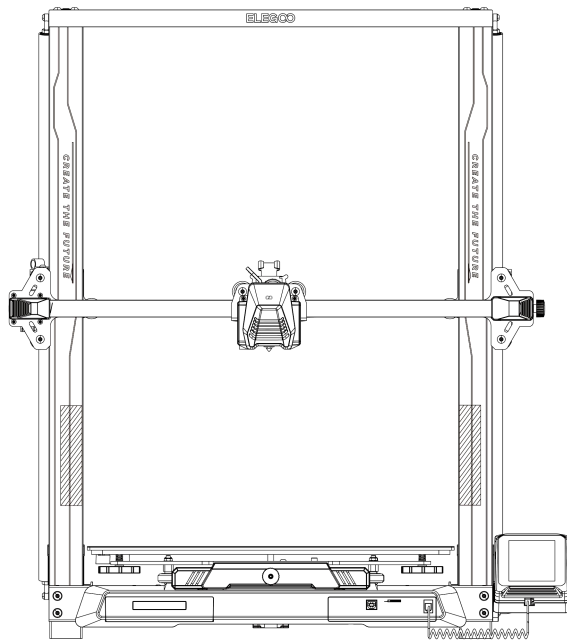
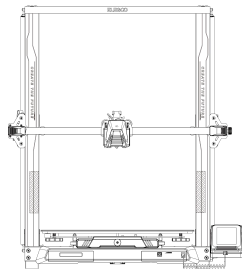


User Manual for NEPTUNE 3 MAX 3D Printer



Pictures are only for illustration purpose, please take actual product as standard.



Thank you for choosing ELEGOO product!

For your convenience, please read this instruction manual carefully before use, the cautions and tips in this manual can help you better avoid incorrect installation and use.

For questions or problems not covered in this manual, please contact us at this email address:
3dp@elegoo.com.

ELEGOO team is always ready to provide you with quality service.

To give you a better experience of our products, you can also gain knowledge of the operation of the equipment in the following ways:

- 1.The instruction manual: You can find the relevant operating instructions and videos on how to operate the machine in the TF Card.
- 2.ELEGOO official website: www.elegoo.com You can go to our official website to find the relevant operating instructions for the machine and contact information.

Cautions

1. Do not place the printer in vibrating or other unstable environments, as the shaking of the machine will affect the print quality.
2. Do not touch the nozzle and heatbed when the printer is working to prevent high-temperature scald and personal injury.
3. After printing, please take advantage of the residual temperature of the nozzle and clean the filaments on the nozzle with the help of tools. Do not touch the nozzle directly with your hands during cleaning to avoid scald.
4. Please do product maintenance frequently, and regularly clean the printer body with a dry cloth to wipe away dust and sticky print material under the situation of power off.
5. 3D printers contain high-speed moving parts, so be careful not to get your hands caught.
6. Children must be supervised by adults when using the machine to avoid personal injury.
7. In case of emergency, please cut off the power directly.

Troubleshooting Guide

A stepper motor of the X/Y/Z axis is not moving or making a noise when "zeroed"

- ① The stepper motor cable could be loose. Please recheck the wiring connection.
- ② The corresponding limit switch may not be triggering properly, please check whether there is any interference in the movement of the corresponding shafts and ensure the limit switch wiring is not loose.
- ③ Loose timing belt may result in rough motion or abnormal noise in the X/Y axis. It can be resolved by adjusting the tension of the timing belt using the rotary knob.

Nozzle Head Assembly is exhibiting Extrusion Anomalies

- ① Check that the extruder stepper motor cable is not loose or disconnected.
- ② Check whether the set screw of the extruder gear is firmly engaged to the motor shaft.
- ③ The heat dissipation of the nozzle assembly may not be enough, verify temperatures and check cooling fan operation.
- ④ For clogged nozzles, try first heating the nozzle to 230°C and pushing the filament by hand to remove a potential clog, or use a fine needle to unclog the nozzle tip while it is heating up.

Model does not Adhere to the Build Platform (PEI Sheet) or is Showing Warping

- ① The key to whether a model can adhere (stick) to the build plate is the largely based on the printing of the first layer. When printing the first layer if the distance from nozzle to platform is more than 0.2mm, it will seriously reduce print adhesion
- ② Try setting the build model first layer option in Cura to [Brim] to improve first layer adhesion, this should also be used to reduce any cases whereby the edges of the printed model are warping or lifting off the build platform.

Model shows signs of Misaligned Printed Layers

- ① The travel speed of the Printer hot end assembly or Print Speed is set too fast. Please try to reduce the Print Speed
- ② The belts of the X/Y axis may be too loose or the synchronizer pulley is not secured tightly. Check these components.
- ③ The current to the Drive may be too low.

Severe Issues in Printed Model of "Stringing" or "Ringing"

- ① Insufficient retraction distance is causing issues, increase the retraction distance in Cura prior to Slicing.
- ② In many cases, if the retraction speed is too slow, you may need to set the retraction speed higher in Cura prior to Slicing.
- ③ When slicing your model, check the box for "Z Hop When Retracted" and set the "Z Hop Height" to about 0.25mm.
- ④ Print temperature may be too high, which can cause certain filaments to become sticky and stringy.

If the printing temperature is too high, it can cause the filament to become too fluid and sticky, resulting in poor 3D printing quality. In this case, lowering the printing temperature slightly can help.

