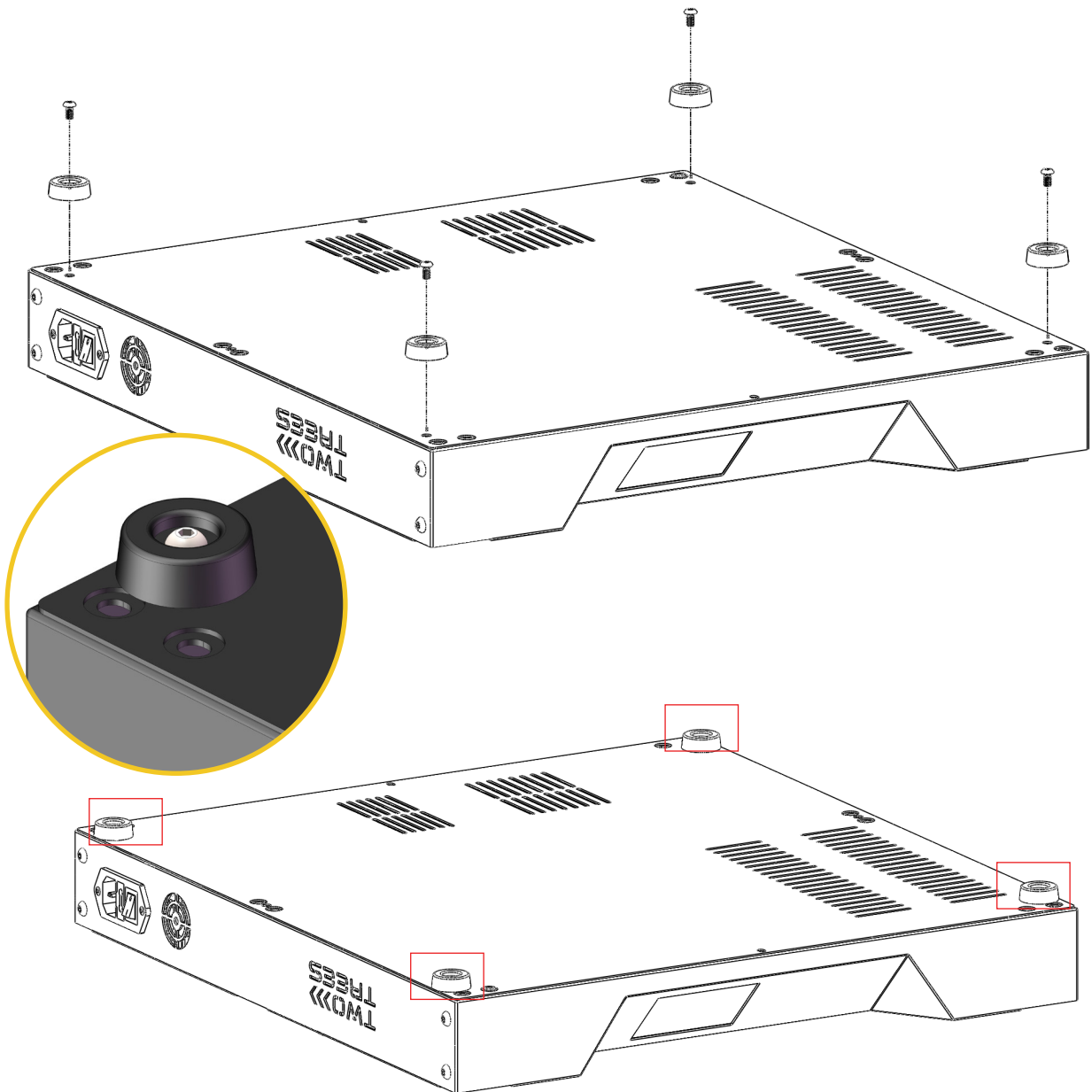
x4



M4*12 Screw 螺丝

x4

Turn Over 反转过来



2. Install The Frames 安装框架



2040 Profile 型材

x4



2020 Profile 型材

x2



Z-axis Linear Rail
Z轴导轨

x2



①

M5*10 Screw 螺丝

x12



②

M5*16 Screw 螺丝

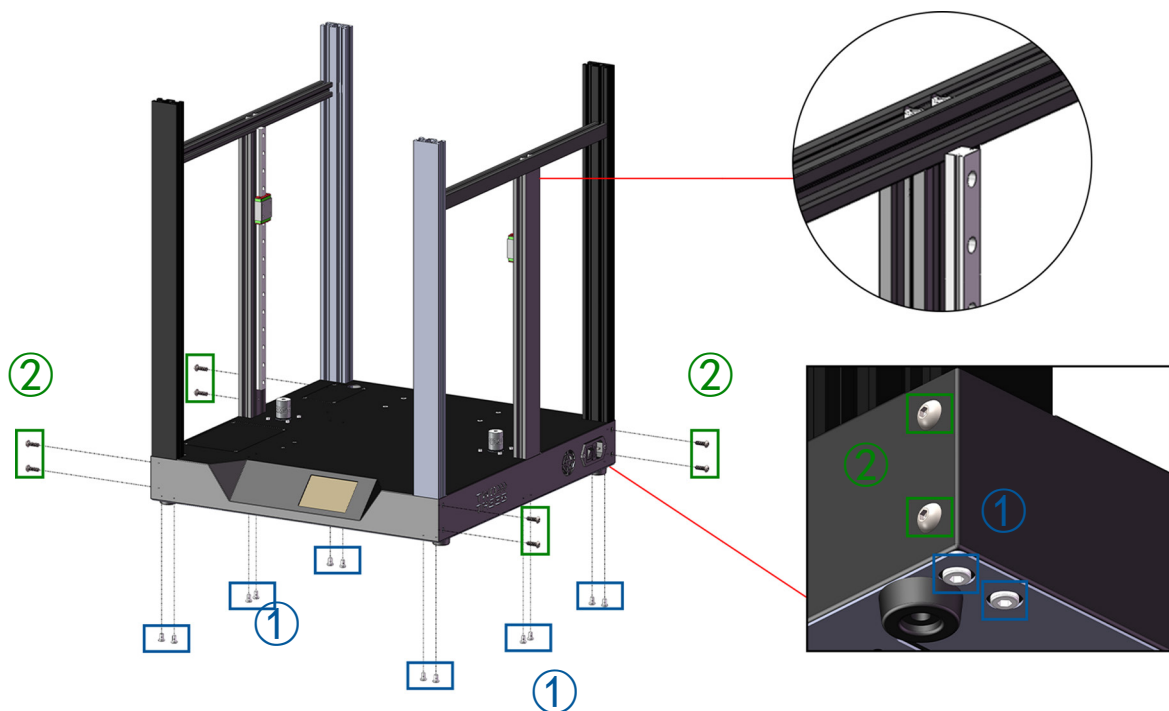
x8

Note: The guide rails face inwards.

The upper slots of the four main frames are always on the edge.

The cover sides of the beams face out.

