Zonestar

Z9V5Pro FDM 3D Printer

(Z9V5Pro-MK4)

User Manual

!! ATTENTION !!

◆Please strictly follow the standard operation when installation.

◆Please put the printer away from the reach of kids.

◆Must be guided by adults when children are installed or used.

◆**Caution: Hot!**

Hotend and hotbed may be very hot even if the 3d printer stop working.

◆ Please keep well-ventilated condition！May produce toxic gases

when the 3d printer is working.

◆For mixing color hot end, must load filament to all of the extruders, or use the

"hotend clean tool" to close the unused channel even if you print single
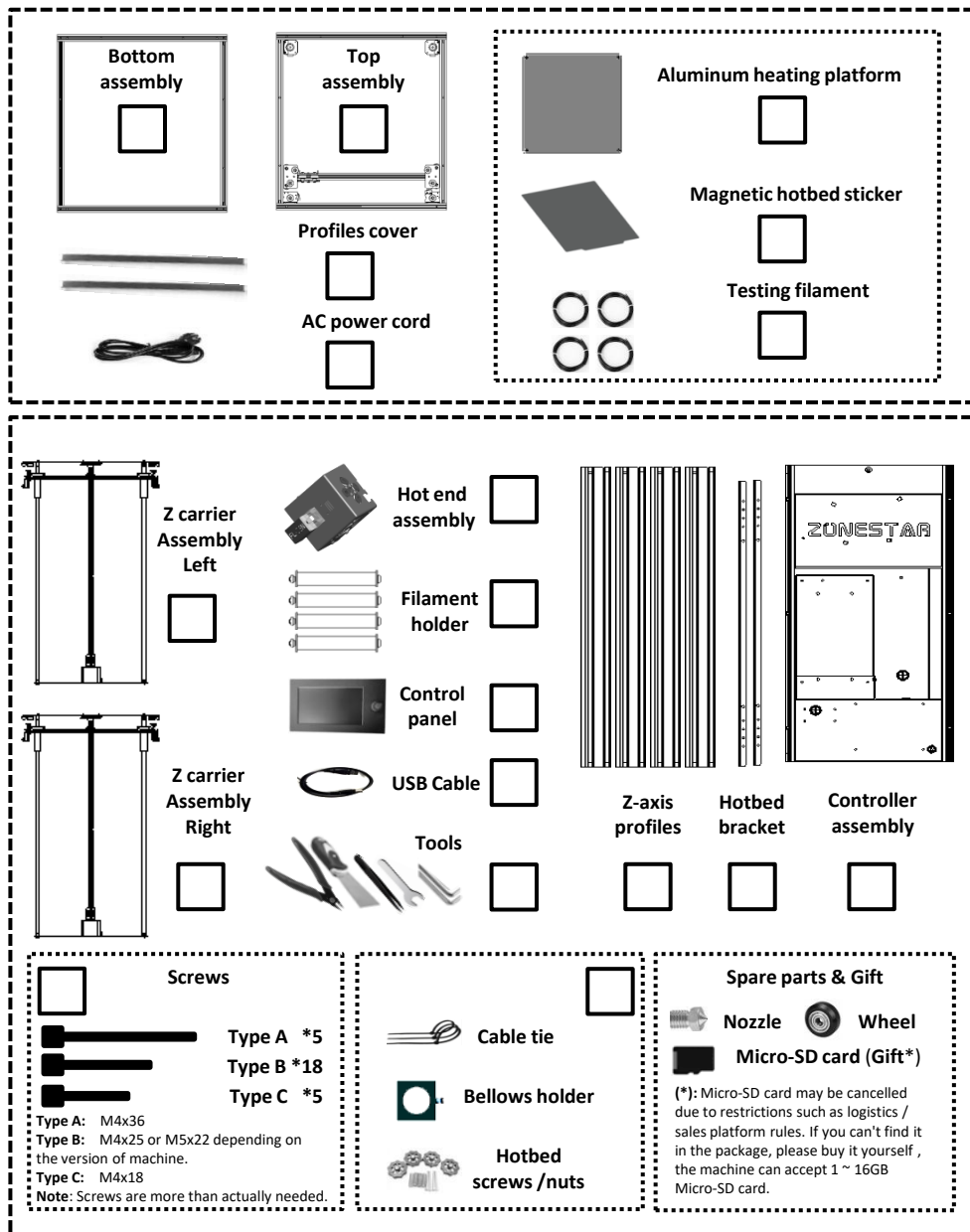
color 3D objects.

