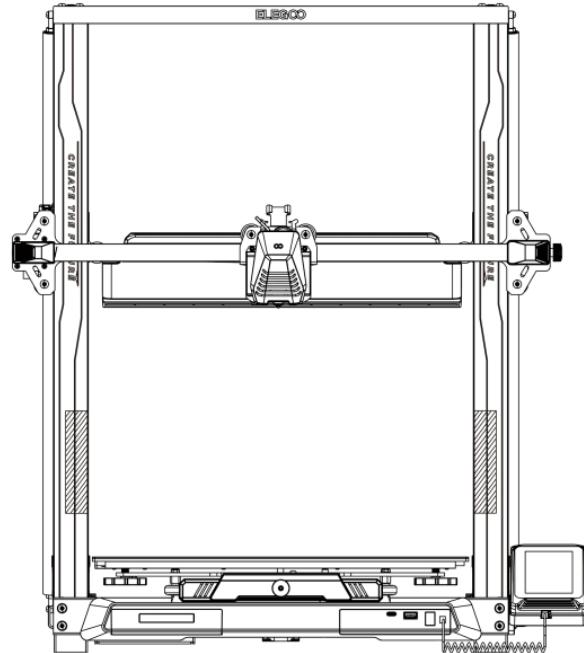


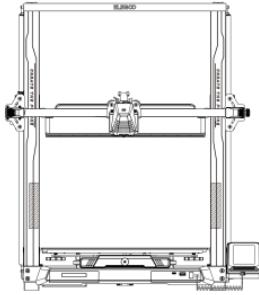
ELEGOO

User Manual for NEPTUNE 4 MAX 3D Printer



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

V1.3



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 related instructions and videos in the U disk.

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.

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Machine Parameters

Print Parameters

Print Principle: FDM (Fused Deposition Modeling)

Build Size: 420X420X480(mm³)

Print Precision: ±0.1mm

Nozzle Diameter: 0.4mm

Maximum speed: 500mm/s

Regular printing speed: 250mm/s

Maximum acceleration: 3500mm/s²

Temperature Parameters

Ambient Environment Temperature: 5°C~40°C

Maximum Temperature of Nozzl: 300°C

Maximum Temperature of Hotbed: 85°C(Ambient temperature:25°C)

