

 [Buy E4 hotend](#)  [Buy E4 hotend](#)

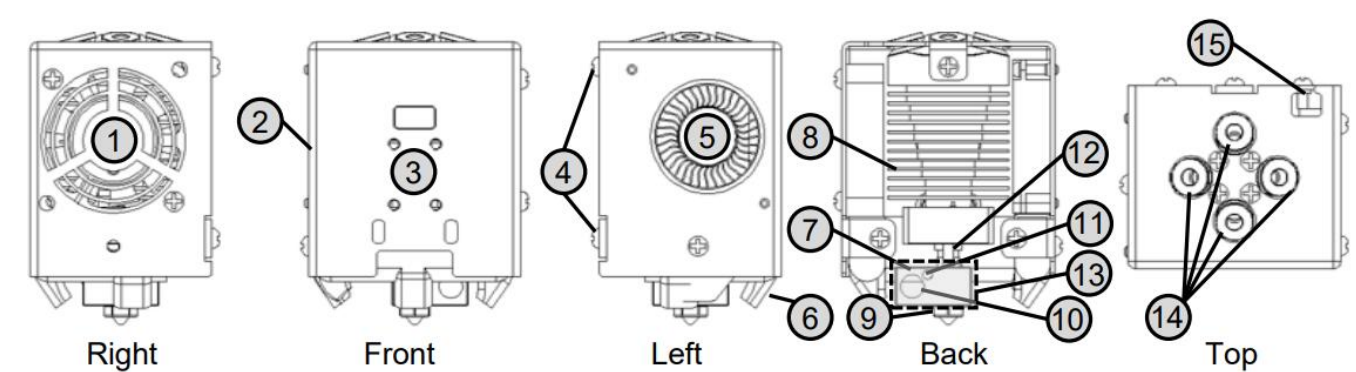
E4 Hotend user guide

1. Specifications

There are 4 input channels and 1 nozzles on the E4 hotend, when switching color, we need to pull out the previous color filament first and then load the next color filament.

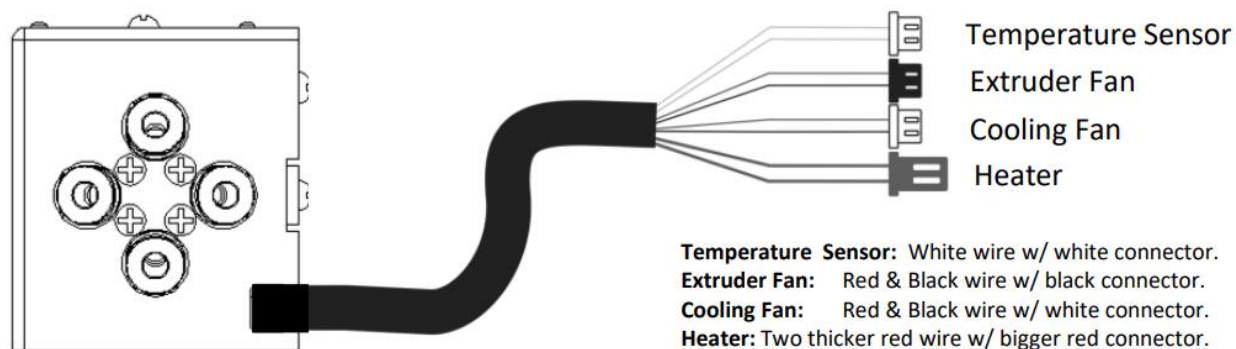
4-IN-1-OUT Non-Mixing-Color Hot end Assembly			
Name			
Item	Value/Parameters	Item	Value/Parameters
Rated Voltage	DC24V/60W Max	Nozzle Diameter	0.4mm Default
Input Channels	4	Nozzle model	V6 Volcano nozzle
Nozzles Number	1	Filament Size	1.75mm
Heater	24V/60W \varnothing 6mmx25mm	Temperature Sensor	NTC Thermistor 100K B3950
Cooling Fan	4010/5000RPM/24V 0.15A	Extruder Fan	4010/5000RPM/24V 0.15A
Applied to	P802/Z5/Z8/Z9/Z10	Filaments	PLA/ABS/PETG, etc.
Wire length	1 meter	Outer Dimensions	50mmx60mmx75mm
Net weight	300g	Gross weight	500g

