

3D Printer User Manual

V1.0

To Our Dear Users

Thank you for choosing Creality. To make using our products easier, please read this User Manual before you start andfollow the instructions provided carefully. Creality is always ready to provide you with high-quality services. If you encounter any issues or have any questions whenusing our products, please use the contact information at the end of this manual to contact us.

To further improve your user experience, you can find more about our devices via the following methods:

User manual: You can find instructions and videos in the TF card provided with the printer.

You can also visit our official website (https://www.creality.com) to find information regarding software, hardware,contact information, device instructions, device warranty information, and more.

Firmware Upgrade

Please visit our official website https://www.creality.com/download, switch to your language, then select your printerand model. Download the required firmware and install it to use it with your printer.

NOTES

1. Do not use the printer any way other than described here in order to avoid personal injury or property damage.
2. Do not place the printer near any heat source or flammable or explosive objects. We suggest placing it in a well-ventilated, low-dust environment.
3. Do not expose the printer to violent vibration or any unstable environment, as this may cause poor print quality.
4. Before using experimental or exotic filaments, we suggest using standard filaments such as ABS or PLA to calibrate and test the machine.
5. Do not use any other power cable except the one supplied. Always use a grounded three-prong power outlet.
6. Do not touch the nozzle, hotbed or motor while the printer is in operation, otherwise you may get burned.
7. Do not wear gloves or loose clothing when operating the printer. Such cloths may become tangled in the printers moving parts leading to burns, possible bodily injury, or printer damage.
8. When cleaning debris from the printer hotend, always use the provided tools. Do not touch the nozzle directly when heated. This can cause personal injury.
9. Clean the printer frequently. Always turn the power off when cleaning, and wipe with a dry cloth to remove dust, adhered printing plastics or any other material off the frame, guide rails, or wheels. Use glass cleaner or isopropyl alcohol to clean the print surface.
10. Children under 10 years old should not use the printer without supervision.
11. This machine is equipped with a security protection mechanism. Do not manually move the nozzle or printing platform mechanism manually while booting up, otherwise the device will automatically power off for safety.
12. Users should comply with the laws and regulations of the corresponding countries and regions where the equipment is located (used), abide by professional ethics, pay attention to safety obligations, and strictly prohibit the use of our products or equipment for any illegal purposes. Creality will not be responsible for any violators' legal liability under any circustance.

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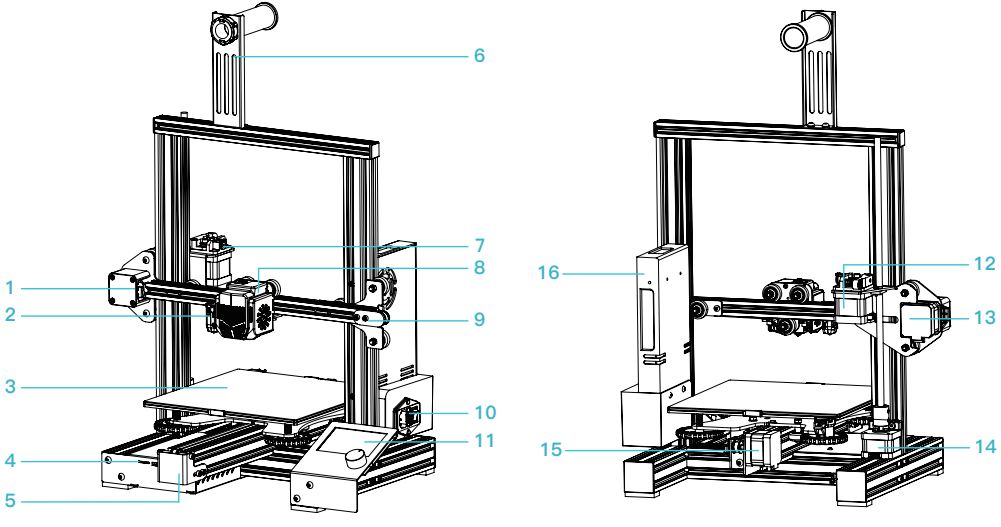
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1. About the Printer



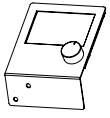
1 X-axis limit switch	5 Y-axis tensioner	9 X-axis tensione	13 X-axis motor
2 CR-Touch	6 Material rack and material barrel	10 Power switch and socket	14 Z-axis motor
3 Printing platform	7 Extrusion kit	11 Screen	15 Y-axis motor
4 Storage card slot	8 Nozzle kit	12 E-axis motor	16 Power supply module

2. Equipment Parameters

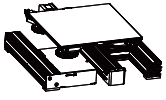
General Specifications	
Model	Ender-3 Neo
Modeling Dimensions	220*220*250mm
Modeling Technology	FDM
Number of Nozzles	1
Slice Thickness	0.1mm-0.4mm
Nozzle Diameter	0.4mm (standard)
Precision	±0.1mm
Printing Material	PLA/ABS/PETG
Supported File Format	STL/OBJ/AMF
Printing Method	TF card/USB on-line printing
Supported Slicing Software	Creality Slicer/Cura/Repetier-Host/Simplify3D
Rated Voltage	100-120V~ 200-240V~ 50/60Hz
Rated Power	350W
Heated Bed Temperature	≤100°C
Nozzle Temperature	≤260°C
Power Loss Recovery	Yes
Auto Leveling	Yes
Language	中文/ English
PC Operating Systems	WIN/MAC/Linux
Printing Speed	≤120mm/s

3. Parts List

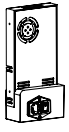
Parts List



1 Screen



2 Base component



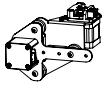
3 Power supply module



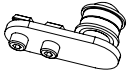
4 Z-axis passive block



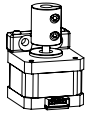
5 Nozzle kit



6 Extrusion kit



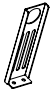
7 X-axis passive block



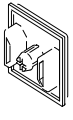
8 Z-axis motor component



9 Material barrel



10 Material rack



11 2020 profile cover



12 Z-axis profile (Right)



13 Z-axis profile (Left)



14 Top gantry profile



15 X-axis profile



16 T-type screw rod

Note: The components above are for reference only. The actual product shall prevail.

