CREALITY

K1 Series CFS upgrade accessory kit

USER MANUAL

K1 Series CFS upgrade accessory kit

V 1.1_EN

To Our Dear Users

Thank you for choosing Creality. For your convenience, please read through this User Manual before you start and follow the instructions provided carefully.
Creality is always ready to provide you with high-quality services. If you encounter any issues or have any questions when using 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 USB flash disk 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

1. You can upgrade the firmware directly through the device screen;
2. You can upgrade the firmware via the Creality Cloud OTA;
3. Please visit the official website https://www.creality.com, click on “Support → Download Center ” , select the corresponding model to download the required firmware, (Or click on“Creality Cloud → Downloads → Firmware”) , after installation is complete, you can use it.

Product Operation and After-Sales Service Information

1. You can log in to the Creality Official Wiki (https://wiki.creality.com) to explore more detailed after-sales service tutorials.
2. Or contact our after-sales service center at +86 755 3396 5666, or send e-mail to cs@creality.com.

Creality Wiki

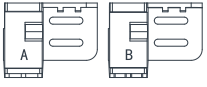
NOTES

1. Do not use the printer in any way other than described herein 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, cool and dustless environment;
3. Do not expose the printer to a violent vibration or any other unstable environment, as this may cause poor print quality;
4. Please use recommended filaments to avoid clogging of the extrusion head and causing damage to the machine;
5. Do not use the power cable of other products during installation. Always use a grounded three-prong power outlet, which accompanies the printer;
6. Do not touch the nozzle and the heated bed during operation to avoid burns or personal injury;
7. Do not wear gloves or wraps while operating the machine to prevent entrapment of movable parts that could cause crushing and cutting injuries to bodily parts;
8. Use the provided tools to clean the filament from the extruder in time taking advantage of the residual temperature after printing. Do not touch the extruder directly when cleaning, otherwise it may cause burns;
9. Clean the printer frequently. Clean the printer body with a dry cloth regularly after powering off the printer, wipe away dust, bonded print filament and foreign objects on the guide rails;
10. Children under 10 years old should not use the printer without supervision, otherwise it may cause personal injury;
11. 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 circumstance;
12. Tip: Do not plug in or unplug wires on a charged basis.

Contents

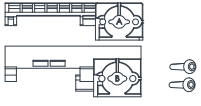
1. Equipment Information

1.1 Packing List



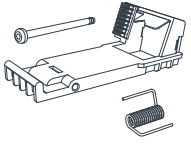
A: K1&K1C&K1 SE
B: K1 Max

1 Cutter Block

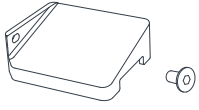


A: K1&K1C&K1 SE
B: K1 Max

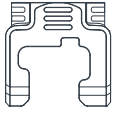
2 Nozzle Wiper Fastener & Screw



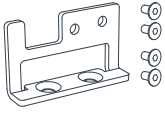
3 Nozzle Wiper & Screw & spring



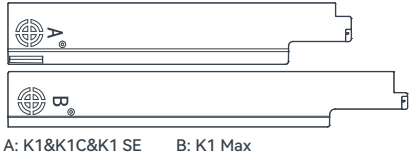
4 Z-Axis Motor Cover & Screw



5 Extruder Motor Cover

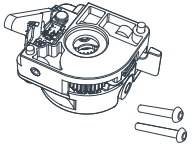


6 Cable Chain Mounting Sheet Metal & Screw



A: K1&K1C&K1 SE B: K1 Max

7 Lead Screw Cover



8 Extruder Kit & Screw

9 Screw Rod Cover (Left and Right)

10 Napkin strip

11 Double-ended fitting & Screw

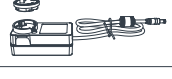
12 Screwdriver

13 USB Flash Disk

14 PTFE Tube

15 USB to 485 Cable

16 USB cable mounting bracket



17 Power adapter

18 The backing adhesive of the buffer

19 Quick Installation Guide

Note: ① The parts labeled A and B are used for different models: A is compatible with K1, K1C, and K1 SE, while B is compatible with K1 Max.
② The above accessories are for reference only. Please refer to the actual items.

