IEMAI®
Print More Materials, All For Application

HIGH TEMPERATURE SERIES

3D PRINTER

MAGIC-HT-M

Operating Instructions

* Please read this manual carefully before starting to operate.

Warning

This device is a Class A product. Use in a general indoor environment may cause radio interference and therefore requires the user to take appropriate protective measures.

IEMAI®

www.iemai3d.com

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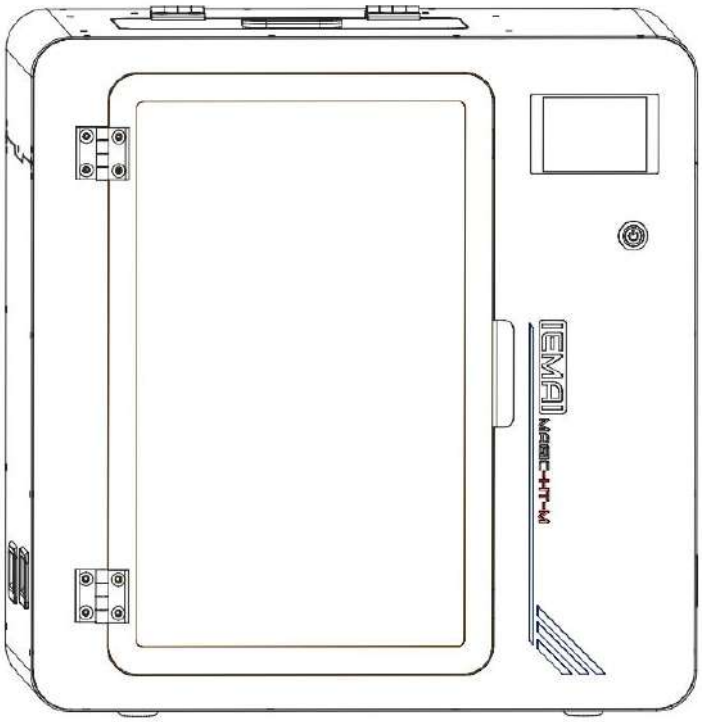
www.iemai3d.com/index.php/download/

Content

1．Overview

1.1 Machine Overview



IEMAI's High-Performance 3D printer MAGIC-HT-M is a 3D printing device based on the principle of fused filament deposition (FFF) technology, with a printing temperature of up to 450°C, a hot bed temperature of 150°C, and a cavity temperature of 90°C. It supports most polymer 3D printing materials on the market, including PEEK, PEKK, PPSU, ULTEM etc., creating excellent temperature conditions to do great printing.. We have adopted a modular design, for example, both the print head and the platform can be quickly disassembled, thus creating conditions for easy maintenance.

1.2 Precautions

First of all, thank you for choosing IEMAI 3D Printer！

This device is a Professional equipment, please read this manual carefully before starting to use, this manual contains important information about the installation, operation, maintenance, and common problems of the 3D printer, the company is not responsible for all losses caused by violation of the cautions and operating procedures given in this manual。

Consumables: Please use the filament provided by our company or the third-party filament of official authorized brand or choose the high-quality filament provided by other regular filament manufacturers, and users should be responsible for the loss caused by using low-quality filament. Please keep the consumables sealed and moisture-proof if not in use for a long time; please bake and dry them in advance before using them again.

Software: Please use a 64-bit system with Windows 7 or above to run the software, more than 4G of RAM and more than 1G of GPU, please use a computer with a higher configuration if possible.

Installation Site Requirements: Installation Site≥600*1000*900mm (L*W*H).

Installation Power Requirements：200~250 V, 50~60 Hz, 950w， Electric cable 1.5 m^2 or more.

Operating Environment: 15-30°C, 10-90% Relative Humidity, non-condensation

Storage Environment: 25-55°C, 10-90% Relative Humidity, non-condensation

1.3 Safety

The device has a specialized motion structure, control system and electrical control parts, users need to pay careful attention to the safety label when using it to prevent burns, pinching, electric shock, or other safety problems.

The maximum temperature of the print head of this equipment can reach 450° C, its heating is strictly prohibited to touch

The maximum temperature of the printing platform of this equipment can reach 150 °C, its heating is strictly prohibited to touch

The maximum temperature of the chamber of this equipment can reach 90°C, and it is strictly forbidden to touch it when it is heated.

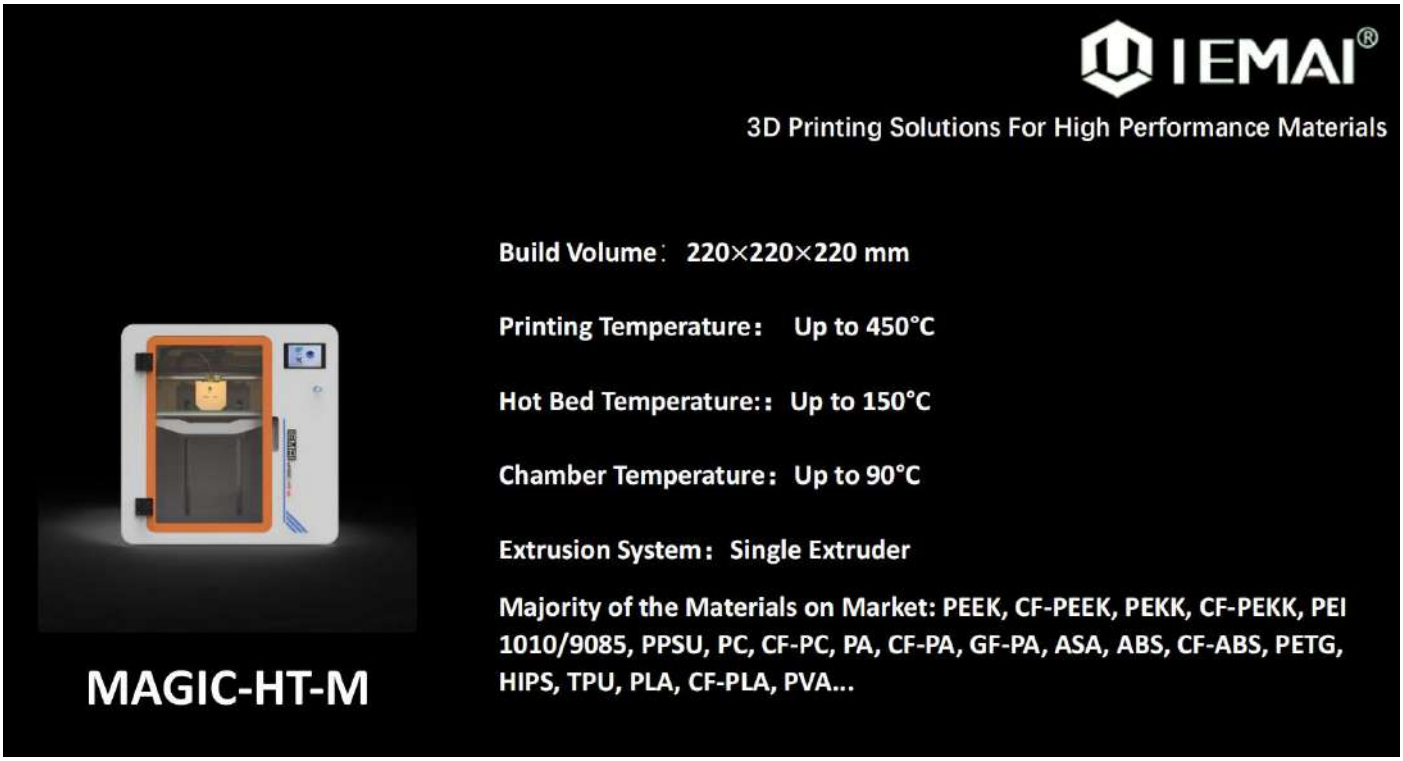
Ensure that the power supply grounding terminal is well grounded to prevent the printer from not working properly or posing a risk of electric shock