> **NOTE:**
> **Please find and read the detail installation and user guide in the SD card if there is any question on installation or use.**

Specifications

Building mode	FFF/FDM	Extruder number	4
Nozzle diameter	0.4mm	Layer thickness	0.1~0.36mm
AC Power voltage	100V~240V	Print speed	40~100 mm/s
Support file format	gcode	Build Volume	Max 300x300x400mm
Hotbed power	24V 250W +-10%	Hotbed temperature	115℃ max
Recommand filament	PLA, PLA+	Rated power	360W Max
Net Weight	15KG	Gross Weight	17.5KG
Machine Size	60x60x65cm	Package Size	63cmx61cmx22cm

Parts

Bottom assembly ☐

Top assembly ☐

Profiles cover ☐

AC power cord ☐

Aluminum heating platform ☐

Magnetic hotbed sticker ☐

Testing filament ☐

Z carrier Assembly Left ☐

Z carrier Assembly Right ☐

Hot end assembly ☐

Filament holder ☐

Control panel ☐

USB Cable ☐

Tools ☐

Z-axis profiles ☐

Hotbed bracket ☐

Controller assembly ☐

☐ **Screws**

Type A *5
Type B *18
Type C *5

Type A: M4x36
Type B: M4x25 or M5x22 depending on the version of machine.
Type C: M4x18
Note: Screws are more than actually needed.

☐ **Cable tie**

Bellows holder

Hotbed screws /nuts

Spare parts & Gift

Nozzle   **Wheel**

Micro-SD card (Gift*)

(*): Micro-SD card may be cancelled due to restrictions such as logistics / sales platform rules. If you can't find it in the package, please buy it yourself , the machine can accept 1 ~ 16GB Micro-SD card.

NOTE
Recommened to check the accessories list when unboxing.

3

Installation

M4x36 **M4x36** **Type B**

Type B *8 **M4x18** **M4x18** **Type B** **Type B**
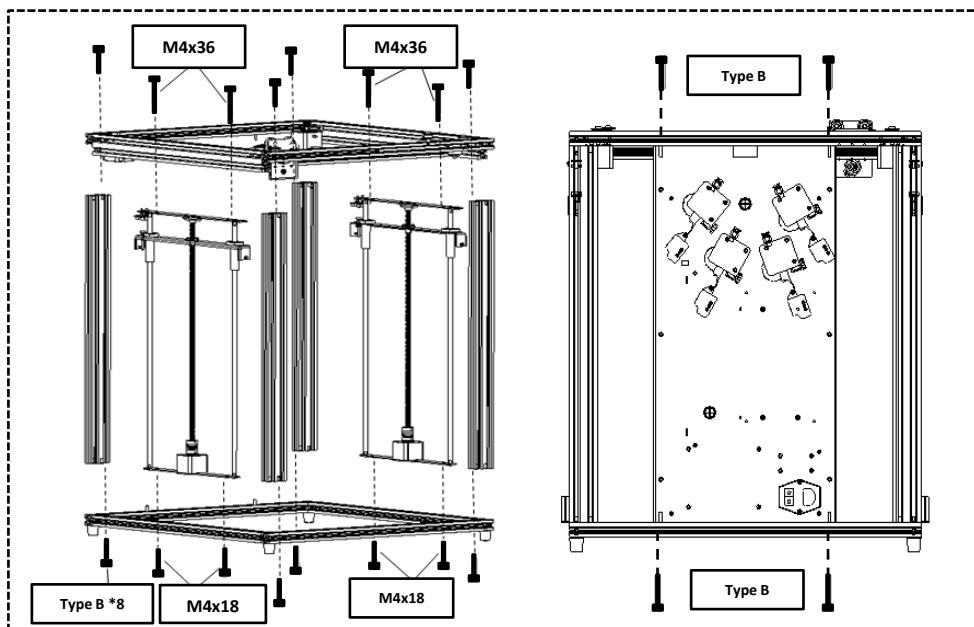
Fix the top assembly with the Z axis profiles.