Software Parameters

Slicer Software: Cura

Input Format: STL、OBJ

Output Format: Gcode

Connection Type: U Disk, LAN,WiFi

Power Supply Parameters

Power Input: 100-120V/220-240V;50/60Hz

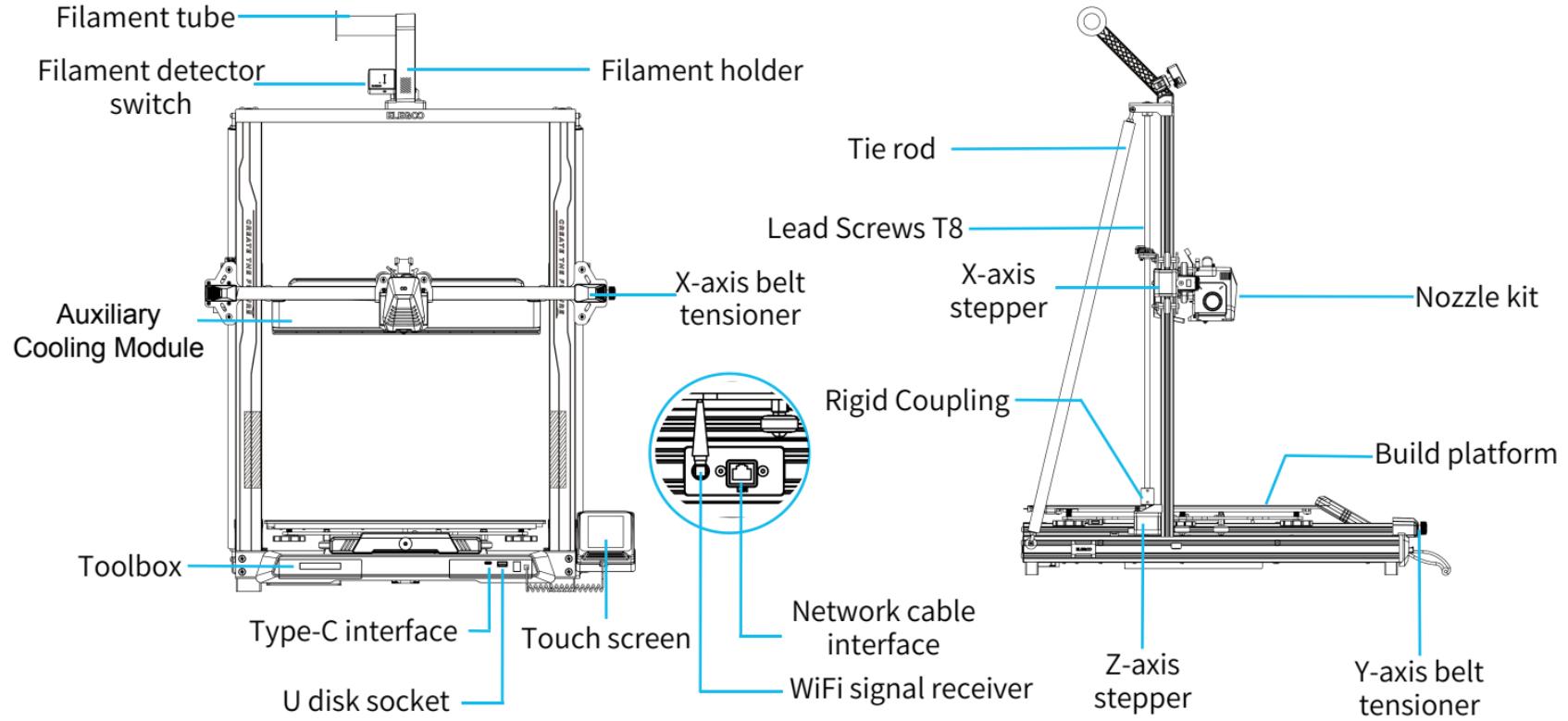
Power Output: 24V

Physical Parameters

Machine Size: 658*632*740mm

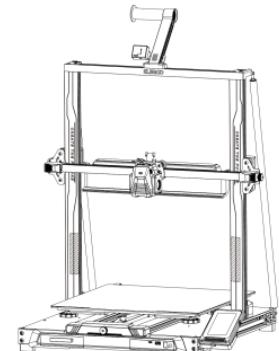
Net Weight: 18.1kg

Machine Structure Diagram



Packing List

Fasteners



Tools

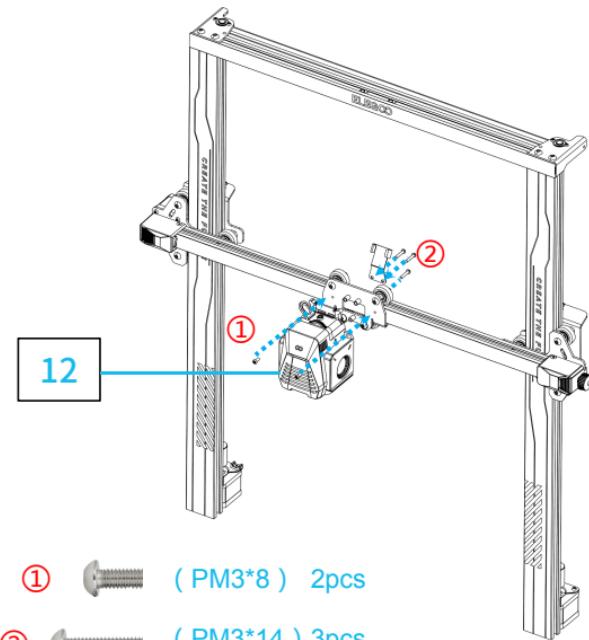


The above accessories shall be subject to actual products, and the pictures are for reference only.

Machine Installation

Attached U disk with an installation instruction video.

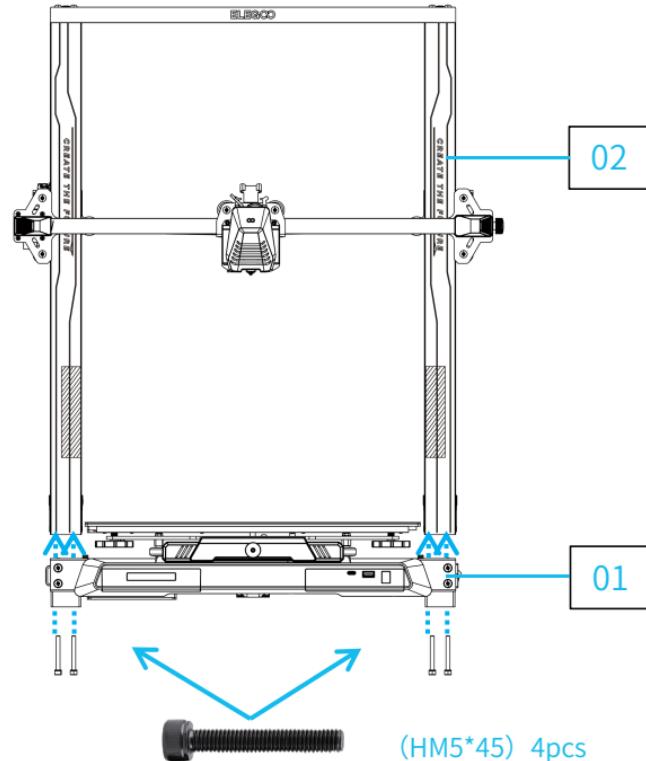
Print head installation: Use 3pcs (PM3*14) screws to fix the print head through the holes of the metal plate from the rear; 2pcs (PM3*8) screws to fix the front of the print head.