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Machine Parameters

Print Parameters

Print Principle: FDM (Fused Deposition Modeling)

Build Size: 420X420X500(mm³)

Print Precision: ± 0.1 mm

Nozzle Diameter: 0.4mm

Print Speed: 30~180mm/s (60mm/s is recommended)

Temperature Parameters

Ambient Environment Temperature: 5°C~40°C

Maximum Temperature of Nozzle: 260°C

Maximum Temperature of Hotbed: 100°C

Software Parameters

Slicer Software: Cura

Input Format: STL、OBJ

Output Format: Gcode

Connection Type: TF Card、USB Wire

Power Supply Parameters

Power Input: 100-240V 50/60Hz

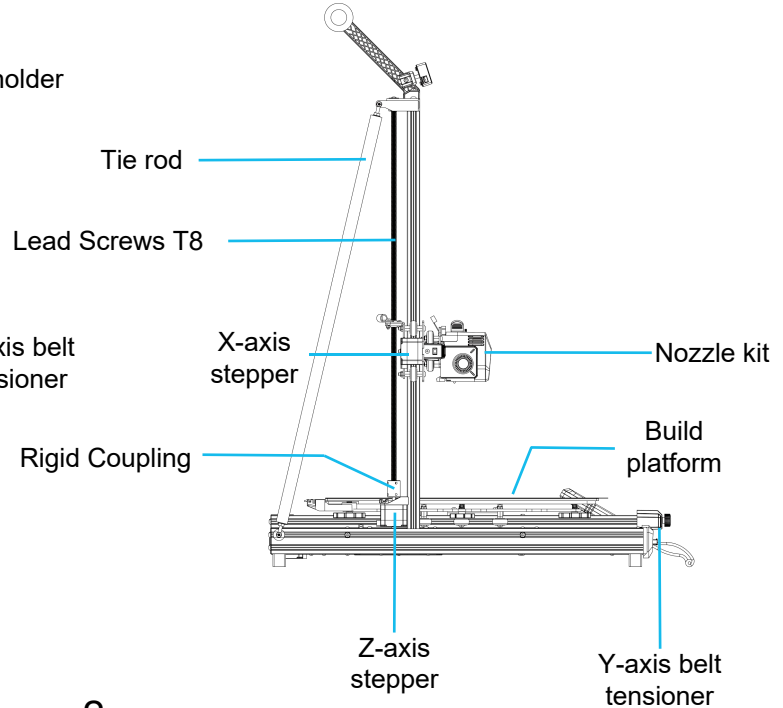
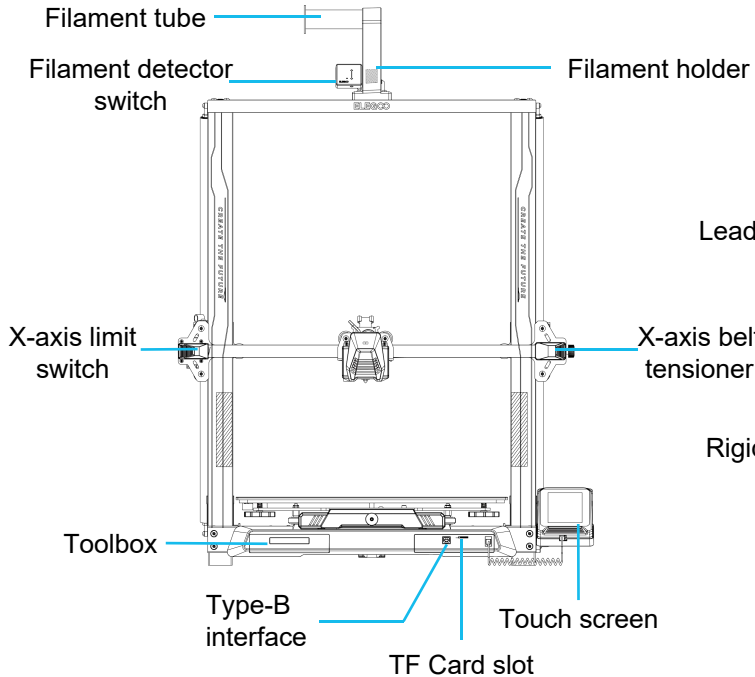
Power Output: 24V

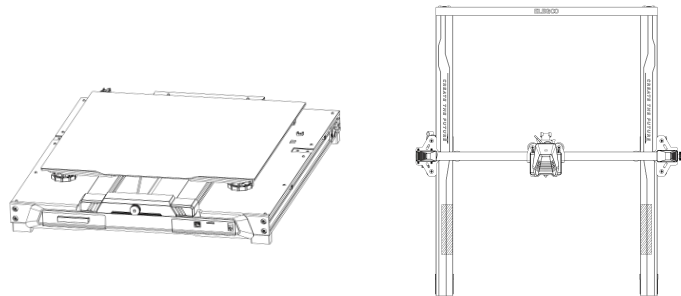
Physical Parameters

Machine Size: 658*632*740mm

Net Weight: 17.7kg

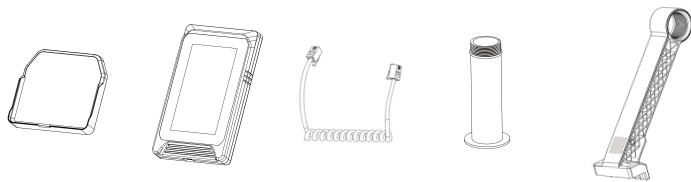
Machine Structure Diagram





01

02



03

04

05

06

07



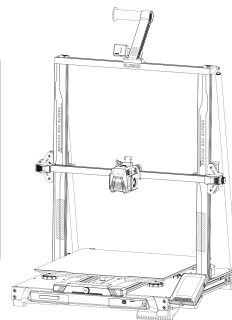
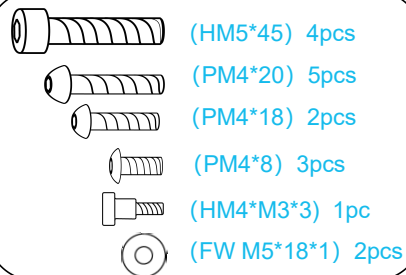
08