注意: 导轨是朝内的; 四个主要框架的上部插槽始终处于机器边缘; 横梁的封面朝外。

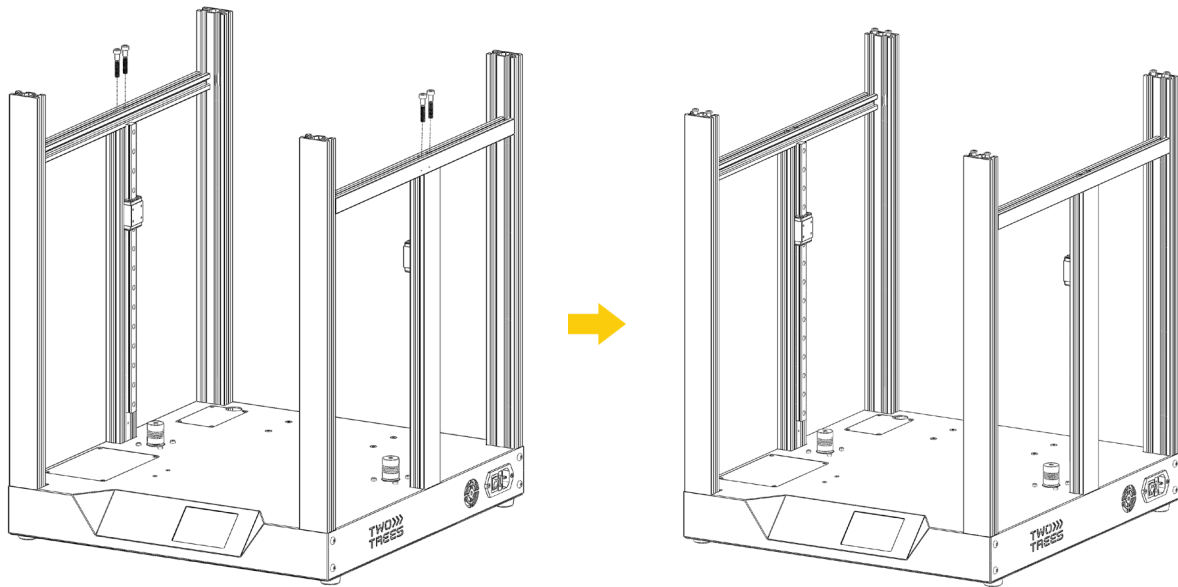


3. Install The Beams 安装横梁

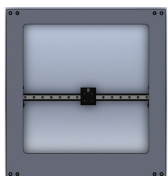


M5 * 30 Screw 螺丝

x4



4. Install The Roof 安装顶部



Machine Roof 机器顶部

x1



①

M5*10 Screw 螺丝

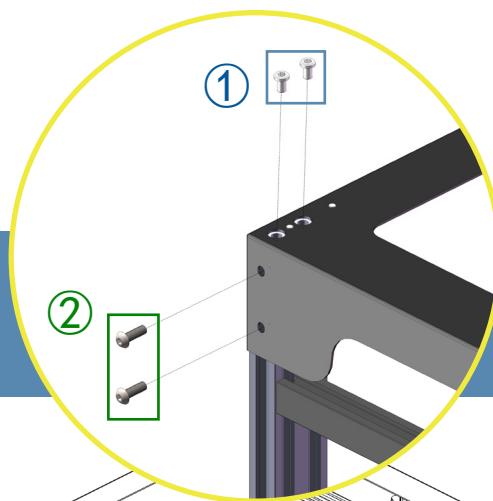
x8



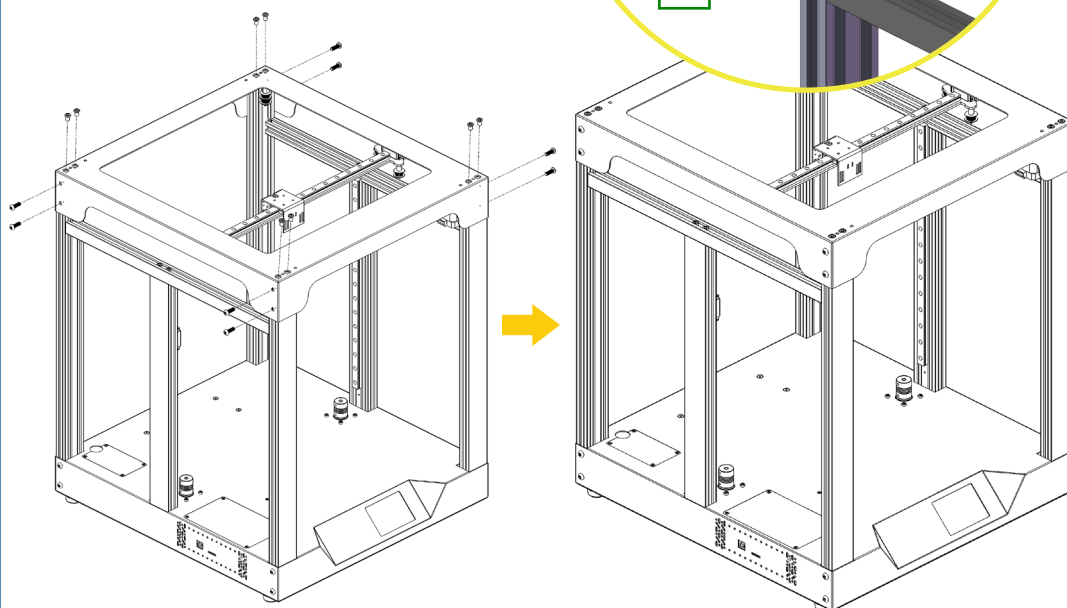
②

M5*16 Screw 螺丝

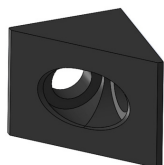
x8



4



5. Install The Triangle Aluminum 安装三角铝件



Triangle Aluminum
三角铝件

x4



T-nut T型螺母

x8



M4*8 Screw 螺丝

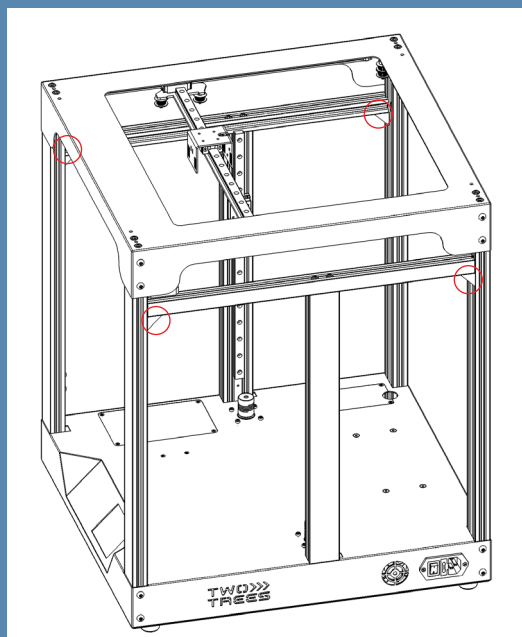
x8

Note: After clamping into the slot, tighten the screws.

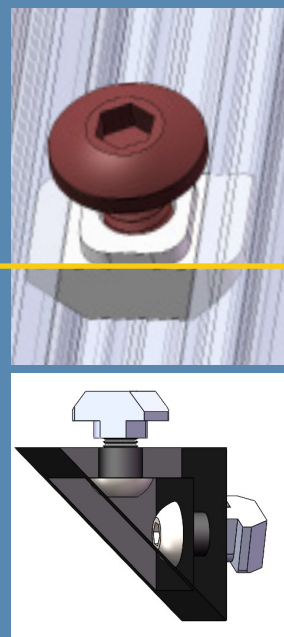
After tightening, the long side of the T-nut should be parallel to the horizontal plane.

注意：卡入槽中后，再拧紧螺钉。拧紧螺丝后，T型螺母的长边应与水平面平行

5



180°



6. Install The Heating Plate Supports 安装热床支架



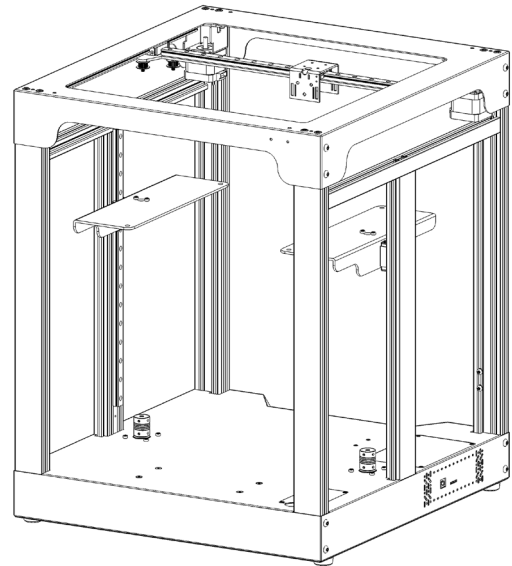
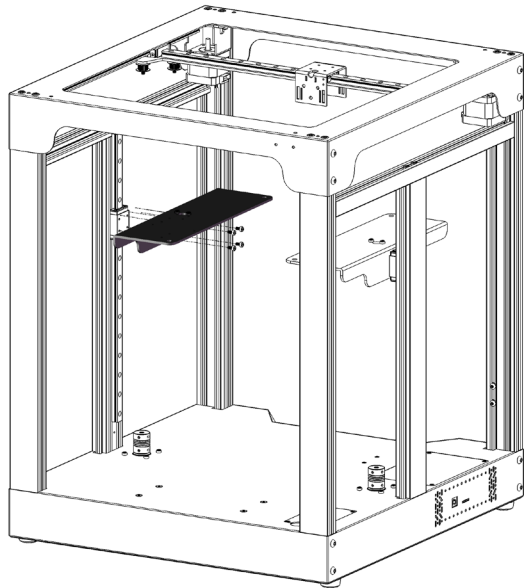
Heating Plate Support
热床支架