Do not disassemble the case without permission, be careful of electric shock

When the printer is working, it is forbidden to move in the printing area to prevent collision, belt turning in, etc.

2. Detailed Parameter

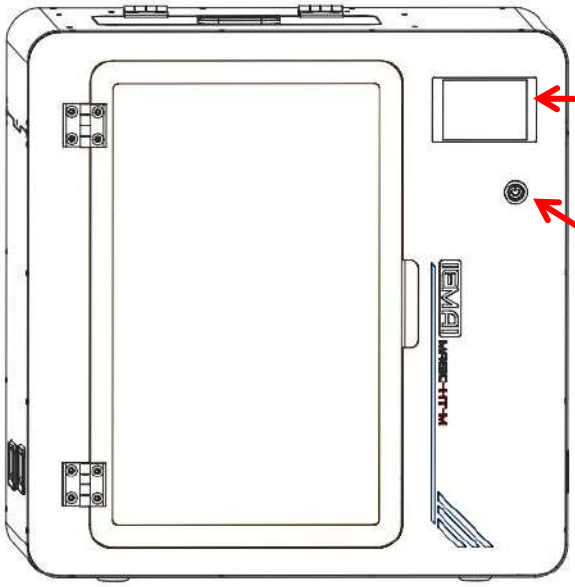
2.1. Specification

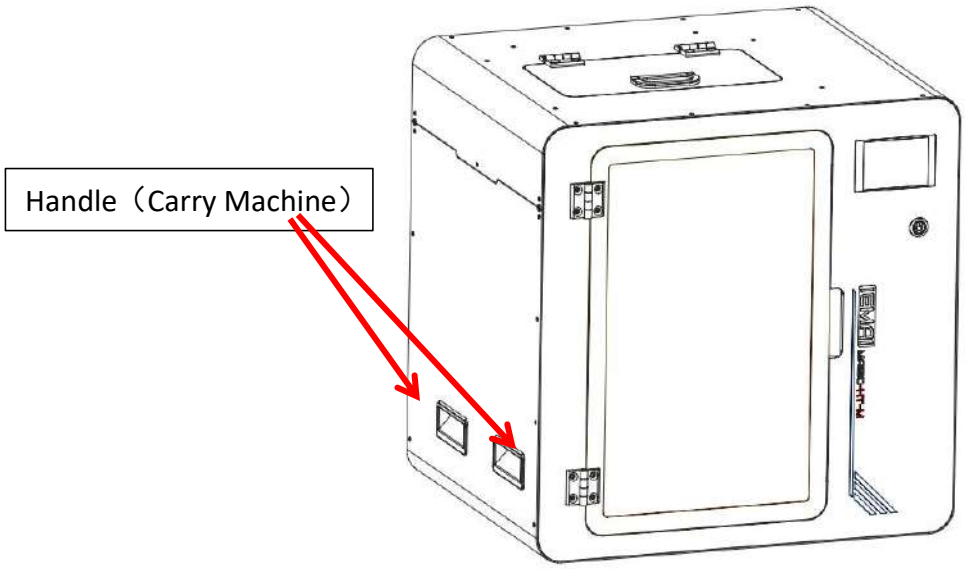


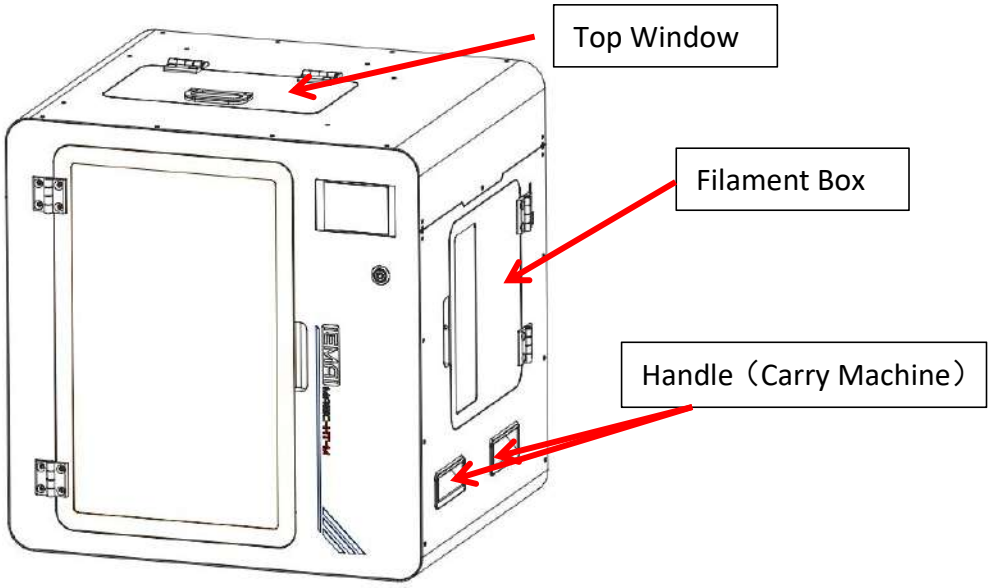
Item	MAGIC-HT-M
Printing Size (L × B × H)	220×220×220 mm
Machine Size (L × B × H)	505×435×515 mm
Packing Size (L × B × H)	535×465×675 mm
Net Weight	35KG
Gross Weight	51KG
Power	100~250 V, 50~6Windows 64 Bit 60 Hz 950 W