09

10

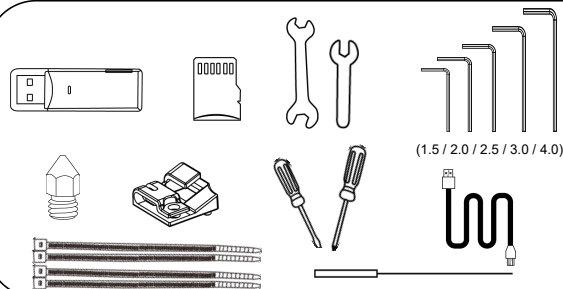
Packing List

Fasteners



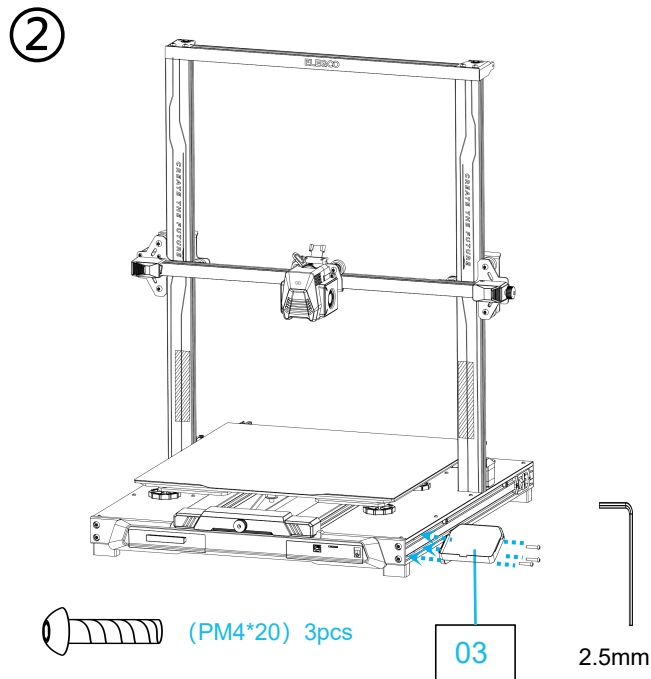
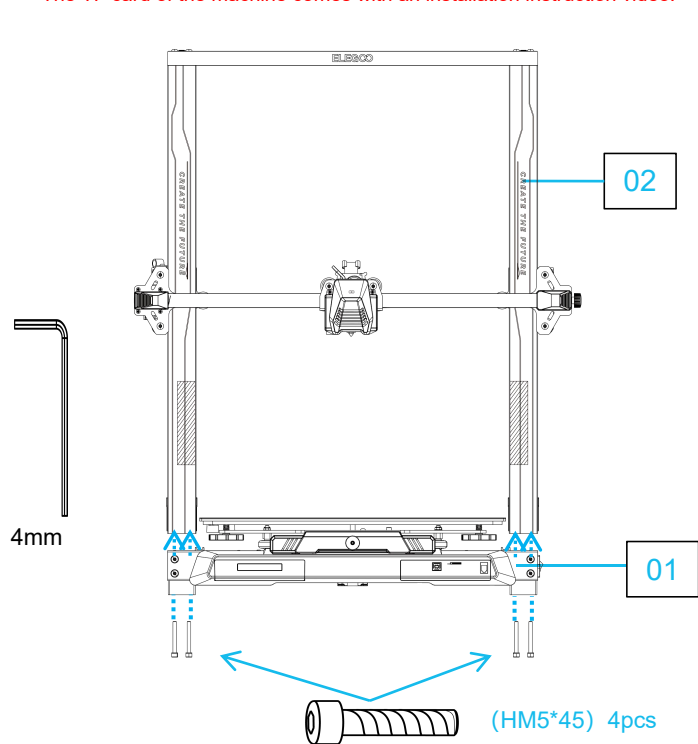
ELEGOO 3D Printer

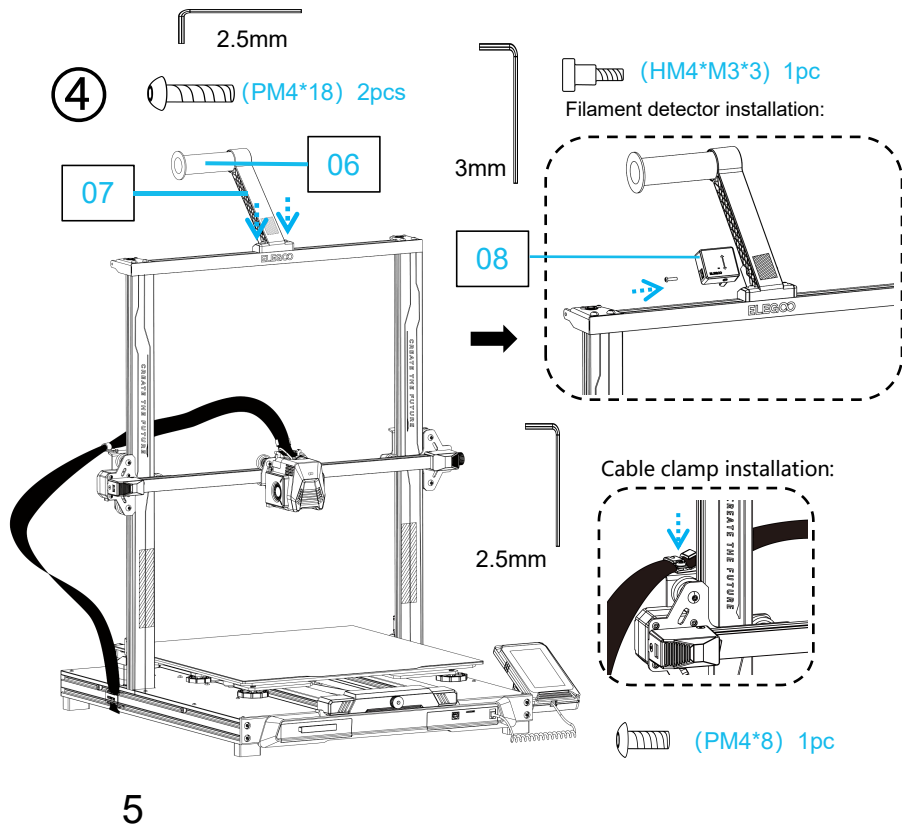
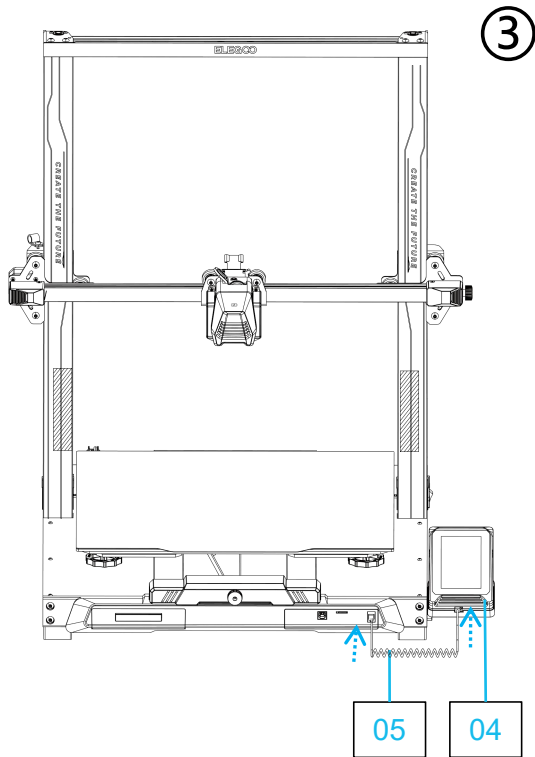
Tools



