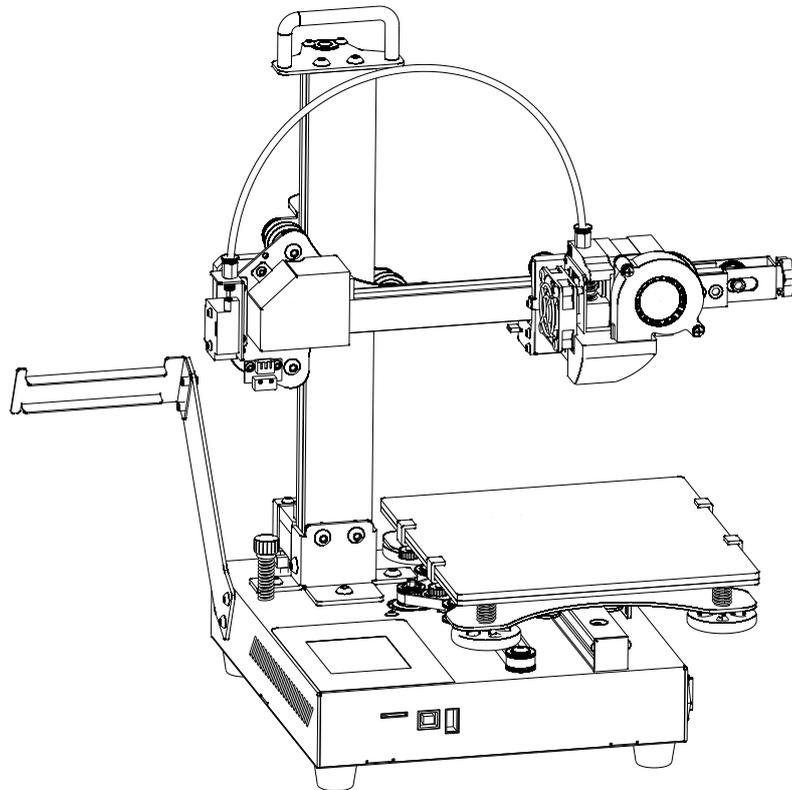


**TRONXY**

# CRUX 1

Installation Manual  
安装使用说明书





When unpacking, please check the packing list to ensure that no parts are lost or damaged. If any, please contact our after-sales personnel immediately and we will reissue them for you in the shortest time.

开箱时,请对照装箱清单,确保无零件的丢失及损坏,如有发生,请立即联系我们的售后人员,我们会在最短时间内为您补发。



Please use the machine in a ventilated, dry, clean and flat environment.

请在通风、干燥、清洁、平坦的环境中使用机器。



The machine contains high-speed moving parts and high-temperature parts. Children are not allowed to use the printer alone.

该机器包含高速运动部件和高温部件,儿童不得单独使用打印机。



Part of the accessories are consumable, the warranty time is different.

部分配件为易耗品,保修时间不同。



In an emergency, you can turn off the power directly.

在紧急情况下,可直接关闭电源。



If the user's unauthorized modification or disassembly causes damage to the core components of the machine, the situation is not covered by the warranty.

如果用户擅自改装或者拆卸导致机器的核心部件损坏,则该情况不在保修范围内。



Video, software and other related information are stored in the TF card, please check.

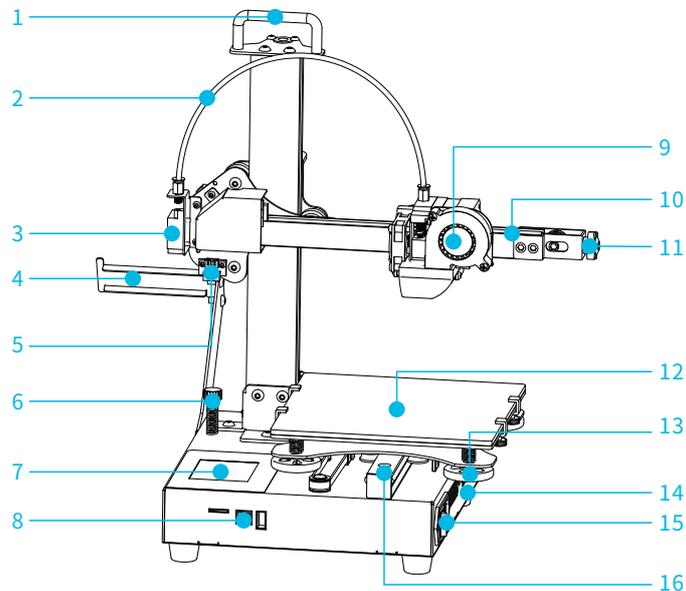
视频,软件等相关信息存储在TF卡中,请查看。

# Directory 目录

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<b>Introduction</b>	01	设备简介	01
<b>Parameter</b>	02	设备参数	02
<b>Packing list</b>	03	包装清单	03
<b>Product installation</b>	04	产品安装	04
<b>Language switch</b>	13	语言切换	13
<b>Leveling the printing platform</b>	14	打印平台调平	14
<b>Load and unload filaments</b>	16	耗材的装载和卸除	16
<b>Print test</b>	20	打印测试	20
<b>Setting of slicing software</b>	22	切片软件的设置	22
<b>Failure cause analysis</b>	28	故障原因分析	28

# Introduction 设备简介



1 Handle  
提手

2 Filament tube  
料管

3 Filament run-out detector  
断料检测器

4 Filament rack  
料架

5 Z-axis limit switch  
Z限位开关

6 Z-axis limit hand screw  
Z轴限位手拧螺丝

7 Touch screen  
触摸屏

8 TF card, Type-B,  
Thumbdrive socket  
TF、USB、U盘接口

9 Print head  
打印头

10 X-axis guide rail  
X轴导轨

11 X-axis belt adjustment knob  
X轴皮带调节旋钮

12 Printing platform sticker  
打印平台贴纸

13 Leveling nut  
调平螺母

14 Voltage transfer switch  
电源电压转换开关

15 Power switches and sockets  
电源的开关和插口

16 Y-axis guide rail  
Y轴导轨

## Parameter 设备参数

Print parameters 打印参数		
Print size	打印尺寸	180*180*180 (mm)
Print accuracy	打印精度	0.1-0.3mm
Printing principle	印刷原理	FDM (Fused deposition molding 熔融沉积成型)
Nozzle size	喷嘴尺寸	0.4mm
Nozzle quantity	喷嘴数量	1
Print speed	打印速度	20-150mm/s (60mm/s is preferred 建议 60mm/s)
Position accuracy	位置精度	X/Y -0.00625mm, Z -0.00125mm
Available filaments	耗材支持	PLA、ABS、PETG、...
Temp parameters 温度参数		
Printing environment temperature	打印环境温度	8-40°C
Nozzle temperature	喷嘴温度	275°C (Max 最大)
Power supply 电源参数		
AC 110/220V 50/60Hz DC 24V/240W		
Software 软件		
Slicing software	切片软件	Tronxy, Cura, Simplify3D
Input Format	输入格式	.stl, .obj
Output Format	输出格式	.gcode
Connection method	连接方式	TF card, Type-B, Thumbdrive socket TF卡、USB、U盘
Machine parameters 机器参数		
Machine size	机器尺寸	314*427*412mm
Packing size	包装尺寸	472*417*195mm
Machine weight	机器重量	≈5.8kg

# Packing list 包装清单

1



Base and X axis assembly  
底座与X轴组件

2



Handle  
提手

3



Filament rack  
料架

4

The types of stickers on the printing platform vary depending on the package content.  
根据套餐不同, 打印平台的贴纸类别也不同。

Platform Sticker  
平台贴纸

5



Card reader  
读卡器

6



TF card  
内存卡

7



Power cord  
电源线

8



Filaments (Color random)  
耗材(随机颜色)

9



Type-B to USB cable  
数据线

10



Shovel  
铲刀(仅晶格玻璃版本才有, 颜色随机)