1. Equipment Information

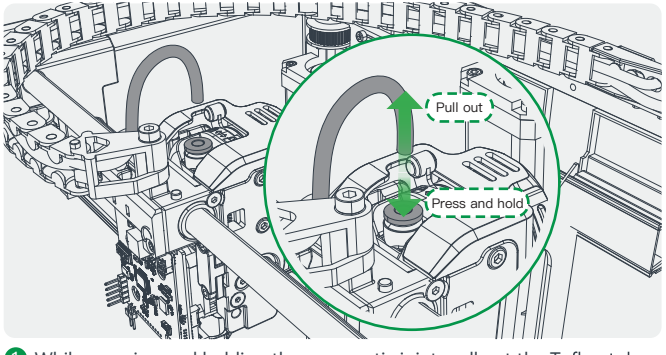
1.2 Equipment Specifications

Equipment Specifications	
Net Weight	0.77kg
Package Dimensions	394*116*68mm
Power Adapter	42w
Consumable Diameter	1.75mm
Compatible with CFS	Yes
Supported Product Models	K1/ K1C/ K1 SE/ K1 Max
Printing Size	The printing size in monochrome is based on the original modified machine, after modification, the Y-axis size for multicolor printing will be reduced by 5mm.
Slicing Software	Creality Print 5.1 Slicing Software and above
485 Data Line Length	1.5m

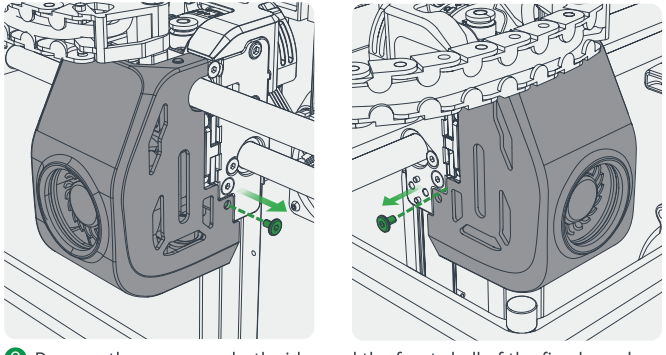
2. Assembly Procedure

*** Steps 2.1~2.5 are common installation steps for the K1 series & K1 Max.**

2.1 Remove the PTFE tube from the extruder end and the front cover of the extruder

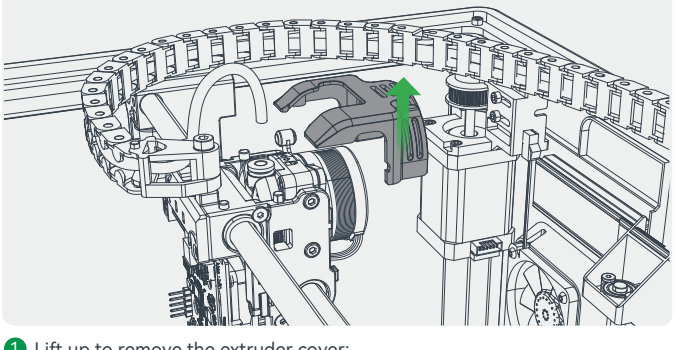


1 While pressing and holding the pneumatic joint, pull out the Teflon tube (Note: If consumables are loaded, please eject them first);