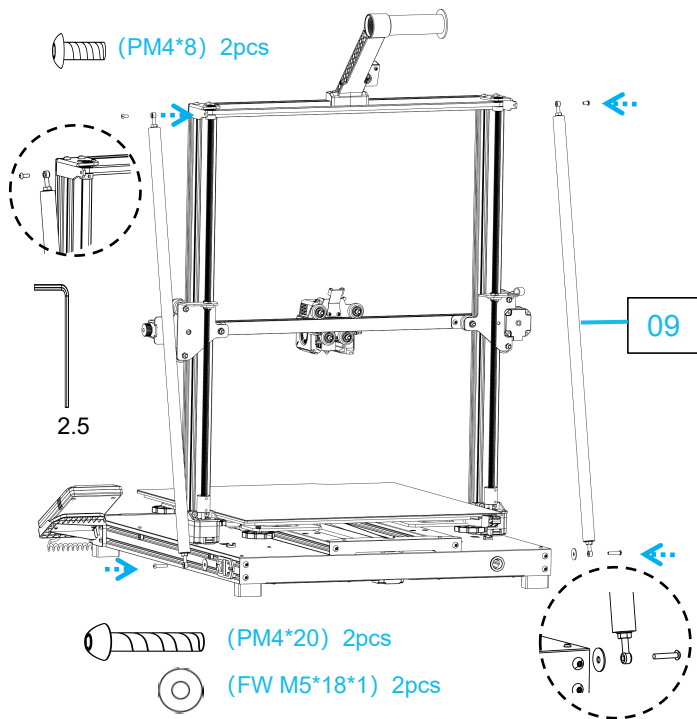
Machine Installation

The TF card of the machine comes with an installation instruction video.

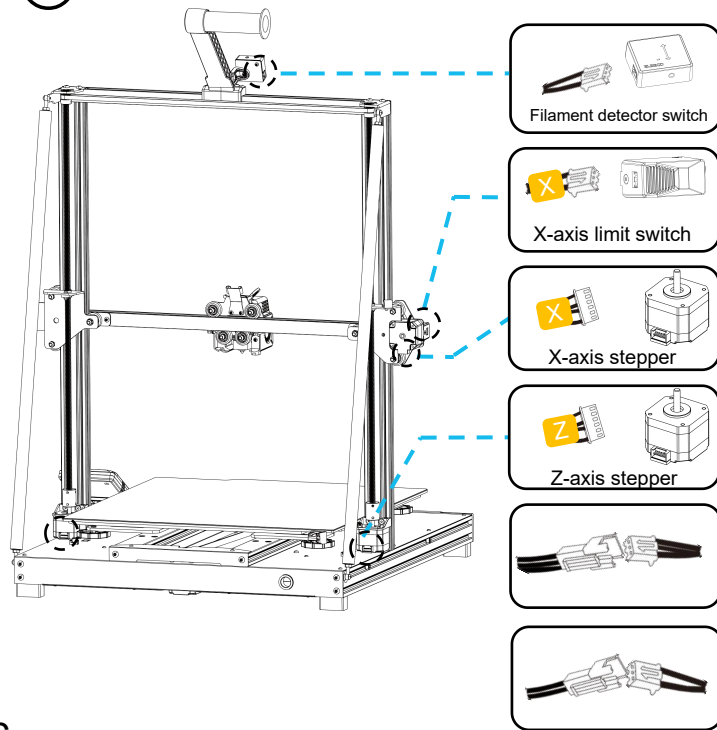




⑤



⑥

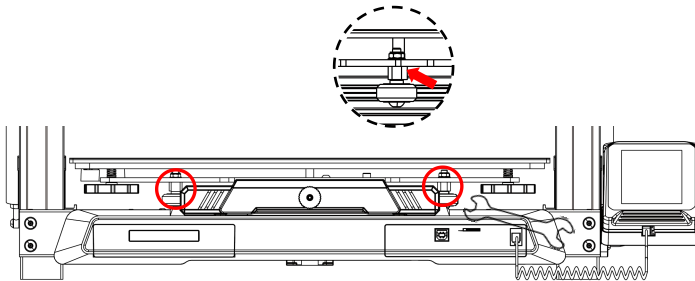
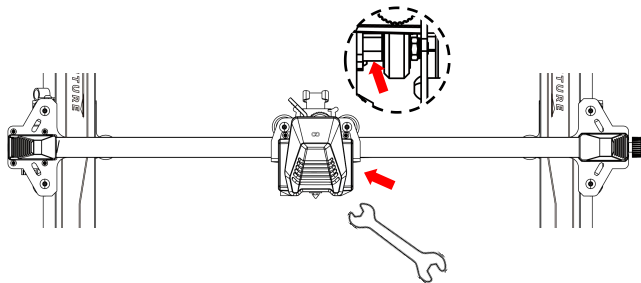