3. Parts List

Tool list



17 TF Card and Card Reader



18 Wrench and screwdrive



19 Cutting plier



20 Nozzle Cleaner



21 power cable



22 Blade



23 Blue clip×2



24 Nozzle



25 Quick release claw



26 Cable tie



27 X-axis timing belt



28 Filament



29 M5×8 Hexagon Socket Button Head Screw×4



30 M4×20Hexagon Socket Head Cap Screw×2



31 M4×16Hexagon Socket Button Head Screw (with spring washers)×4



32 M5×45Hexagon Socket Head Cap Screws (with spring washers) ×4



33 M5 T nuts×2



34 M4×18Flat Head Socket Cap Screw×2



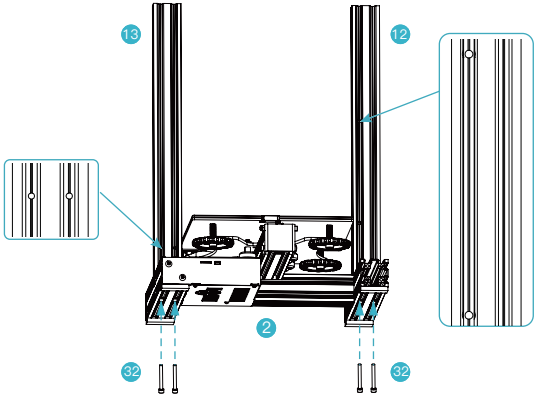
35 M5×25Hexagon Socket Head Cap Screws (with spring washers)×4

Note: The components above are for reference only. The actual product shall prevail.

4. Install the Printer

4.1 Assemble Z-axis profiles

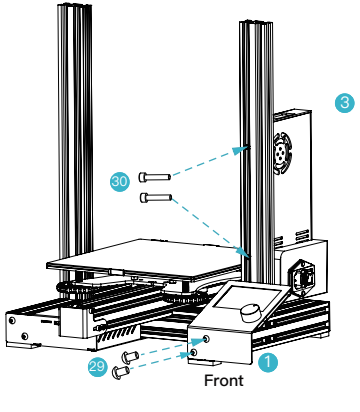
Make sure that the Z-axis profile is perpendicular to the profile of machine base and flush with both left and right sides of the base profile, and tighten the four M5 x 45 screws from the bottom upwards.



4.2 Install screen and power supply components

A. Fix the power supply behind the right profile of the Z-axis, pre-lock it first with two M4 x 20 screws aligned with the holes and then tighten to secure it.

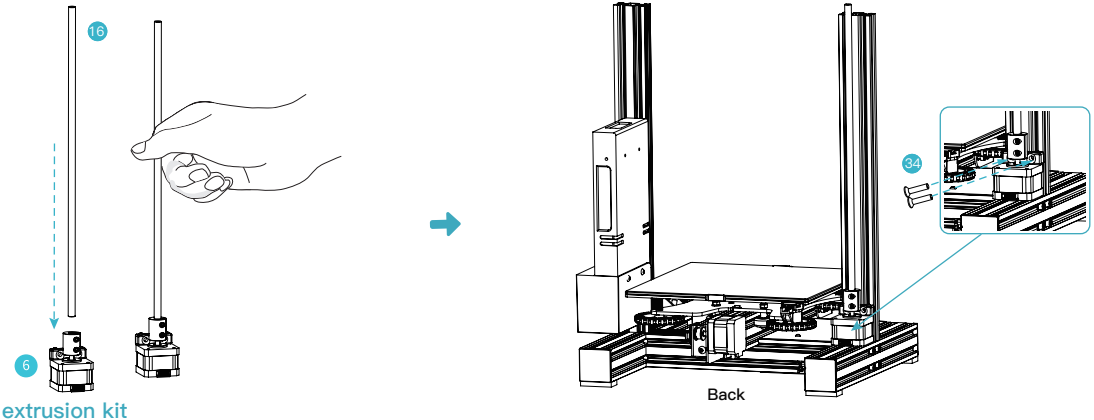
B. Secure the display fixing plate to the base assembly using two M5 x 8 screws.



4.3 Install Z-axis motor component and T-type screw rod

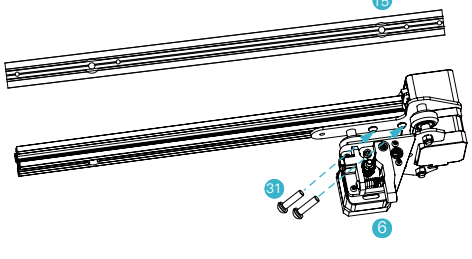
A. Insert the T-rod onto the Z-axis motor assembly and tighten to secure.

B. Lock the Z-axis motor assembly to the profile using two M4 × 18 screws.



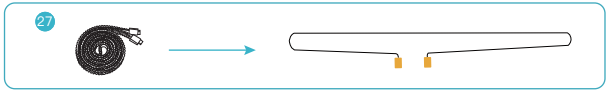
4.4 Install the extrusion kit

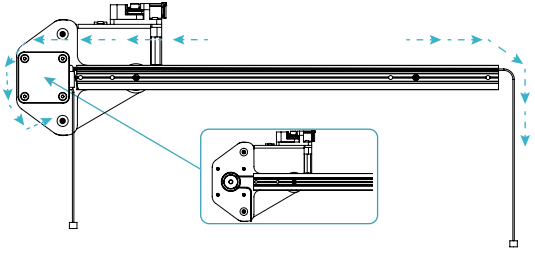
Fix the extrusion kit to the left end of the X-axis profile using two M4 x 16 screws.