1

2

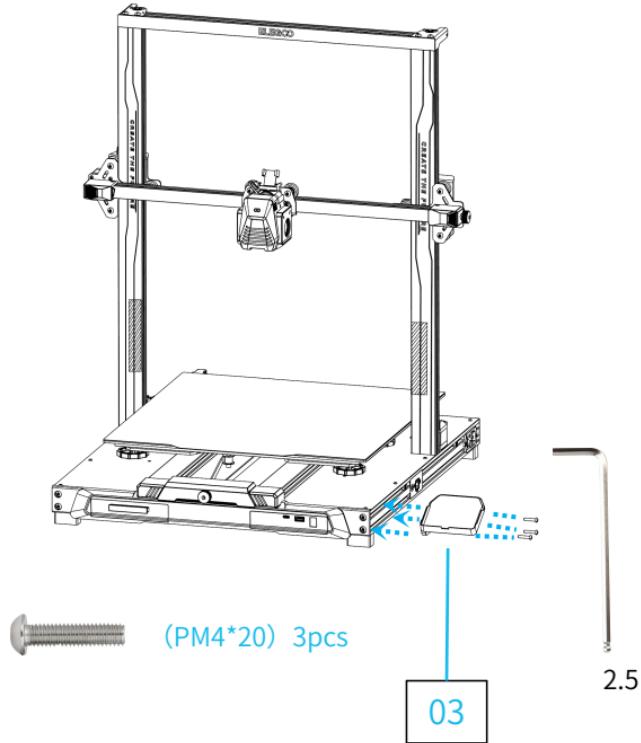
4



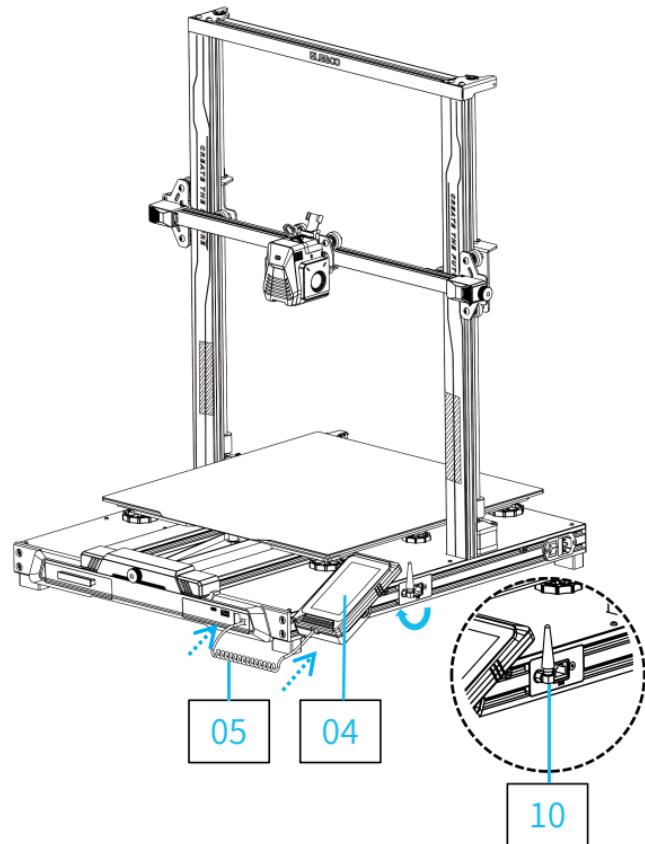
02

01

③



④



⑤

2.5

(PM4*18) 2pcs

06

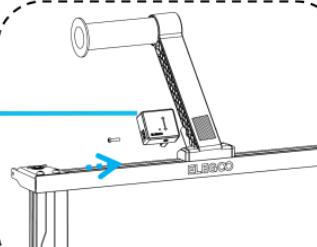
07

3.0

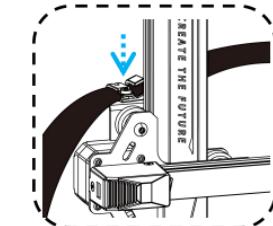
08

(HM4*M3*3) 1pc

Filament detector installation:



Cable clamp installation:



(PM4*8) 1pc

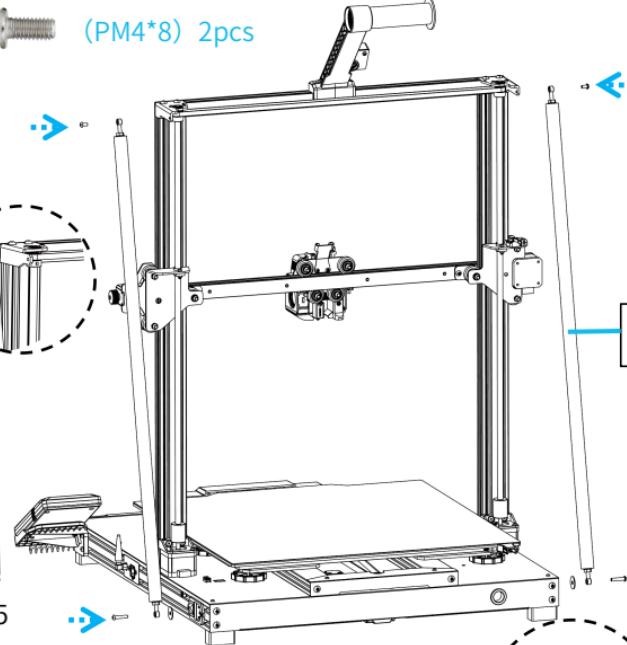
When installing, you need to organize the cables and fold them together to install and fix them.