11



Wrench  
扳手

12



M4 \* 6 screw \*9  
M4\*6 螺丝 \*9

## 1. Assemble the base and X-axis assembly 组装底座与X轴组件



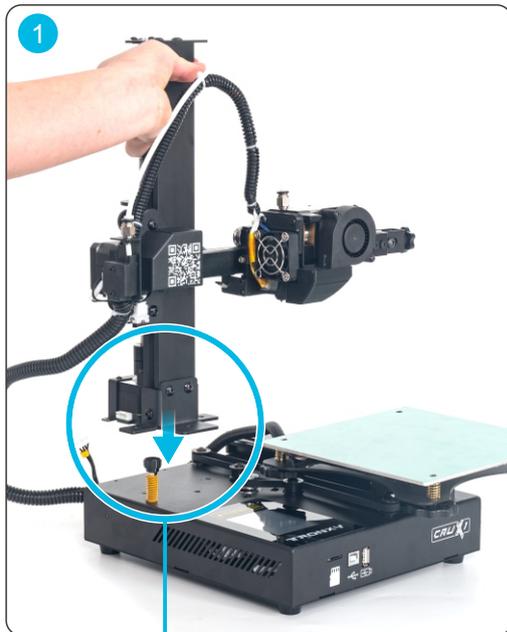
1

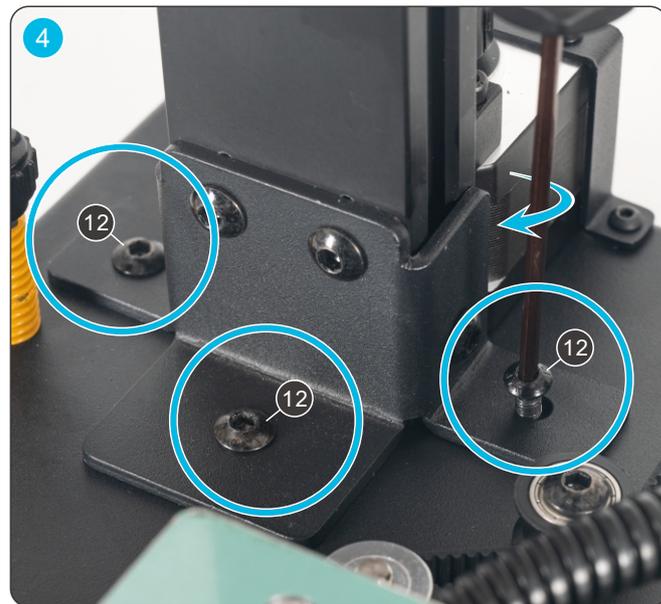
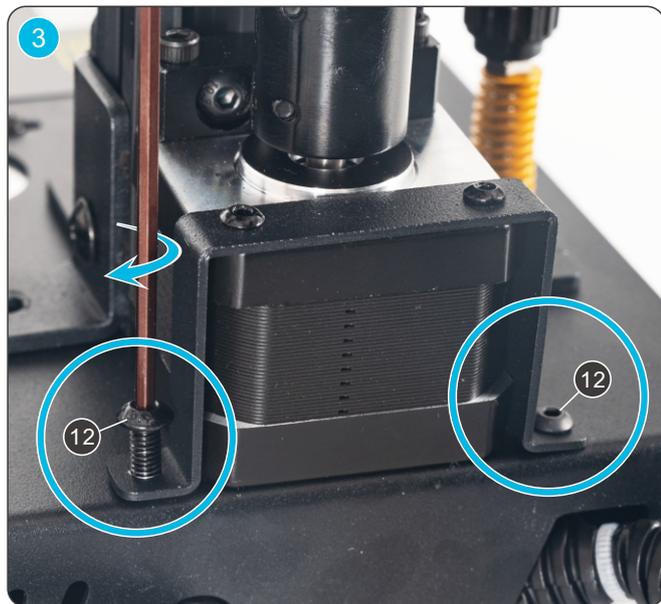
Base and X-axis assembly  
底座与X轴组件



12

M4\*6 screw \*5  
M4\*6 螺丝 \*5





Use five M4 \* 6 screws to install the x-axis assembly on the base  
使用5颗M4\*6螺丝将X轴组件安装到底座上

## 2. Installation handle 安装提手



2

Handle  
提手



12

M4 \* 6 screw \* 2  
M4\*6 螺丝 \* 2

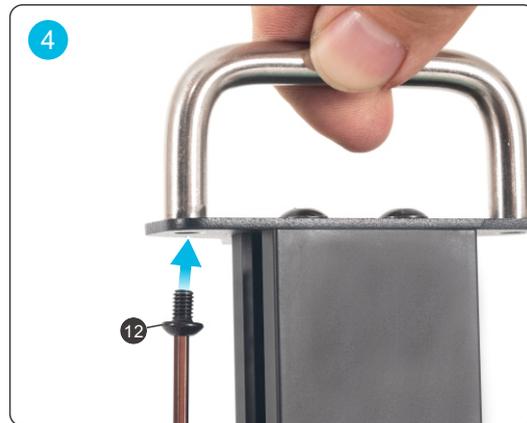


Lower X-axis rails for easy installation of carrying handles

降低X轴导轨, 方便安装提手



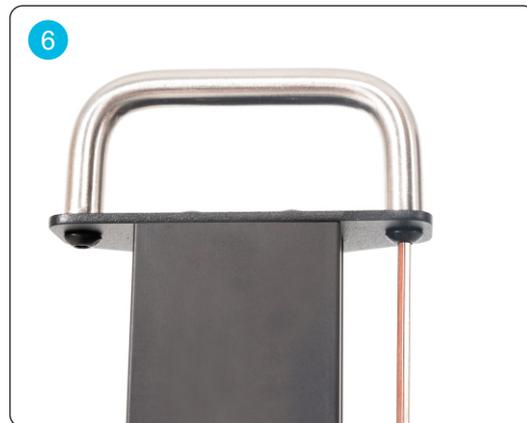
Align the handle with the screw hole  
将提手对准螺丝孔



Lock with M4 \* 6 screws  
使用M4\*6螺丝锁紧



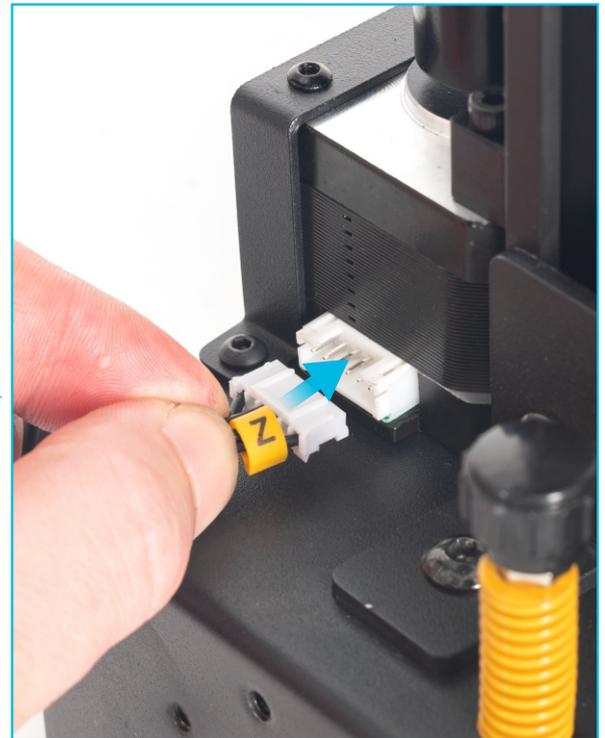
Lock with M4 \* 6 screws  
使用M4\*6螺丝锁紧



Handle installation completed  
提手安装完成

## Product installation 产品安装

### 3. Insert the Z motor line 插入Z电机线



## 4. Install the filament rack 安装料架



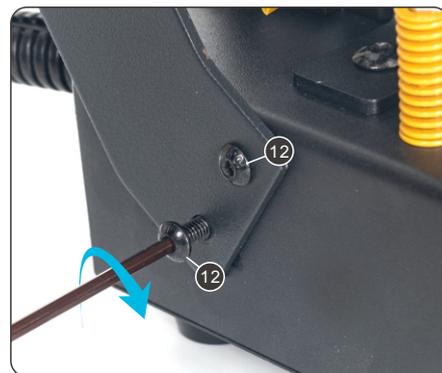
3

Filament rack  
料架



12

M4 \* 6 screw \* 2  
M4\*6 螺丝 \* 2



Fix the filament rack on the machine with two M4 \* 6 screws  
使用两颗M4\*6螺丝将料架固定在机器上