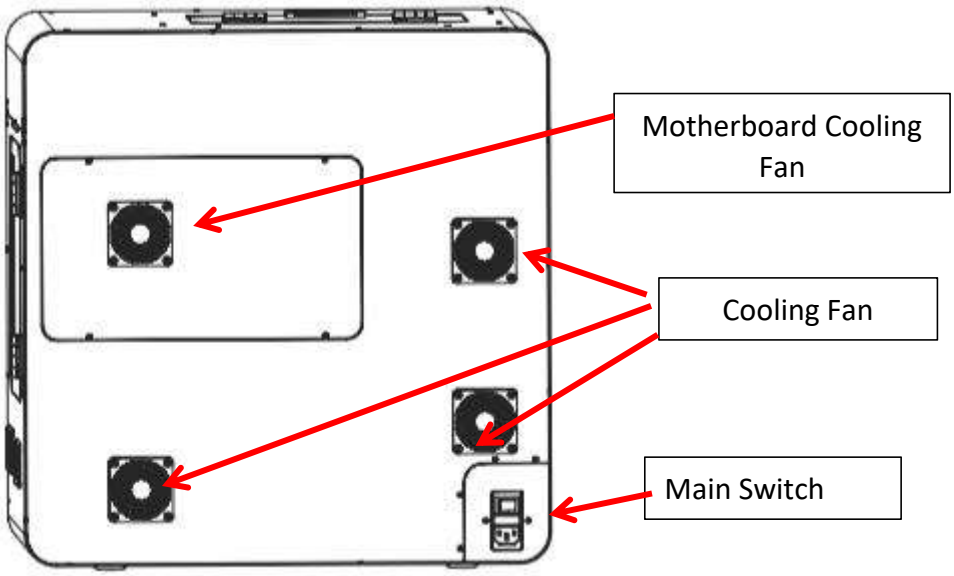
Common	Principle:	Fused Filament Fabrication
	Extrusion System:	Single Extruder
	Filament Diameter:	1.75 mm
	Position Resolution:	X/Y: 12.5 μm Z: 1.25 μm
	Printing Speed:	0 - 150 mm/s
	Printing Platform:	Carbon Fiber Plate, Quick Detachable
	Print Bed Temperature:	150°C
	Heated Bed Materials:	Silicon
	Printing Platform Auto Calibration:	Support
	Power Failure Recovery:	Support
	Supporting Materials:	PEEK, CF-PEEK, PEKK, CF-PEKK, PEI 1010/9085, PPSU, PC, CF-PC, PA, CF-PA, GF-PA, ASA, ABS, CF-ABS, PETG, HIPS, TPU, PLA, CF-PLA, PVA...
	Layer Thickness:	0.05 – 0.3 mm
	Nozzle Diameter:	0.4 mm (Default), 0.6 mm, 0.8 mm, 1.0 mm (Choosable)
	Extruder Temperature:	450 °C
	Connection Control:	Wi-Fi, SD Card
	Suggest Operating Environment:	15-30°C, relatively humidity 10-90%, No Moisture Condensation
	Storage Temperature:	-25 - 55 °C, relatively humidity 10-90%, No Moisture Condensation
	Technology Certification:	CE, RoHS
	Air Filter:	Activated Carbon Filters (Choosable)
Software	Supplied Software:	IEMAI 3D EXPERT, Cura, Simplify3D
	Operating System:	Windows 64 Bit
	File Type:	STL, OBJ, 3MF
	Output:	GCODE
Features	Power Failure Recovery Filament Absent Warning Auto-Shut Down System WIFI Control Auto Leveling Camera Monitoring (Choosable)	

2.2 Device Layout





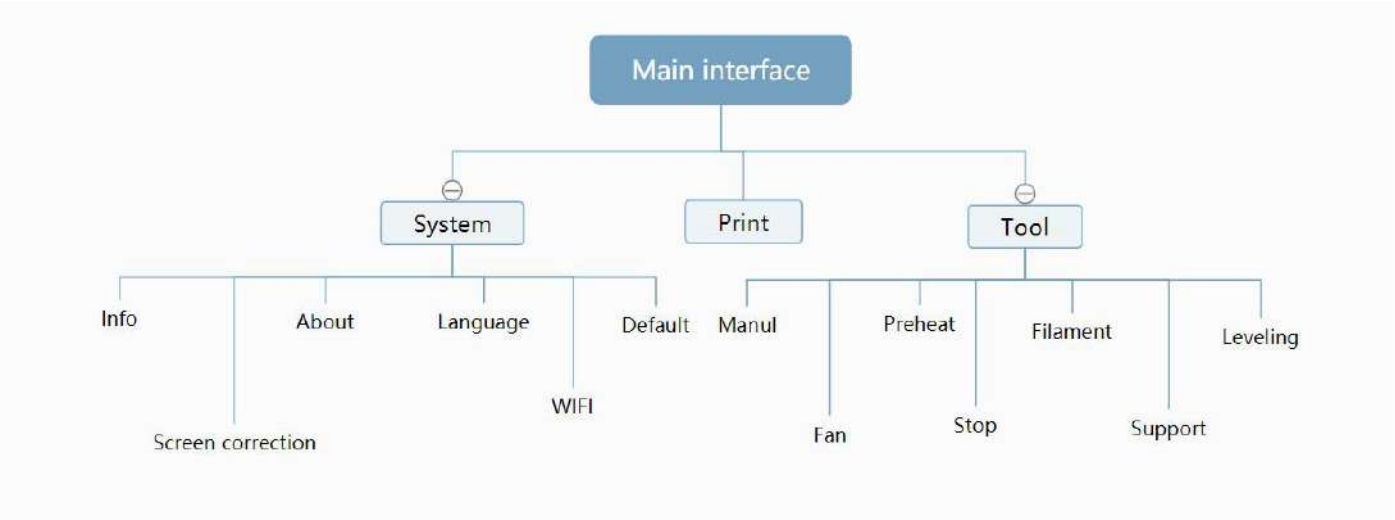

Top Window
Filament Box
Handle（Carry Machine）


Motherboard Cooling Fan
Cooling Fan
Main Switch

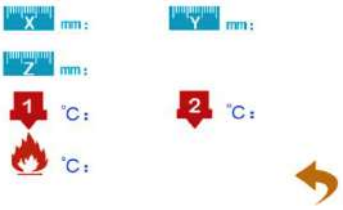
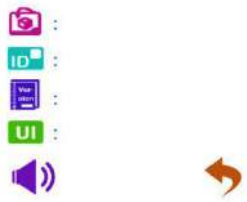
2.3 Interactive Interface

The interactive Interface of this device adopts a 3.5-inch Color Touch Screen (Resistive), please read the following instructions carefully before first use

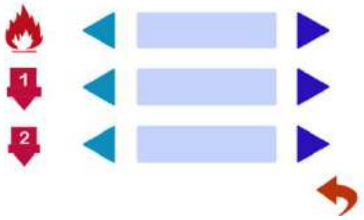
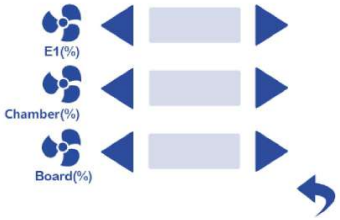
Logic diagram of interactive interface