x2

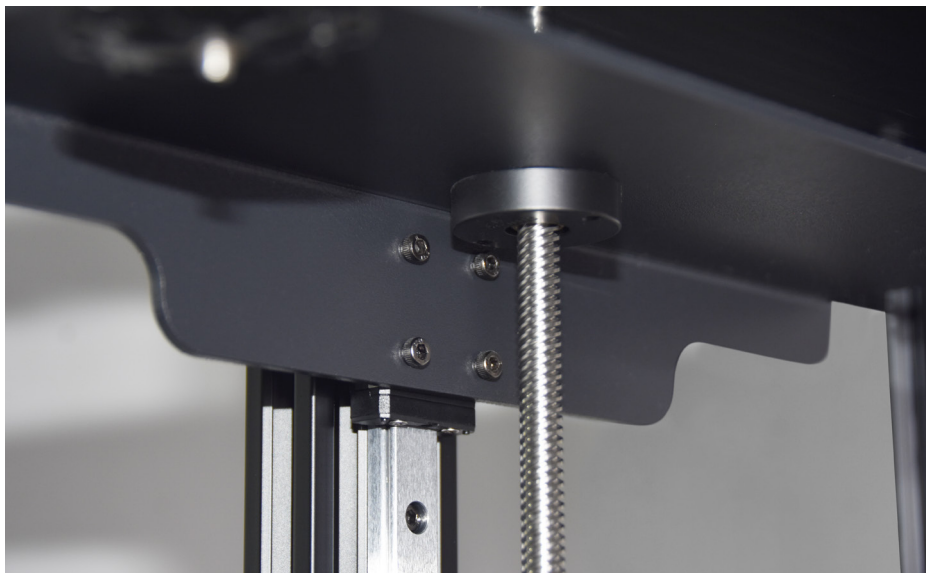


M3*6 Screw 螺丝

x8



Note: Do not over tight first in case you need to adjust such as installing crookedly
注意：一开始不要扭太紧,以防之后因为装歪而需要调整这里。

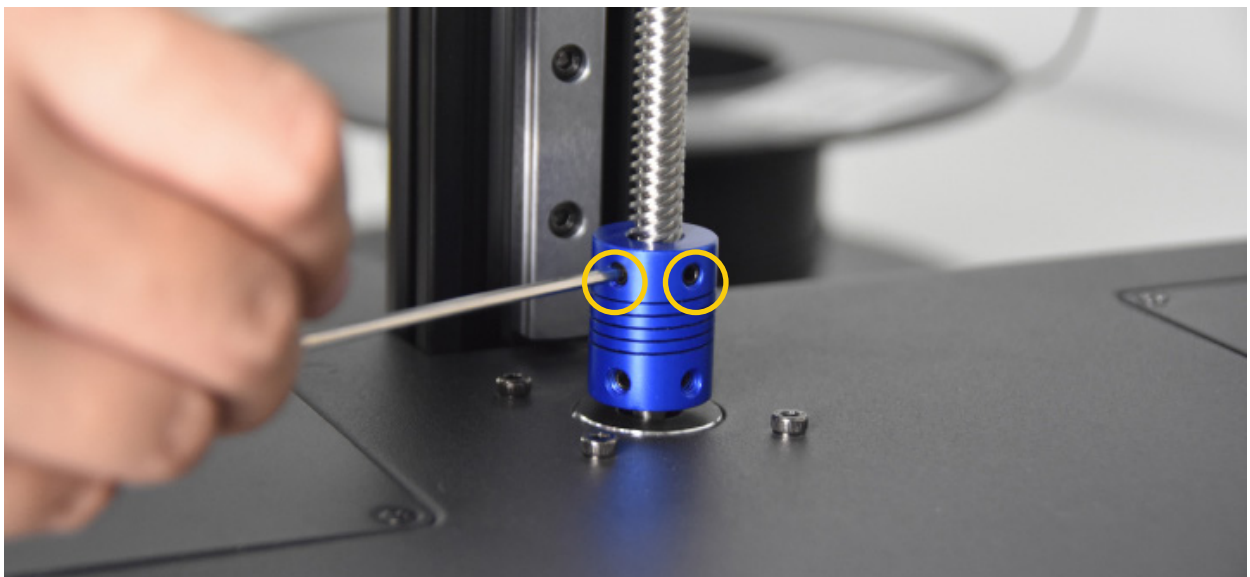
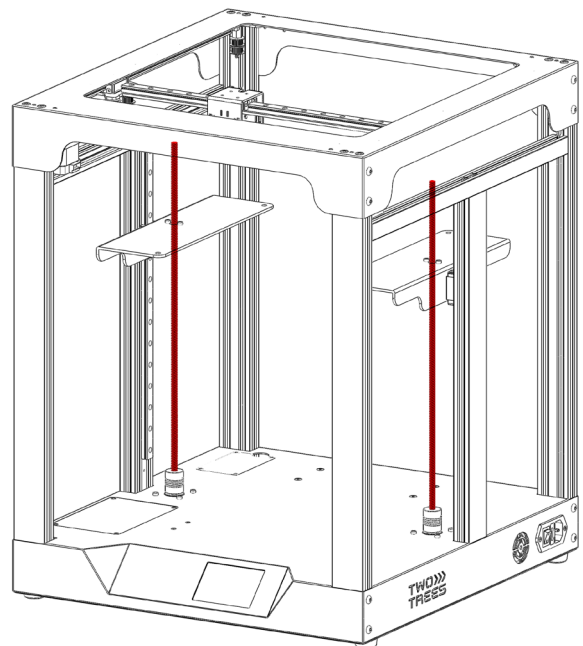
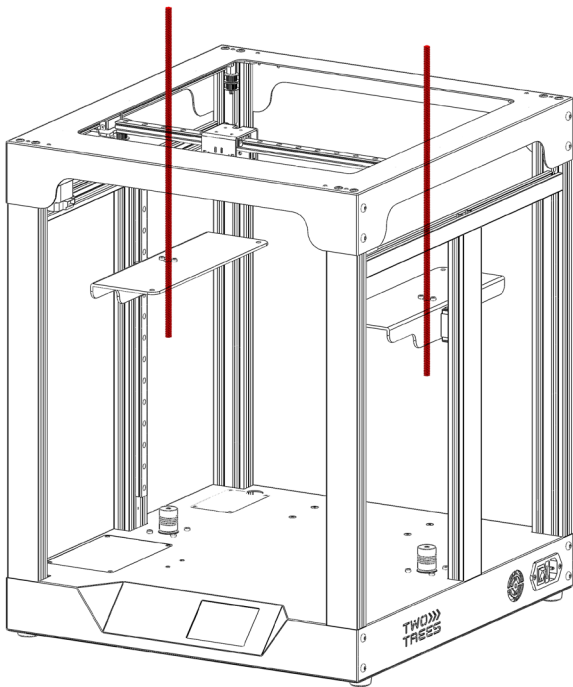


7. Install T8 Lead Screws 安装T8丝杆



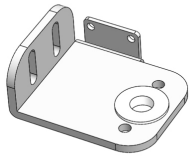
T8 Lead Screw T8丝杆

x2



Note: Twist the couplings and observe whether the part moves as a whole.
注意: 扭动并观察该部分是否作为一个整体移动

8. Install the T8 Lead Screw Holder and Z-axis End Stop 安装丝杆固定座与Z轴限位开关



T8 Lead Screw Holder
丝杆固定座
x2



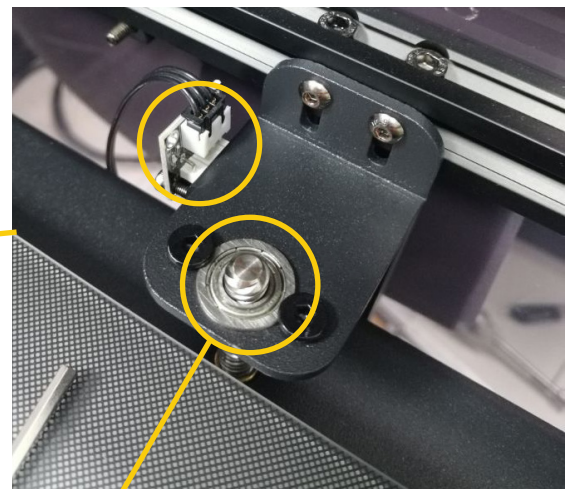
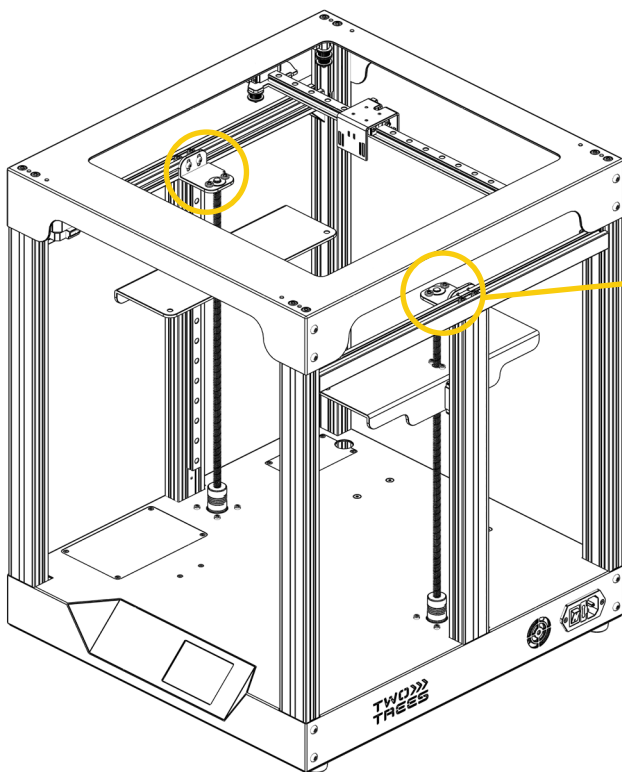
T-nut T型螺母
x4

Note: Do not over tight in case you need to adjust here later.