4.5 Install the X-axis timing belt

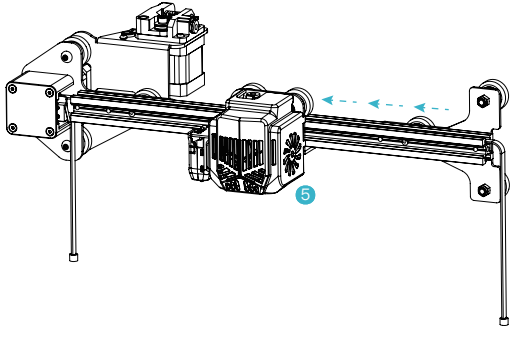
Thread the X-axis timing belt through the XE-axis assembly. (As shown in the diagram below)

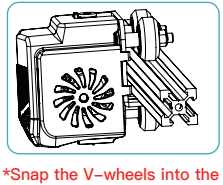




4.6 Install the nozzle kit

Slide the nozzle kit into the X-axis profile.

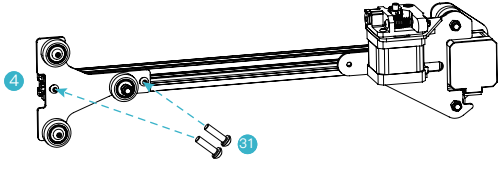




*Snap the V-wheels into the V-slot of the X-axis profile

4.7 Install Z-axis passive block

Fix the Z-axis passive block to the right end of the X-axis profile using two M4 x 16 screws.



* just pre-tight the screws

4.8 Install X-axis passive block

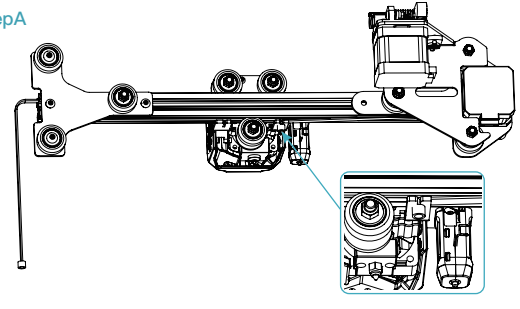
A. Snap the brass sleeve on the left side of the X-axis timing belt into the extruder back support plate.

B. Fix the X-axis passive block to the X-axis profile. (Be careful not to screw it down and make sure the X-axis passive block can slide along the X-axis profile.)

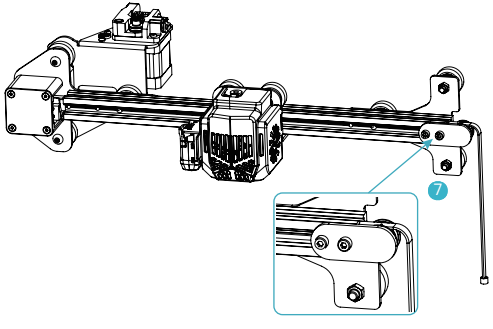
C. After winding the X-axis timing belt around the X-axis passive block, snap the brass sleeve at its right end into the extruder back support plate.

D. Push the X-axis passive block to the right to tension the X-axis timing belt to the same state as the Y-axis timing belt, then tighten the set screw on the X-axis passive block.