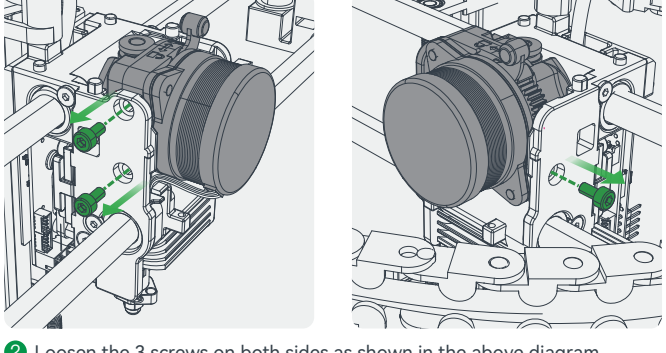


2 Remove the screws on both sides and the front shell of the fixed nozzle cover. When removing the nozzle cover, please unplug the cooling fan wire;

2.2 Remove the extruder motor cover and the stop position extruder motor assembly



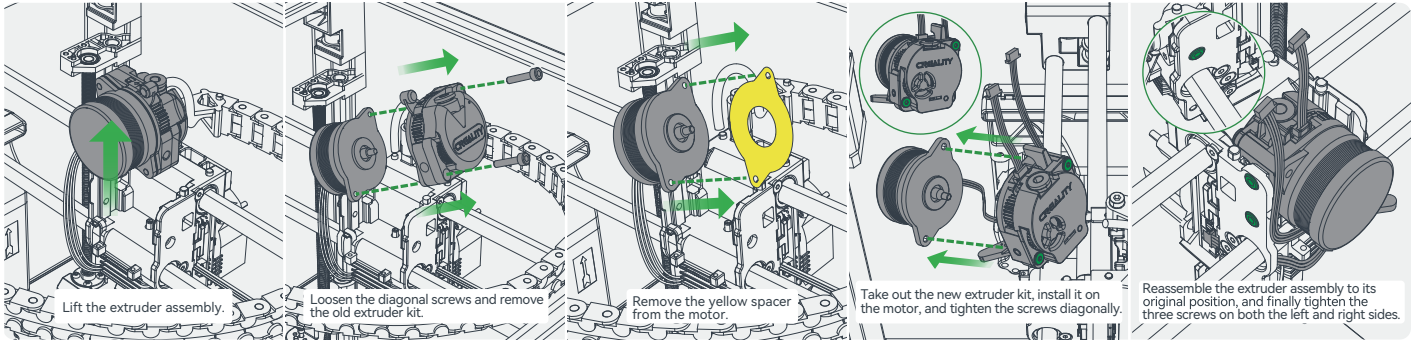
1 Lift up to remove the extruder cover;



2 Loosen the 3 screws on both sides as shown in the above diagram.

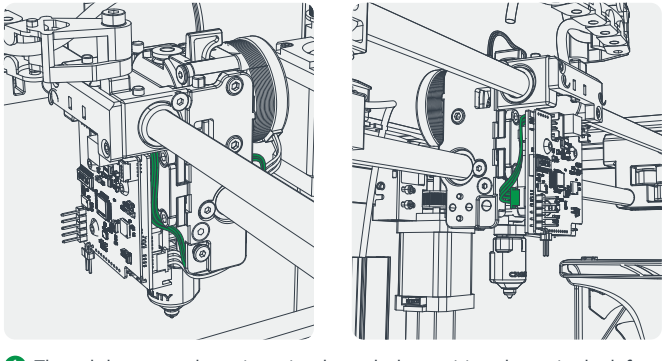
2. Assembly Procedure

2.3 Replace the extruder

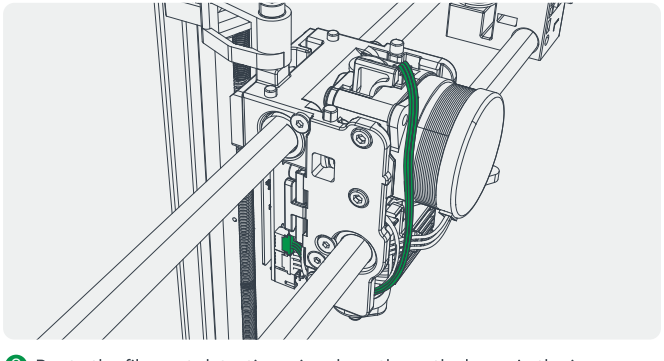


1 Lift the extruder assembly, remove the old extruder kit, and install and secure the extruder kit from the upgrade package.