## 5. Install platform sticker 安装平台贴纸

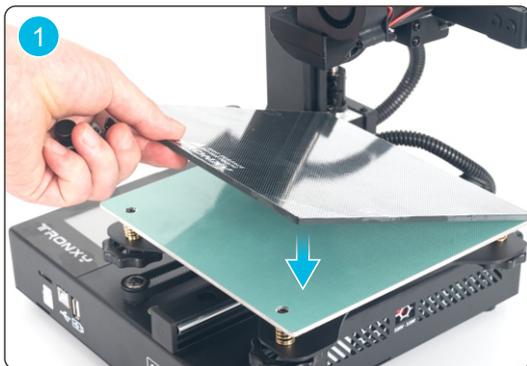
\*The types of stickers on the printing platform sticker vary depending on the package content. (Sample: Lattice glass)

\*根据套餐不同, 打印平台贴纸的贴纸类别也不同。(示例: 晶格玻璃)



4

Platform Sticker  
平台贴纸



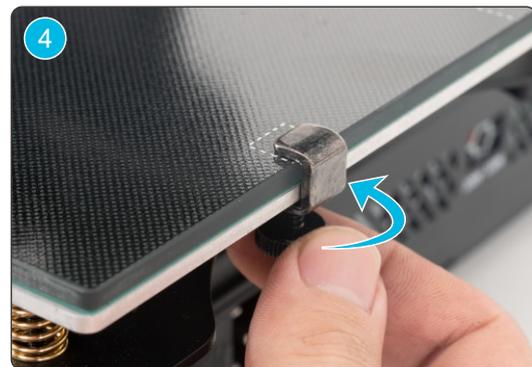
Place the platform sticker on the hot bed  
将平台贴纸放在热床上



Tear off the protective film of the platform sticker  
撕掉平台贴纸的保护膜



Fix the platform sticker with clips  
使用夹子固定平台贴纸



Tighten the screw of the clip counterclockwise  
逆时针拧紧夹子的螺丝



Install the remaining clips as shown in the figure  
如图所示位置, 将剩下夹子安装好

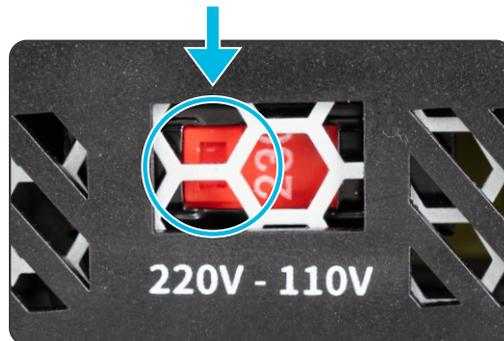
## Product installation 产品安装

6. Check whether the voltage is consistent with the local required voltage 检查电压是否和当地一致

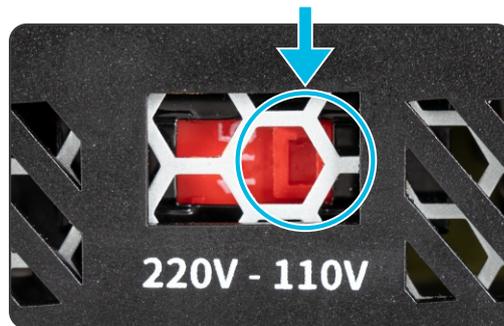


Under normal circumstances, you can keep the default factory settings. If you have special requirements, you can adjust them according to the actual situation.

正常情况下,保持默认设置即可,如有特殊需求可根据实际情况调整。

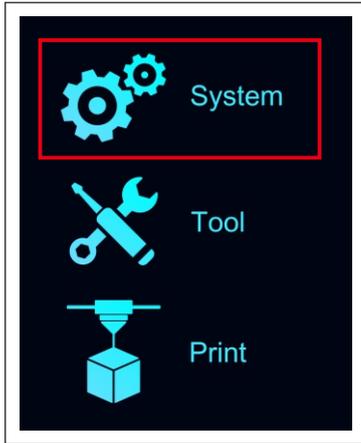


Switch to the left, the voltage is set to 220V  
往左拨动为220V



Switch to the right, the voltage is set to 110V  
往右拨动为110V

# Language switch 语言切换



Select "System"  
选择“系统”

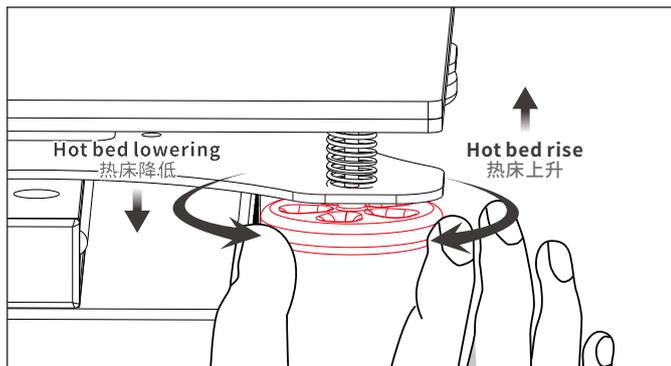


Select "Language"  
选择“语言”



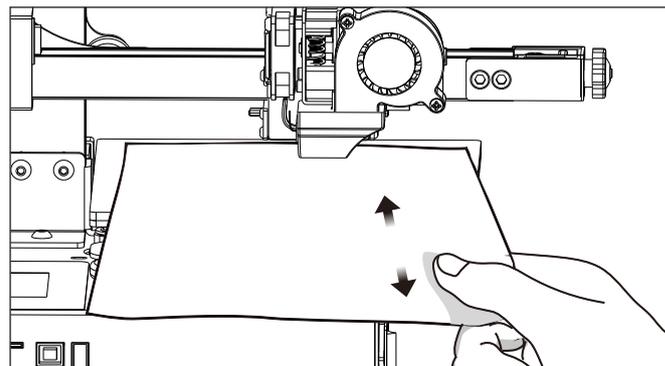
Choose the language you want  
选择你需要的语言

## Leveling the printing platform 打印平台调平



Click four points of ABCD in sequence, the print head will move to the corresponding position, and then adjust the leveling nut, making the distance between the nozzle and the platform sticker about 0.1mm (about A4 paper thickness).

依次点击ABCD四个点，打印头会移动到对应位置，然后调节调平螺母，使喷嘴与平台贴纸的距离约为0.1mm左右（约为A4纸厚度）。



You can place a piece of A4 paper on the printing platform, adjust the nozzle to the position where it just touches the paper, and push the paper back and forth until you can feel slight resistance.

