



Vulcan 3D Printer operating manual

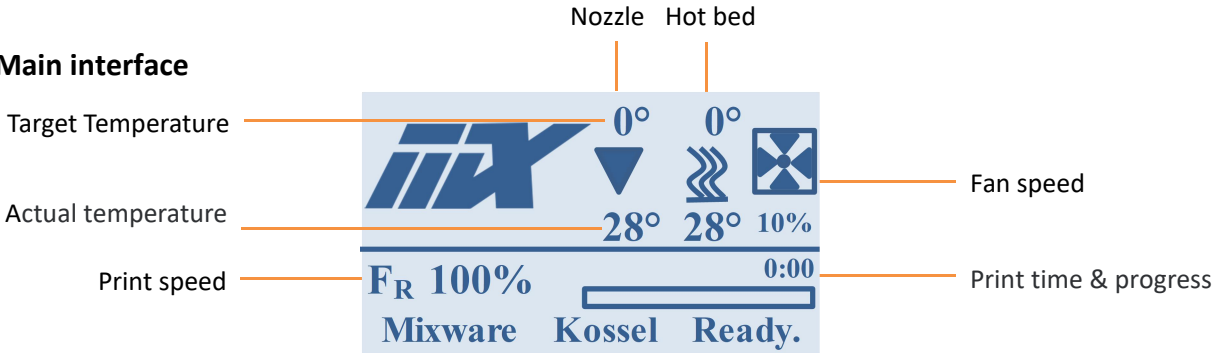
V1.3

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- 2** **Bed leveling**
- 3** **Insert filament and printing**
- 4** **Software description and use**
- 5** **FAQ guide**
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- 7** **Disclaimer**

1 Interface introduction

1.1 Main interface



1.2 Main menu

Info screen	↑
Control	→
No SD card	→

No SD card status

Info screen	↑
Control	→
Print from SD	→

Insert SD card status

“↑”: return
“→”: next step

1.3 Control

Main	↑
Temperature	→
Bed Leveling	→
Change filament	→
Initialization	

1.4 Temperature control

Control	↑
Nozzle:	0
Bed:	0
Fan speed:	0
Preheat	

Cooling status

Control	↑
Nozzle:	200
Bed:	45
Fan speed:	0
Cool down	

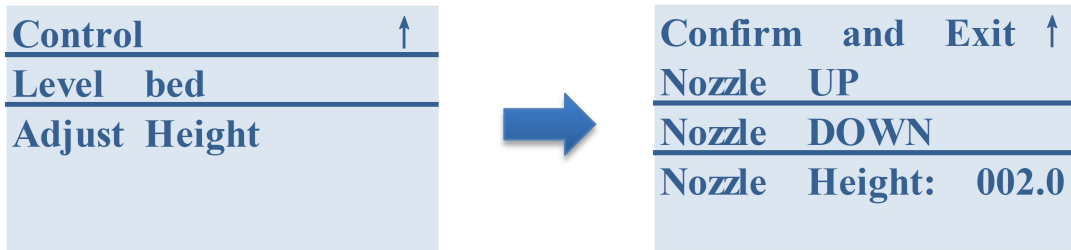
Heating status

2 Bed leveling

- ◆ Vulcan 3D printer: automatically leveling
- ◆ After assembly, the printer must be leveled before printing for the first time.
- ◆ After the leveling is completed, the printer will maintain this state. If one of the following three situations occurs in the first layer of printing, it must be re-leveled:
 - a. The filament can not adhere to the bed;
 - b. If the nozzle is too close to the bed, the filament cannot be extruded;
 - c. Uneven;

2.1 Leveling

Main interface → Control → Bed Leveling



2.2 Leveling step

Step1: Click "Level bed" and the printer will automatically calibrate the bed

Step2: Select "Up/Down" to adjust the relative height of nozzle and bed

Step3: Complete leveling, save and exit

Figures as follow:

Info screen	↑
Control	→
Print from SD	→



Main	↑
Temperature	→
Bed Leveling	→
Change filament	→
Initialzition	



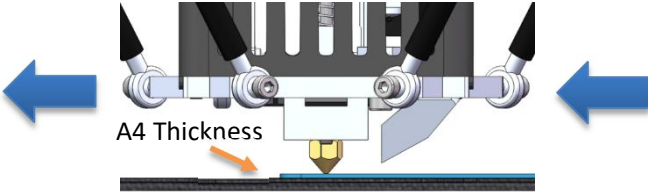
Control	↑
Level bed	
Adjust Height	

Nozzle automatically picks up and records on the bed



Confirm and Exit	↑
Nozzle UP	
Nozzle DOWN	
Nozzle Height:	<u>001.1</u>

Confirm and exit



Observe the relative height of the nozzle to the bed

Confirm and Exit	↑
Nozzle UP	
Nozzle DOWN	
Nozzle Height:	<u>002.0</u>

Adjust Up/Down

3 Insert filament and printing

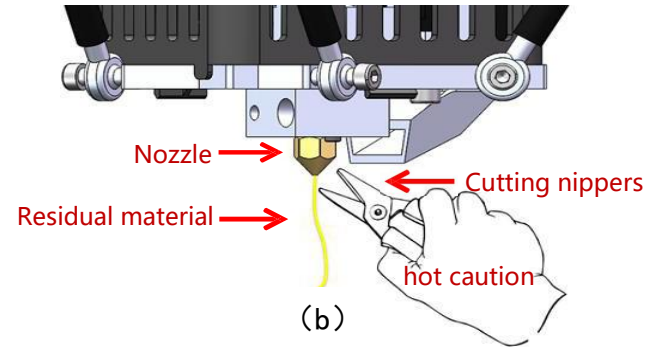
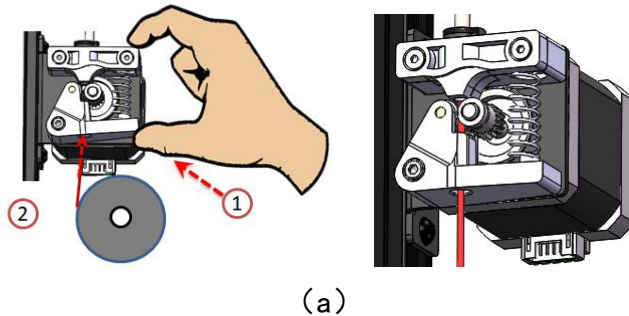
3.1 Insert filament

---Main interface → Control → Change filament → Load filament;

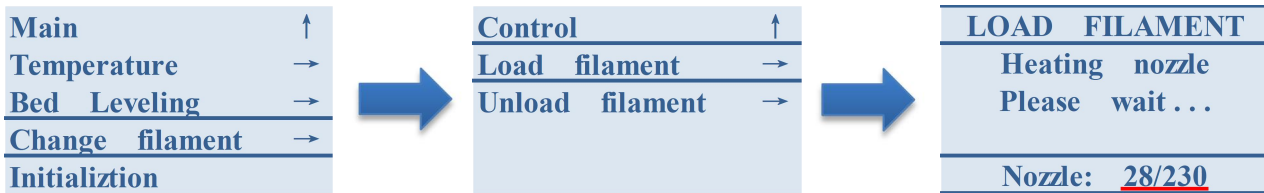
---As shown in figure (a), the filament are inserted;

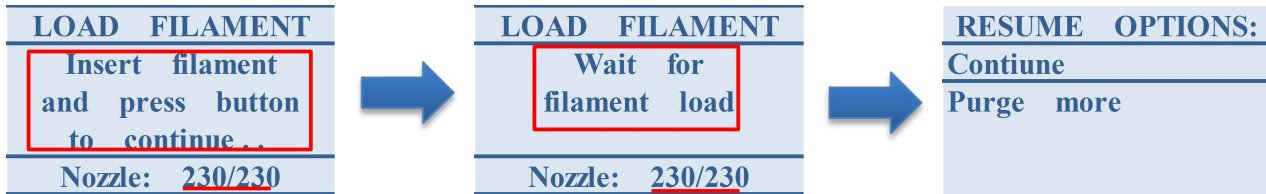
---After the temperature reaches the target temperature, the extruder will feed automatically;

---Clean up the residual material from the nozzle as shown in figure (b) → Continue



Figures as below:

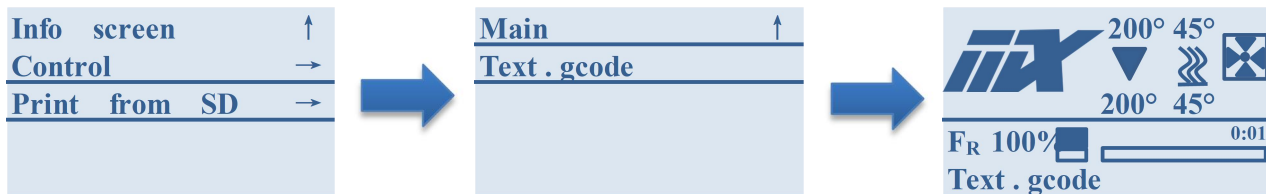




3.2 Print

Insert SD Card → Print from SD → select file(Gcode with a number/English name) to print → Observe the printing effect of the first layer

Figures as below:



Kind reminder: The above operations are for the first printing. For the continuously using, it's no need to operate the feeding filament step if the filament is enough for the next printing; If the printed slice is okay of the 1st layer, no need to leveling again.