2. Components



1. Cooling Fan Mounted Screws	2. Housing	3. Bed leveling sensor(optional)	4.
6. Fan Duck Nozzle	5. Extruder Fan	7. Heating block	8. Heat sink
10. Cartridge heater	11. Temperature sensor	12. Throat	13. Silicone sleeve
15. Cable			

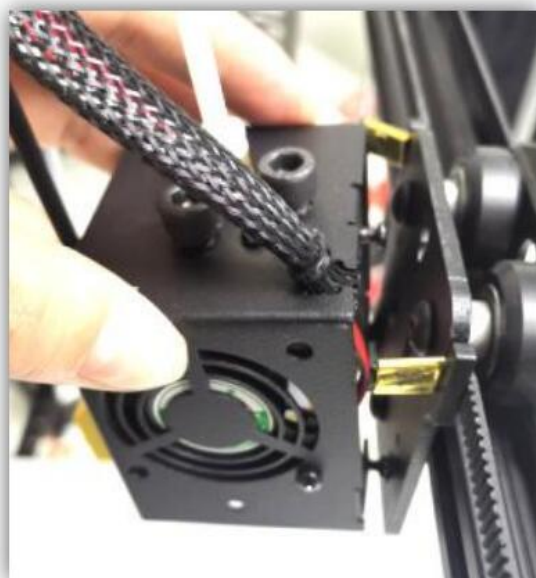
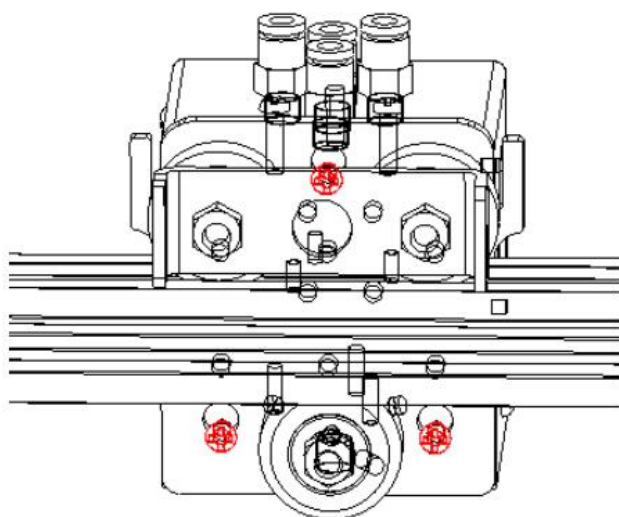
3. Wire and Terminals



4. Installation & wiring

Installation

Simply remove the 3 screws behind the hot end assembly and install the E4 hotend assembly on the X carrier of the machine.