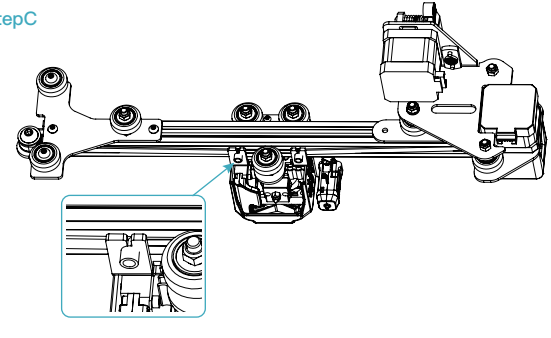
StepA



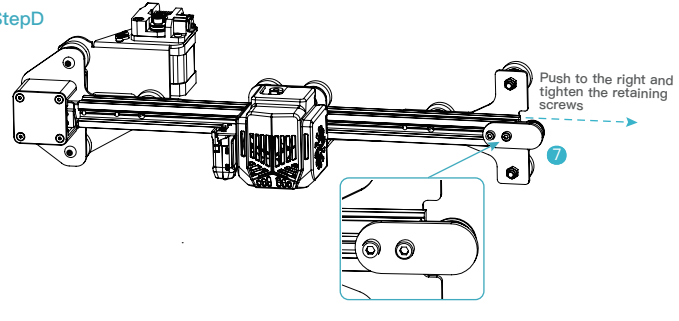
StepB



StepC

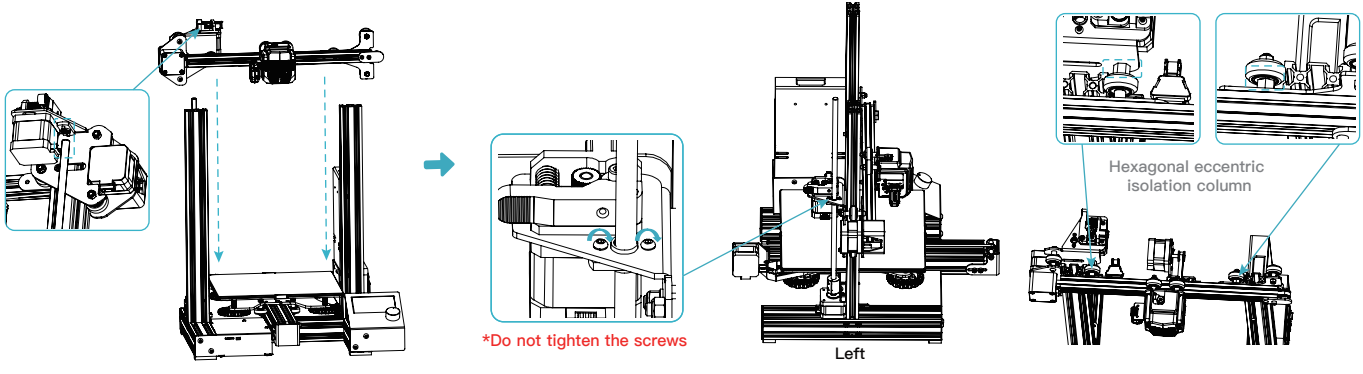


StepD



4.9 Install the X-axis kit and adjust tightness

Fit the X-axis kit into the Z-axis profile, with the V-wheels on the left and right sides aligned with the slot in the profile and the T-rod nut aligned with the T-rod. (Note: The eccentric spacers on the left and right need to be adjusted if the left and right passive blocks cannot get in.)

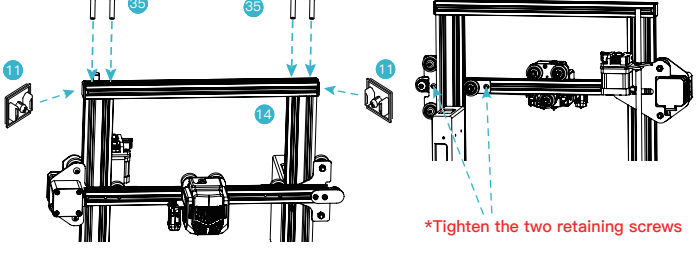


4.10 Install the top gantry profile and profile cover

A.Secure the top gantry profile to the top end of the gantry with four M5 x 25

B.Attach the profile covers to the ends of the top gantry profile.

C.Tighten the two retaining screws on the Z axis passive block.

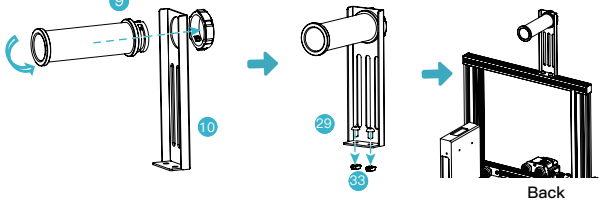


4.11 Install the material rack and barrel

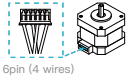
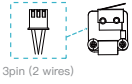
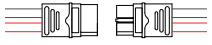
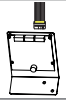
A.Assemble the material rack and barrel.

B.Thread the two M5 x 8 screws through the material rack and then screw on the M5 T-nuts. (Note that there is no need to screw it down)

C.Finally, fix those components to the top gantry profile.



4.12 Equipment Wiring

 6pin (4 wires) X,E,Z–axis motor port	 3pin (2 wires) X–axis limit switch	 Mainboard power cable	 Display cable

A1.Follow the yellow label on the 6pin (4 wires) port to connect the X–axis stepper motor;

A2.Follow the yellow label on the 6pin (4 wires) port to connect the E–axis stepper motor;

A3.Follow the yellow label on the 6pin (4 wires) port to connect the Z–axis stepper motor;

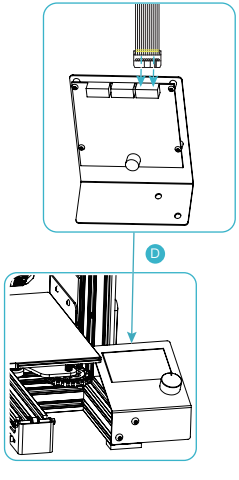
B. Follow the yellow label on the 3pin (2 wires) port to connect the X axis limit switch;

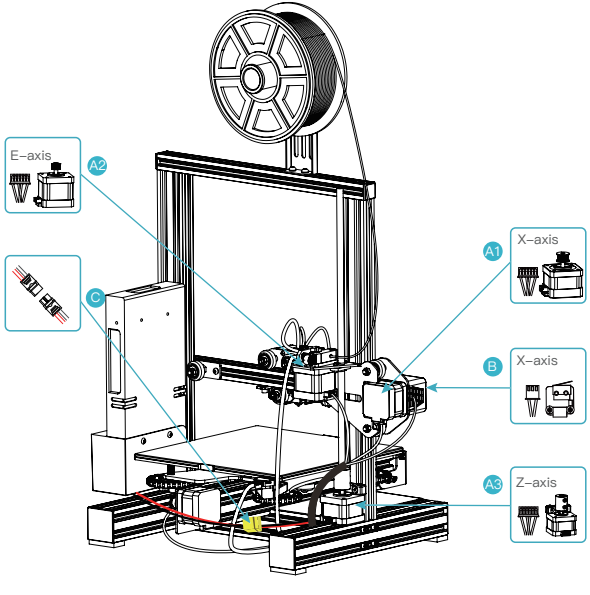
C. Connect the mainboard power cable;