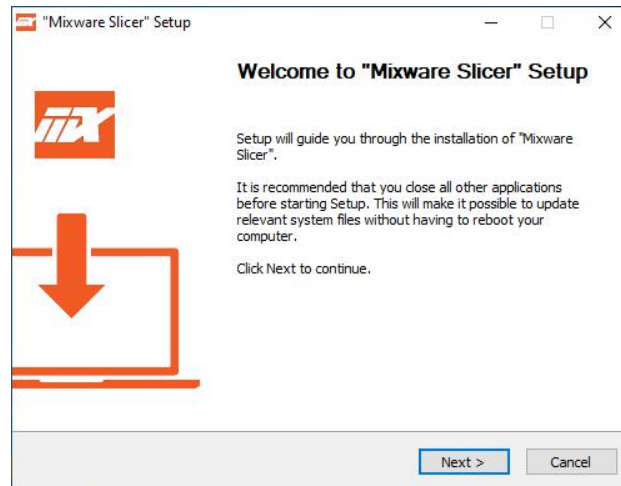
4 Software description and use

4.1 System requirement

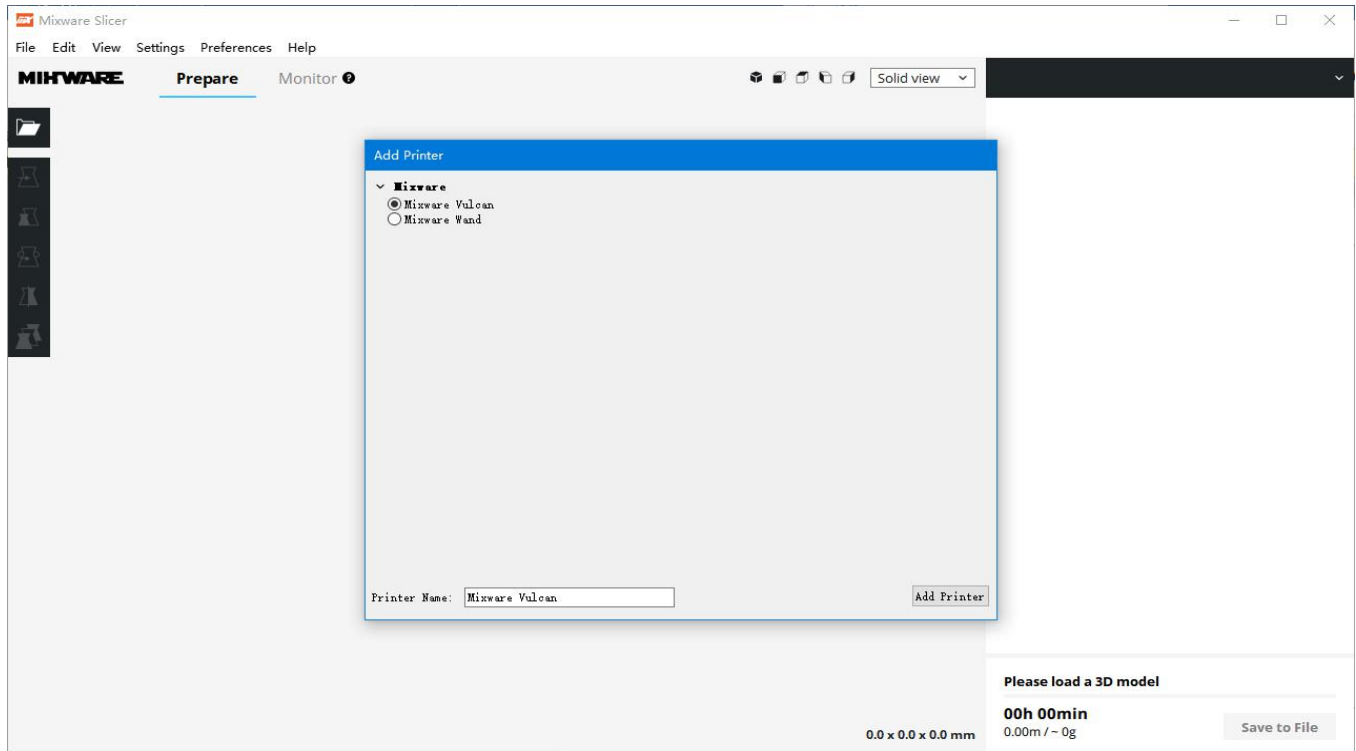
- ◆ Windows 7 or higher (64-bit)
- ◆ Compatible with OpenGL 2 graphics chip