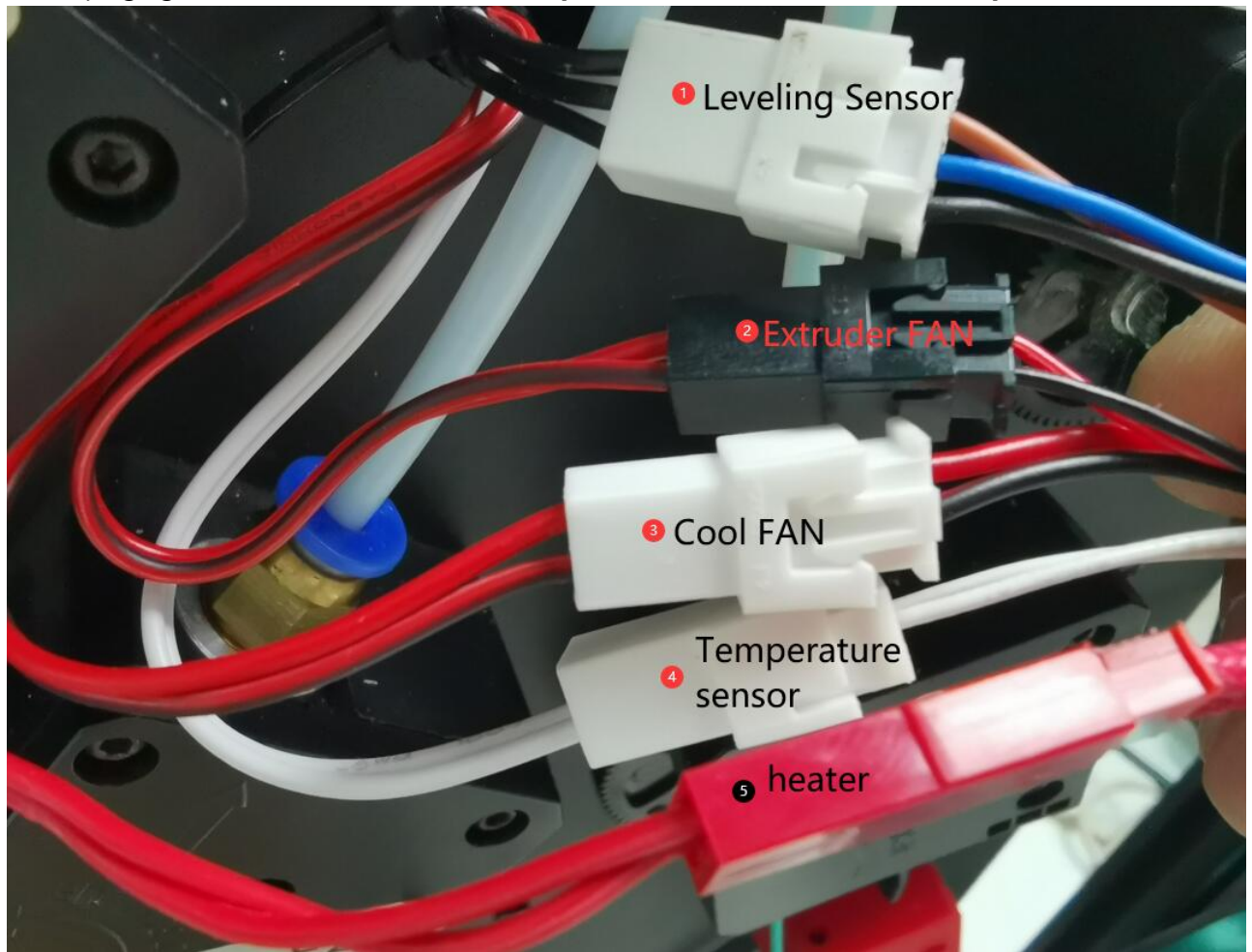
Wiring

 **Please pay attention:**

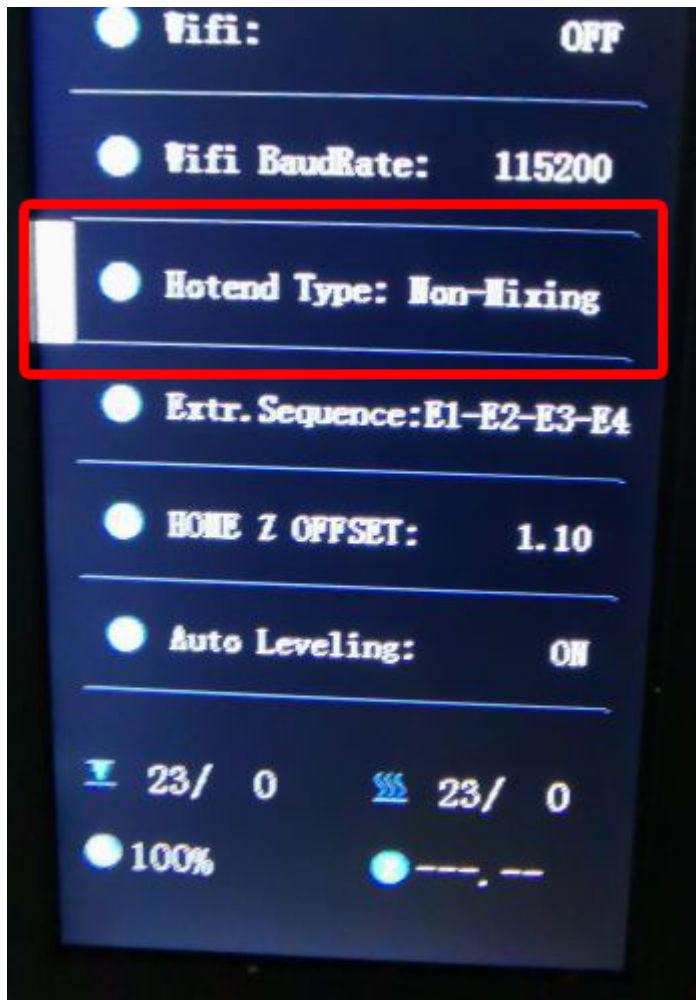
- **Please watch for to distinguish terminals 3 and 4**, because their terminals color are the same, but the wires color are different.