D. Connect the display cable.

Caution

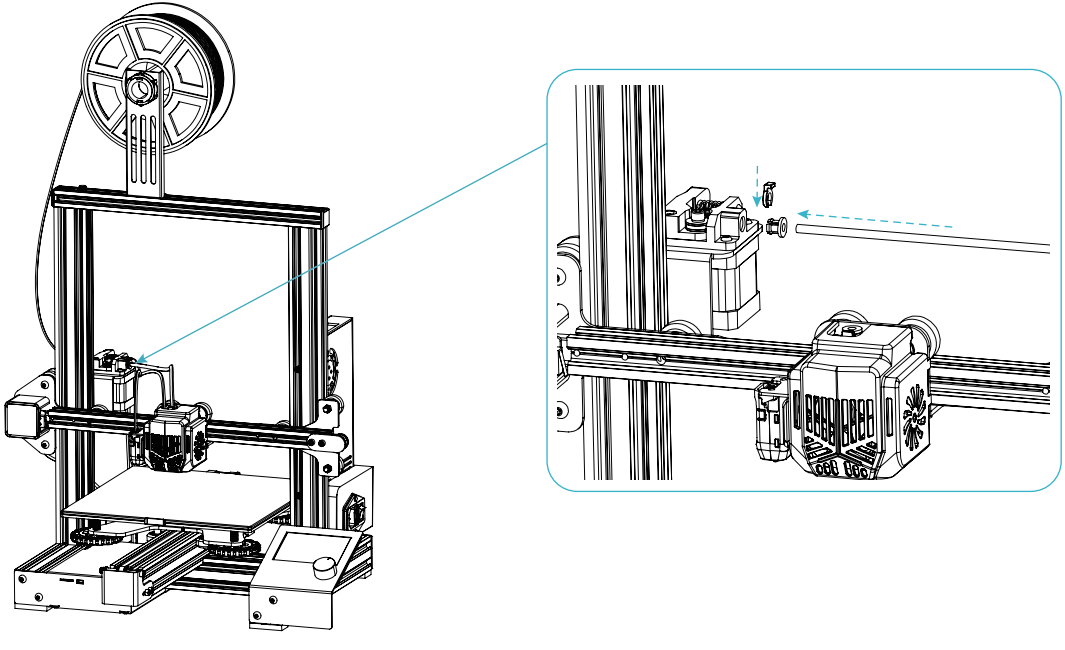
- Please ensure the correct position for the power supply switch and mains before supply connection , in order to avoid damage to the device.
- If the mains between 100V and 120V, please select the 115V for the power supply switch.
- If the mains between 200V and 240V, please select the 230V for the power supply switch(default is 230V).





4.13 Install the Teflon Tube

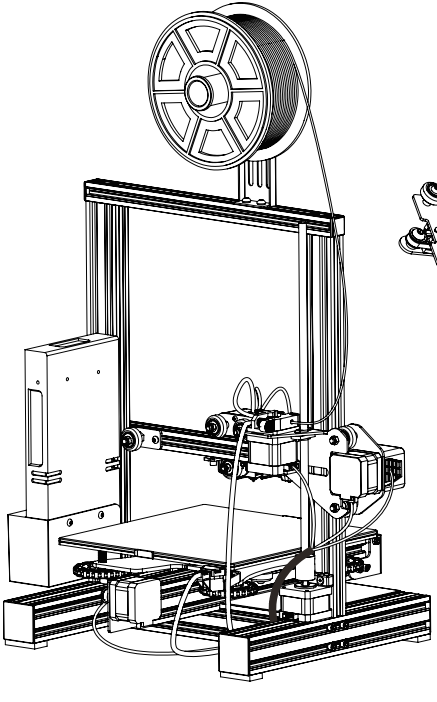
Quick release claw	Wire clip (blue)

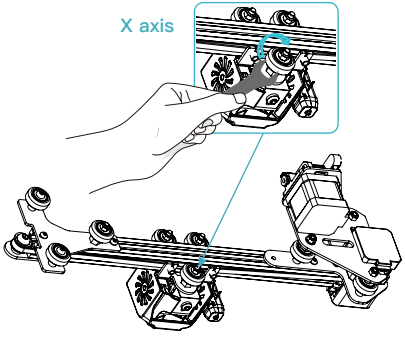


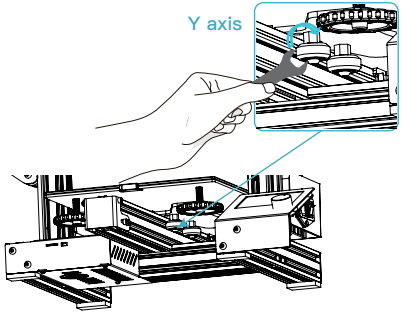
4.14 Adjusting pulley tightness

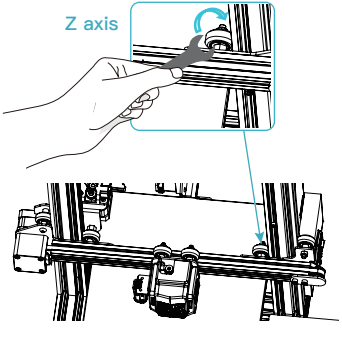
Check the pulley looseness before switching on the machine.

X/Y/Z axis pulley adjustment: Gently turn the pulley to check whether it is idling or jammed. If this phenomenon occurs, use an open-end wrench to adjust the tightness of the hexagonal eccentric isolation column to make it rotate smoothly.



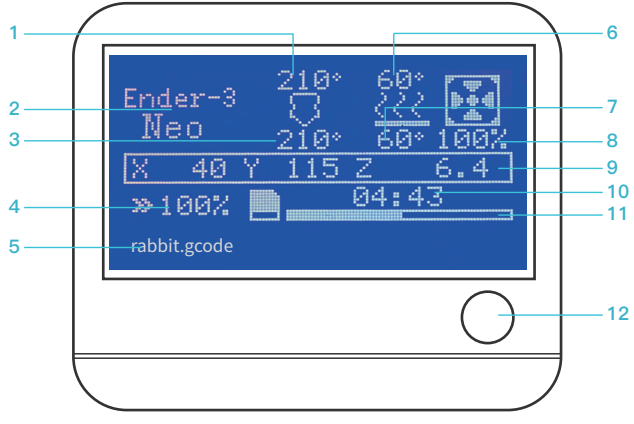






5. On-screen information

Displayed information

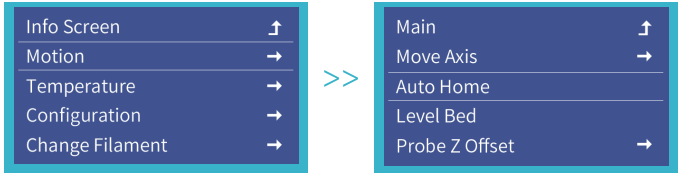


1 Set nozzle temperature
2 Model
3 Current nozzle temperature
4 Printing Speed
5 Prompt
6 Set heated bed temperature
7 Current heated bed temperature
8 Fan speed
9 Current nozzle position
10 Printing time
11 Printing Progress
12 Press: Select OK
Rotation: Toggle option/Change value