Type B **Type B**

Push
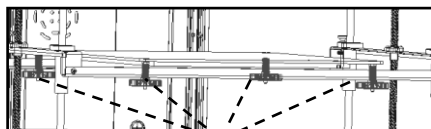
Type B **Type B**
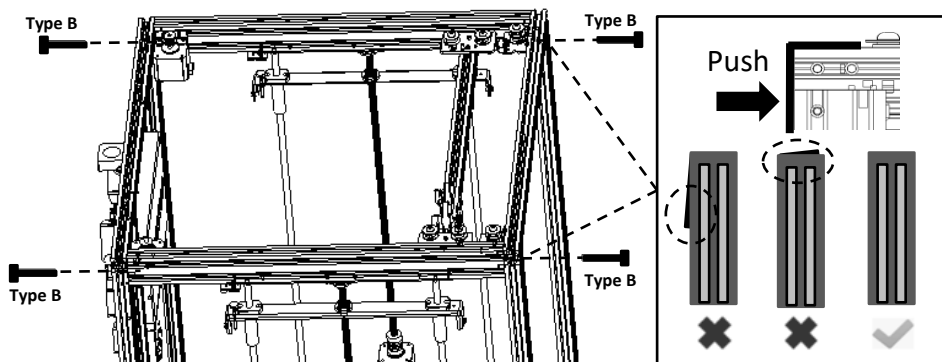
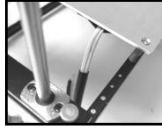***NOTE**: Keep the **y-axis aluminum profiles** aligned with the **z-axis aluminum profiles.**
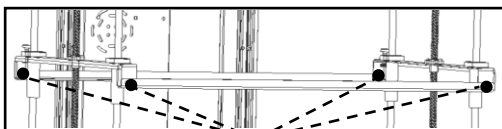
Install the hotbed bracket on the Z-axis carriers.
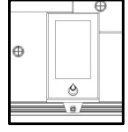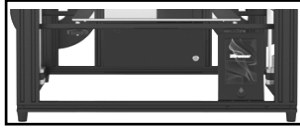**Note**: take down M4x8 screws on the Z-axis carriers first and then tighten them.

Install hotbed on the bracket, put the springs between hotbed and bracket, fix by M4x35 screws and hand nuts.
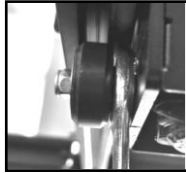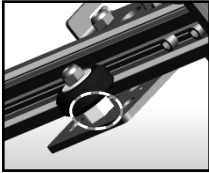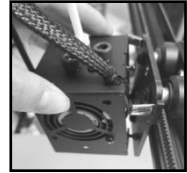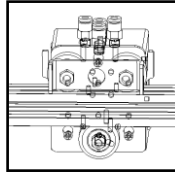
4

Installation

The cable of the hot bed should be placed in the rear/right corner of the machine.

Install the control panel on the front/bottom profile, fix this screw.

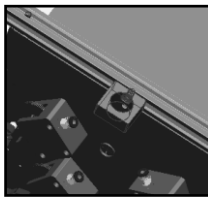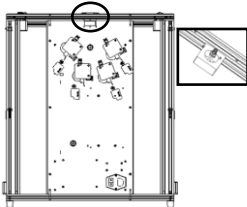Use a wrench to adjust the eccentric column on the X carrier, let it can move smoothly and without shaking.