2.3.1 System Interface

Figure 1: Main interface  Click "System" to go to Figure 2	Figure 2: System interface  1. Click "Info" to go to Figure 3 2. Click "About" to go to Figure 4 3. Click "English" to switch to other Language 4. Click "Default" to restore the original factory settings 5. Tap TPAAdjustment to correct the touch offset 6. Click "WIFI" to go to Figure 5	Figure 3: Info interface  1. This interface allows you to view the current coordinates of the XYZ axis 2. The current temperature of the left nozzle, and right nozzle, and hot bed
Figure 4: About interface  This interface allows you to view the name, ID, system version, UI version, and Power On/Off sounds	Figure 5: WiFi Setup Interface  This interface allows you to view information about Wi-Fi	

2.3.2 Tool interface

Figure 1: Main interface	Figure 2: Tool Interface	Figure 3：Manual
		
Click "Tool" to go to Figure 2	1. Click "Manual" to go to Figure 3 2. Click "Preheat" to go to Figure 4 3. Click "Filament" to go to Figure 5 4. Click "Level" to perform automatic leveling 5. Click "Fan" to go to Figure 6 6. Click "Stop" to stop all execution commands 7. Click "Support" to view the after-sales contact information	Here can do the following 1. Select the moving unit of 0.1-10mm 2. Controls the XYZ axis for unit movement 3. Click "  " to go back to the original point" 4. Select E1 or E2 for unit extrusion
Figure 4: Pre-Heat interface	Figure 5: Filament interface	Figure 6: Fan Interface
		
1. This interface allows you to set the preheat temperature of the hot bed, left nozzle and Right nozzle	1. Loading material "  " 2. Unload material "  " 3. E1- Left Nozzle,E2-Right Nozzle 4. "  "Stop Loading Command	1. This interface allows you to set the nozzle cooling fan E1 and the fan rate of the Chamber

2.3.3 Print Interface

Figure 1: Main Interface

Click "Print" to go to Figure 2

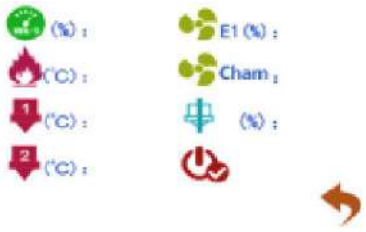
Figure 2: File Interface

Check Specify G-code file to print or delete the file

Figure 3: Print Interface

1. This interface is the main interface in print You can view thumbnails
2. Hot bed, Nozzle Temperature and chamber temperature
3. Elapsed time, Time remaining、Current speed
4. File name, Print Progress Bar, and more
5. You can control pause (resume) and stop printing
6. Press " " to reset during the printing process

Figure 4：Print Setting Interface



1. This interface can be adjusted during the printing process
2. Print Speed Ratio, Temperature of Hot Bed, Nozzle
3. Fan Rate of Nozzle Fan E1 and Chamber Fan
4. Extrusion flow
5. As well as setting power off after printing

3.Device Usage

3.1 Unboxing for The First Time

Step 1	Step 2	Step 3
		
1. Check if the packaging is complete 2. If there is a damage, please feedback by taking photos in time 3. If serious damage, please refuse to receive	1. The equipment is tightly packed and protected 2. Please be patient in removing the package 3. If you need to use tools, such as knives, scissors 4. Please be cautioned to avoid scratching the device	1. Check The Door Glass, Whether the Control Panel is Segmentation 2. Notice the starter kit and material package are placed under the platform 3. Please connect the power to start the equipment and then move up the platform to take out

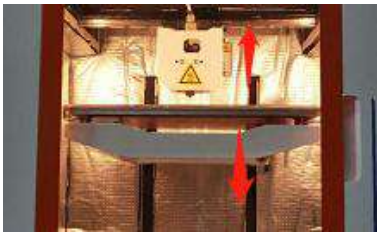
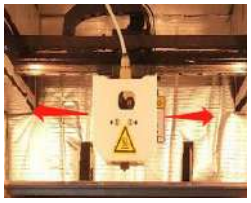
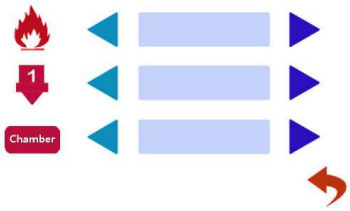
Step 4

Remove the power cord from the left material box, use the cutter to cut the XY axis fixing tie,

wrong operation may damage the belt.

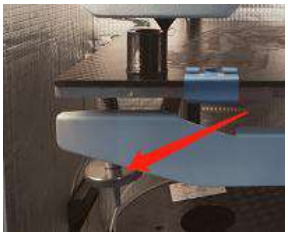
The kit under the Z-axis needs to be removed after turning on the machine to rise the Z-axis

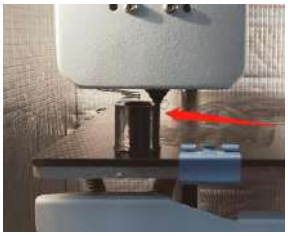
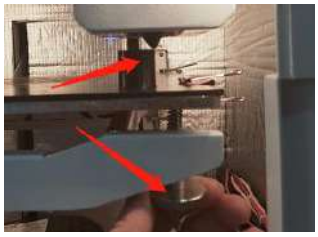
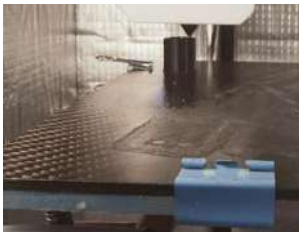
3.2 Device Movement Check

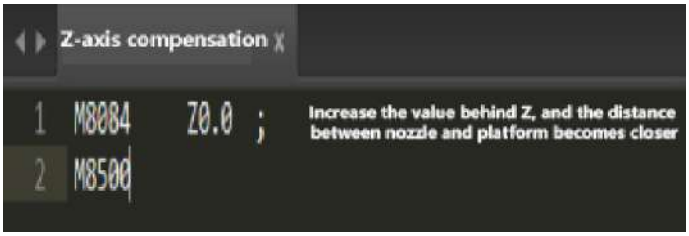
Step 1	Step 2	Step 3
 1. As shown in the diagram 2. Connect the device power to the cradle power	 1. Under normal condition, all lights of the device are lit as shown in the figure	  1. Click the Z-axis up and down respectively. 2. Observe if it moves normally as shown
Step 4	**Step 5**	
   1. Manually control the XY axis movement through the touch screen 2. Observe if it moves normally as shown	 1.Through pre-heat via the touchscreen. 2.The temperature can be set for the hot bed, left nozzle, and chamber. 3.The temperature on the right represents the set temperature. 4.The temperature on the left represents the actual temperature. 5.The recommended bed temp for the first warm-up：50C°±2C°. 6.Nozzle temperature：210C°±2C°. 7.Please be careful of high temps and handle with caution.	Attention: The chamber fan needs to be turned on before the inner chamber warms up, it is recommended to use 100% of the air volume used, and the temperature chamber only supports a maximum of 90 C° stable printing.