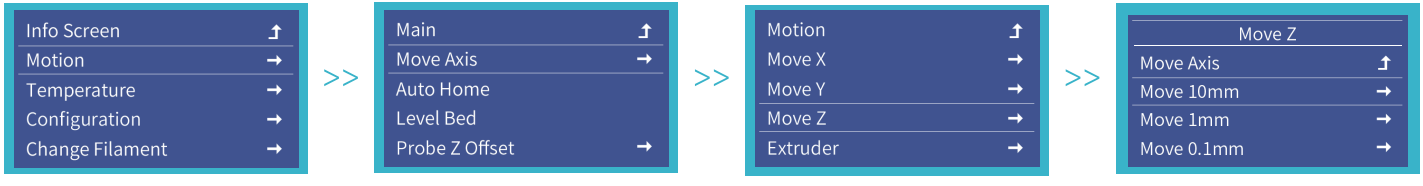
Info screen		
Motion	Move Axis	Moving X/Y/Z/Extruder
	Auto Home/Level Bed Probe Z Offset/ Disable Steppers	
Temperature	Nozzle/ Bed/ Fan Speed/ Preheat PLA/ Preheat ABS	
Configuration	Advanced Settings	Set Home Offsets / Velocity / Acceleration / Jerk /Probe Offsets / Steps (mm) / Temperature / Fillament / Initialize EEPROM
	Probe Z offset	
	CR Touch	Reset / Self-Test / Deploy/ Stow / SW-Mode
	Power Outage	
	Preheat PLA Conf / Preheat ABS Conf /	Fan Speed / Nozzle / Bed/ Store Settings
	Store Settings / Load Settings / Restore Defaults	
Change Filament	Preheat PLA/ Preheat ABS/Preheat Custom	
Change Media		
Print from Media		
Languages		
About Printer		

6. Auxiliary leveling

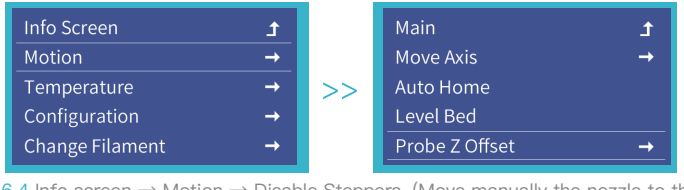
6.1 Info screen → Motion → Auto Home. (Waiting for the end of the CR-Touch detection platform)



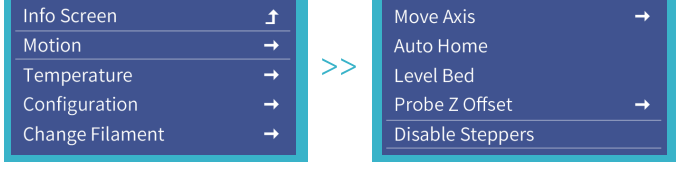
6.2 Info screen → Motion → Move Axis → Move Z. (Adjust the value to 0)



6.3 Info screen → Motion→ Probe Z offset. (Observe the clearance between the nozzle and the platform and adjust the Z Offset to allow a distance of approximately 0.2mm between the nozzle and the platform.)



6.4 Info screen → Motion → Disable Steppers. (Move manually the nozzle to the top of the platform adjusting knob and adjust the four knobs in turn to make the distance between the nozzle and the platform about 0.2mm. Repeat the adjustment 1 to 2 times if necessary.)

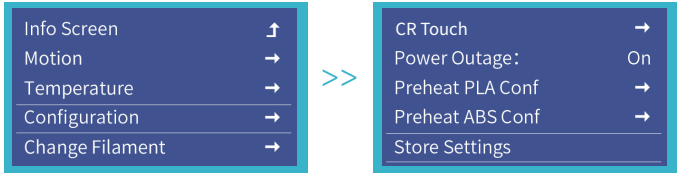


7.Auto Leveling

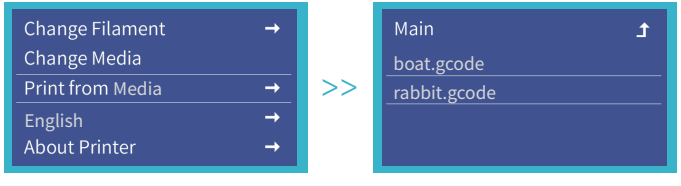
7.1 Info screen → Motion→ Level Bed → Return to info screen.



7.2 Info screen → Configuration → Store Settings. (Save Z-axis compensation data)

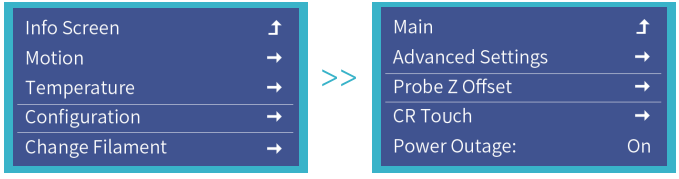


7.3 Info screen → Print from Media → Select print file → Print.



7. Auto Leveling

7.4 Info screen → Configuration→ Probe Z offset. (After printing starts, observe the adhesion of the filament to the glass platform and adjust the Z-axis compensation value appropriately.)