4.2 Install

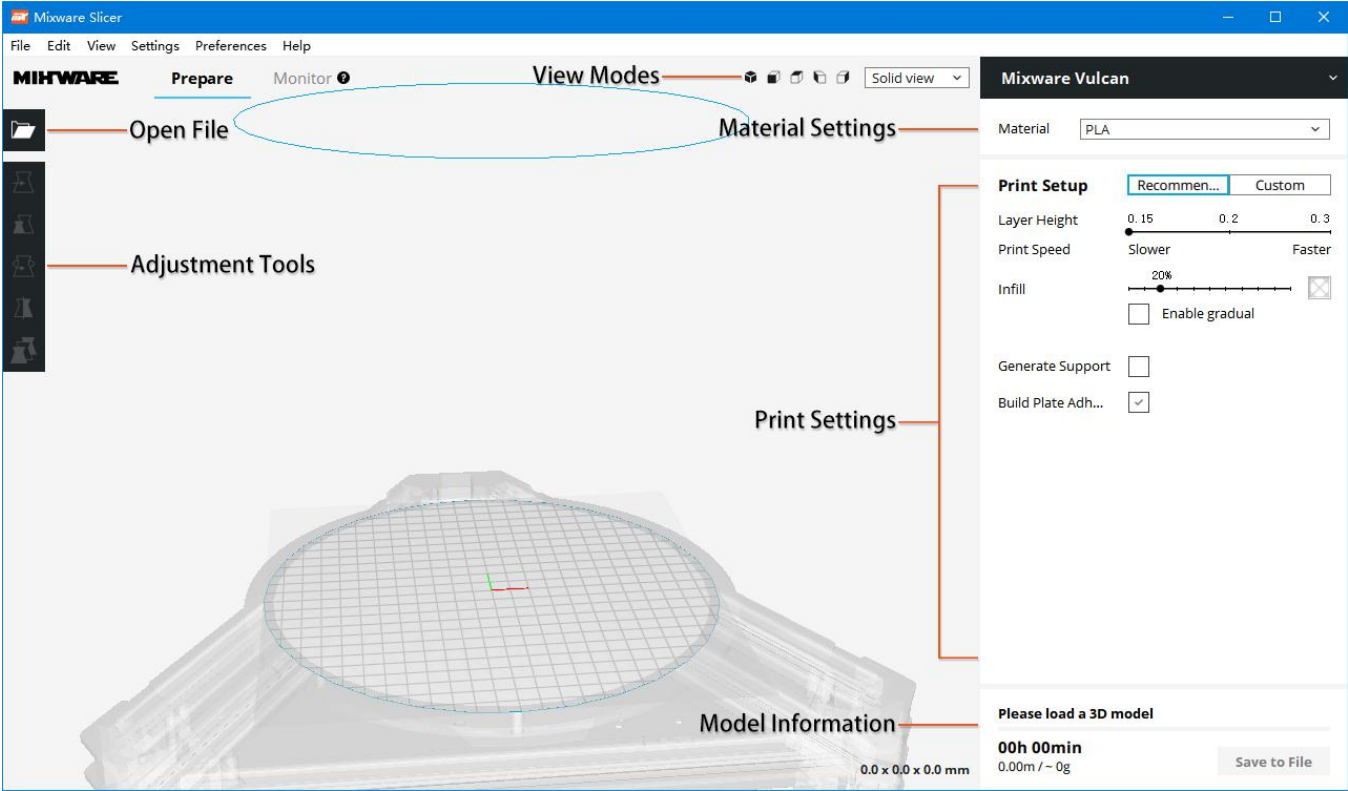
4.2.1 Setup and run the installation wizard to complete the installation



- 4.2.2 When you first open Mixware Slicer, you will be asked to choose a 3D printer model, namely Mixware Vulcan or Mixware Wand. Select the model and directly click "Add Printer" to directly start using Mixware Slicer. Click "Preferences" and select "Configure" to have the language setting, re-start can get into the corresponding language interface.