4. Print Operation

4.1 Operation of Auto-Calibration

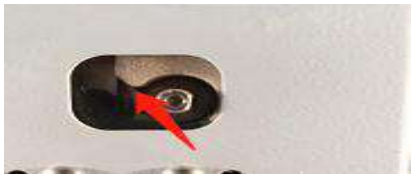
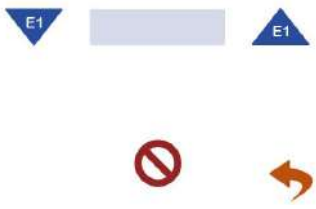
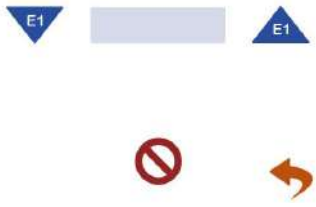
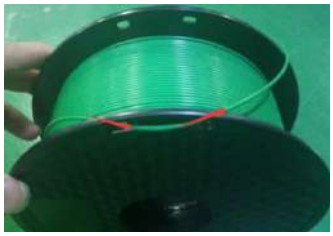
<table>
<tr>
<td>1. Carry out the basic leveling of the platform to ensure that the basic leveling of the platform will not be excessively inclined
Step 1
 
1. Press the spring firmly
2. Ensure that the platform does not shake</td>
<td>Step 2
 

1. Raise z-axis platform</td>
<td>Step 3
 
1. Use fixed height objects as shown
2. Positioning platform with nozzle height</td>
</tr>
<tr>
<td>Step 4
 
1. Adjust the nut
2. So that the platform and nozzle just pass through the object</td>
<td>Step 5
 
1. Push the print head to the inner corner by hand
2. Adjust again</td>
<td>Step 6
 
1. Hand push to the last corner of the adjustment, after the completion of the platform four points from the nozzle distance are the same height.</td>
</tr>
</table>

2. Click the leveling button to use automatic leveling to get the platform data. Wait for the printer to automatically measure the platform 49 each test point.	
3. Start printing and Z-axis compensation After testing the printing platform, you can start printing. If you find that the nozzle and platform spacing is not ideal during the printing process, you can open and change the data in the file of "Automatic leveling compensation parameters" through Notepad, put the changed file into the SD card, and use the 3D printer to print this TXT file once, the compensation parameters are changed.	

4.2.1 Unload Filament

<table>
<tr>
<td>Step 1
 

1. Pre-heataccording to the material to be loaded
2. Refer to Step 10 for the preheating temperature of different materials</td>
<td>Step 2
 
 
1. Straighten the material
2. Cut the material to the tip</td>
<td>Step 3
 
 
1. Load the material through the break test port
2. Manually feed it to the gears</td>
</tr>
<tr>
<td>Step 4
 
1. Click to load material “ E1 ”
2. E1 for the nozzle</td>
<td>Step 5
 
1. Till the nozzle appears fine filament
2. Click “ ” Stop loading command</td>
<td>Step 6
 
3. When unloading materials
4. Pull material in advance by hand
5. and apply a certain amount of tension</td>
</tr>
<tr>
<td>Step 7
 
1. Click to uninst E1 material “ E1 ”
2. E1 for the nozzle</td>
<td>Step 8
 
1. After the material exits the gear
2. Manually ripping it out
3. And fix the threads
4. Do good moisture preservation</td>
<td></td>
</tr>
</table>

Step 10: Recommended preheating nozzle temperature for commonly used materials		
Super Performence	Reinforced Composites	General engineering materials
PEEK：430C°	CF-PEEK/GF-PEEK：450C°	PA：260C°
PEKK：430C°	CF-PEKK/ESD-PEKK：430C°	PC：260C°
PEI 1010：360C°	GF-PA/CF-PA：300C°	ABS：240C°
PEI 9085：360C°	CF-PC/PC-FR/PC-ABS：270C°	PETG：230C°
PPSU：360C°	CF-ABS：260C°	PLA：200C°
PPS：300C°	ESD-PETG：260C°	TPU：230C°
	CF-PLA：220C°	

4.3 Start Printing

Step 1	Step 2	Step 3
		
1. In the IEMAI slicing software 2. Save the code to the SD card 3. **Please refer to the software tutorial for detailed slicing methods**	1. Insert the SD card into the card slot on the right side of the device and select the file to be printed	1. Click “  ” ready to start printing

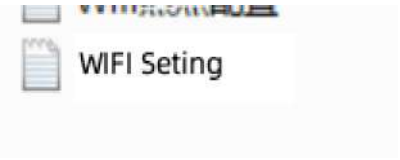
4.4 Model Removal

Step 1	Step 2	Step 3
		
1. Printed model on the build platform	1. Use a scraper from the lower left corner of the model to insert between the model and the build platform to separate the model from the build platform	1. Use a scraper from the lower right corner of the model to insert between the model and the build platform to separate the model from the build platform
Step 4	**Step 5**	
		
1. For the completed model the base raft needs to be removed, using the correct slicing parameters the model and raft body can be easily separated as a whole by hand	1. The finished model and the separated raft are finally obtained	
Attention：For large models that are not suitable for dismantling inside the machine, the building platform can be taken out and dismantled outside.		

4.5 PEEK Material Printing Precautions

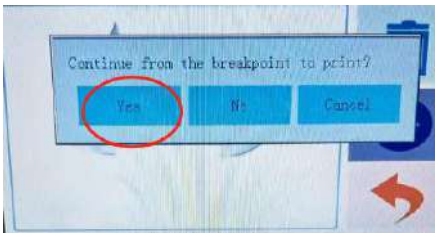
Material/Parameter	Print Temperature	Platform Temperature	Chamber Temperature
peek	440	100	90
	Attention: 1. PEEK can only use high-temperature head printing 2.Pre-heat before printing, should first heat the thermostat chamber and hot bed, the print head should not be heated for a long-time, long-time heating is easy to form carbonization lead to print head clogging (clogging treatment see common problems and their solutions - PEEK printing) 3. Before printing the material should first use 120 C° baking 5H 4. printing when the cooling fan off		

4.6 PC-based WIFI LAN Control

Step 1  ChiTu HB V1.10(1).zip 1. Installation of CHITU HB/PRO software	Step 2  1. Enter the software interface 2. Enter the name and password of the WIFI in the lower right corner 3. and generate a configuration file	Step 3  1. Copy the generated file to the SD card 2. and put it on the machine to print once
Step 4  1. Copy the generated file to the SD card 2. and put it on the machine to print once 3. 0.0.0.0 means not connected successfully	Step 5  1. Enter the software and click Scan 2. Automatically reads machines in the network and connects them	Step 6  1. Green status indicates successful connection
Step 7  1. Preheat and movement operation available	Step 8  1. Select local file to upload	Step 9  1. Just select the file to print