2.4 Connect the cutter detection wire and the filament break detection wire



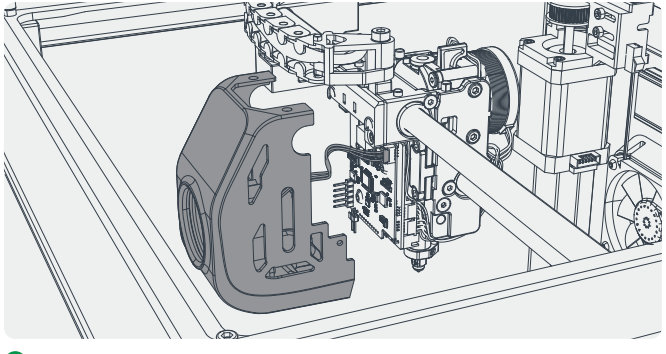
1 Thread the cutter detection wire through the position shown in the left image and insert it into the wire slot on the circuit board (as shown in the right image).



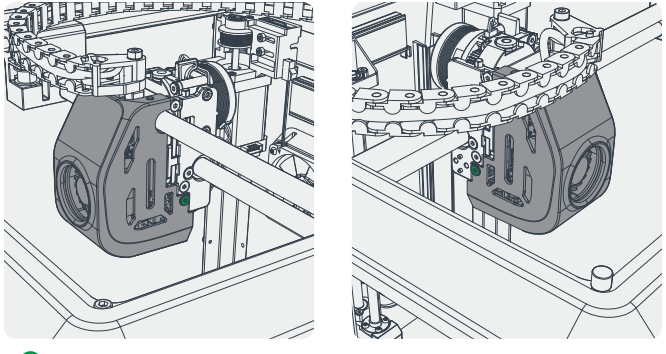
2 Route the filament detection wire along the path shown in the image above and connect it to the wire slot on the circuit board, as shown above.

2. Assembly Procedure

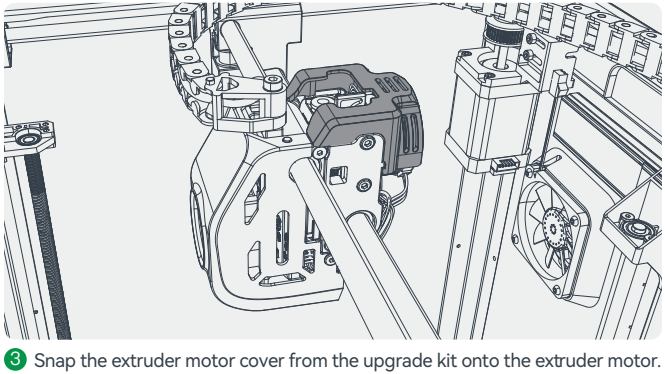
2.5 Connect the fan wire, assemble the nozzle front cover, and the extruder motor cover