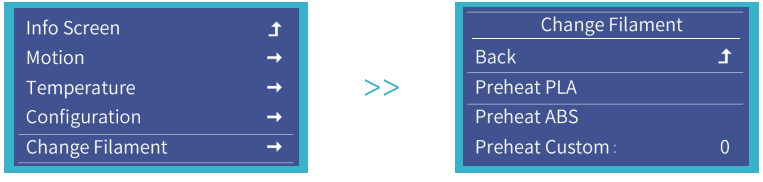


 	The nozzle is too far away from the platform, and the filaments cannot stick to the platform.
 	Filaments are extruded evenly, just sticking on the platform.
 	The nozzle is too close to the platform, leading to insuficient filament extrusion, even scraping the platform.

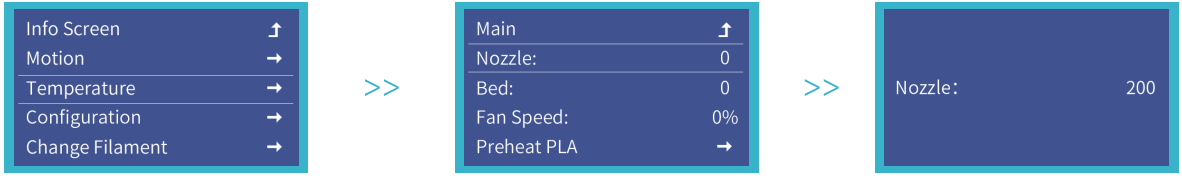
8. Filament infill

8.1 Preheating

Method 1



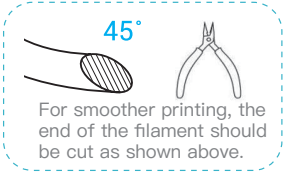
Method 2



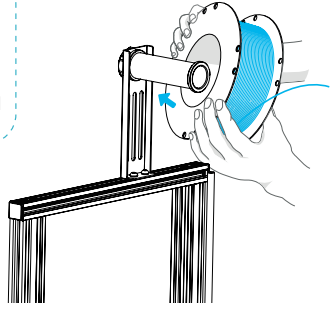
8.2 Loading the Filament

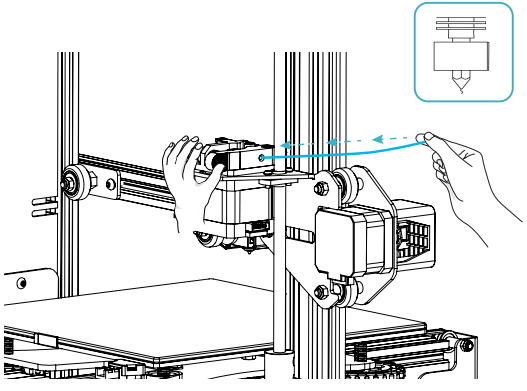
A. When you wait for the temperature to rise, hang the filament over the filament holder.

B. Press the extrusion clamp and insert the filaments along the extruder hole up to the nozzle. When the temperature hits the target value, a flow of filaments can be seen at the nozzle, meaning that the filaments have been loaded.



For smoother printing, the end of the filament should be cut as shown above.





Replacing the filament:

1. When the printer is not under work:

A. Heat the nozzle to above 185℃ first, wait for the filaments inside the nozzle to soften, then press the extrusion handle and pull out the filaments quickly to prevent them from getting stuck at the heat break;

B. Replace the new filaments onto the rack frame and repeat the loading procedure above.

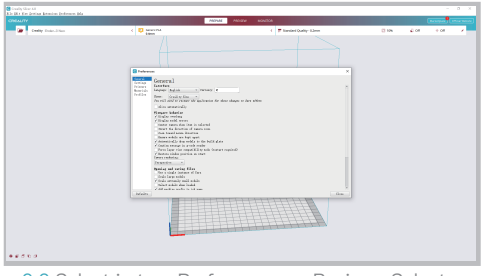
2. When the printer is working:

A. Suspend printing first and, once the printer has stopped, press the extrusion handle to pull the filaments out quickly and prevent them from getting stuck at the heat break;

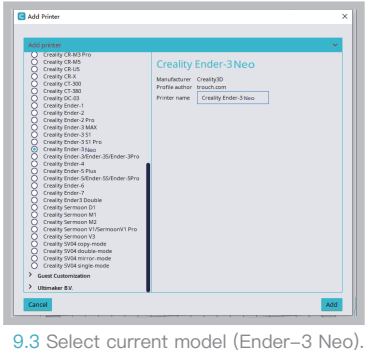
B. Replace the new filaments onto the rack, press the extrusion handle, insert the filaments through the extruder feed hole into the nozzle, then push the filaments hard to squeeze out the residual filaments from the nozzle, and clean it up for printing.



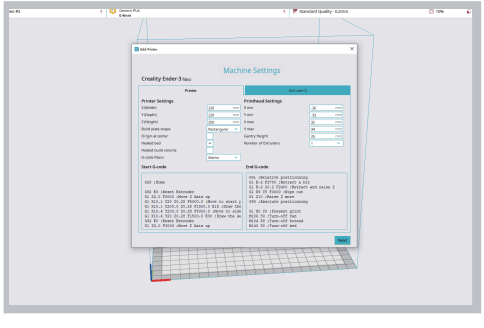
9.1Download the Creality software at www.creality.com, or find it in the memory card and install it.



9.2 Select in turn Preferences → Basic → Select Language → Close to complete the settings.



9.3 Select current model (Ender–3 Neo).



9.4 Enter Parameters → Close.

9.Start Printing



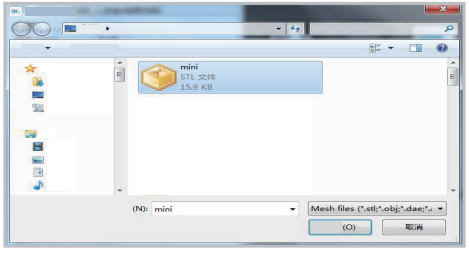
9.5 Open the Creality 3D Slicing Software.