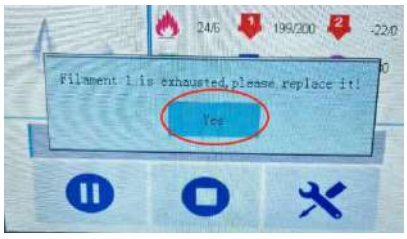
5. Function Introduction

5.1 Power Failure Recovery

Step 1	Step 2	Step 3
		
1. If the machine suddenly powers off during the printing process	1. Turn the power back on 2. Find the document that was previously printing 3. Display in red font, select print	1. Select "Yes" in this screen 2. And completes the power failure renewal

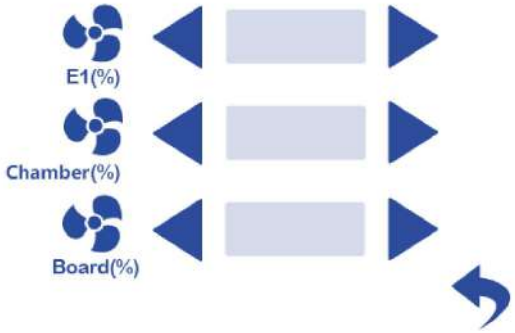
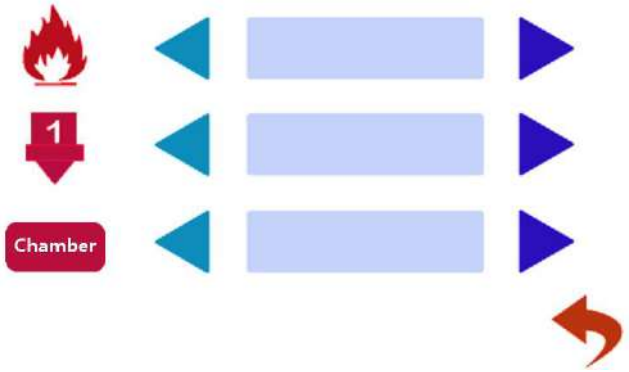
Attention：Make sure the Z-axis of the printer has not moved after power failure, otherwise it will not be able to continue printing after the last breakpoint.

5.2 Filament Absent Warning

Step 1	Step 2	Step 3
		
1. If the printer runs out of material during printing 2. Please select "Yes" in this screen to change the material	1. Unloading materials “ E1 ” 2. Loading materials “ E1 ” 3. E1 for the left nozzle, E2 for the right nozzle 4. Unload the existing material first and then load the new material	1. Click “ ”, the printer continues the previous print

Attention：This operation processes cannot exit the print interface, and X, Y, Z axis cannot be moved

5.3 Temperature Setting of The Constant Temperature Chamber

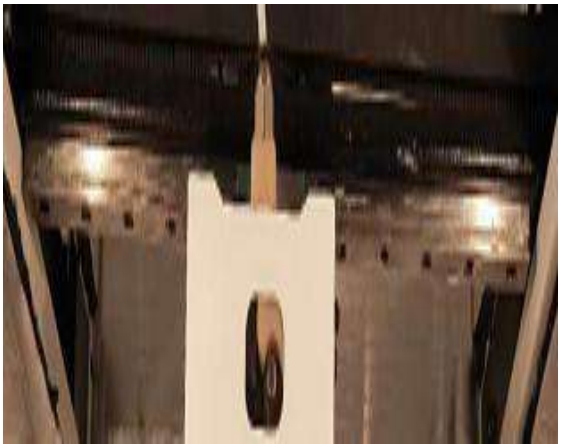
1. Enter the fan control interface and control the chamber fan to 100%	
2. Enter the preheat interface to set the temperature, the highest set to 90 °C ± 5 °C	
Attention: Be sure to turn on the fan before heating up the chamber	

6. Maintenance and Care

This equipment belongs to the high-temperature equipment, interior use environment temperature is high , do not replace regular parts by yourself to avoid machine failure. Do not replace regular parts by yourself to avoid machine failure.

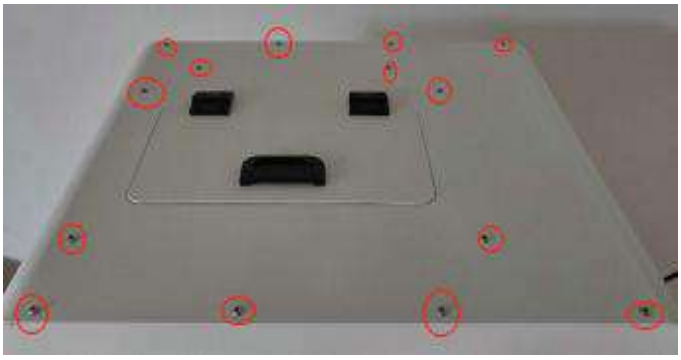
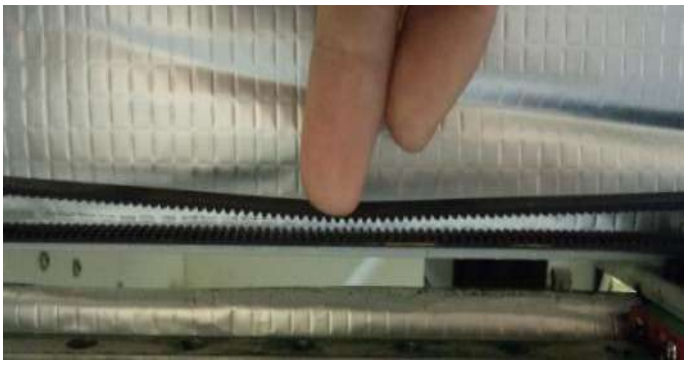
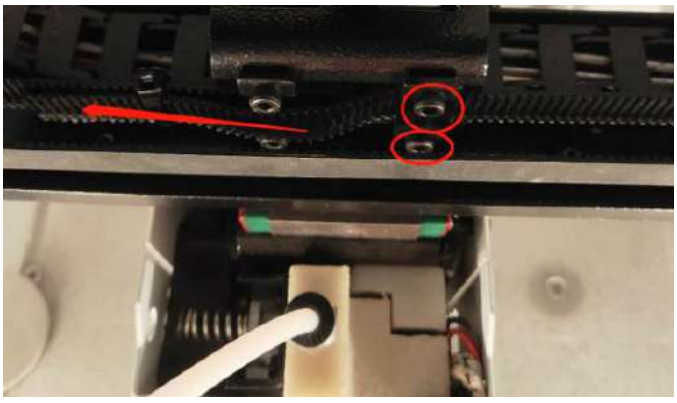
6.1 Maintenance of Linear Guide and Ball Screw

Ball screw and linear guide are the guarantee to keep secure operation, and the correct maintenance can effectively increase the service life of the machine.