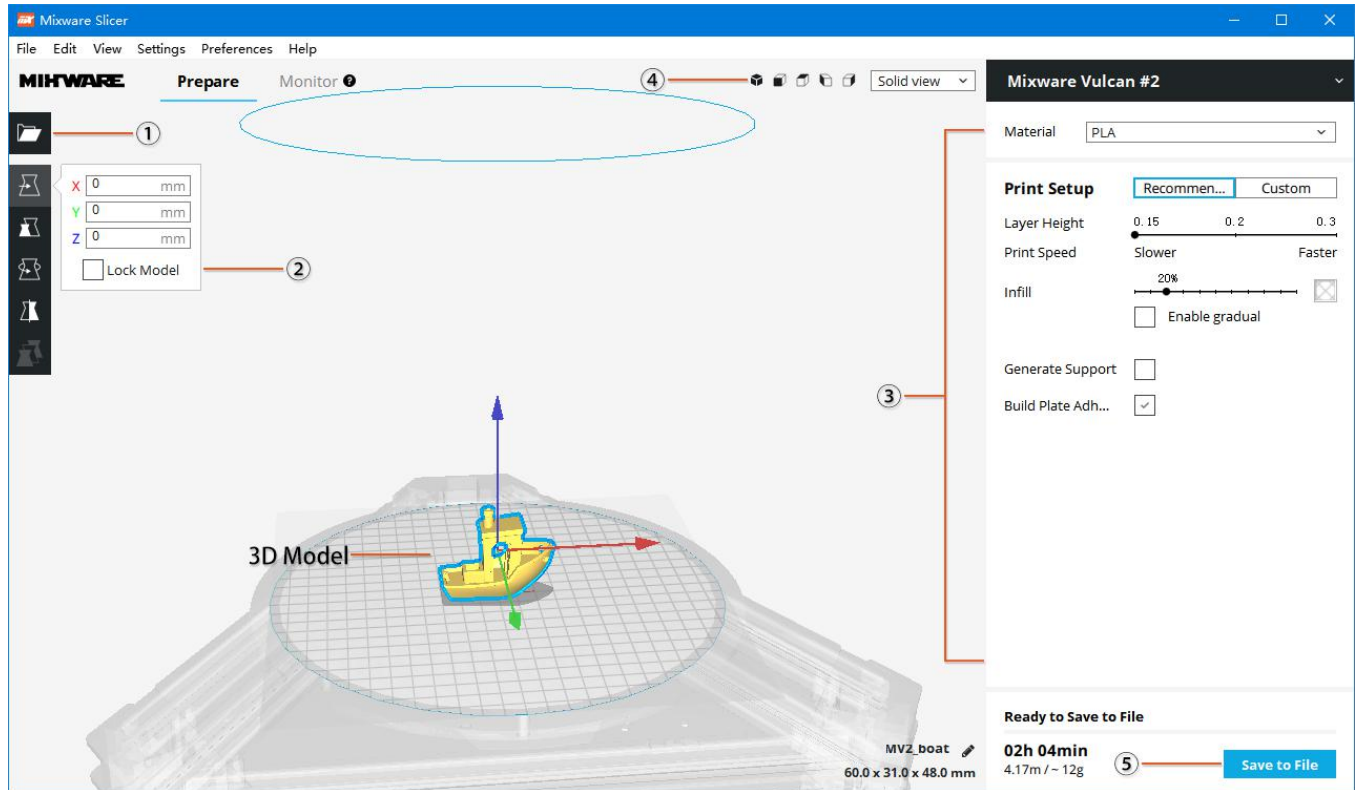


4.3 Interface overview



4.4 Model slicing

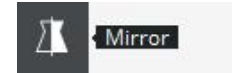
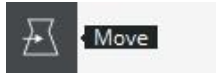
Follow the following steps to complete the model slice:



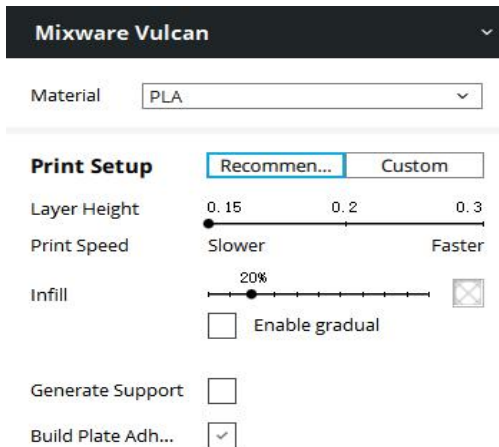


4.4.1 Load the model into Mixware Slicer by clicking "open file" (top left).

4.4.2 Select the model and use the adjustment tool to position, scale, rotate and mirror the model.



4.4.3 Select profile quality in the right sidebar, set the fill ratio, and enable or disable support and print bed attachment.