Supplementary Introduction

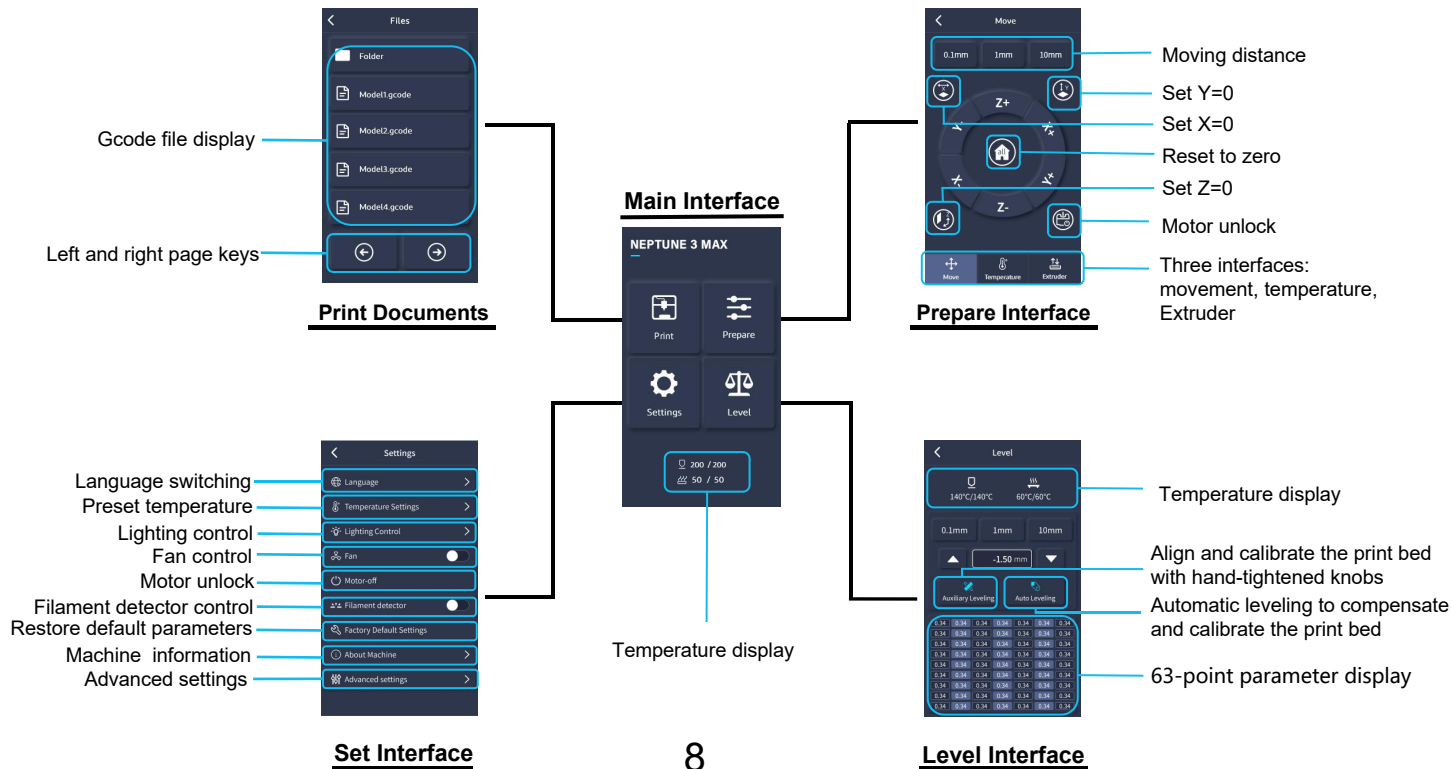
Special Case :

The bottom slide block has been adjusted before leaving the factory, but the pulley of the machine may become loose due to the transportation. If the build platform of the machine is shaky and loose, an open spanner can be used to slowly twist the eccentric isolation column under the platform until the slide block slides smoothly and does not shake.

Similarly, if the print head is shaky or loose, the corresponding eccentric isolation column can also be adjusted until the print head slides smoothly without shaking, and the pulleys on both sides of the gantry also have corresponding eccentric isolation columns that can be adjusted.



Operation Screen Introduction

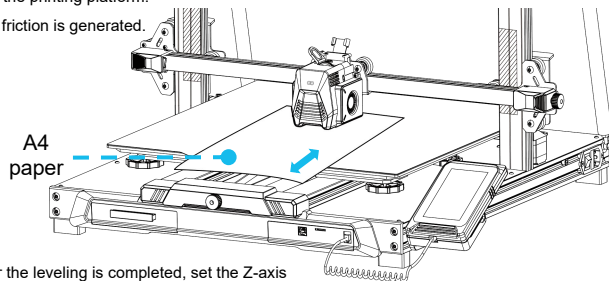


Auto Leveling

When first running the machine, the distance between the platform and the nozzle needs to be calibrated in the leveling mode, which is about the thickness of a piece of A4 paper .

- ①
- When the printer is powered on, select **【Level】**
 - Each axis of the printer automatically returns to the origin. After entering the leveling interface, place a piece of A4 paper between the nozzle and the printing platform, and click the compensation value to adjust the distance between the nozzle and the printing platform (See picture 2), by pushing and pulling the paper with the friction generated to complete the center point calibration. Then click the auxiliary leveling **【⚙️】**, and use A4 paper to calibrate the remaining six points of the platform by hand-tightened knobs, and each point can be completed by generating friction on the A4 paper.
 - After completing the auxiliary leveling, enter the automatic leveling for automatic calibration.
 - The machine will enter the heating state: the nozzle is heated to 140°C, the hot bed is 60°C. (Please preset the hot bed temperature according to the temperature of the consumables to achieve a more accurate leveling value.)
 - After reaching the preset temperature: start the 63-point automatic calibration.
 - After the leveling is completed, set the Z-axis compensation: place a piece of A4 paper between the nozzle and the printing platform. Click the compensation value and push and pull the A4 paper to complete the compensation and leveling when friction is generated.