⑥

(PM4*8) 2pcs

2.5

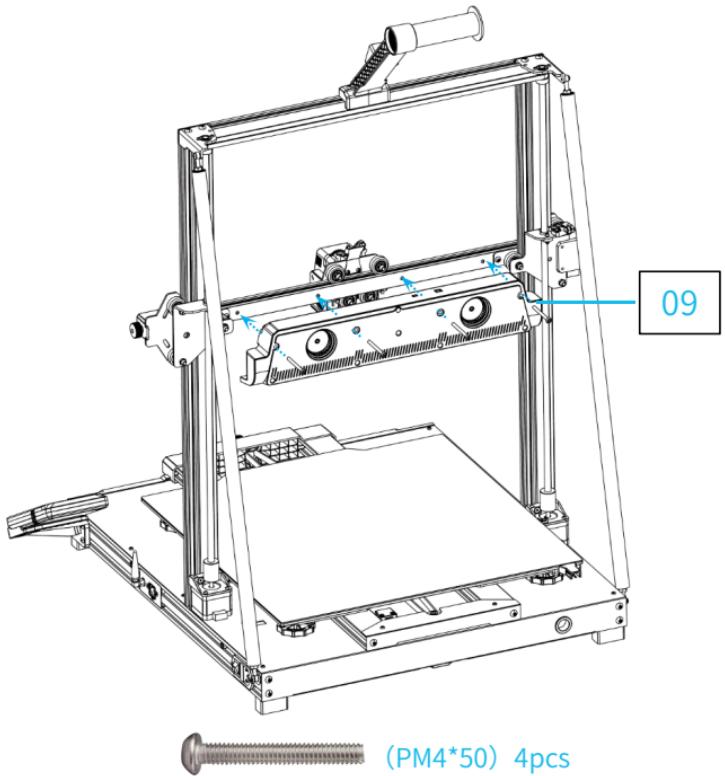
2.5



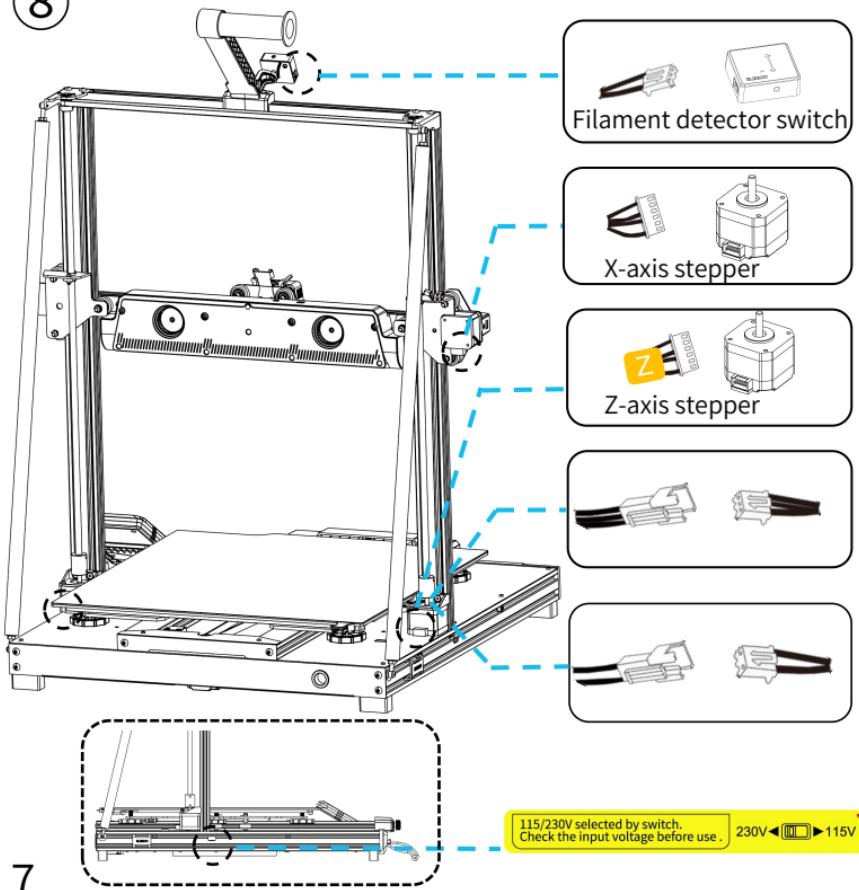
(PM4*20) 2pcs

(FW M5*18*1) 2pcs

⑦



⑧

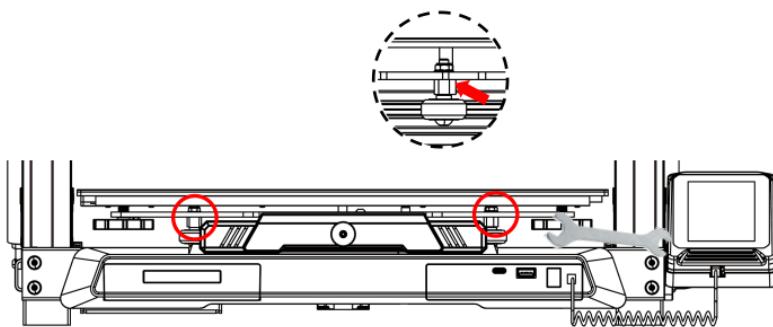
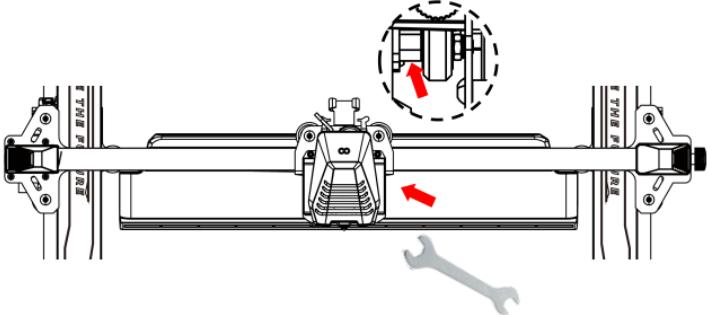