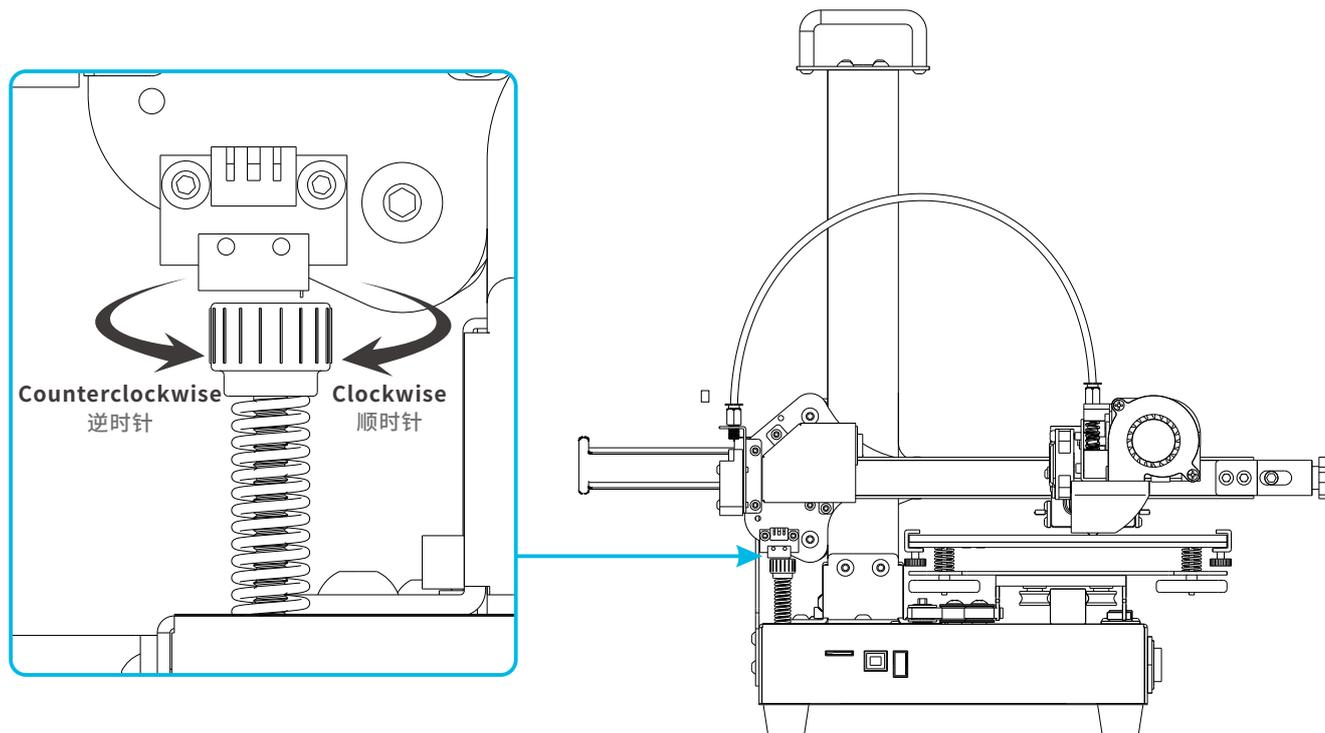
可放一张A4纸在平台上，将喷嘴调整到刚好碰到纸张，前后推动纸张能感受到轻微阻力即可。

## Leveling the printing platform(Unrequired steps) 打印平台调平(非必要步骤)



When the adjusting and leveling screw reaches the limit position, the nozzle and the platform are still too close (anticlockwise) or too far (clockwise) Z limit screw.  
(The original output has been set, generally no need adjusted)

当调节调平螺母到极限位置, 喷嘴与平台仍然过近 (逆时针调节) 或者过远时 (顺时针调节) Z限位螺丝。  
(原出厂已经设置好, 一般情况下不用调节)



# Load and unload filaments 耗材的装载和卸除

## 1. Insert filament 插入耗材

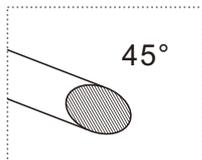


In order to successfully complete the loading of the filament, the filament needs to perform some necessary operations, as shown in the following figure.

为了顺利完成加载, 灯丝需要进行一些必要的操作, 如下图所示。



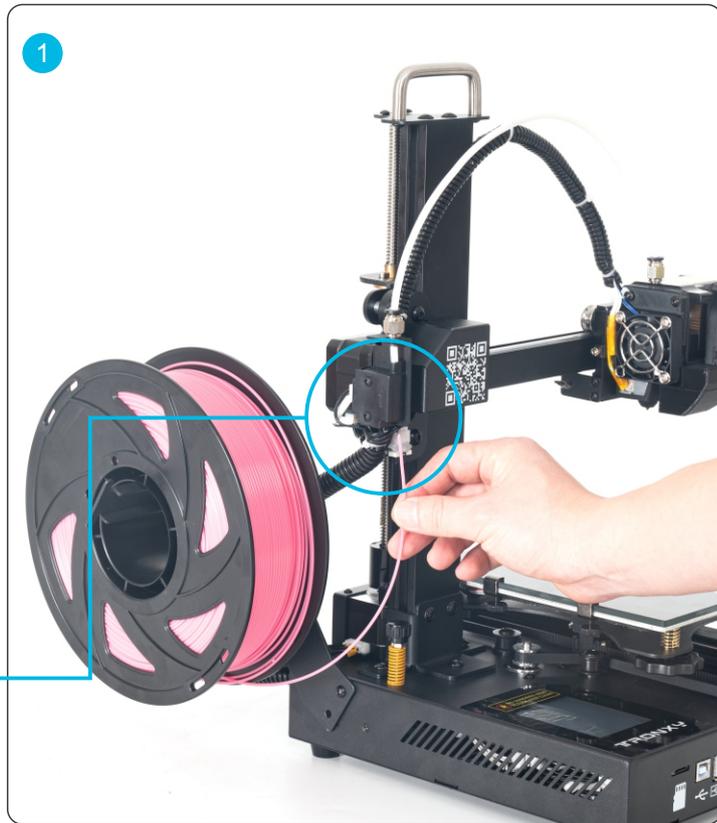
Straighten the front end of the filament  
拉直耗材



Cut the front cut of the filament into 45° angle  
将耗材剪成45°角



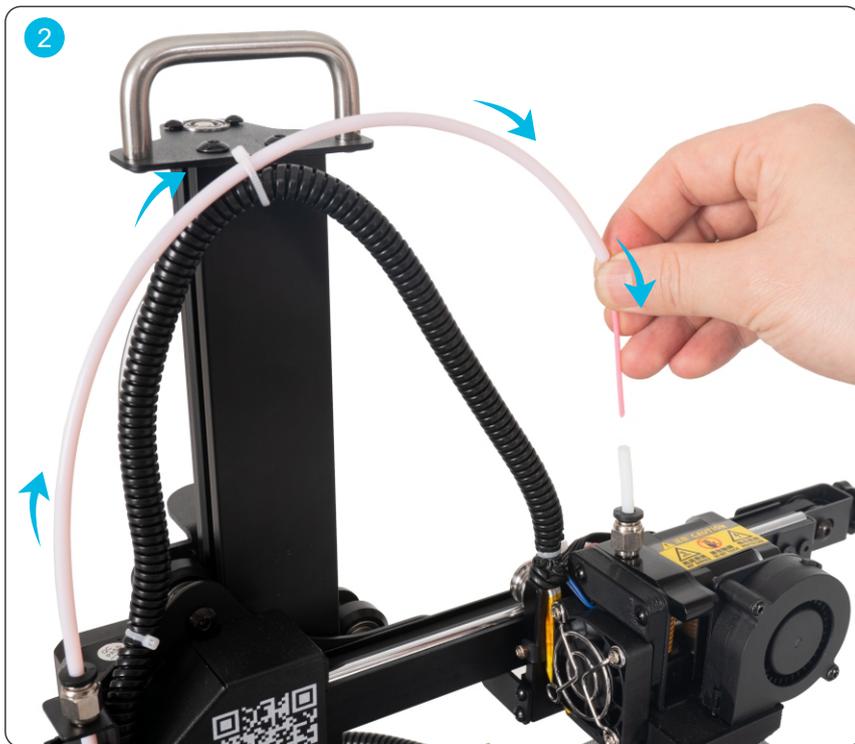
Insert the consumables from under the Filament run-out detector  
将耗材从断料检测器插入