1 Connect the fan wires on the nozzle cover into the wire groove on the circuit board as shown in the diagram.



2 Fix the nozzle cover with screws as shown in the diagram.

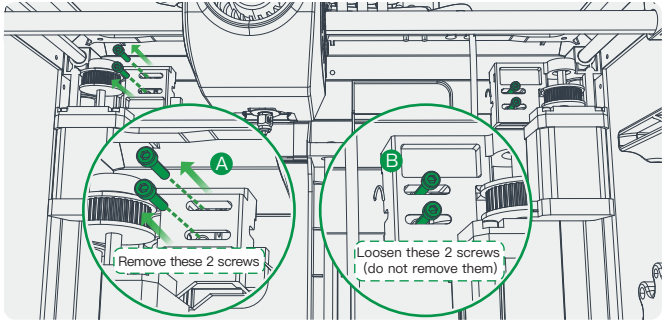


3 Snap the extruder motor cover from the upgrade kit onto the extruder motor.

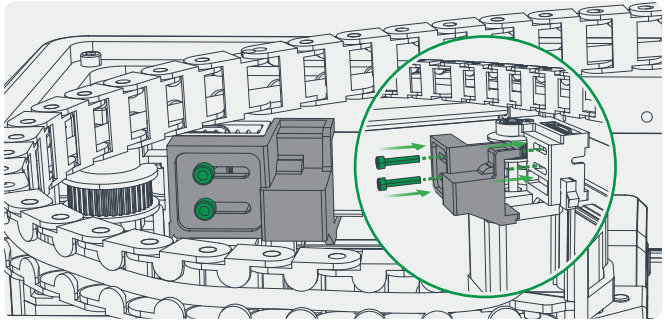
2. Assembly Procedure

* K1 Series

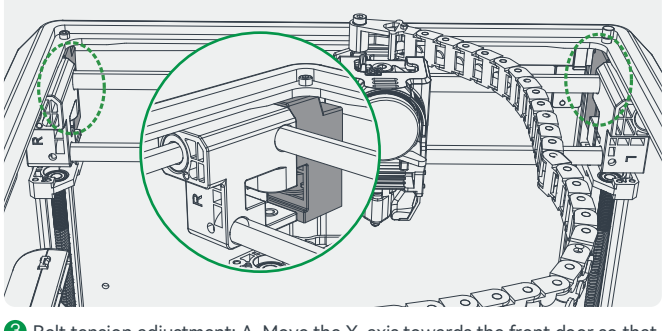
2.6 (K1 Series) Install the cutter block and adjust the belt tension



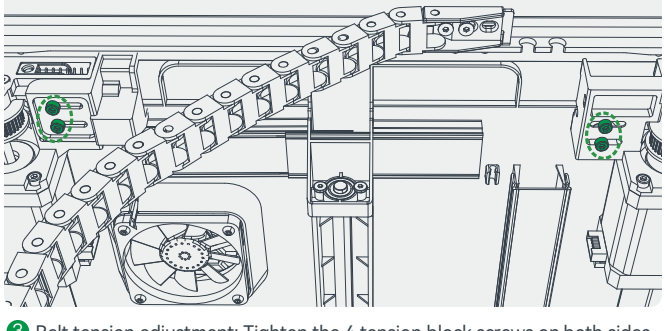
1 A. Remove the 2 screws on the left belt tension block (keep them for later use);
B. Loosen the 2 screws on the right belt tension block (note: do not remove them).



2 From the upgrade package, select the cutter block compatible with the K1 series and install it as shown. Secure it with the screws you just removed (Cutter Block A fits K1, K1C, and K1 SE; B fits K1 Max).



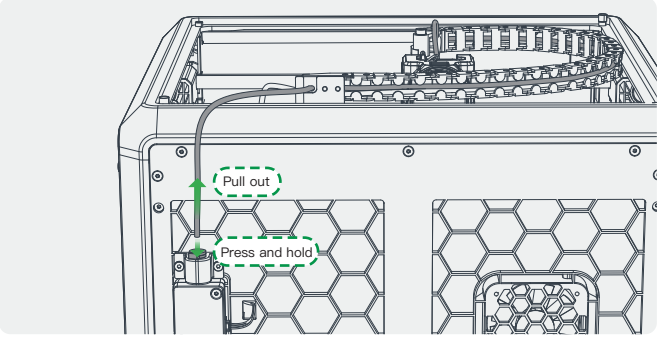
3 Belt tension adjustment: A. Move the X-axis towards the front door so that both ends of the X-axis align with the fixed home position;