First step: Use a towel or rag to remove the original lubricant from the linear guides and ball screws.	
Second step：Add grease, apply the right amount of grease in the V-groove on both sides of the guide, and evenly apply on the fillet of the ball screw	

6.2 Adjustment of Belt Looseness

The belt may loosen after a long period of time leading to a decline in print quality, so it is recommended that it be adjusted every six months.

Step 1: Open the top cover, as shown on the top 14 screws and 3 screws on both sides to remove and take off the top cover	
Step 2: Check the belt tightness, finger lightly press the belt, belt deformation of more than 2mm, almost and the lower belt contact when the belt needs to be tensioned.	
Step 3: Loosen the two screws holding down the belt, tighten the screws after pulling the belt tight	

6.3 Dust Removal from Electrical Box Fans

Step one: Check the dust condition of the dust cover and fan blades of the electrical box fan. Timely cleaning the dust of the cooling fan helps to improve the working environment of the motherboard and prevent the drive from overheating and out-of-step phenomenon.	 
Step two: Removing the dust cover. Insert the four corners of the dust cover from the dust cover to gently key out the dust cover.	 
Step Three. Clear the dust on the dust cover and fan. Use the air gun to remove the dust on the sponge inside the dust cover, and blow clean the dust on the fan (blow the fan, pay attention to the pressure cannot be too large, so as not to blow bad fan)。	

6.4 Nozzle Maintenance

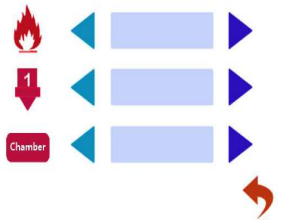
Nozzle cleaning:

In the printing process there will be excess filament residue melted on the nozzle for the print item impact so need to be cleaned.

Step 1: Heat up the nozzle (the last printing temperature shall prevail).

Step 2: Use tweezers to hold a soft fiber cloth or some other high temperature resistant soft goods wipe clean (prohibit the use of sandpaper blades and other sharp with corrosive tools items grinding cleaning).

Note: the nozzle high temperature, operation attention to burns;



Nozzle replacement.

Step 1: unscrew the 2 screws marked as shown, remove the print head outer frame

Step 2: the nozzle will be warmed up (to the common printing temperature shall prevail)

Step 3: the heating block using a duckbill pliers and use a 10mm socket to remove the nozzle counterclockwise rotation.

Step 4: take out the new nozzle using raw material tape clockwise around the threaded part of the nozzle 7 turns and press out the threads.

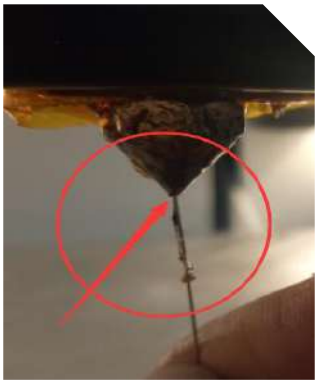
Step 5: Use duckbill pliers and a socket to reattach the nozzle to the print head.

Nozzle replacement requires timely re-adjustment of the nozzle and print platform pitch (for details, please refer to the print - install the print platform and leveling)

peek blockage solution.

Method one: heating 450 C° using 0.4mm fine needle to unclog the nozzle and then extrude peek

Method two: use PC at 450 C° for extrusion



6.5 Print Head Disassembly and Maintenance

Attention: Please disassemble and install the print head with the power off

The equipment is a dual Quick Detachable Print Head, if the print head needs to be replaced during use, the steps are as follows.

Step 1: Check whether there are supplies in the print head if there are supplies first remove the supplies (refer to Printing - Loading and Unloading Supplies for details).

Step 2: Turn off the power and loosen the three screws as shown in the figure.

Step 3: Pull out the print head, press the pneumatic interface black rubber to pull out the feed tube, complete the removal.

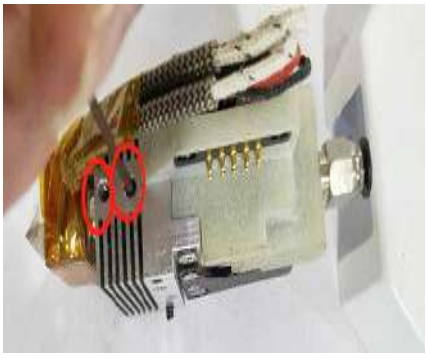
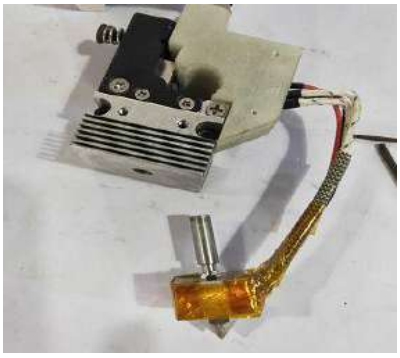
To replace the print head, proceed as follows:

Step 1: Install the print head in the original position, tighten the front two screws so that the print head is closely connected to the base, and then tighten the side screws.

Step 2: Check the installation effect, open the tool - preheat, if the display temperature is "1023", that the print head is not installed correctly or the print head is damaged.

Attention: Please disassemble and install the print head while the power is off

6.6 Steps to Disassemble The Nozzle

Step 1	Step 2	Step 3
		
Unscrew the 2 screws as shown	Loosen the top spring screw	Removal of heating block completed

7. Common Problems and Their Solutions

Only a few common problems are listed, for more questions please contact the technician directly.

7.1 Movement

Problem	Solution
Problem 1: When extruding, the extrusion gear shake.	Increase the print head temperature or determine if the head is clogged or needs to be reloaded with material.
Problem 2: One or two of the X, Y, Z and E axes cannot be moved, and an alarm sound appears when you click to move	Check if the limit switch is pressed
Problem 3: Opposite direction of motion	Open the firmware and change the control code 1 or -1 ;The following is the direction control of stepping motor, I1 and I-1 are in the opposite direction. Therefore, if the motor direction is wrong, either change the wiring or change the direction parameters M8002 I-1 ;X stepper motor direction, I1 Or I-1 M8003 I-1 ;Y stepper motor direction M8004 I1 ;Z stepper motor direction M8005 I-1 ;E1 stepper motor direction M8005 I-1 E2 ;E2 stepper motor direction

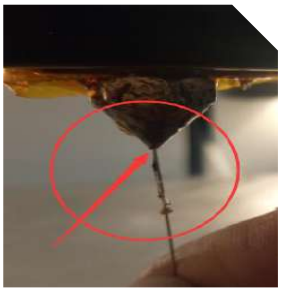
7.2 Temperature

Problem	Solution
Problem one: click on the heating, the temperature does not change, a few seconds later prompted the heating power is insufficient, check the heating head temperature rise Attention: temperature measurement careful of high temperature hot hands	Whether the print head is installed, or whether the wire is connected
Problem 2: Temperature display "1023"	Print head is not properly installed