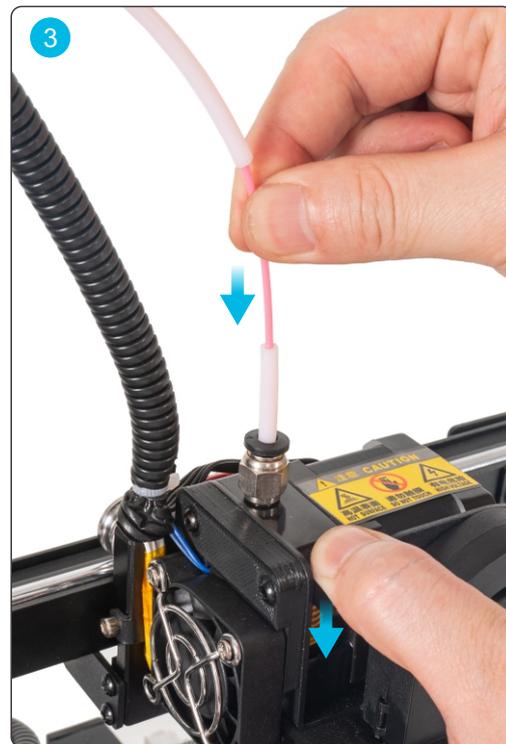
\*The filament used in the demonstration in the picture needs to be purchased separately

\*图中演示用的耗材需另外购买

## Load and unload filaments 耗材的装载和卸载

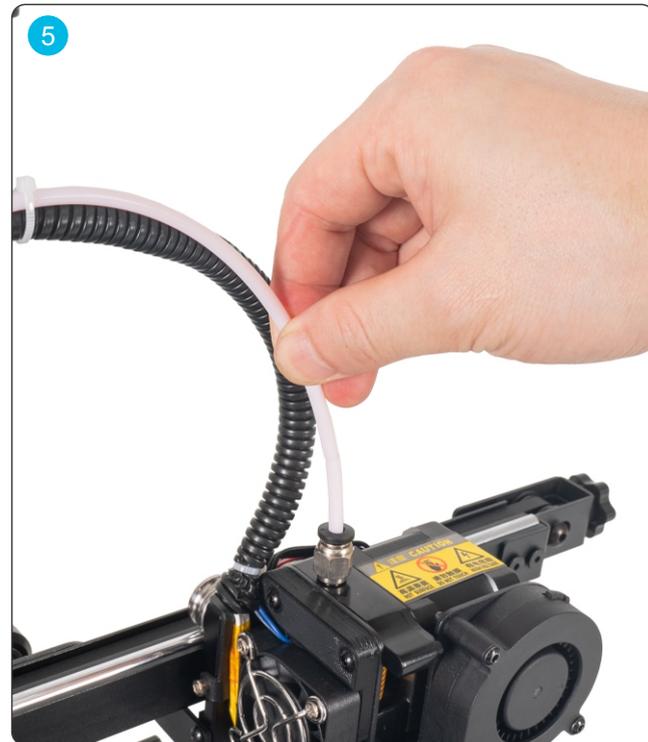


The filament is passed through the material tube and inserted into the extruder  
耗材通过料管, 插入挤出机



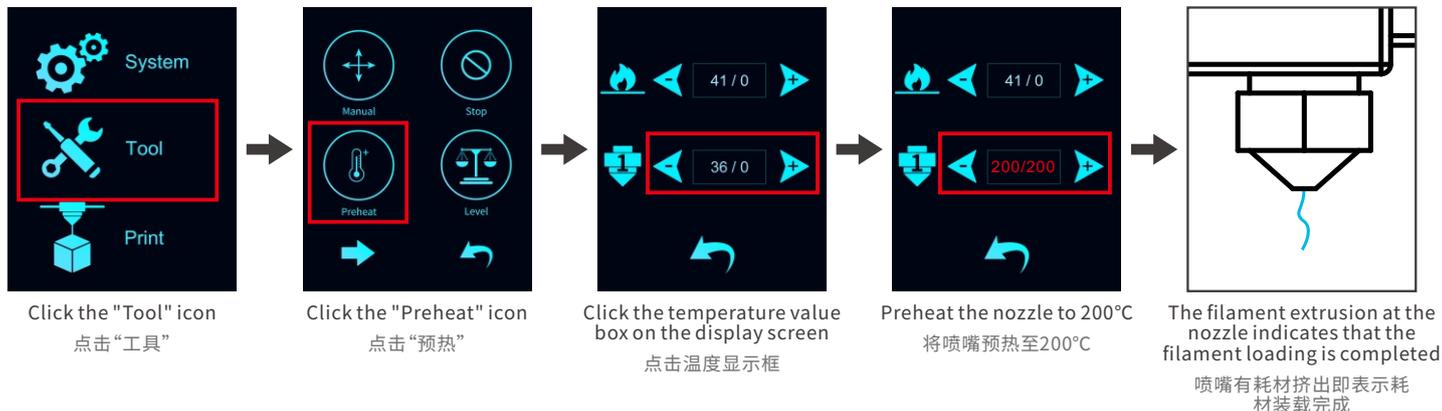
Press down on the elastic buckle of the extruder and insert the filament to the bottom of the print head  
向下按压挤出机的弹力扣, 将耗材插到打印头底部

## Load and unload filaments 耗材的装载和卸除



## Load and unload filaments 耗材的装载和卸除

### 3. Preheating nozzle 预热喷嘴



### 4. The display screen controls the feeding and discharge of filament 挤出与退出耗材



# Print test 打印测试



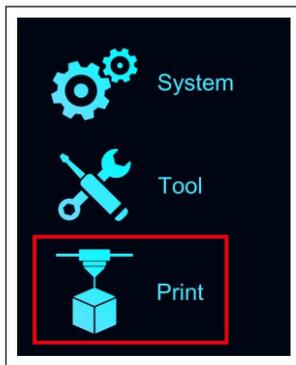
Thumbdrive print  
U盘打印



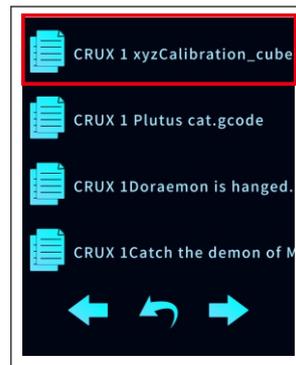
The metal side of  
TF card is inserted  
upwards  
金属面朝上

1. Both the thumbdrive and TF card can read the printed content and keep reading at the same time;
2. When inserting the memory card into the card slot of the desktop, make sure that the metal surface is facing up, and do not use too much force, which may cause the risk of damaging the TF card or the card slot of the motherboard;
3. If the content on the memory card cannot be read, format it with FAT32 and try again;
4. The printer is compatible with other memory cards of the same size;
5. Save the data to be printed in the root directory of the memory card. Do not save other folders or files in the memory card. It is better to name the G-CODE file name with a number.

- 1、U盘和TF卡皆可读取打印内容，且支持同时读取；
- 2、将内存卡插入桌面卡槽时，确保金属面朝上，不要用力过猛，存在损坏TF卡或主板卡槽的风险；
- 3、如果无法读取内存卡上的内容，请使用FAT32格式化并重试；
- 4、打印机兼容其他同大小尺寸的内存卡；
- 5、将要打印的数据保存在内存卡根目录下，不要在内存卡中保存其他文件夹或文件，并且最好用数字命名G-CODE文件名。



Select "print"  
选择“打印”



Select a test file  
选择测试文件

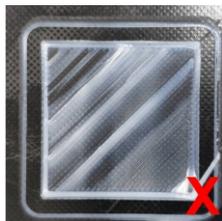


Confirm to print the file and start printing  
确认文件，开始打印

# Print test 打印测试

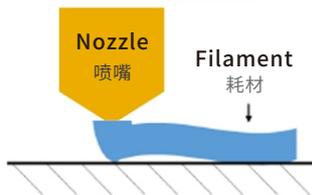
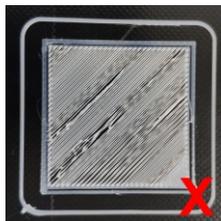
## Possible situations and solutions when extruding consumables

挤出耗材时可能出现的情况以及解决的办法



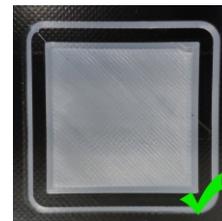
The distance between the hot bed and the nozzle is too close, you need to adjust the Z compensation, press the **arrow 1** in the figure to compensate the difference.