4.4.4 To view the selected configuration files and the results of supported Settings, go to "view module"



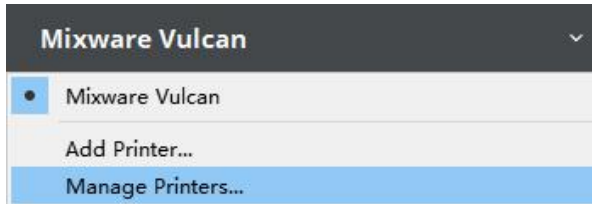
, then click and select "Layer View".

4.4.5 In the lower right corner, select "save to file" or "save to removable drive" to save the print file.

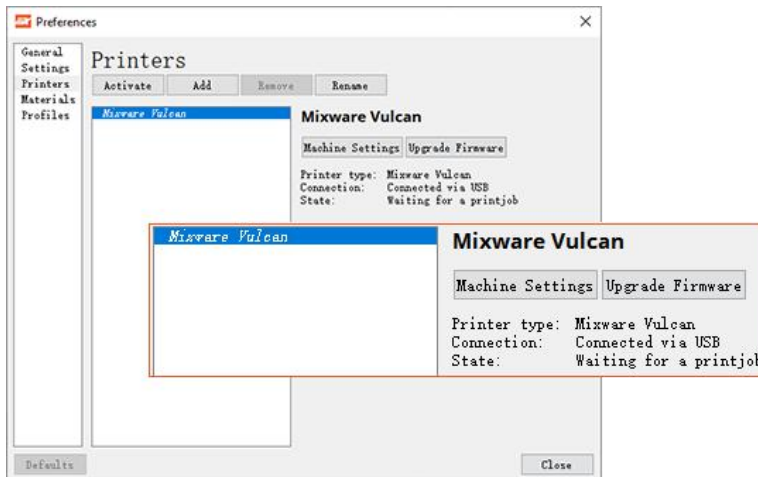
4.5 Upgrade Firmware

Follow the following steps to complete the firmware upgrade:

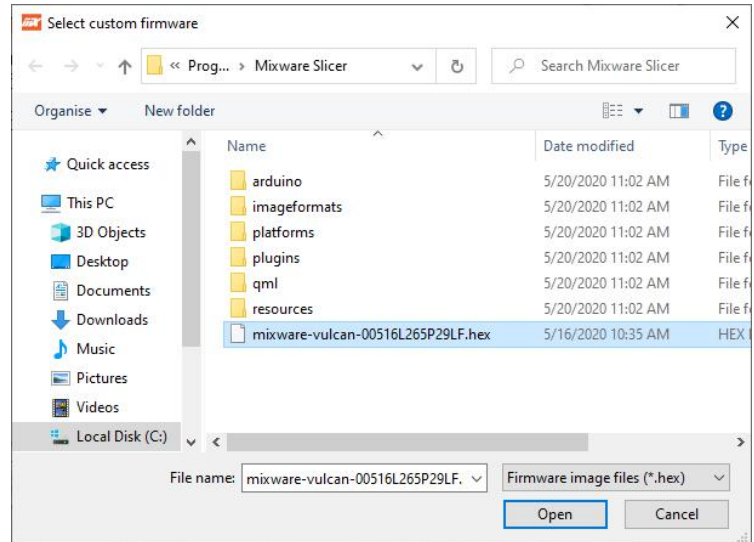
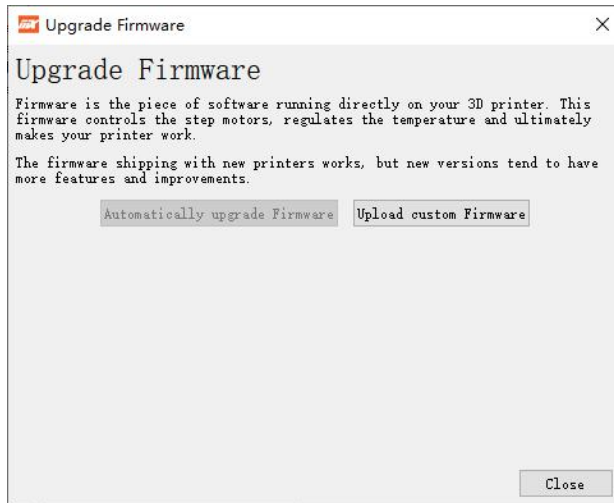
4.5.1 In the top-right corner, select “Manage Printers...” to enter the printers Screen.