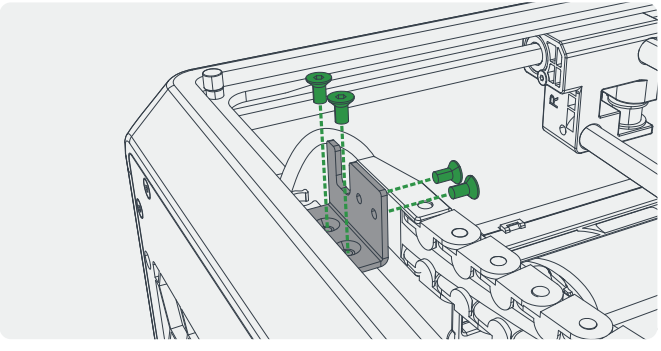
3 Belt tension adjustment: Tighten the 4 tension block screws on both sides of the belt.

2. Assembly Procedure

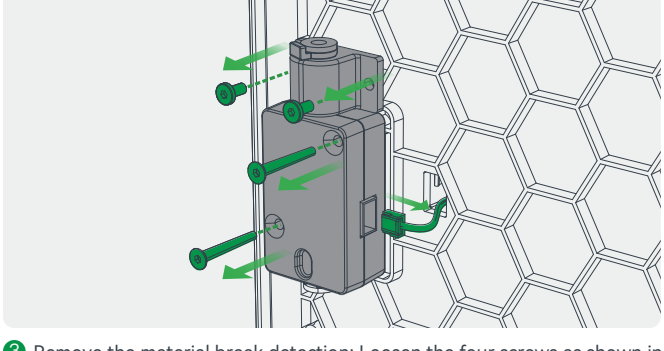
2.7 (K1 Series) Remove the PTFE tube, install the drag chain mounting plate, and perform filament break detection



1 Remove the Teflon tube: While pressing the pneumatic connector, pull out the Teflon tube and extract it completely.



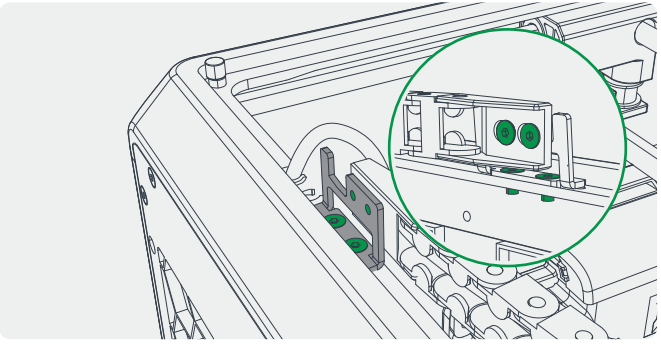
2 Remove the drag chain mounting bracket: Remove the four drag chain mounting bracket screws as shown in the picture, then remove the drag chain mounting bracket.



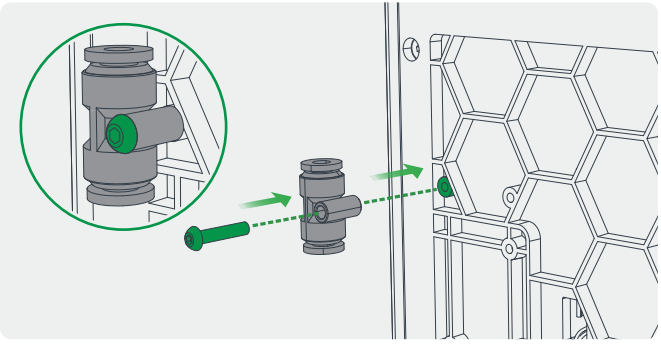
3 Remove the material break detection: Loosen the four screws as shown in the picture, unplug the material break detection line, and then remove the material break detection.