热床与喷嘴距离太近, 需要调整Z补偿, 按图中**箭头1**补偿差值。



The distance between the hot bed and the nozzle is too far, you need to adjust the Z compensation, press the **arrow 2** in the figure to compensate the difference.

热床与喷嘴距离过远, 需调整Z补偿, 按图中**箭头2**补偿差值。

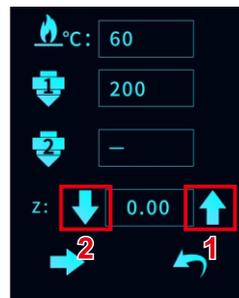


Proper nozzle height  
Good extrusion and adhesion  
合适的喷嘴高度良好的挤出和附着力



The interface displayed during the printing process

打印过程中的页面



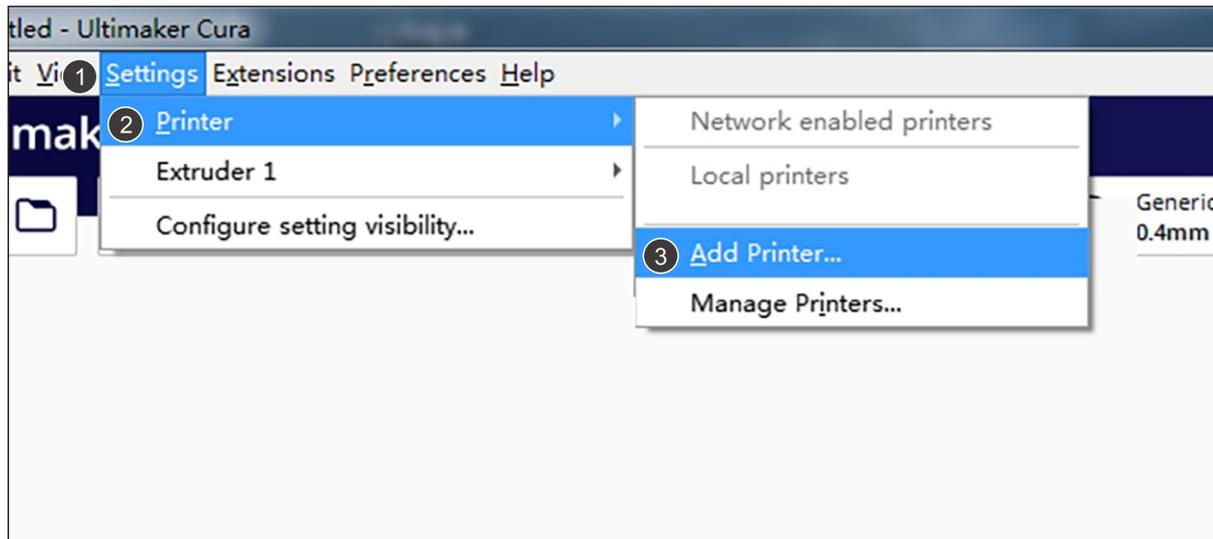
## Setting of slicing software 切片软件 的设置

1. Install "Ultimaker\_Cura-amd64", double-click to install the software, and follow the instructions to complete the installation steps. (installation file is in TF Card)

安装“Ultimaker\_Cura-amd64”，双击安装软件，按照提示完成安装步骤。(安装文件在TF卡内)

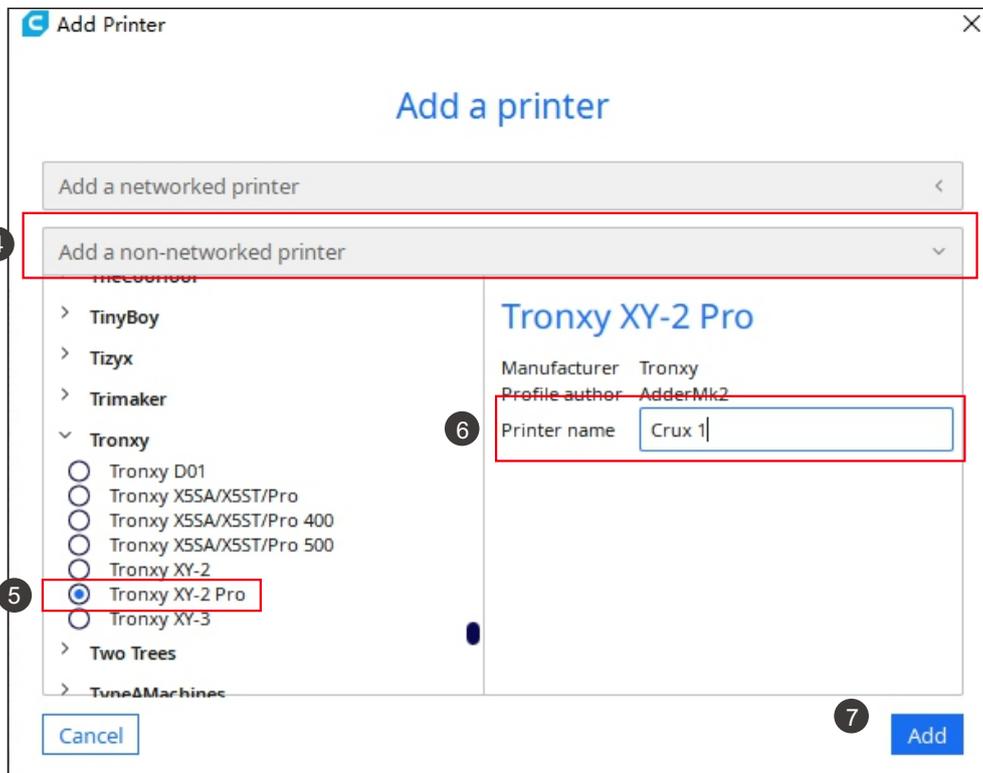
2. Add and set the printer according to the following picture.