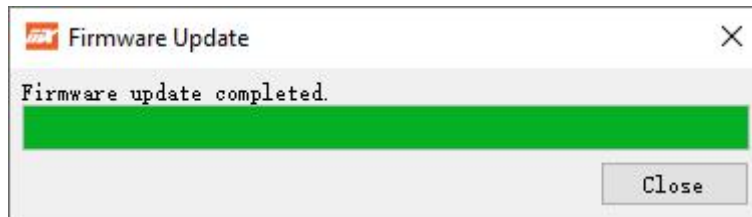
4.5.2 Use USB to connect the printer to Mixware Slicer; The printer screen displays "connect via USB", click "Upgrade Firmware".



4.5.3 Click “Upload custom Firmware”, select upgrade file, waiting for the upgrade to complete.



4.5.4 Firmware update completed.



5 FAQ guide

5.1 Leveling failure

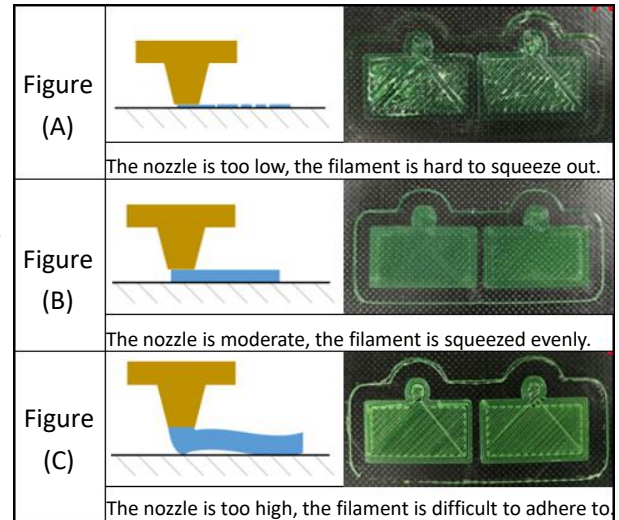
During leveling, the interface (a) appears, and the printer needs to be restarted and initialized, as shown in figure (b). Check whether the leveling switch can be touched normally, please contact the after-sales service for details.

Homing failed
PRINTER HALTED
Please reset

(a)

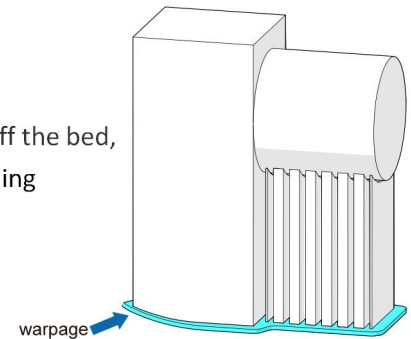
Main ↑
Temperature →
Bed Leveling →
Change filament →
Initialization

(b)

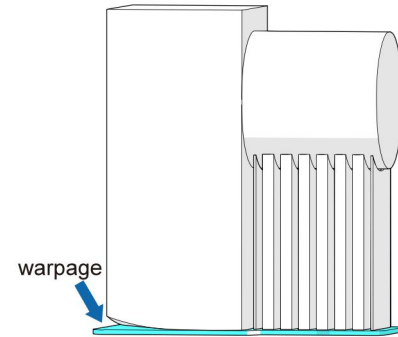
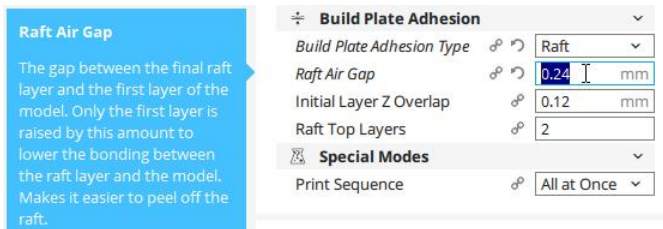


5.2 The first layer printing failed

- 5.2.1 If the extrusion filament cannot adhere to the bed, the nozzle is too high off the bed, as shown in figure "C". Stop print → Main interface → Control → Bed leveling → Adjust Height → Nozzle down(Reduce nozzle height) → Reprint until debug to figure (B).



- 5.2.2 The model not attached on the platform?
Adjust the “Raft Air Gap” of the “Build Plate Adhesion”
in the slice software.
Proposed “Raft Air Gap”: 0.22 or 0.24.



5.3 The LCD screen does not display or displays a white bar

- 5.3.1 Make sure the printer is properly connected or plugged in
- 5.3.2 Ensure that the LCD screen wiring is normal, the main board EXP1 connected to the LCD screen EXP1, EXP2 connected to EXP2

5.4 Cannot print offline

- 5.4.1 Make sure the SD card works
- 5.4.2 Offline printing only supports gcode file, not STL file, please use the slicing software to export the model section gcode file, and the file name must be English/number.