PS: If the wires of 3 and 4 are connected reversely, you can see the nozzle temperature displayed on the LCD screen will be much higher than the room temperature after you powered on the machine.

- When plugging the terminal, **be careful not to push the metal terminal from the plastic case.**

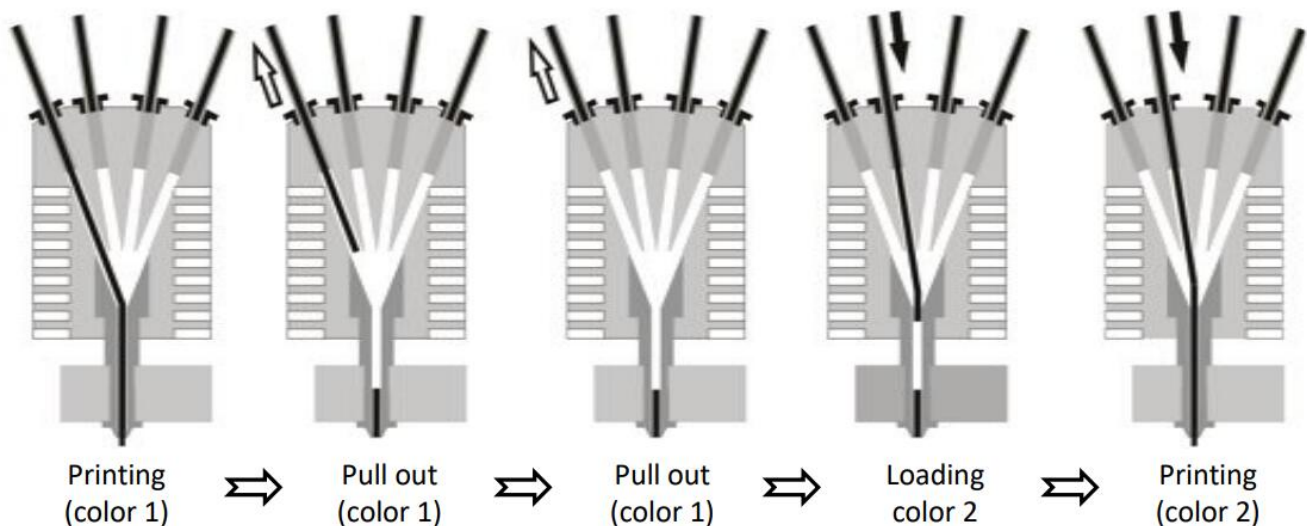


Set hot end type on LCD MENU: Control>>Configure>>Hotend Type



5. Working principle

4-IN-1-OUT hot end is composed of fitting, heat-sink, heater, nozzle and other components, when printing, extrusion feeder insert this color filaments into the hot end, then the filament is melted and flowed from the nozzle. While changing the color, the extrusion feeder needs to pull the previous color filament out of the hot end, and then insert another color filament. Since the melted residual filament in the nozzle cannot be completely pulled out, after replacing the filament, a "wipe tower" needs to be added to remove the residual filament in the nozzle to make better color discrimination, refer to [Slicing](#)