注意：一开始不要扭太紧,以防之后还需要调整这里。



M4*8 Screw 螺丝
x4



Slightly higher

稍微出头

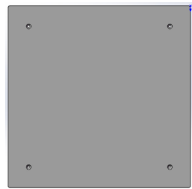
The Z-axis end stop faces backwards.
Z轴限位开关面向右后方。

And remember to connect the wire with the end stop.
记得连接限位开关的电线

8



9. Install Heating Plate 安装热床



Heating Plate 热床

x1



Spring 弹簧

x4



Leveling screw nut
调平螺母

x4



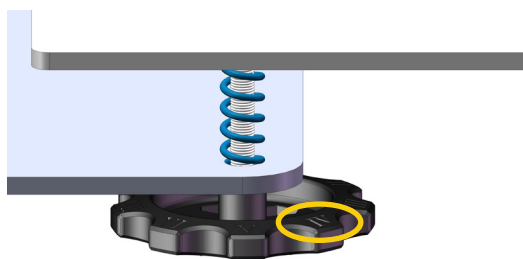
Countersunk head screw
沉头螺丝

x4

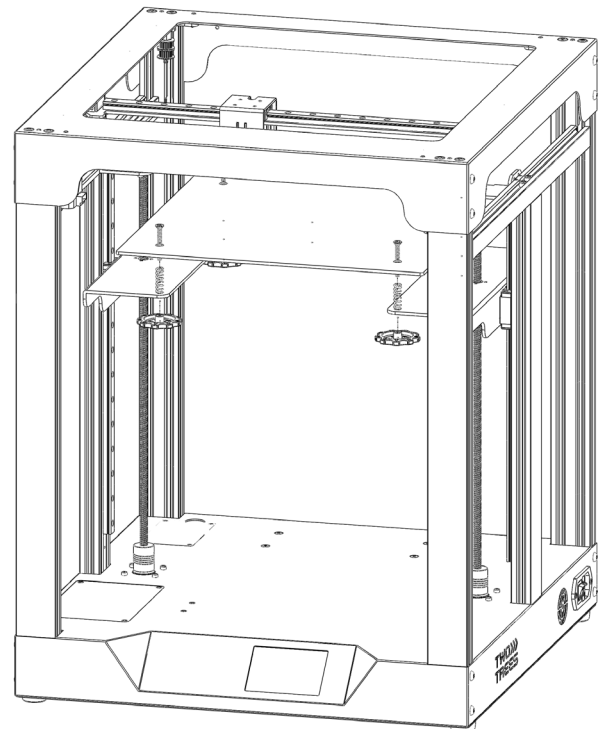


Insulating Sponge
隔热棉

x 1



Roman numerals 罗马数字朝上



Note: The plastic protective layer on the heating plate can be removed. The insulating sponge can be stuck to the back of heating plate (optional).

可去除热床上的塑料保护层。隔热绵可以粘在热床的背面(可选)。

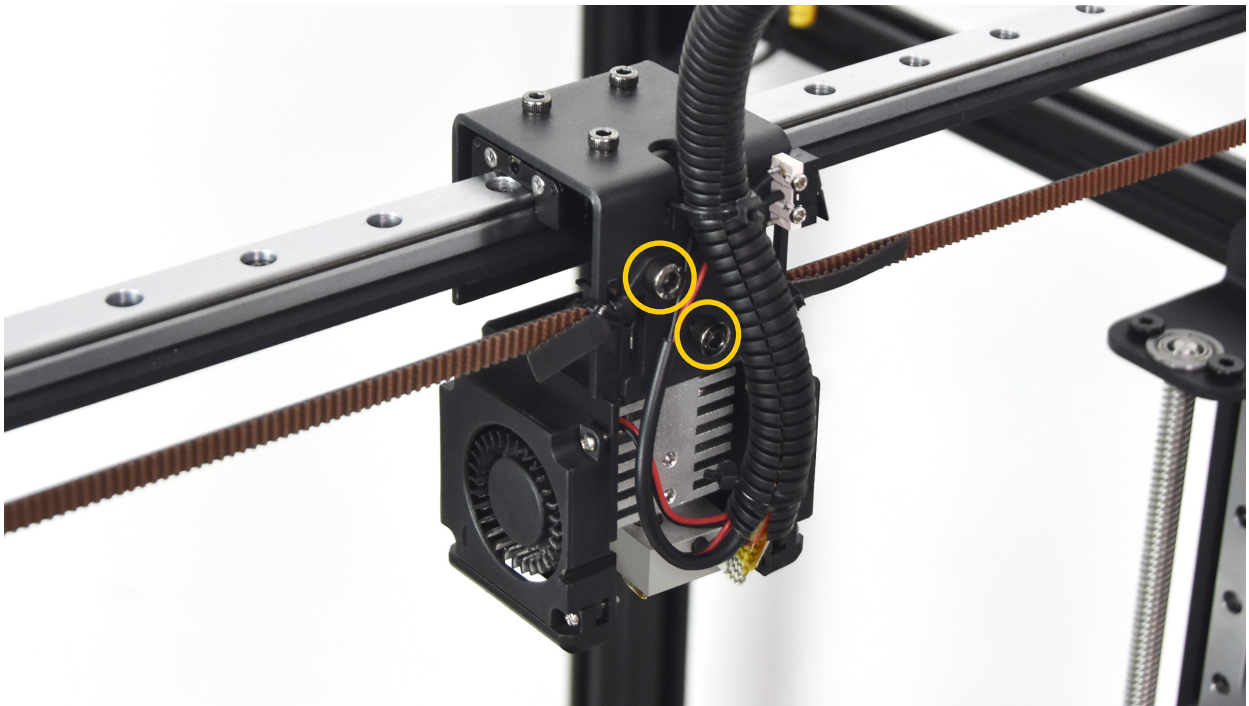
10. Install The Extrusion Head Kit 安装挤出头套件