Note that the leveling sensor only detects the metal platform plate, for example, replacing the glass platform for leveling will not produce detection effect, which will cause the nozzle to squeeze the platform.



- ②
- Similarly, you can directly click the automatic leveling **【⚙️】** to calibrate the printing platform (See picture 4). After the leveling is completed, set the Z-axis compensation: place a piece of A4 paper between the nozzle and the printing platform, click the compensation value and push and pull the A4 paper to complete the compensation and leveling when friction is generated. (The front auxiliary leveling is to improve the evenness of the platform and make the compensation effect of automatic leveling better.)

Model Test

Print Head Feeding Check

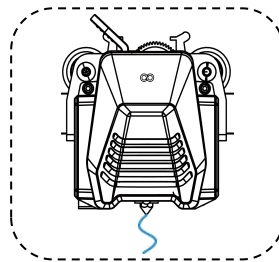
- 1) First push the filaments to the bottom of the print head.
- 2) Click 【Prepare】 - 【Extruder】 , click 【Load】 , the temperature of the nozzle will be automatically heated to 200°C.
- 3) After the nozzle is preheated to 200°C, click the feed to extrude the filaments from the nozzle.
- 4) Clean the melted filament of the nozzle before printing.

NOTE: Filament with different hardness have different requirements for “spring” strength. The spring strength of the extruder can be adjusted with an Allen Wrench(within 2.5mm). When turning counter-clockwise, spring strength is increased, while spring strength is decreased when turned in a clockwise direction

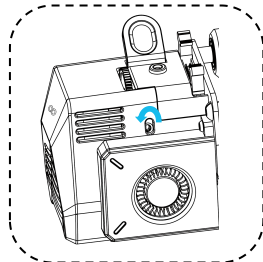
Start printing

- 1) Insert the TF card into the card slot of the printer.
- 2) Click 【Print】 on the main menu and select the model file.
- 3) When the nozzle and the heatbed reach the preset temperature, the X, Y, Z axis will return to zero, and then start printing.

Notice:When printing the test model, please observe the first layer printing. In cases A and C, the compensation settings are not properly adjusted. Compensation adjustments can be made during printing to adjust the distance between the nozzle and the platform. In case B, the nozzle and the platform have reached a proper printing distance and can continue printing.

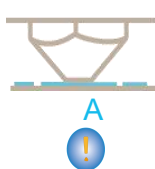


Normal Extrusion State

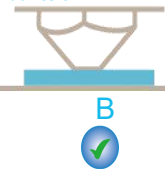


Rotating the button counter-clockwise: The extrusion force increases, which means that the filament is pushed out of the nozzle with more force.
Rotating the button clockwise: The extrusion force decreases, resulting in a reduction of the force with which the filament is pushed out of the nozzle.

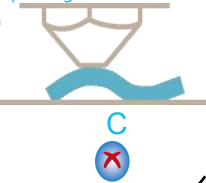
The nozzle is too close to the platform, and resulting in under extrusion.



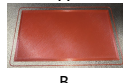
The extrusion volume & distance between the nozzle and the heated bed platform is proper with uniform adhesion



The nozzle is too far from the platform and the resulting adhesion is insufficient. The model may fall of the heated bed platform during printing.



A

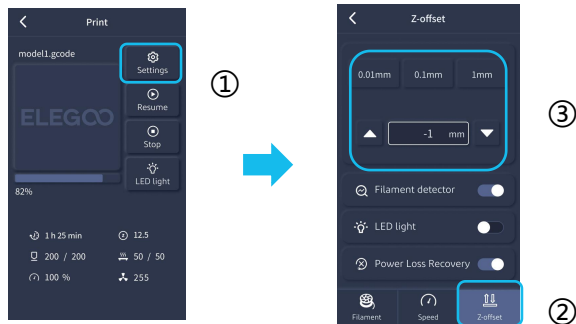


B



C

As shown in the picture:



When fine-tuning, please switch the moving distance to 0.01mm or 0.1mm to prevent the nozzle from extruding the platform excessively or filament hanging in the air.

Resume Printing Description

Power Loss Recovery: If you want to continue printing because of a sudden power outage or accidentally turn off the power of the machine, this function does not need to be set manually. When the printer is reconnected to the power supply and turned on, just click resume to continue. (Please note that the PEI platform has a better adhesion effect when it is heated, but it will cool down if the power is turned off for too long, causing the model fall off easily, and the resume printing cannot be completed.)

Filaments Detection: This function is to remind the user to replace the filaments before continuing printing when the model is half-printed, which effectively prevents the model from being scrapped due to insufficient consumables.

Software Installation

Tips: You can use a card reader to copy the data in the TF card to the computer for storage.

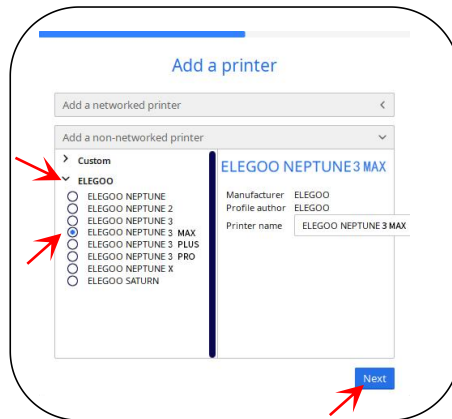
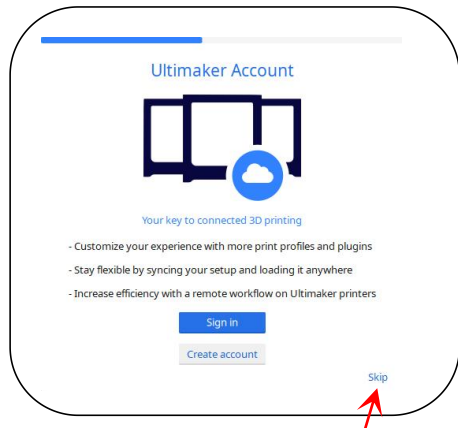
Our slice software is modified form Cura open source slice software, in order to better match with our company's machines for printing and meet the needs of our customers.