>>

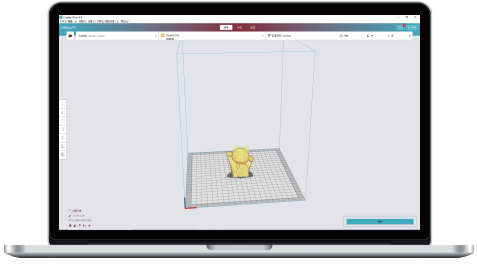


9.6 Load (read the file).

>>

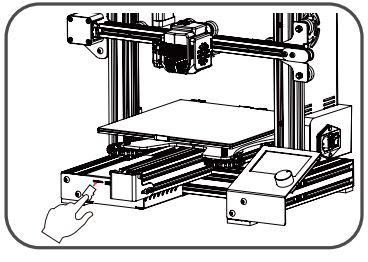


9.7 Select the file.



9.8 Generate the G-code file → Save it to the memory card.

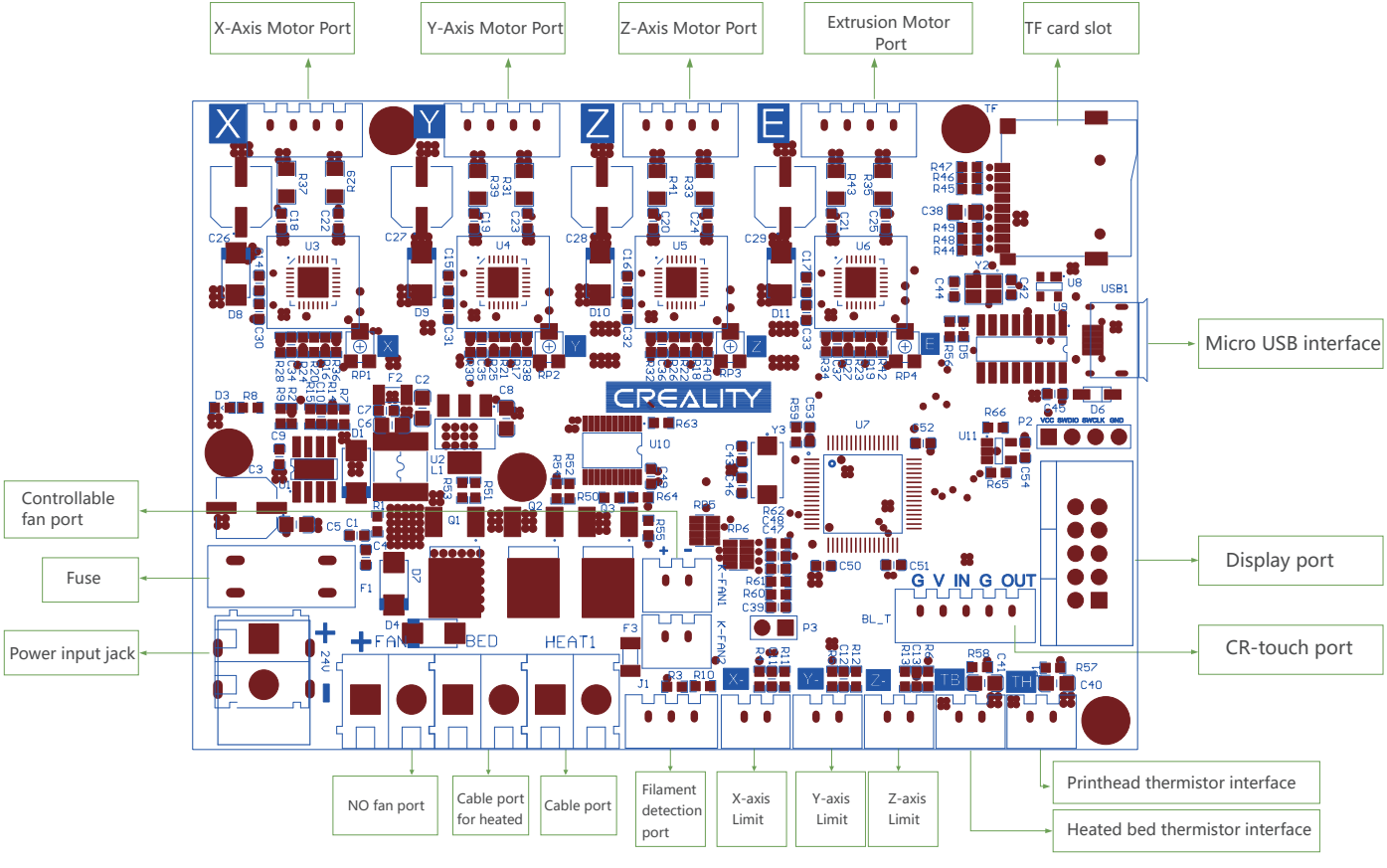
>>



9.9 Insert the memory card → Press the screen knob → Select menu → The file to print.

The file name must only contain Latin letters and digits. Chinese characters or special symbols must not be used.

Note: For details on using the software please refer to the slicing software user manual on the memory card.


X-Axis Motor Port
Y-Axis Motor Port
Z-Axis Motor Port
Extrusion Motor Port
TF card slot
Micro USB interface
Controllable fan port
Fuse
Power input jack
Display port
CR-touch port
NO fan port
Cable port for heated
Cable port
Filament detection port
X-axis Limit
Y-axis Limit
Z-axis Limit
Printhead thermistor interface
Heated bed thermistor interface
CREALITY
G V IN G OUT
FAN
BED
HEAT1

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