Supplementary Introduction

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

The diagram illustrates the five main operation screens of the NEPTUNE 4 MAX printer:

- Print Documents**: Shows a list of Gcode files (Model1.gcode, Model2.gcode, Model3.gcode, Model4.gcode) and left/right page navigation keys.
- Main Interface**: The central hub with four main buttons: Print, Prepare, Settings, and Level, along with connectivity and status indicators.
- Prepare Interface**: Movement controls for X, Y, Z axes, including moving distance, origin setting, and motor unlock.
- Set Interface**: Advanced settings menu including Language, WLAN, One click self-check, Lighting Control, Fan, Motor off, Filament detector, Factory Default Settings, About Machine, and Advanced settings.
- Level Interface**: Leveling parameters for 121 points, displaying temperature, compensation settings, and a detailed Z-offset grid.

Annotations for the Prepare Interface:

- Moving distance
- Set Y=0
- Set X=0
- Reset to zero
- Set Z=0
- Motor unlock
- Three interfaces: movement, temperature, Extruder

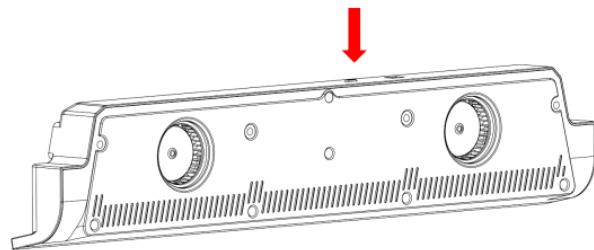
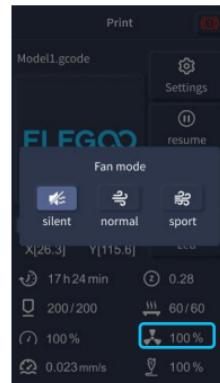
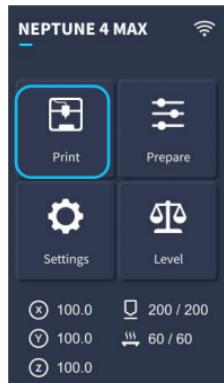
Annotations for the Level Interface:

- Temperature display
- Compensation settings
- 121-point parameter display

Auxiliary cooling module instructions:

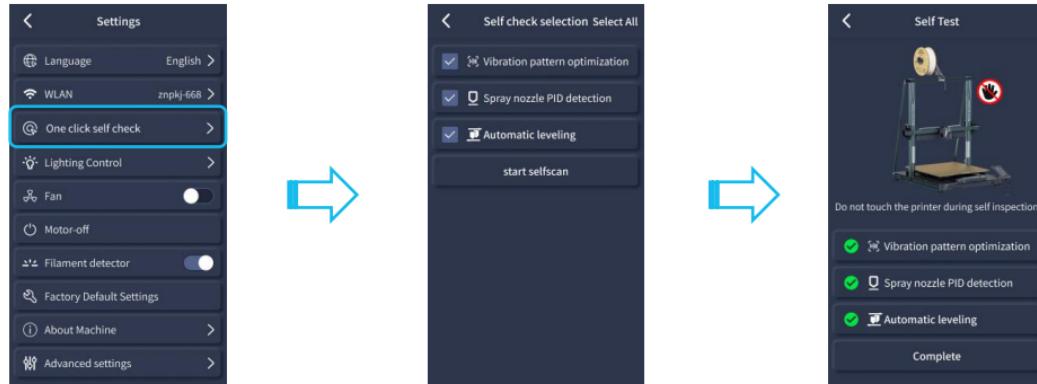
Users can click the fan icon to adjust the air outlet status of the rear cooling fan during the printing process.

The fan has three modes: silent / normal / sport, please adjust according to the printing situation, as shown in the picture below.



The auxiliary cooling module can be turned off during silent printing.

Self-check function:



Vibration pattern optimization: Calibrate the machine through vibration detection and compensate for vibration during printing.

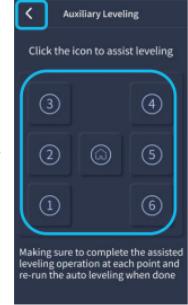
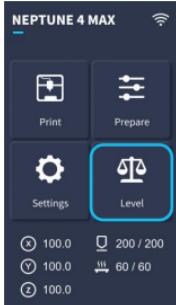
Spray nozzle PID detection: Detect nozzle temperature fluctuations to calibrate PID.

Automatic leveling: After finishing the leveling data collection, use an A4 paper to place between the nozzle and printing platform for setting compensation.