The software installation steps are as follows:

Open the TF card of the machine to select the path \ Software and Software Drivers folder \ ELEGOO Software folder \ Double-click the ELEGOO-Cura application to install it.

Follow the prompts in the installation process to the next step.

Finally, select the corresponding model of our company as shown below to complete the settings.



Instructions for Use

The screenshot shows the Elegoo Cura software interface. At the top, there's a menu bar with 'File', 'Edit', 'View', 'Settings', 'Extensions', 'Preferences', and 'Help'. Below it is a toolbar with 'PREPARE', 'PREVIEW', and 'MONITOR' buttons. The main workspace displays a 3D model of a yellow cube on a grid. To the left of the workspace is a toolbar with icons for 'Move', 'Zoom', 'Rotate', 'Mirror image', 'Model setting', and 'Support structure interception'. A red box highlights these icons, with red arrows pointing to them from the text labels. To the right of the workspace is a 'Print settings' dialog box with various sliders and checkboxes. At the bottom left, there's a status bar showing 'Object list', 'EN 30x30x30', '30.0 x 30.0 x 30.0 mm', and a 'Slice' button. At the bottom center, there's a 'Preview image function' button with a red arrow pointing to it from the text label. Below this button is a 'Save as TFT file' button and a 'Save to File' button.

Import model

Move

Zoom

Rotate

Mirror image

Model setting

Support structure interception

Print settings

Profiles

Default

Infill (%)

Support

Adhesion

Custom

Object list

EN 30x30x30

30.0 x 30.0 x 30.0 mm

Slice

1 hour 7 minutes

10g · 3.48m

Save as TFT file

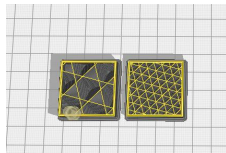
Save to File

Preview image function

Other operation tips:

- ① Scroll the middle mouse wheel to zoom the viewpoint, and hold down the middle wheel to move the platform position.
- ② Press and hold the right mouse button to move the mouse to change the viewpoint.
- ③ Click the right mouse button will bring up a pop-up selection.

Model setting: When printing multiple models, you can configure individual slice settings for the specified model.



Support structure interception: You can set the intercept region on the model so that the set region does not generate support structure.

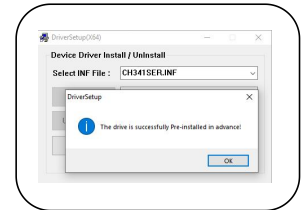
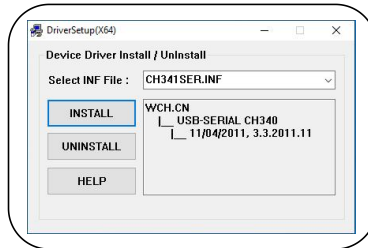
Preview image function: Gcode files saved in TFT file format can use to preview the model image in the selection file on the printer, which can identify the printed file more visually.

Online Print

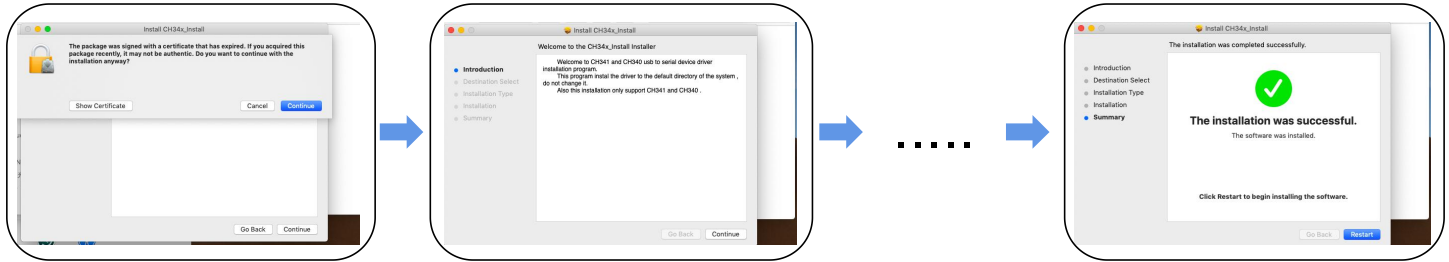
Please be sure to check the relevant data files in the TF card!

- Connect the printer and computer with USB cable, double-click to open the slicing software, select the corresponding model and then click on the monitor, if the interface shows a blank then it proves that the connection is not successful, you need to install the driver.
- The installation method of the driver, Window processes it as follows: Open the profile of the TF card to select the path \ Software and Software Driver Folder \ Software Driver Folder \ Window-USB Driver Folder\ CH340G USB Driver Folder \ Double-click the [DRVSETUP64] file to run it and click to install it. (As shown in the picture below.) Please note that this driver software has no virus, so please feel free to install it. If your antivirus software determines that it is a virus, you can close your antivirus software for a while and then continue to install the driver software.