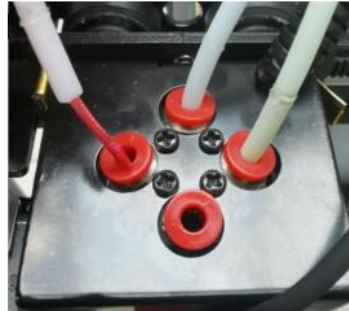
6. Pre-load filaments

Before printing, please pre-load the filaments into the appropriate position of the hot end so that the extruder can load smoothly the filaments into and out of the hot end.

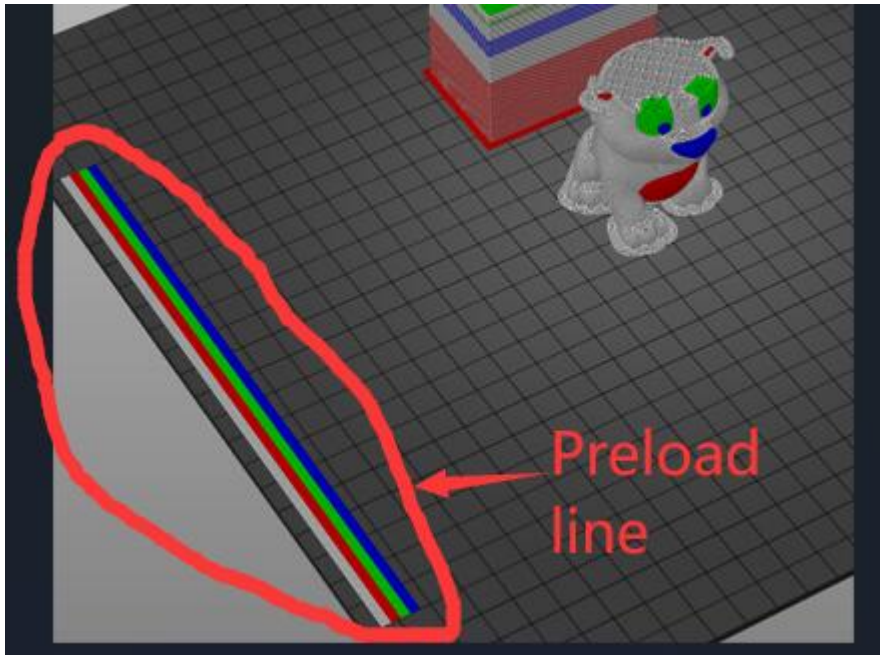
- **Step 1:** Load filaments from the extruder and let the filaments extend about 10mm out of PTFE tubes.
- **Step 2:** Plug the PTFE tubes (with filaments) into the HOTEND.

✂️ ⚠️ **If there is a filament in the hot end, heating and nozzle and then pull it out first.**

✂️ Cutting the front of filaments into a sharp shape before loading filament. ✂️ The filament of the extruder that is not used during printing does not need to be loaded.



✂️ Add some gcodes in the **"Start gcode"** (👉 [View](#)) of slicing software to print.



✂️ Add some gcodes in the **"End gcode"** (👉 [View](#)) of slicing software to pull out the last printed filament from the hotend.

7. Unload filaments

Please follow the steps below to unload the filament from the hotend:

- Step 1: Heating the nozzle (190 degree for PLA and 230 degree for ABS).
- Step 2: Rotate gear of the extruder to unload the filament.
- ★ Some 3d printers (e.g. Z9V5Pro) has a "Filament" Menu on LCD screen, please operate the LCD screen and use menu of "Prepare>>Preheat/Extruder/Unload" etc. to preheat the nozzle, choose extruder and unload filaments.