根据以下图片添加打印机并进行设置。



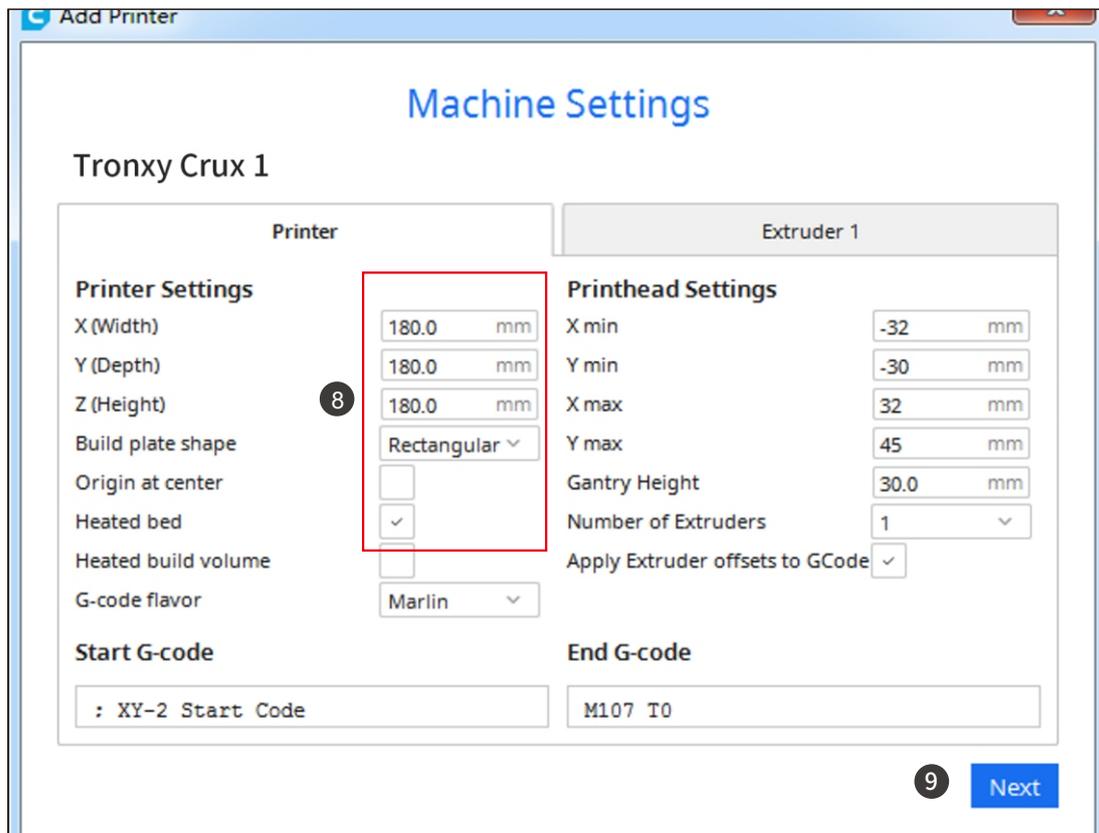
① Settings → ② Printer → ③ Add Printer...  
设置 → 打印机 → 新增打印机

## Setting of slicing software 切片软件 的设置



④ Click the "Add a non-networked printer" → ⑤ Select "Tronxy XY-2 Pro"  
点击“添加未联网打印机” 选择“Tronxy XY-2 Pro”

→ ⑥ Enter "Crux 1" → ⑦ Click the "Add"  
输入 Crux 1 点击“添加”

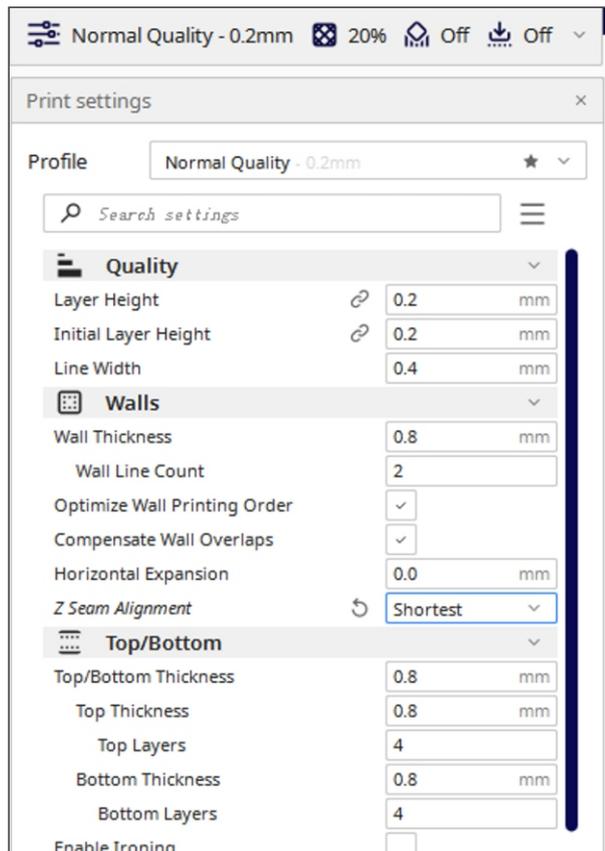


- 8 Change the printing size as shown in the figure, and select "Heated bed" → 9 Click the "Next" button  
如图所示更改打印尺寸,勾选“加热床” 点击“下一步”

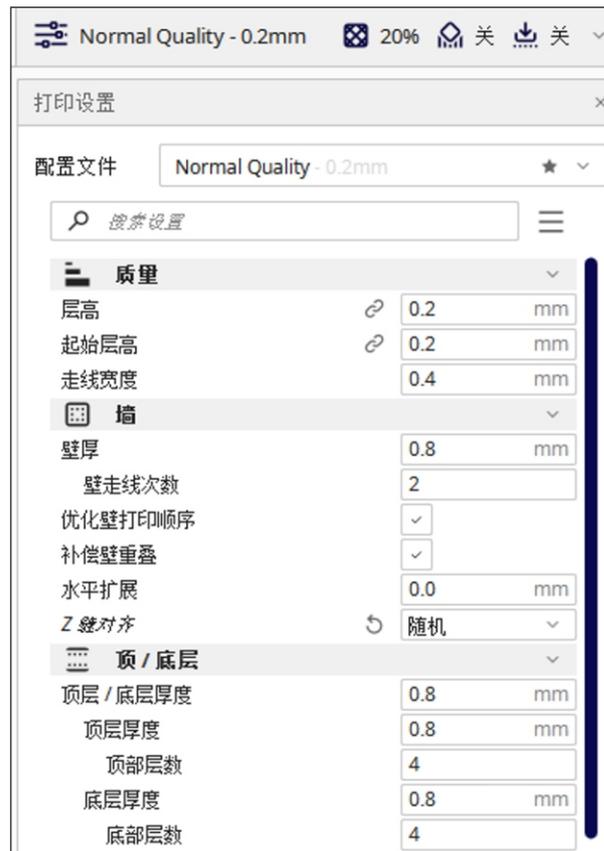
# Setting of slicing software 切片软件 的设置

Configure slicing based on the image  
参考图片进行切片设置, 可根据具体需求自行调整

(English interface)



(中文界面)



# Setting of slicing software 切片软件 的设置

(English interface)

Search settings

Enable retraction

Skin Overlap Percentage 10.0 %

Skin Overlap 0.04 mm

**Infill**

Infill Density 20 %

Infill Pattern Cubic

**Material**

Printing Temperature 200 °C

Final Printing Temperature 200 °C

Build Plate Temperature 60 °C

Flow 100 %

Wall Flow 100 %

Initial Layer Flow 100 %

**Speed**

Print Speed 60 mm/s

Outer Wall Speed 30 mm/s

Top/Bottom Speed 40.0 mm/s

Travel Speed 80 mm/s

Initial Layer Speed 20 mm/s

**Travel**

Enable Retraction

Retraction Distance 8 mm

Retraction Speed 80 mm/s

(中文界面)