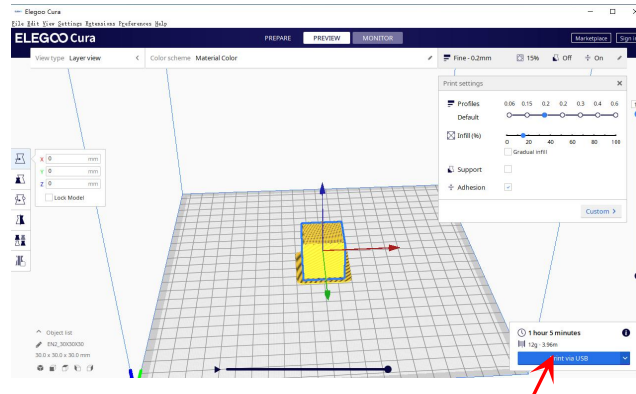
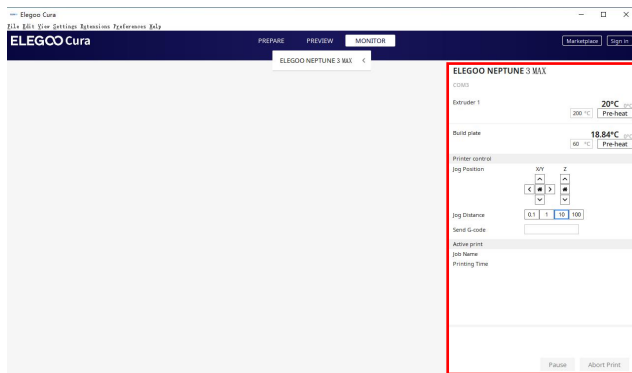
Name	Date modified	Type	Size
CH341PT.DLL	11/13/2020 1:49 PM	Application exten...	7 KB
CH341S64.SYS	11/13/2020 1:49 PM	System file	57 KB
CH341S98.SYS	11/13/2020 1:49 PM	System file	20 KB
ch341SER	11/13/2020 1:49 PM	Security Catalog	10 KB
CH341SER	11/13/2020 1:49 PM	Setup Information	6 KB
CH341SER.SYS	11/13/2020 1:49 PM	System file	39 KB
CH341SER.VXD	11/13/2020 1:49 PM	Virtual device driver	20 KB
DRVSETUP64	11/13/2020 1:49 PM	Application	42 KB
SETUP	11/13/2020 1:49 PM	Application	82 KB



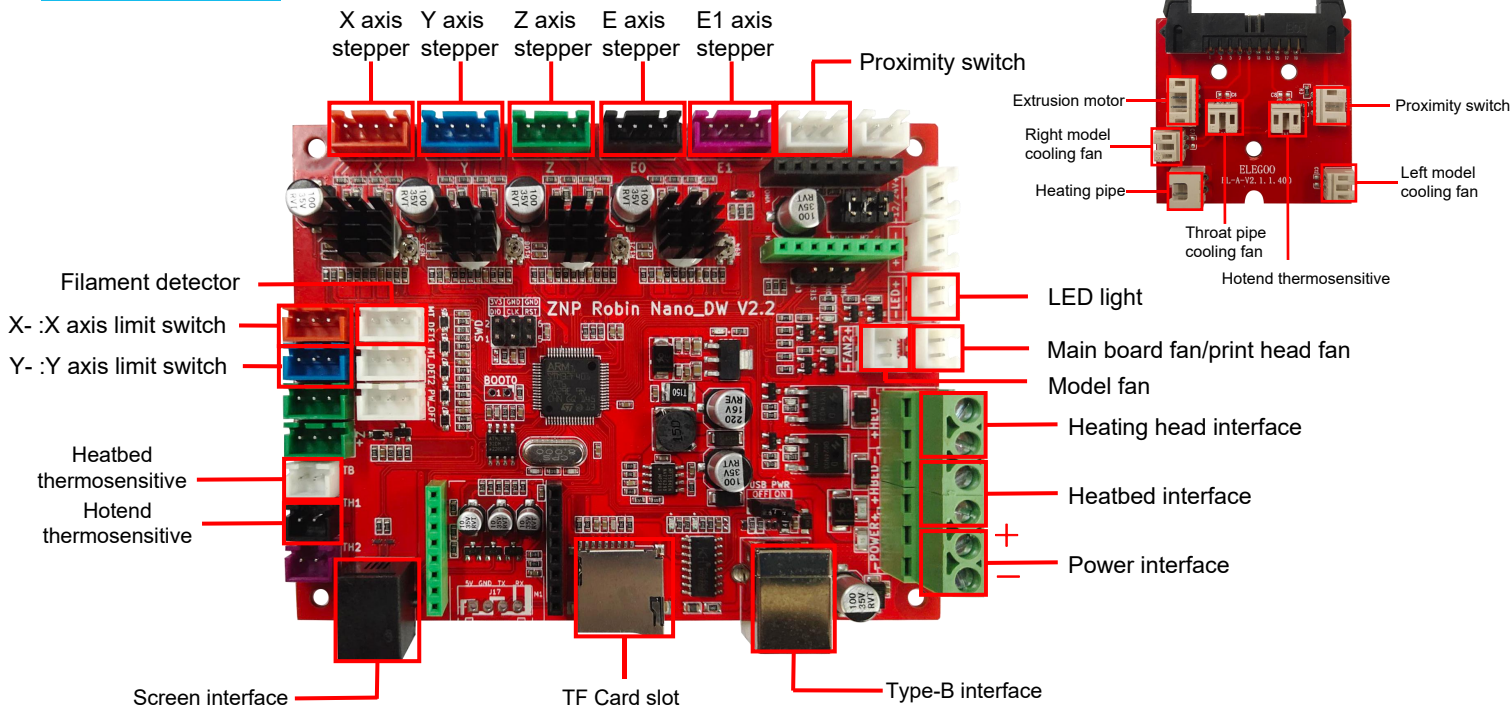
- The installation method of the driver, Mac processes it as follows: Open the random TF card data and select path\software and software driver folder\software driver folder\Mac-USB driver folder\CH34X_MAC folder\double-click CH34x_install_V1.5.pkg to install. Continue the installation as prompted. (As shown below)



- After the driver installation is complete, reconnect the USB cable, open the ELEGOO slicing software, and then click on the monitor, if it display the printer model and other information, the computer has been successfully connected.
- After importing the model, set the print temperature, layer thickness and other relevant information, and then click on the **【slice】** , select the USB online printing.
- The power supply cannot be cut off when printing through the USB cable, and the computer cannot enter sleep and hibernation modes to prevent data transfer failures.



Circuit wiring



After-sales service registration card
售后服务登记卡

Date of purchase

购买日期： _____

Place of purchase

购买地点： _____

Printer

机器： _____

S/N

序列号： _____

Fault description

故障描述： _____

Contact

联系人： _____

Phone number

电话号码： _____

Address

地址： _____



ELEGOO official website: www.elegoo.com