5.5 Print head plug, plug nozzle, different parts of the throat

5.5.1 blocking at the nozzle:

One is the poor quality of consumables; Second, the metal scrap at the nozzle is not cleaned up during processing. We will check to avoid this problem before delivery. If this problem occurs, please try to clean the nozzle or contact the customer service for a solution.

5.5.2 blocking at the throat:

One may be caused by insufficient heat dissipation, please ensure that the fan timely heat dissipation aluminum block; Second, the pipe may not be screwed to the end, please check and make sure that the pipe is screwed to the end.

5.5.3 quick plug joint and heat dissipation aluminum block connection block, this situation is not timely heat dissipation, please check whether the fan is normal operation.

5.5.4 Exchange the printing head according to the schematic diagram:

5.4 loose the top cover of the printing head①;

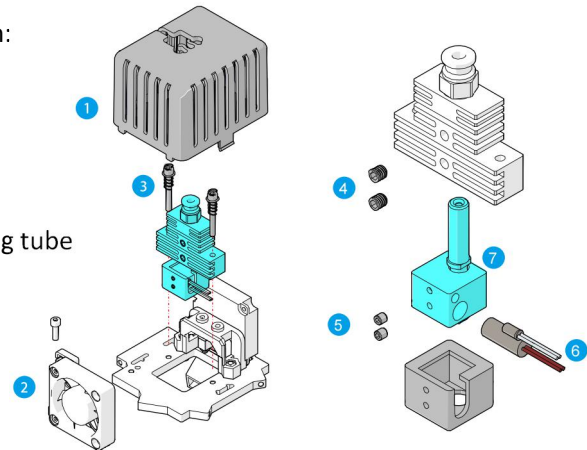
5.5 loose the square shape cooling fan②;

5.6 loose the M3 screws and take out the printing head set③

(make sure the printing head cool down);

5.7 Loose the M4④ and M3⑤ top screws, release the heating tube and the temperature sensor⑥;

5.8 Replace with the new printing head⑦.



5.6 Print head does not wire or wire is not uniform

5.6.1 There are two situations in which the print head cannot produce silk:

The first is the blocking material, please refer to item 3 for treatment, the second is the heating temperature is not enough, the general PLA printing temperature is 180-200 degrees, ABS printing temperature is 210-240 degrees.

5.6.2 printing head wire is not uniform, please make sure that the print head is not blocked, refer to the third, if there is no blocking phenomenon, please check whether the extruder is normal, and the extruder and extrusion bearing to the friction of the material is enough, such as friction is not enough to slip or rotation out of sync, please clean the extrusion wheel.

5.7 The print head wobbles unsteadily

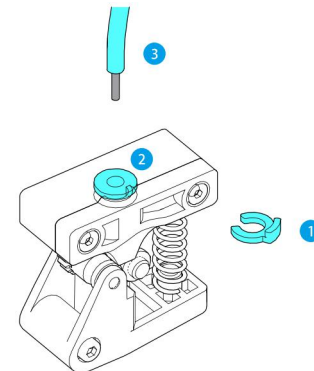
5.7.1 Please check whether the screws holding the fish-eye bearing are loose

5.7.2 Please check the belt connector, the pulley is shaking, if there is, please check whether the screws have been tightened.

5.8 Cracking of filament, cannot extruding filament normally

5.8.1 Following the steps for replace the filament:

- a) Pull out the black plastic ring①;
- b) Press the black claw of the black tube②;
- c) Pull out the feeding tube③;
- d) Take out the cracked filament or shape it flatly;
- e) Re-load new filament.



6 Safety instruction



High temperature will be generated when Vulcan3D printer works. Do not touch working parts or extruder directly with your hands. After printing, the working part may still be in a high temperature state. Please wait patiently for the working parts and print model to cool before removing the model from the print bed.



Vulcan3D printer contains high speed moving working parts, beware of pinch



Please use Vulcan 3D printer in spacious and well-ventilated environment.



Be careful not to swipe sharp objects at your finger when removing the model from the printing bed.



Please pay attention to protect Vulcan 3D printer from rain and moisture.



The recommended ambient temperature for Vulcan 3D printer is 8°C-40°C, and the humidity is 20%-50%. Use outside this range may cause poor printing effect.



The firmware has been debugged and uploaded to the motherboard when leaving the factory, so there is no need to re-upload the firmware when using the machine; Uploading incorrect firmware is likely to cause damage or loss of functionality. It is not recommended to upgrade the firmware if not necessary.



It is not recommended to run Vulcan 3D printer unattended.



In case of emergency, please turn off the power of Vulcan 3D printer.

7 Disclaimer

This user manual is just for installation, operation and maintenance instruction, not the product warranty.


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