Loosen the 3 PCS M3 screws on the back of hot-end assembly, then mount it to the X carrier and tighten these screws.

x4

45cm

20cm
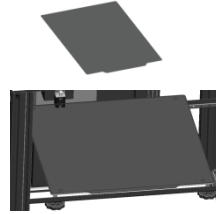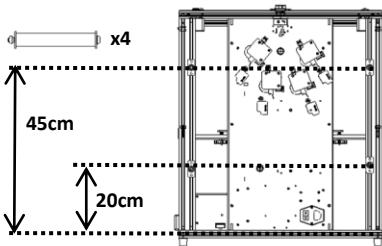
Install 4 PCS filament brackets on the back of the Z axis profiles.
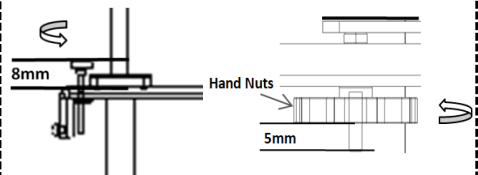

Place magnetic hotbed sticker (A-side) on the hotbed

Install the bellows holder to the center of top-back profile, the bellows wrapping the PTFE tubes and the hot end wires will be fixed here.


8mm

Hand Nuts

5mm

Adjust the height adjustment screws (left and right sides) and the handle nuts (x4) under the hot bed to the height shown in the figure above.

Wiring

X Motor+XSW (X)

ZSW(Z-L)

Z motor (Z-L)

YMotor+YSW (Y)

ZSW(Z-R)

Heatbed

Control Panel
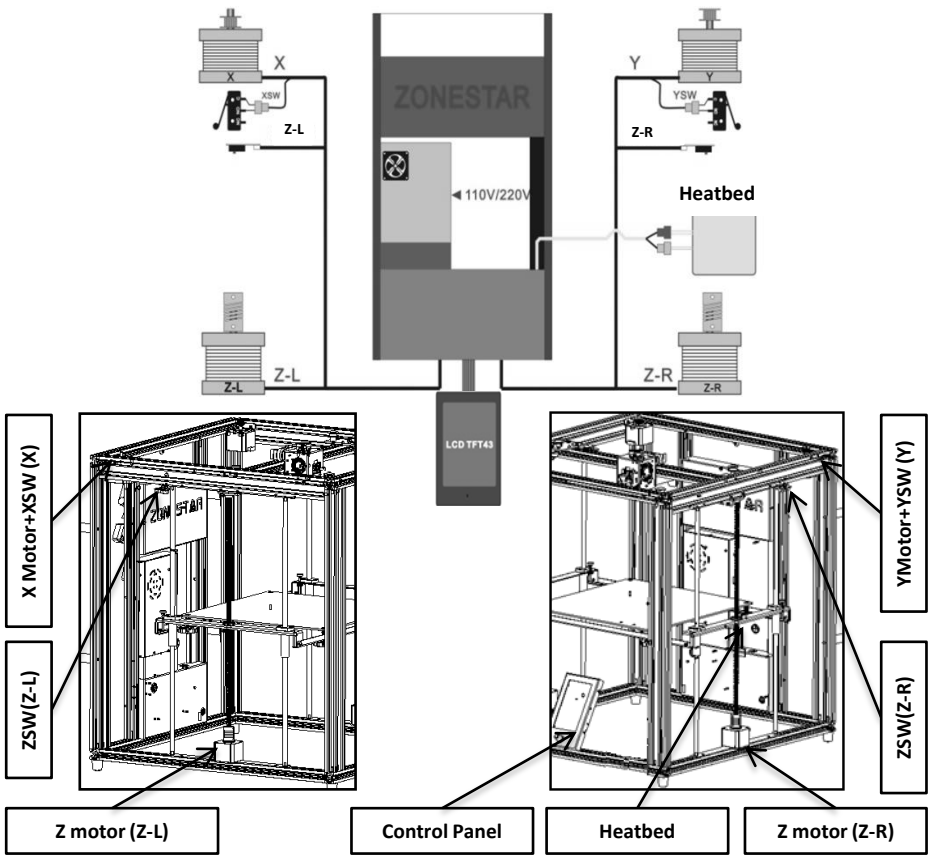
Z motor (Z-R)