Extrusion Head Kit
挤出头套件

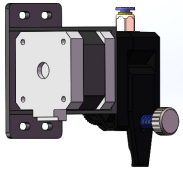
x1

Twist the 3 screws off first 先扭下螺丝



Position of the bellow 波纹管的位置如图所示。

11. Install The Extruder 安装挤出机



BMG Extruder BMG挤出机

x1



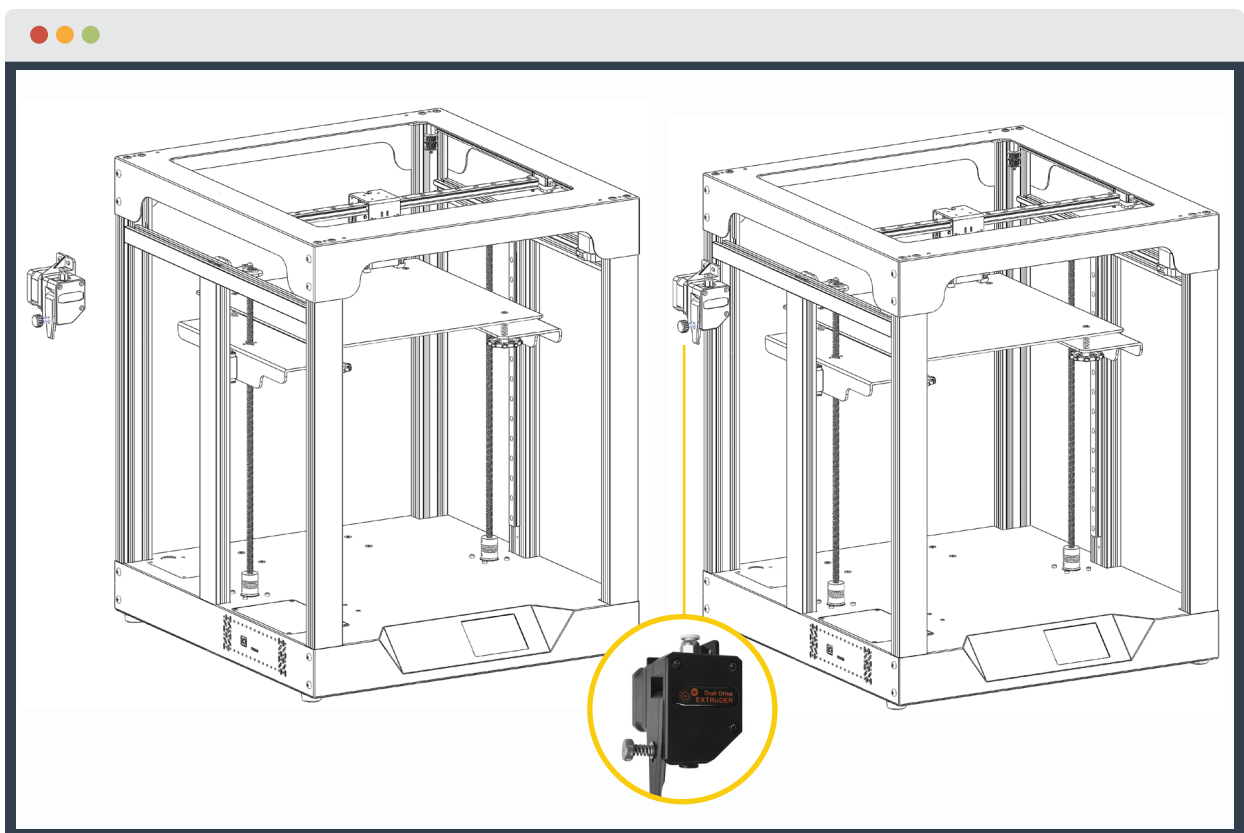
T - nut T型螺母

x2



M4 * 8 Screw 螺丝

x2

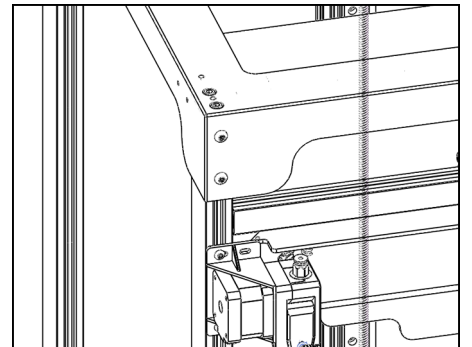


Note: After clamping into the slot, tighten the screws.
注意:卡入槽后,再拧紧螺丝

12. Fix The Teflon Tube 固定四氟管



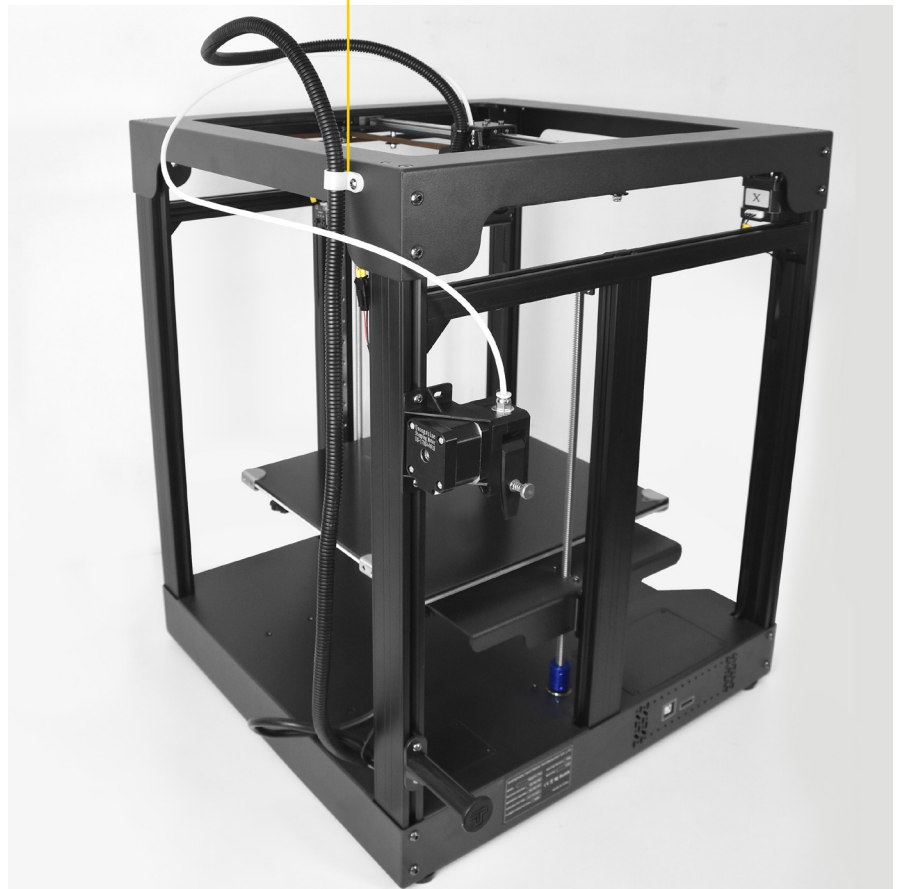
Wire Clip 线夹 x 1



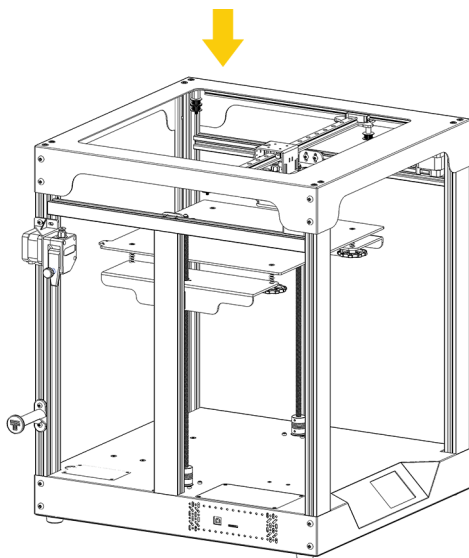
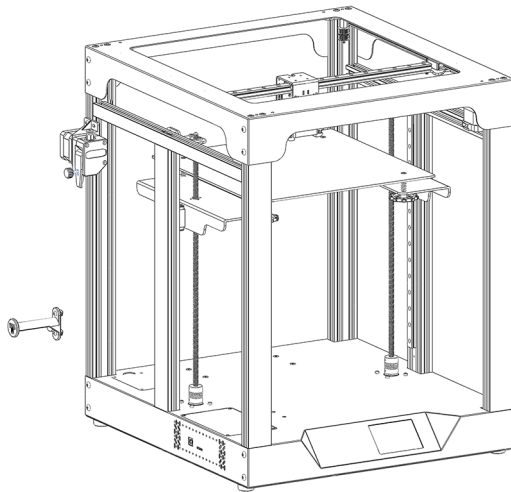
Teflon Tube 四氟管 x 1