7.3 Print

Problem	Solution
Problem 1: Prompt 1 extruder no material, cannot print properly	Add filament at the break detection
Problem 2: The print appears to be detached from the bottom and is carried away	After determining that the platform is able to print that material, adjust the platform and nozzle gap when the zero point is small (see Printing - Installing the Build Platform and Leveling for more information)
Problem 3: Use of automatic unload filament, but stuck between extrusion gear and extrusion clamp	Remove the print head and cut off the deformation part

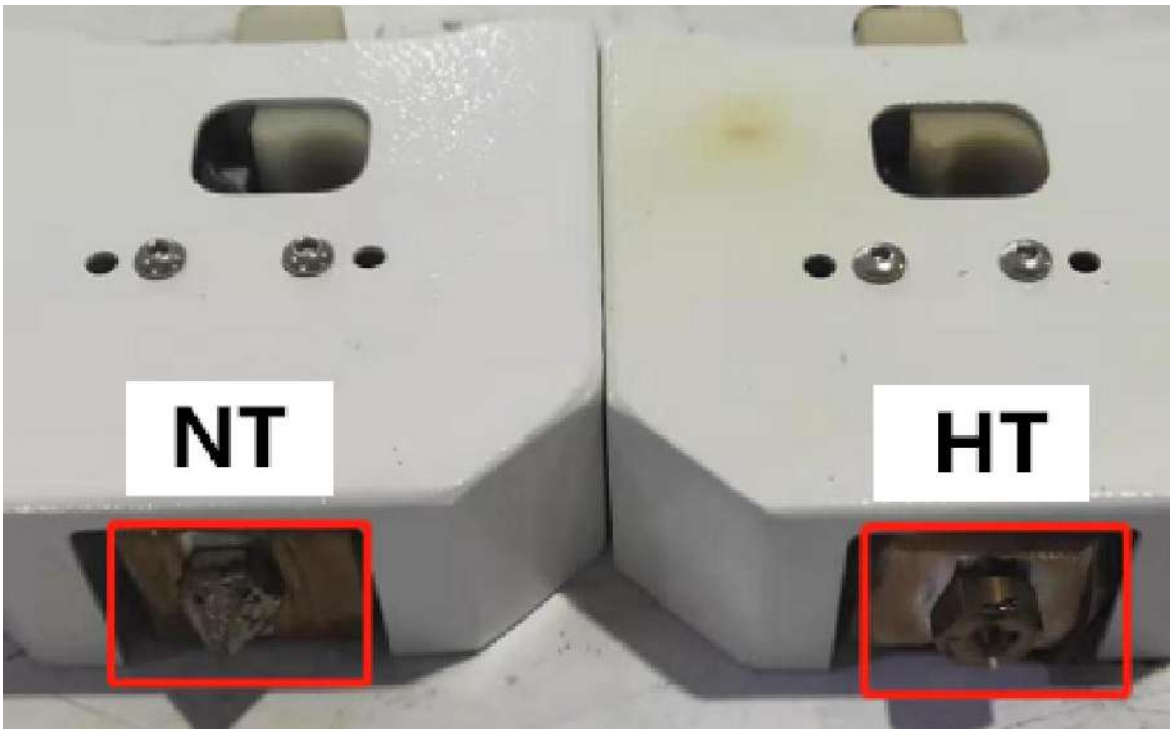
7.4 Clean Up Carbon Blockage

Problem	Solution
1. Pause the print again after printing cannot be extruded	Pull out the print head above the feed tube and remove the filament to reload the filament by cutting off the expanded filament at the front. Reason: The distance drawn back is too long, the peek inside the throat, the interval heating between prints caused by the material expansion of stuck filaments.
2. After printing for a period of time to squeeze out some black material and not in the silk	**Treatment I.** Use the nozzle corresponding size of the needle to unclog the nozzle and extrude again will be internal  **Treatment II:** Step 1: Refer to the print head disassembly and maintenance, after removing the print head Step 2: Use a 2mm drill bit to drill out the material inside the throat and nozzle, turn into a depth of 14.5mm (0.4mm runner in the front of the nozzle)  Step 3: Empty the inner throat and restore the quick release head to use again.

8. Appendix：

Appendix A

The difference between high and low temperature of the print head



External distinction can be seen nozzle style, large square nut style for high-temperature nozzle, cone type for the common temperature nozzle。

Appendix B

How to use the platform glue stick

1.Before printing on the printing platform to apply solid glue evenly twice, as shown in the figure can be based on the size of the print model vertical and vertical coating of the corresponding area.

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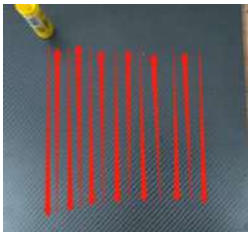
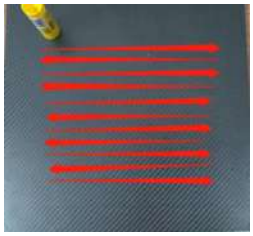
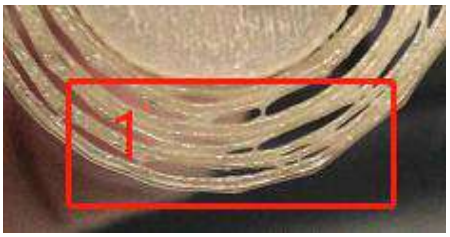



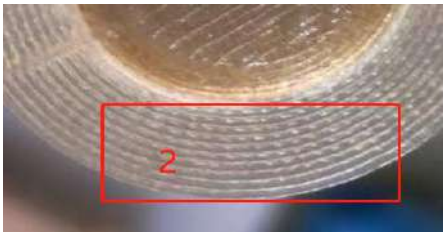
Attention: The temperature of the carbon fiber board when applied cannot exceed 50℃, otherwise the high temperature will quickly melt the glue stick resulting in uneven thickness of the applied glue.

2. After using for a long time, when the residual glue on the platform is too much, you can take off the carbon fiber board and rinse it with clean water and re-glue it.

Attention: It is recommended to use the side skirt attachment type for printing model with carbon fiber board, to avoid the model printing warpage and other bad flat production.

When printing the model, it is recommended to observe the printing situation well before leaving the printer. Observe the forming effect of the skirt to determine whether the height of the nozzle and platform is appropriate.

As in the case of Figure 1. The skirt line is loose and independent, and separated by one root. This means that the nozzle is a little far from the platform, you can increase	 

the automatic leveling compensation parameters to make the nozzle and platform closer to the distance	
As in the case of Figure 2. The skirt lines are connected and fused into one plane. This means that the distance between the nozzle and the platform is more appropriate, and such a skirt effectively increases the contact surface between the model and the platform, increasing the adhesion force.	

Attention: If the nozzle is too close to the platform, there is no gap between the platform and the nozzle, it will lead to nozzle extrusion without supplies, so printing with a good observation of the skirt can be very good to help us improve the success rate of printing.