NOTE

1. Make sure all of the connectors are plugged well before power on.

2. The left **Z Motor**/**ZSW** and right **Z Motor**/**ZSW** are paired. if the z-axis limit switch is triggered but the Z motor doesn't stop when did HOME All(or HOME Z), please try to exchange the wiring of *ZSW(Z-L)* and *ZSW(Z-R)* and check again.
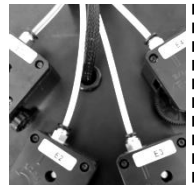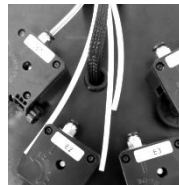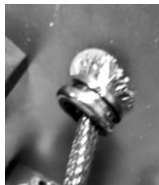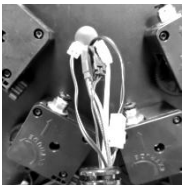
Connet HOTEND wires

Connet filament guide

Step 1: Following the color of connector to wiring the hotend, and then put the wires into the control box.

Step 2: Insert the filament guide (**PTFE tube**) into the extrusion feeder, and according to the user guide of hot end to connect the filament guide to hot end too.

Operation
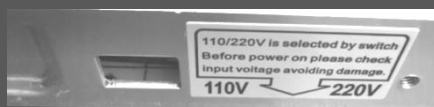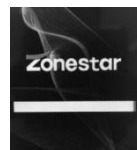
POWER ON

| Plug in AC power cord and turn on the power switch | Push and hold the DC power button 5 seconds until LCD shows "ZONESTAR" Logo |

POWER OFF

◎ Power Outage
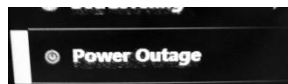
| Do "Power OFF" on LCD screen menu | Wait the LCD screen turn off | Turn OFF AC power switch |

CONTROL PANEL

Zonestar

Print   Prepare

Control   Info

Title bar

Menu bar

Status bar

Operation knob

	Print from SD card
	Prepare to print
	Configurations
	Information of the machine

NOTE

Please refer to "LCD_DWIN Menu Description.pdf" in SD card to get the instruction of menu.

Print from SD card

1. Do *"Prepare>>Auto Home>>Home All"* on control panel, wait the hot end go to the HOME (origin) position.
2. Watch the nozzle, tighten the hand nuts under the bed to move down or loosen these nuts to move up the bed **(Fig 1),** let the nozzle is higher than the bed about 1~2mm **(Fig 2),**.
3. Do *"Prepare>> Bed leveling>> Point 1"* on control panel(**Fig 3**), the nozzle will go to the corners of the bed, adjust the hand nuts under the hotbed and let the nozzle almost touch the hotbed (**Fig 4**).
4. Repeat step 3 to do "*Point 2/3/4*", until all 4 corners has been leveled.
5. Repeat step 3 and STEP4 **to do 3 rounds** at least to confirm all 4 corners at the same height.

Step2: Load filament

1. Do *"Prepare>>Auto Home>>Home All"* on control panel and wait for the hot end move to original position.
2. Do "*Prepare>>Filament>> Preheat nozzle: 200"*, waiting nozzle Temperature reached to 200 ℃ **(Fig 5).**
3. Use a diagonal pliers to cut off the head of filament (**Fig6**), press the handle of the *extrusion feeder #1(E1)* and insert filament to extruder (**Fig 7**), rotate the gear (**Fig 8**) to push the filament until you can see the filament in the PTFE tube (**Fig 9**).
4. Do "*Filament>> Quickly load"* and watch the filament until run out from the PTFE tube.
5. Plug the PTFE tube to the hot end or install the PTFE tube with fitting to the hot end (*).
6. Do "*Filament>> Slowly load"* and watch the nozzle, until you can see the filament flowed out from the nozzle(**Fig 10**).