M4*8 Screw 螺丝 x 1



13. Install The Filament Holder 安装料架

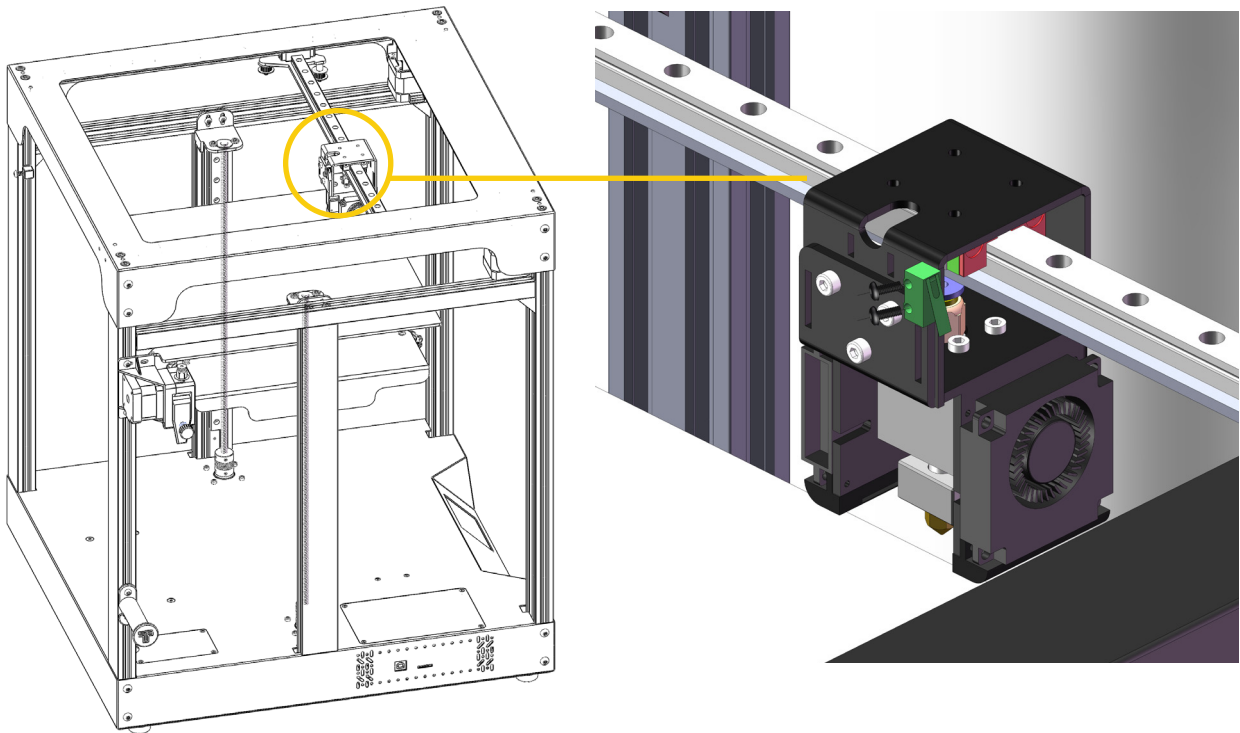


Note: After clamping into the slot, tighten the screws.
注意:卡入槽后,再拧紧螺丝

14. Install X-axis End Stop 安装X轴限位开关

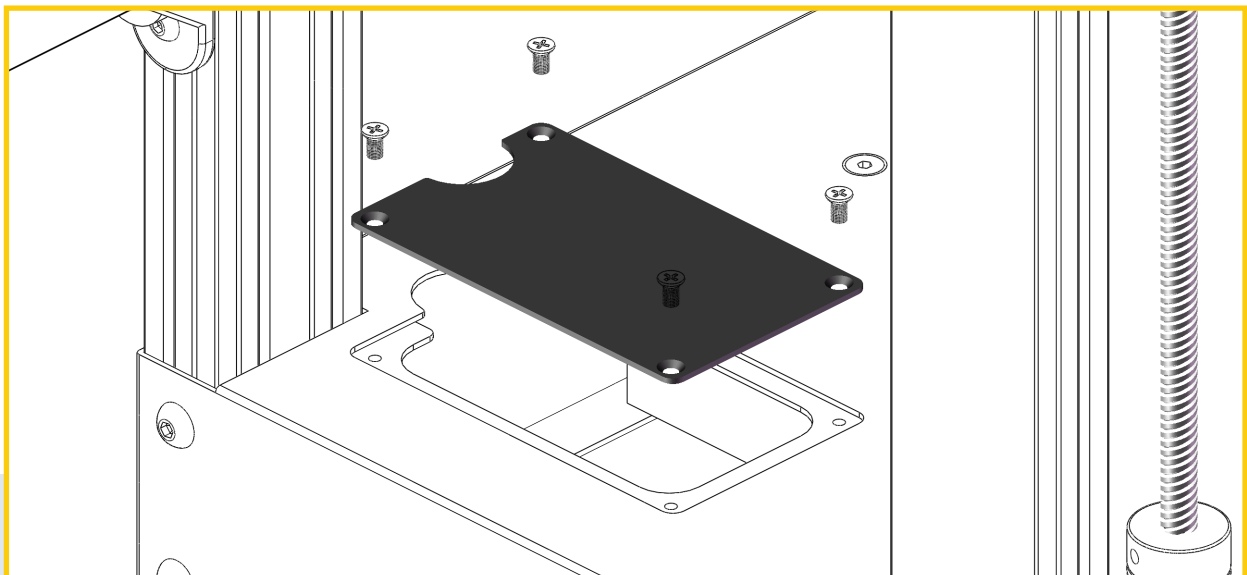
Twist the 2 screws off first. 先扭下螺丝

The end stop is next to the extrusion head kit. 限位开关在挤出头旁边



15. Remove 接线位置

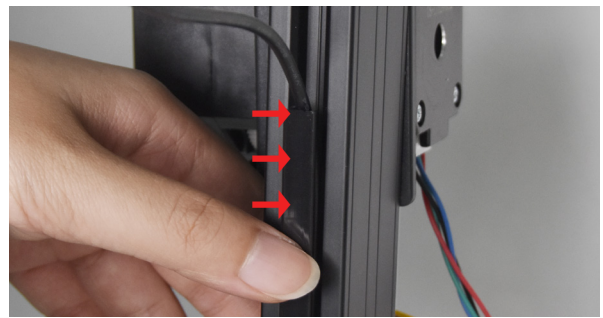
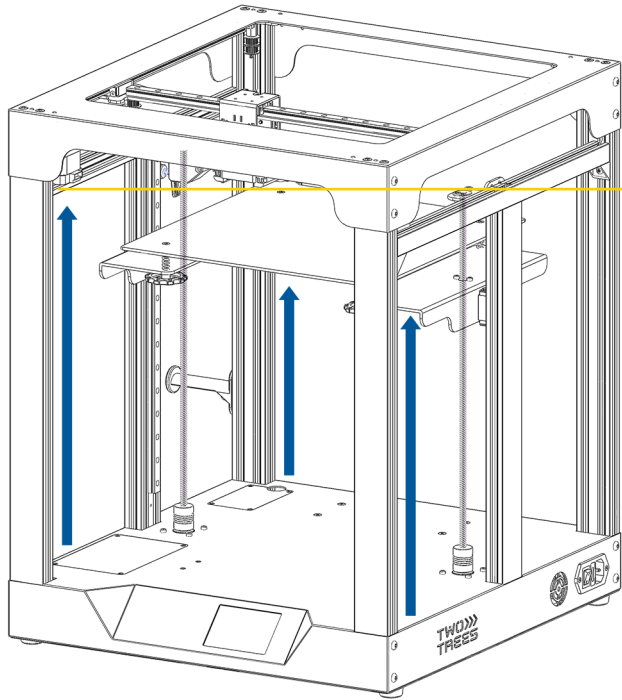
Remove M3*4 screws and open the cover. 取下M3*4螺丝并打开盖子。



16. X Axis motor, Y Axis motor, Y End stop X轴电机、Y轴电机、Y限位接线

Profile Cover Strip 型材封条 x 3

The wires goes and hidden inside the groove, then seal with 3 profile cover strips.
接线沿着型材往上,并隐藏在凹槽内,再用3个型材封条扣紧。