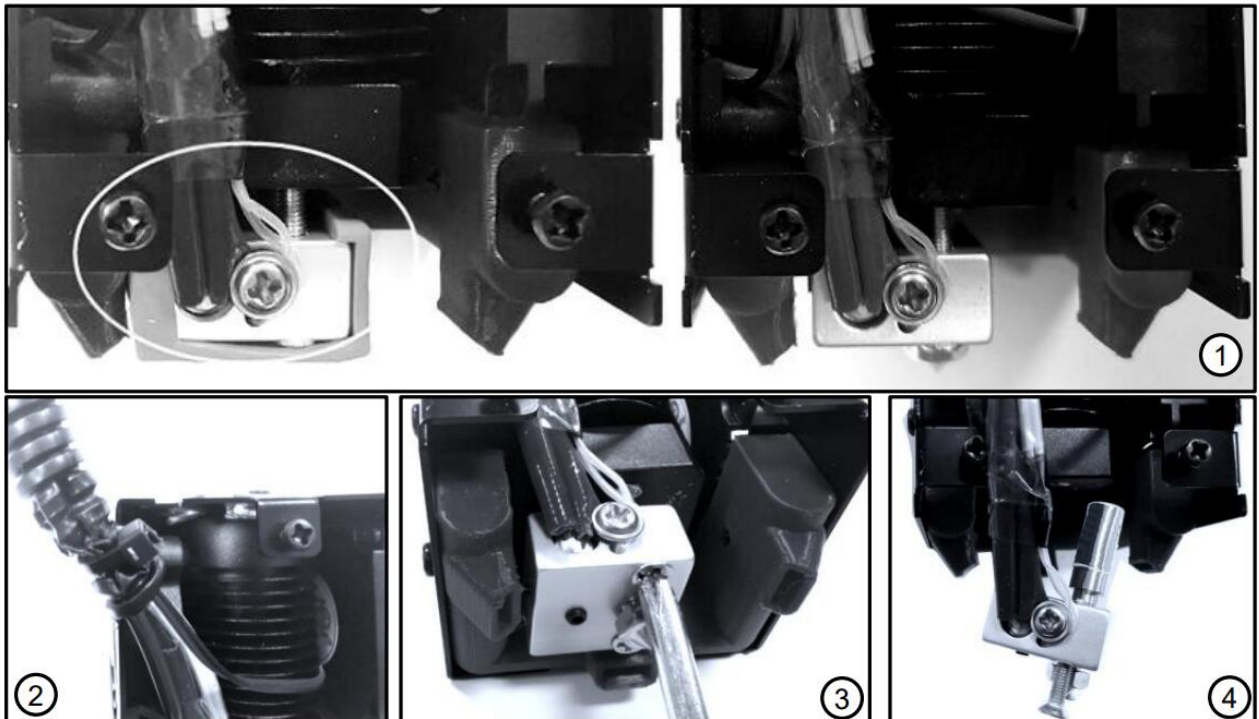
8. Slicing

- For PrusaSlicer(recommended), please refer to [👉 here](#)
- For Cura slicer, please refer to [👉 here](#)
- For Simplify3d Slicer, please refer to [👉 here](#)

9. Maintain

For some reason, it may happen that the filament is clogged inside the hot end and cannot be pulled out and pushed in, in this case, you may need to remove the heating block from the hot end and clean the hot end, the reasons included:

1. The filament breaks inside the hot end, usually because the filament is damaged by moisture or poor quality..
2. When the filament is pulled out, the melted front end will be pulled out a long filament, and when a new filament enters, the filament may be glued together and cannot be inserted. The cause is usually an excess of toughening agent added to the filament.
3. The filament is not completely melted due to the printing temperature setting problem, and may be stuck in the PTFE tube when pulled out.
4. The "switch extruder" setting in the slicer setting is incorrect, such as insufficient load and unload length or wrong sequence, which may also cause blockage.



10. Testing gcode

We have uploaded some test files to our website, you can download them from [here](#)

Video tutorial

-  [How to load Filament - for one color printing](#)
-  [How to load Filament - for multi colors printing](#)
-  [Download and install slicing software](#)
-  [Slicing guide - for one color printing](#)

- 🎥 [Slicing guide - for multi colors printing](#)
- 🎥 [Slicing guide - Convert one color 3d file to multi colors](#)