Step3: Build your first works

1. Plug a SD card to the SD card socket on the printer (*Fig 11*).
2. Click "Print" on the control panel and choose "*Test gcode\xyz_cube.gcode*" (*Fig 12*), click the knob to start printing.
3. Wait until the hot end and hotbed is reached to the setting temperature*,* use a tweezers to remove it if there is filament flowed out from the nozzle*.*
4. After heating finished, the hot end will move to above of the hotbed and start feeding filament. Watch the distance from nozzle to bed, and double click the knob on the control panel to open a "*Baby steps*" menu *(Fig 13)*, rotate knob slowly to fine tune the distance from the nozzle to hotbed*(Fig 14).*
5. Wait the printing finished, you will get your first works *(Fig 15).*
6. Wait the hotbed cool, take off the sticker from the hot bed and remove the prints from the sticker.
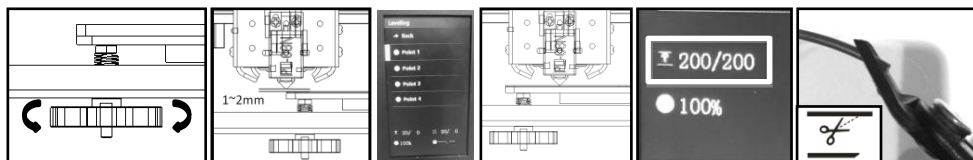

| Fig 1 | Fig 2 | Fig 3 | Fig 4 | Fig 5 | Fig 6 |

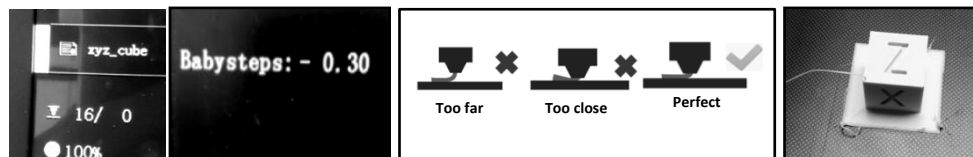| Fig 7 | Fig 8 | Fig 9 | Fig 10 | Fig 11 |

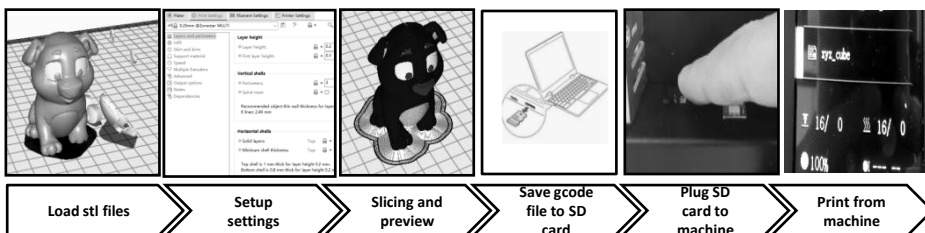| Fig 12 | Fig 13 | Fig 14 | Fig 15 |

Slicing

About Slicing

Slicing a 3D drawing translates the 3D drawing into a language that a 3D printer can understand and print. The slicing software is a computer software used in the majority of 3D printing processes for the conversion of a 3D object model to specific instructions for the printer. In particular, the conversion from a model in *STL(Obj, Amf)* format to printer commands in **g-code** format. This machine can use a variety of slicing software to complete slicing.

!ATTENTION PLEASE!

Slicing software is not a part of this product, but you can download it for free from the internet, some slicing software can be used to this kit, for example Prusa-Slicer, Cura, etc. What we recommend is Prusa-Slicer.

Slicing and print process

| Load stl files | Setup settings | Slicing and preview | Save gcode file to SD card | Plug SD card to machine | Print from machine |

Install and Step up slicing software

1. Please open the LCD screen MENU "**Info>>View User Guide**", and then you can find a QR code, Use your phone's browser to scan it to go the document download link. And then you can find a slicing software download link.
2. Download the slicing software to your PC or laptop and unzip it, find Prusa-Slicer execute file, click to run it.
3. It will start to work a "**Configuration wiza**rd", choose "**Zonestar FFF**" and "**Z9/0.4mm**", click **"finish".**
4. Choose "**Zonestar Z9+E4 HOTEND**" on printer settings.
5. For details to use the slicing software, please read the user guide and video tutorial from the slicing software download link.