17. Connect the E-axis Motor Wire and Filament Sensor

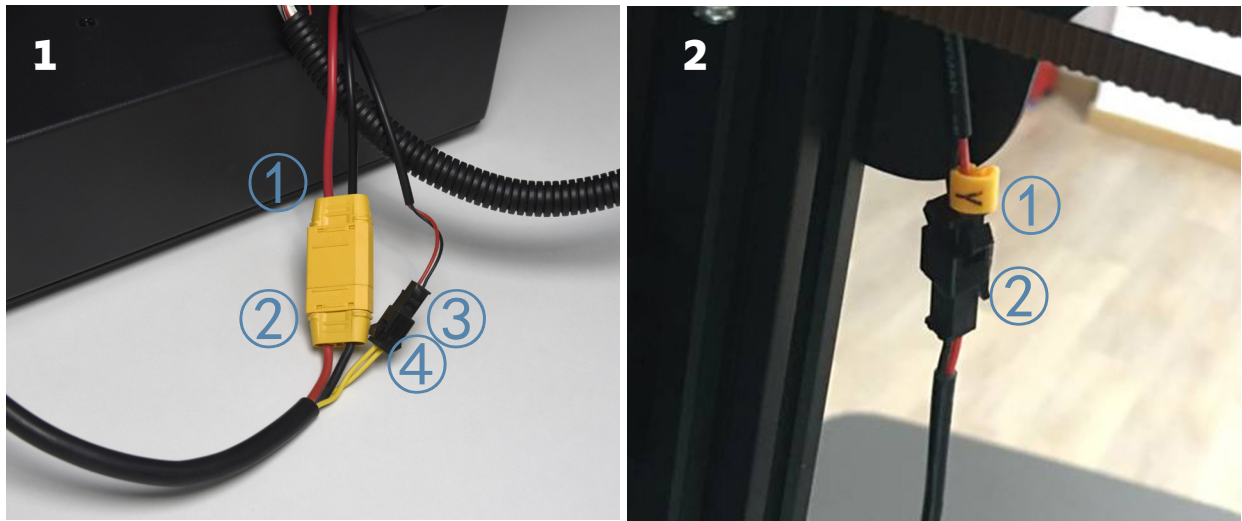
连接E轴电机线和断料检测器



18. Connect The Heating Plate Wire and Y Axis End stop Wire 连接热床线和Y轴限位线

Picture 1: Connect ① with ② and connect ③ with ④

图 1: 将 ① 和 ② 连接, 将 ③ 和 ④ 连接



Picture 2: Connect ① with ②

图 2: 将 ① 和 ② 连接

19. About the Thermistor Wire and Heating Cube Wire 关于热敏电阻线和加热棒线

Line A is the thermistor cable to hot end. A线是热端的热敏转接线

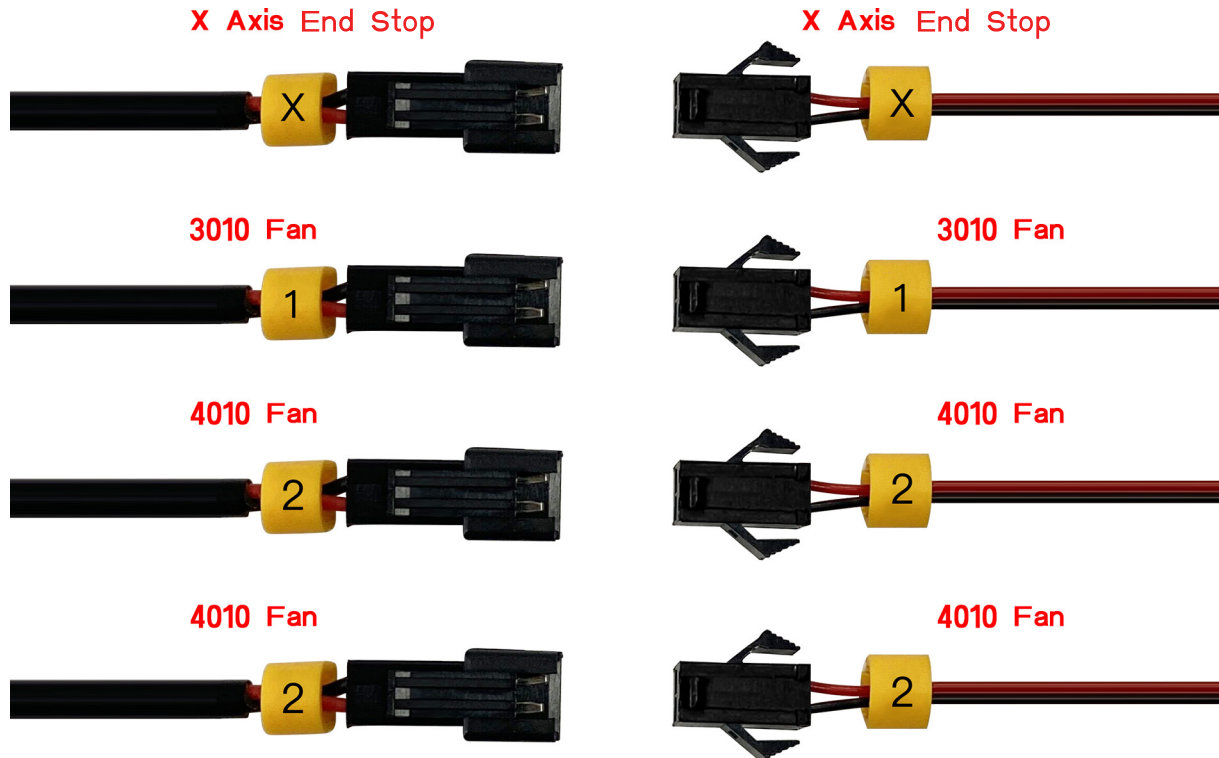
The heating tube wires are already connected. 加热棒的黑红电线已对接好(此线不分正负)



20. About the Fan Wire and the X Axis End Stop 关于连接风扇线和X轴限位开关线

No.1 and No.2 wire are both fan wires. 1号和2号线都是风扇线。

They are connected according to the corresponding numbers. 根据对应的数字连接。

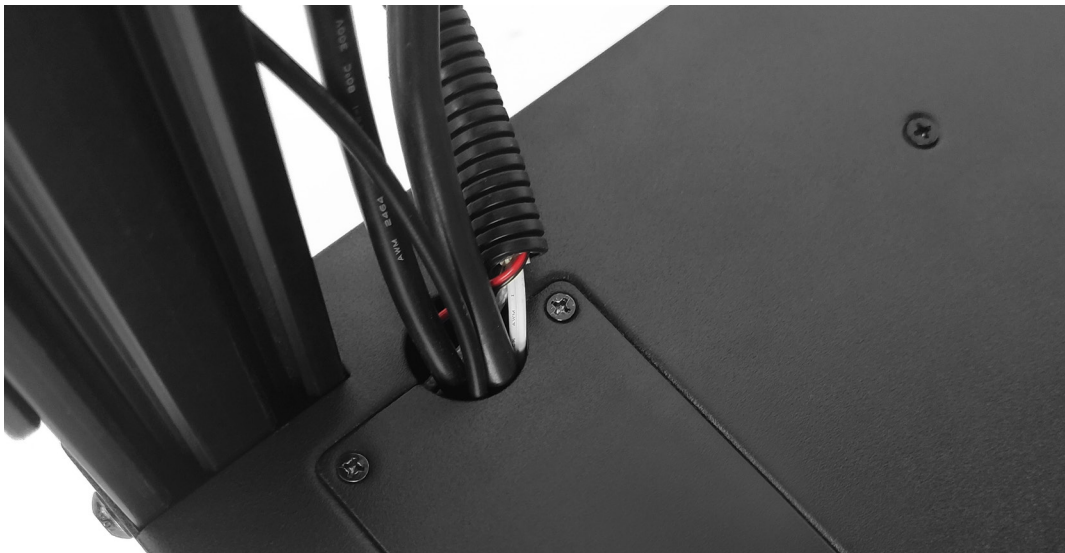


X-axis limit switch line is inserted into the X-axis limit switch line.

X轴限位转接线与X轴限位开关线对接。(X-axis is on the top carriage X轴在马车顶部上)

21. Seal the Wiring Cover 封上接线盖板

Hide the wires into the printer case. 把线束藏到打印机机箱里。



TEST & ADJUST 检测与调整

1. Tighten the screws of the coupling to ensure the overall linkage of the heating plate when the coupling is twisted

联轴器内的螺丝扭紧,确保扭动联轴器时热床整体联动



2. Adjust the height of z-axis limit switch
Z轴限位开关高度调节



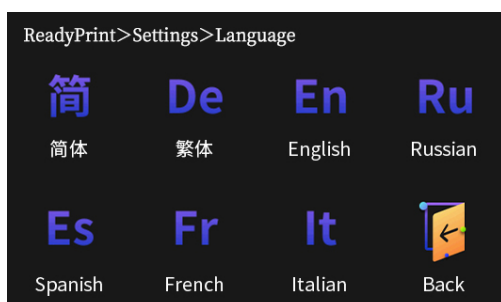
3. Plug in the power and press the switch
插电源,按下开关



4. Language 语言设置:

“Setting” → “Language”

点击“设置” → “语言”



5. Home 归零 :

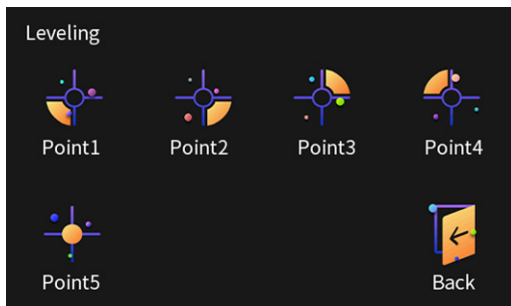
“Tools” → “Home” → click “All”

点击“工具” → “回零” → “全部”

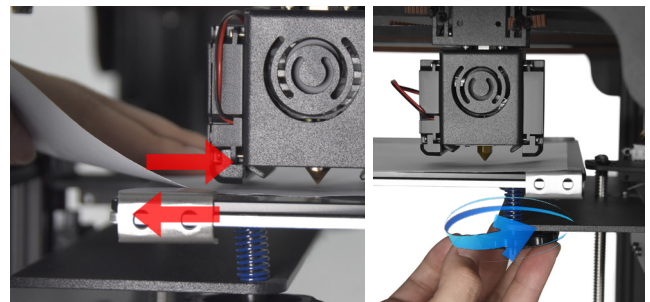


6. Leveling: 调平

6.1. "Leveling" → click 5 points and level them one by one
依次点击5个点

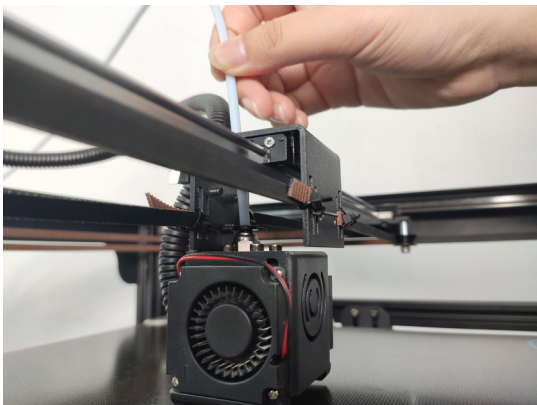


6.2. Insert a piece of A4 paper to see if it can slide smoothly, otherwise there is a scratch and you need to rotate the nuts manually
塞一张A4纸,看是否能滑动,如纸上有刮痕,需要手动旋转螺母