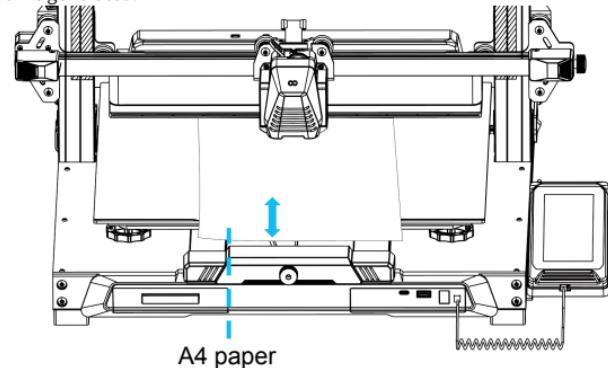
Auto Leveling

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 .

- When the printer is powered on, select **【Level】** .
- Each axis of the printer automatically returns to the home position, after entering the leveling page, place a piece of A4 paper between the nozzle and the platform, and click the compensation value to adjust the distance between the nozzle and the platform (See Picture 2), and push and pull the A4 paper, when there is friction generated, the center point calibration can be completed. Click on the auxiliary leveling **【】**, calibrate the 6 points of the platform with the A4 paper by hand-twisting nuts, and push and pull the A4 paper, when the paper can be pulled out but not pushed in, the auxiliary leveling can be completed.
- 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 121-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.
- Click the save icon to save. **【】**



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.



Model Test

Print Head Feeding Check

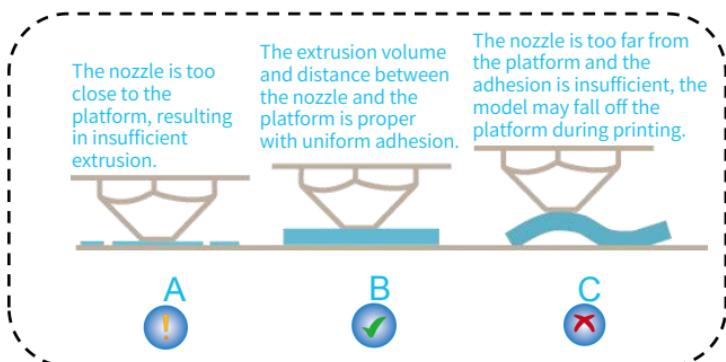
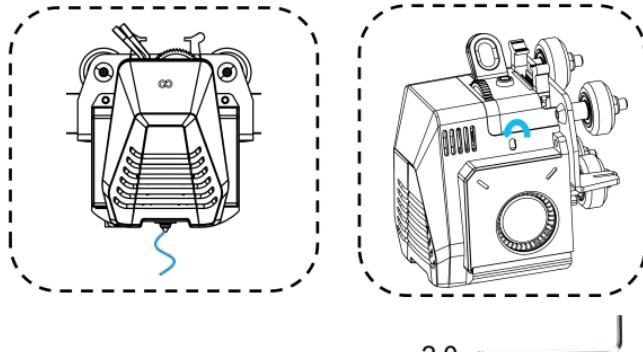
- 1) First push the filaments to the bottom of the print head.
- 2) Click 【Prepare】 - 【Extruder】 , click 【Load】 , the temperature of the nozzle will be automatically heated to 200°C.
- 3) After the nozzle is preheated to 200°C, click the feed to extrude the filaments from the nozzle.
- 4) Clean the melted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

Notice: Consumables with different hardness have different requirements for the spring strength. The spring strength of the extruder can be adjusted with an Allen wrench. When turning counterclockwise, the spring strength is increased, and the spring strength is decreased clockwise.

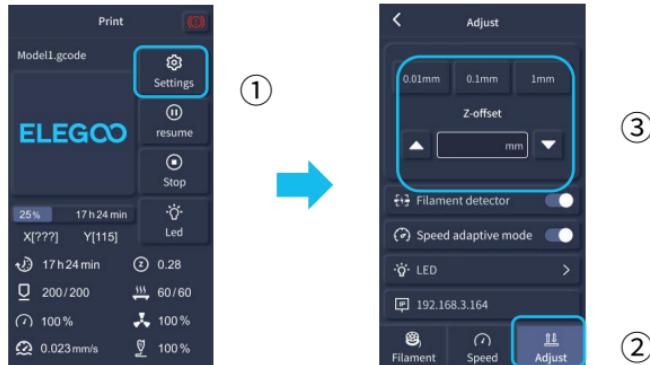
Start printing

- 1) Insert the U disk into the printer's USB port.
- 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.



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

Tip: Copy the data in the U disk to the computer for saving.

Our slice software is modified from 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:

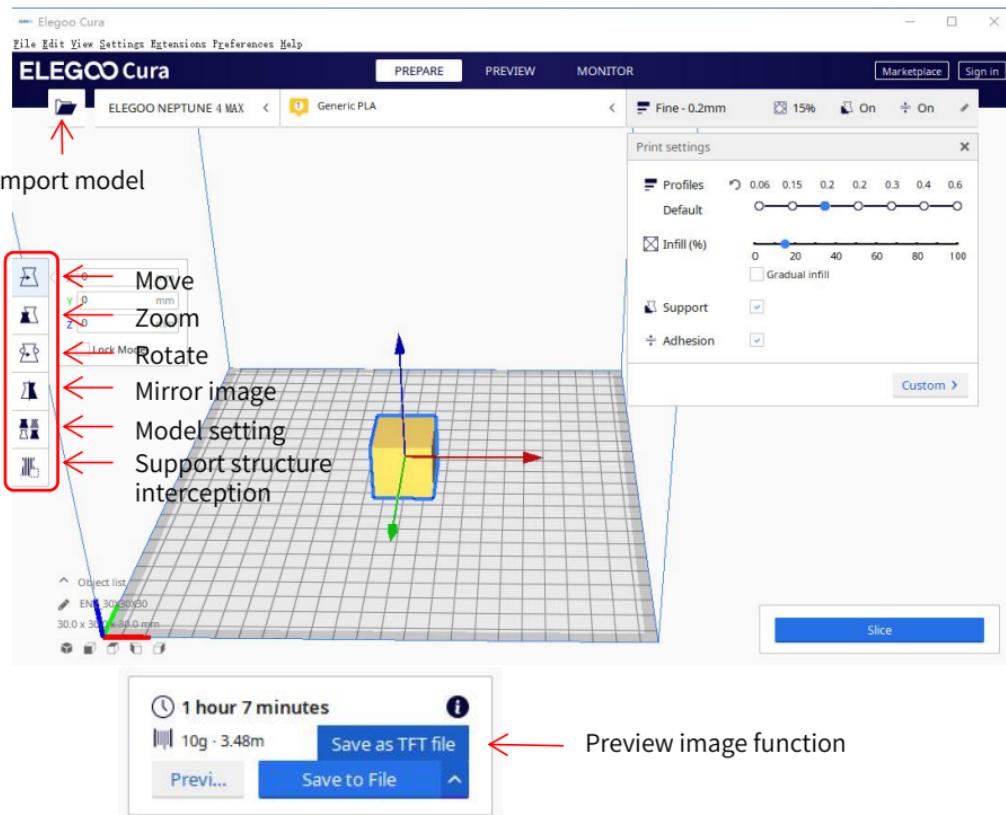
Open the attached U disk file and select the path \ Software and Software Drivers folder \ ELEGOO Software folder \ Double-click the ELEGOO-Cura application to install it.

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.



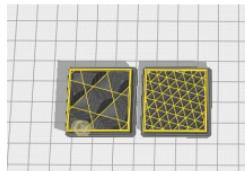
Instructions for Use



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.



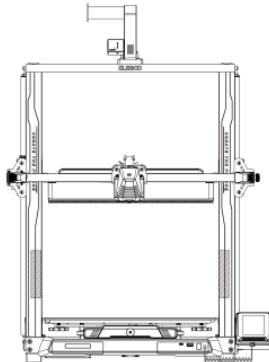
Support structure interception: You can set the intercept region on the model so that the set region does not generate support structure.

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

The device supports WiFi and network cable connection. After the connection is successful, check the IP address on the screen, and enter the IP address through the browser to access the machine.

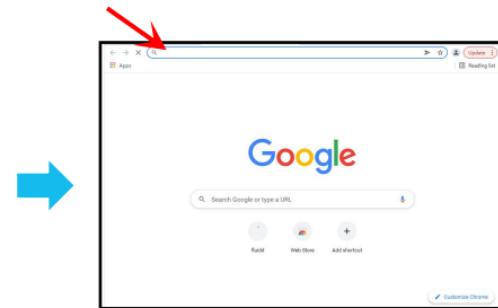
- Note that the machine and the computer can only be connected to the LAN of the same network segment, and make sure that the circuit wiring port on the machine has already connected, otherwise the access will fail.



network cable connection

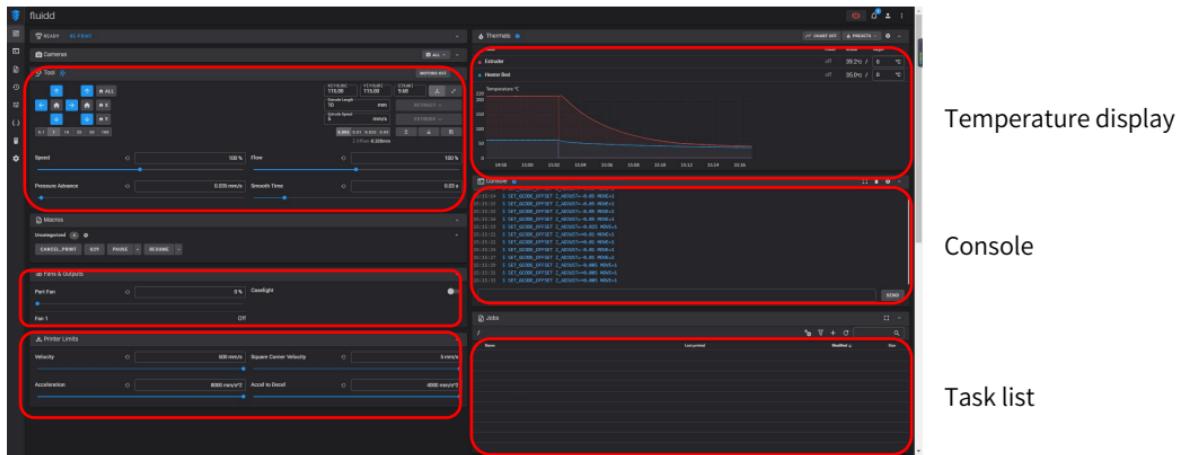


WiFi connection



- Use Google Chrome to enter the IP address of the device, e.g. 192.168.211.164, and enter it via the Enter key to access the page.