Advance Features

Z9V5Pro support more advance features, included "Filament run-out detection", "Power loss recovery", "Power auto shut down", "Bed auto leveling", etc.. For details, please refer to the instructions in the SD card or see "View User Guide"on the "Info" MENU of LCD screen**.**

By upgrading some accessories, you can also get more functions, such as color mixing printing, WiFi wireless control, etc. for details, please refer to the instructions in the SD card or see "View Update News"on the "Info" MENU of LCD screen.

Warranty Conditions

IT IS RECOMMENDED THAT YOU KEEP THE ORIGINAL PACKAGE OF THE PRODUCT IN ORDER TO OBTAIN A PROPER WARRANTY SERVICE.

The warranty obligations for this product are limited to the terms set forth below**:** ZONESTAR Innovation Tech., Co., Ltd.("ZONESTAR"), warrants this product against defects in material and workmanship for a period of 12 months from the date of original purchase ("Warranty Period"). If a defect arises and a valid claim is received within the Warranty Period, ZONESTAR will, at its option, 1) repair the product by using new or refurbished replacement parts, 2) exchange the product with a product that is new or which has been manufactured from new or serviceable used parts and is at least functionally equivalent to the original product, or 3) exchange the product with a product that is new and upgraded model which has at least equivalent or upgraded function to the original product.
Replacement will be offered at ZONESTAR's discretion and the warranty will continue from the date of original purchase. When a product or part is exchanged, any replacement item becomes your property and the removed item becomes ZONESTAR's property and non-returnable.

Warranty service handling instructions:
Please have the serial number ready before contact our support team.
We may provide warranty services in the following ways:
1. Mail the replacement to you, and we will provide replacement instructions and guidance.
2. You are required to send the whole machine back to our maintenance center for maintenance, and then deliver the product to you completely.

NOTE:
In case of the above situation, the warranty period will be extended for 12 months after the delivery time of the repaired parts (or products). Before you deliver your product for warranty service it is your responsibility to prepare a proper packaging by using the original package (or equivalent). Inside the package you must include the defect product and all accessories (cash-receipt, invoices or equivalent document) to the our Services Center. After the repairing service is completed, we will deliver the product to you.
Any product left for repair not reclaimed by the customer within 30 calendar days from the date of collection notice issued by ZONESTAR may be handled or disposed by ZONESTAR in any way whatsoever without prior notice to the customer and ZONESTAR shall not be liable or responsible to the customer for such product or for any losses or damages whatsoever incurred in such event.

Exclusions and Limitations:
This warranty does not apply:
a) to any consumable parts such as nozzle, hotbed sticker or glass, filament guide, etc.; b) to damage caused by accident, misuse, neglect, fire, water, lightning or other acts of nature, unauthorized modification or failure to follow instructions supplied with the product; c) to repair or attempted repair by anyone not authorized by iRobot;
d) in case of unintended usage or bad maintenance including but not limited to cleaning of the product; e) if any serial number has been removed or defaced; f) the warranty does not cover of any damage of cosmetic nature; g) the product does not function properly because it was not originally designed, manufactured, approved and / or uthorized for the country where you used the product, which might occur in instances where the product has been purchased in another country or region than that of its intended used; h) extreme or external causes beyond our reasonable control including, but not limited to, breakdowns, fluctuations, or interruptions in electric power
ZONESTAR makes no guarantee to replace any spare parts of the products that is damaged, broken or malfunctioned such as but not limited to in situations where the affected spare parts of which are not available to Homertek for any reason whatsoever.
Your statutory rights are not affected by the terms of warranty.

Others:
1) In case of dispute relating to the warranty, the maintenance service and / or any information contained herein, ZONESTAR's decision shall be final. The terms and conditions contained here in are for general reference only and are subjected to change without notice.
2) The warranty begins on the date of purchase shown on the purchase voucher (cash-receipt, invoices or equivalent document).

Technology support email address: support@zonestar3d.com

Shenzhen Zonestar Innovation Technologe Co., Ltd.