7. Assemble Filament 耗材装配 :

7.1. Insert the Teflon tube into the joint.
Note: Ensure you really plug it 5-6 cm to the bottom
四氟管插入到底,确保插到底

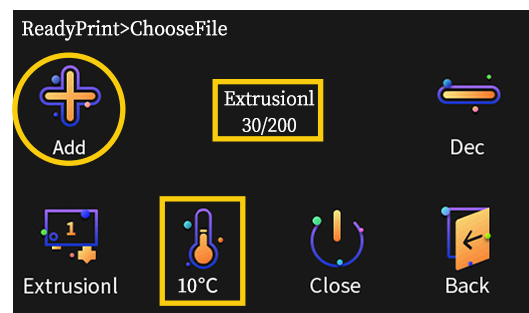


7.2. Insert the filament through the filament sensor and BGM extruder.
耗材穿过断料检测和BGM挤出机

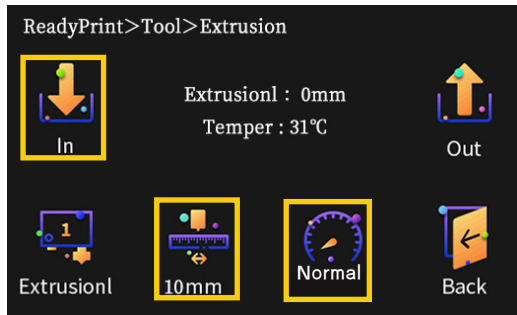


8. Test The Output 检测耗材输出:

8.1. "Preheat" → Choose among "1/5/10°C" (Click to change) → "Add" (Click the "Add" to increase the temperature that the filament needs, generally around 200°C).
"预热"→ 选择"1/5/10°C"(点击可更换)→ "增加"(点击"增加",增加到耗材所需的温度,一般在200°C左右)。

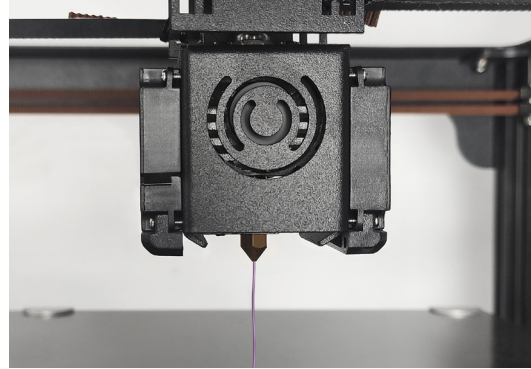


- 8.2. “Back” → “Extrusion” → “10”mm,Normal,In
返回 → 挤出 → 10mm, 中速, 推进



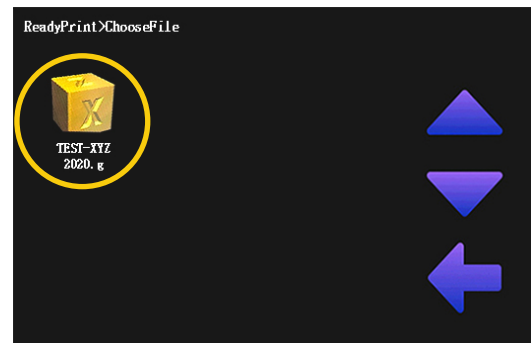
- 8.3. See if the filament is extruded smoothly and evenly

看耗材是否顺滑均匀挤出



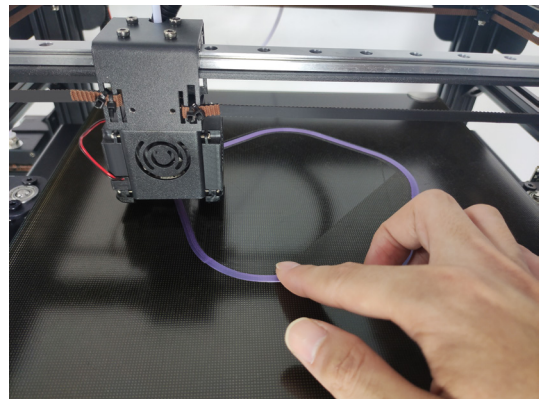
9. Try Printing 尝试打印 :

“Printing” → “TEST-XY2020.gcode” → “Confirm”
打印 → TEST-XY2020.gcode → 确认



10. Second Check 二次检查:

Touch the material just extruded. If it is not easy to be scraped, leveling is done. Otherwise, it needs to be adjusted by rotating the nuts
用手碰刚挤出的耗材, 不易脱落的则调平成功, 不然需旋转螺母调整



ERROR SYMBOLS & DEFINITION

错误标志与定义

- Err1:** The heating plate exceeds the maximum temperature limit, please check whether the thermal interface is shorted.
热床超过最大温度限制, 请检查热接口是否短接;
- Err2:** The nozzle exceeds the maximum temperature limit, please check whether the thermal interface is shorted.
喷嘴超过最大温度限制, 请检查热接口是否短接;
- Err3:** The heating plate is below the minimum temperature limit, please check whether the thermal interface is disconnected.
热床低于最低温度限制, 请检查热接口是否断开;
- Err4:** The nozzle is below the minimum temperature limit, please check whether the thermal interface is disconnected.
喷嘴低于最低温度限制, 请检查热接口是否断开;
- Err5:** The heating of the nozzle fails. If the nozzle does not reach the set temperature difference within the set time an error will be reported; please check the configuration file settings or check whether the power supply is sufficient.
喷嘴加热失败: 如果喷嘴在设定时间内未达到设定的温差, 则报错。请检查配置文件设置或检查电源功率是否足够;
- Err6:** The heating of the heating plate fails. If the heating plate reaches the set temperature difference within the set time, an error will be reported; please check the configuration file settings or check whether the power supply is sufficient.
热床加热失败: 如果热床在设定时间内达到设定的温差, 将报告错误。请检查配置文件设置或检查电源功率是否足够;
- Err7:** Thermal runaway. When the temperature reaches the target temperature, the current temperature is lower than the target temperature value within the set time and exceeds the set temperature, an error will be reported; please check whether the thermal sensitivity is normal or whether the PID value is appropriate.
热失控: 当温度达到目标温度时, 当前温度低于设定时间内的目标温度值超过了设定温度时, 则报错。请检查热敏是否正常或PID值是否合适。

AFTER-SALES SERVICE

The guarantee period is 12 months from the date of purchase.

1. Missing/Damaged/Defective Parts

Within 7 days of the date of receipt, we will replace any parts for free of charge including shipping fees.

After 7 days of the date of receipt, we will replace any parts for free of charge. But you need to pay the shipping fees.

2. Customer Damaged Parts: You need to pay for the cost of the parts and the shipping fees.

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- a. Lost or damaged shipments must be reported to the carrier within the carrier's claim window, and you need to inform us within 7 days of the date of receipt.
- b. For any parts lost or damaged during shipping, you need to take photos or video and send them to us.
- c. Once the Carrier dispute is settled, please provide us with all communications with the carrier. It is the customer's responsibility to keep us up to date with ALL communication with the carrier.
- d. For Missing Parts, you need to fill out a Service Ticket.
- e. For Damaged Parts, you need to fill out a Service Ticket and send us the photos or video.
- f. If the part is one of the LCD Panel, Power Supply or Mainboard, you need to ship the part back to us and we will send a new one.

售后服务

保修期为自购买之日起12个月内。

1. 缺少/损坏/有缺陷的部件:

签收日期后的7天内,我们将免费更换任何部件,包括运费;

签收日期后的7天后,我们将免费更换任何部件。但客户需要支付运费。

2. 客户损坏部件:客户应支付部件成本和运输费用。

3. 快递公司责任:丢失、损坏或有缺陷的部件。

- a. 对于丢失或损坏的货物的索赔必须在承运人的索赔窗口内向承运人报告,客户需要在签收日期后的7天内通知我们。
- b. 对于在运输过程中丢失或损坏的任何部件,客户应拍摄照片或视频并将信息发送给我们。
- c. 一旦承运人争议解决,请向我们提供与承运人的所有通讯。客户有责任让我们及时了解与承运人的所有通讯。
- d. 对于缺失零件,客户应填写服务单。
- e. 对于损坏的部件,客户应填写服务票,并将照片或视频发送给我们。
- f. 如果部件是LCD面板,电源或主板,客户应将部件运回给我们,我们将发送新部件。

If you have any after-sales questions, please contact us asap. 如您遇到任何售后问题,请第一时间联系我们

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