- After successful access, you will enter the control interface below the picture



Movement Control: control the movement of each axis, and can set compensation after leveling.

Fan and Output: control to turn on the printhead fan and lighting.

Printer Limit: the maximum acceleration control of the printer, normally no need to change the settings.

Temperature Display: display the machine temperature heating condition, and the preheating printhead temperature and hot bed temperature can be set in advance.

Console: G-code commands can be sent to run the machine.

Task List: drag the G-code file of the Elegoo Cura slice to the task list here for printing.

Troubleshooting Guide

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

- ① The stepper cable is loose. Please recheck the wiring connection.
- ② The corresponding limit switch does not trigger properly, please check whether there is any interference in the movement of the corresponding shaft and whether the limit switch wire is loose.

Nozzle kit extrude anomaly

- ① Check that the extruder stepper cable is not loose.
- ② Check whether the set screw of the extruder gear is locked to the motor shaft.
- ③ The heat dissipation of nozzle kit is not enough, make sure that the nozzle kit's cooling fan is working properly.
- ④ For clogged nozzles, try briefly heating the nozzle to 230°C and squeezing the filaments by hand to remove the clog, or use a fine needle to unclog the nozzle while it is warming up.

Model does not stick to the platform or warpage

- ① The key to whether the model can stick to the platform is the filaments are attached to the platform when printing the first layer. When printing the first layer, if the distance between the nozzle and the platform is more than 0.2mm, it will seriously reduce the model's attachment to the platform, so it needs to be adjusted.
- ② Set up the build platform attachment in Cura, and select the attachment type 【Brim】 , which will help to enlarge the attachment surface and prevent warping and other problems.

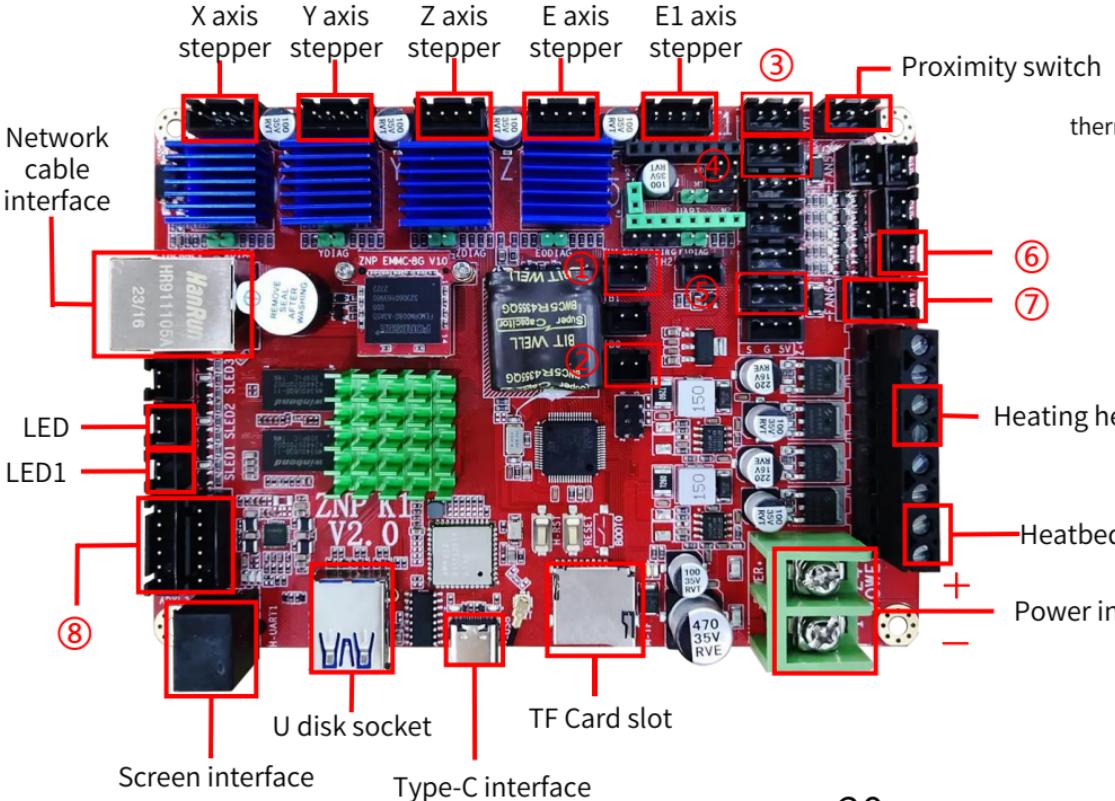
Model misalignment

- ① The travel speed or print speed is too fast. Please try to reduce the speed.
- ② The belt of X/Y axis is too loose or synchronizer pulley is not securely tight.
- ③ Drive current is too low.

Severe wire drawing

- ① Insufficient retraction distance, set the retraction distance larger when slicing
- ② If the retraction speed is too slow, set the retraction speed higher when slicing.
- ③ When slicing, tick the box "Z Hop When Retracted" and set the "Z Hop height" to about 0.25mm.
- ④ Print temperature is too high, which causes the filaments to become sticky.

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