皮肤重叠百分比 10.0 %

皮肤重叠 0.04 mm

**填充**

填充密度 20 %

填充图案 立方体

**材料**

打印温度 200 °C

最终打印温度 200 °C

打印平台温度 60 °C

流量 100 %

壁流量 100 %

起始层流量 100 %

**速度**

打印速度 60 mm/s

速度(外壁) 30 mm/s

速度(顶部/底部) 40.0 mm/s

空驶速度 80 mm/s

起始层速度 20 mm/s

**移动**

启用回抽

回抽距离 8 mm

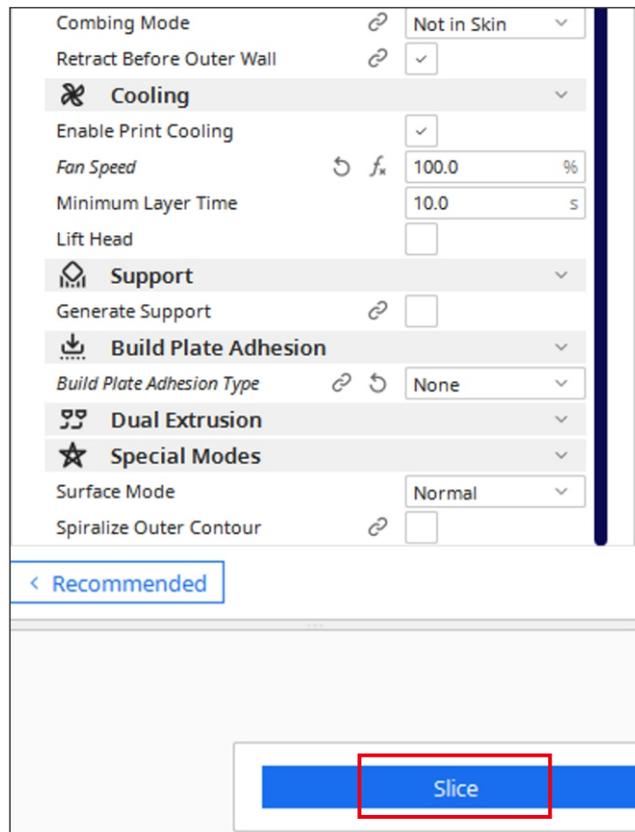
回抽速度 80 mm/s

回抽速度 80 mm/s

< 推荐

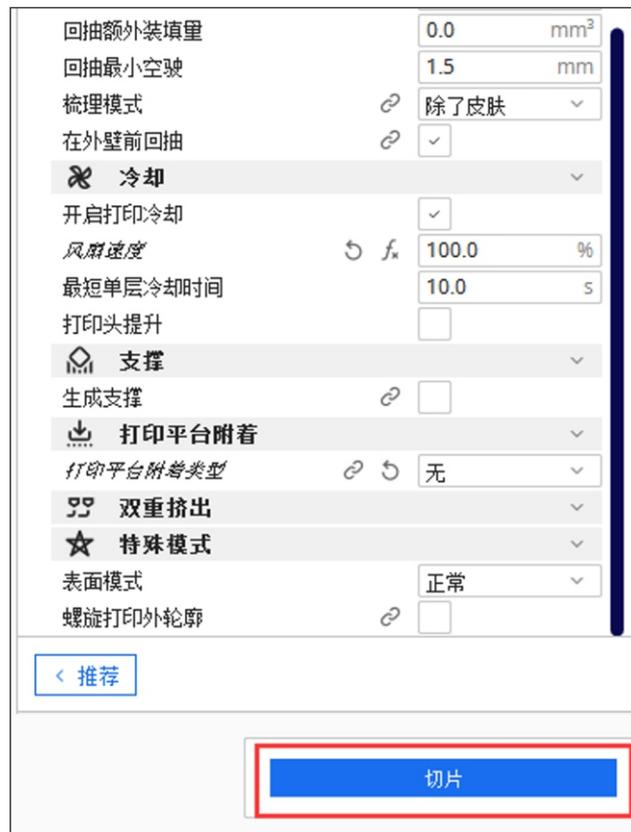
## Setting of slicing software 切片软件 的设置

(English interface)



Set parameters and click slice.

(中文界面)



设置好参数点击“切片”即可

## 1. Machine cannot start

- 1) Check the power line and other wires are connected well or not.
- 2) Check whether the supply voltage suits the local standard.
- 3) Check whether the screen or power supply is damaged and replace it in time.
- 4) Check if the wires are damaged or broken.
- 5) Check whether the power fuse is burnt out.

## 1、机器无法启动

- 1) 检查电源线和其他电线是否连接好。
- 2) 检查供电电压是否符合当地标准。
- 3) 检查屏幕或电源是否损坏,及时更换。
- 4) 检查电线是否损坏或断裂。
- 5) 检查电源保险丝是否烧断。

## 2. The contents of the TF card cannot be read

- 1) Check the card reader if it is good.
- 2) If the computer can't read the TF card , please format it and try again.
- 3) Check whether the TF card is inserted correctly.
- 4) The filename has an illegal character, please rename it.
- 5) Please replace the damaged TF card and try again.

## 2、无法读取TF卡内容

- 1) 检查读卡器是否完好。
- 2) 如果电脑无法读取TF卡,请格式化后再试。
- 3) 检查TF卡是否正确插入。
- 4) 文件名含有非法字符,请重命名。
- 5) 请更换损坏的TF卡并重试。

## Failure cause analysis 故障原因分析

### 3. If the print head does not squeeze enough filament or can't squeeze any filament

- 1) Check whether the print head temperature reach 200 °C above (PLA), led to filament 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 softness of filaments and can't be extruded normally.
- 5) Check whether the diameter of filaments is consistent 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.

### 3、如果打印头没有挤压足够的耗材或无法挤压任何耗材

- 1) 检查打印头温度是否达到200°C以上 (PLA), 导致灯丝无法挤压, 等待温度升至设定目标。
- 2) 检查细丝是否打结, 导致送料不畅。
- 3) 检查灯丝或管道是否没有插入到位, 导致送料失败。
- 4) 检查打印头温度是否过高, 导致耗材过于柔软, 不能正常挤出。
- 5) 检查长丝直径是否与切片软件中设置的直径一致, 以免挤出长丝数量不够。
- 6) 检查耗材是否被脏物堵塞或挤出时喷嘴堵塞。
- 7) 更换质量更好的灯丝。

### 4. If the first layer upwarp

- 1) Check if the hot bed has been leveled well.
- 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.

### 4、如果第一层向上翘起

- 1) 检查热床是否平整。
- 2) 检查热床表面是否有污垢。
- 3) 检查喷嘴与平台之间的距离是否太高, 导致粘合剂不足。
- 4) 检查热床是否有足够的温度。
- 5) 检查切片软件的第一层, 看是不是打印太快了。

### 5. The model is not easy to take off

- 1) Try to heat the hot bed to 50-70 °C take off it by the shovel .
- 2) It is recommended to buy TRONXY magnetic stickers.

### 5、模型不易脱模

- 1) 尝试将热床加热至 50-70 °C 用铲子将其取下。
- 2) 建议购买TRONXY磁贴。

### 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.

### 6、不能加热

- 1) 检查加热棒和热敏电阻是否接触不良或损坏。
- 2) 检查切片软件是否设置了目标温度。
- 3) 检查热敏电阻丝是否脱落。

### 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.

### 7、电机失步

- 1) 检查皮带松紧, 皮带轮是否未锁紧。
- 2) 检查当前电压。
- 3) 检查 X/Y/Z 轴运动是否顺畅。
- 4) 打印速度太快。
- 5) 环境温度过高。
- 6) 需要刷固件。

### 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.

### 8、电机异常噪音或振动

- 1) 检查电机线是否接触不良、松动或接错。
- 2) 电机温度过高。
- 3) 检查电机是否损坏。
- 4) 刷固件。
- 5) 打印负荷过重。

### 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.

### 9、模型错位与故障

- 1) 喷嘴进料不顺畅, 请清洁喷嘴或更换喷嘴。
- 2) 检查打印速度是否过快。
- 3) 灯丝质量差, 请更换新灯丝。

### 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.

### 10、灯丝异常声音和振动送料电机

- 1) 请检查喷嘴是否堵塞。
- 2) 喷嘴进料不顺畅, 请清洁喷嘴。
- 3) 软件设置是否有误。
- 4) 检查电机是否不工作。
- 5) 检查电机是否工作或送料齿轮不工作。

### 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.

### 11、屏幕相关问题

- 1) 无屏/蓝屏, 请重启或检查网线是否插好。
- 2) 触摸屏故障, 检查螺丝是否安装过紧。
- 3) 乱码/闪屏、静电、接地或重启。

### 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.

### 12、主板相关问题

- 1) 接线无反应。请检查接线安装。
- 2) 自动关机重启, 可能是异常固件或“断电恢复打印”模块损坏。
- 3) 散热不足, 请降低环境温度。
- 4) 主板损坏无反应。

### 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.

### 13、无法连接到打印机

- 1) 检查驱动程序是否未安装或正确安装。
- 2) 串口选择不正确。
- 3) 软件参数不匹配。

Due to the differences between different machine models, the physical objects and the final images can differ.  
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