2. Assembly Procedure

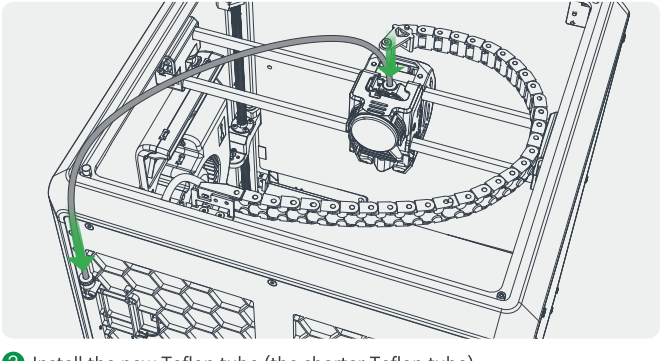
2.8 (K1 Series) Install the new drag chain mounting plate, Y-connectors, PTFE tube, and lead screw shield (left and right).



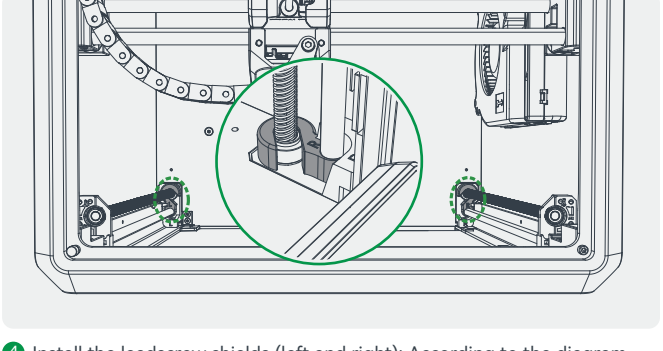
1 Install the new drag chain mounting sheet metal: Install the new drag chain mounting sheet metal from the upgrade package at the indicated position in the diagram, and secure it tightly with the 4 matching screws.



2 Install the new double-way connector: Install the double-way connector in the position shown in the diagram, and secure it with the self-tapping screws (the shorter screws).



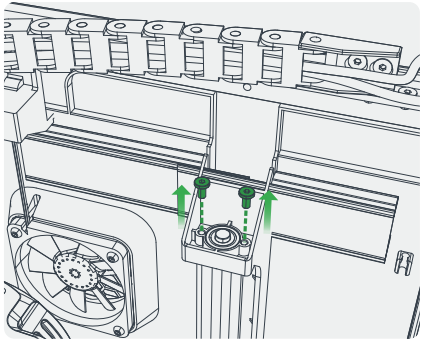
3 Install the new Teflon tube (the shorter Teflon tube).



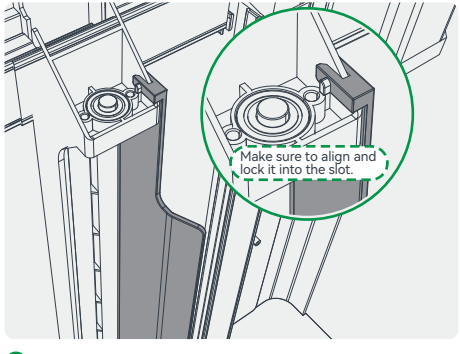
4 Install the leadscrew shields (left and right): According to the diagram, install the leadscrew shields (left and right) at the leadscrews on the front door side.

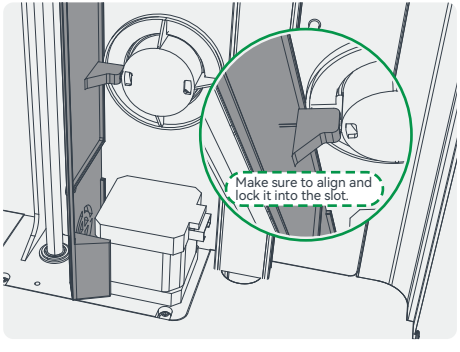
2. Assembly Procedure

2.9 (K1 Series) Install the lead screw shield, Z-axis motor cover, and hopper assembly

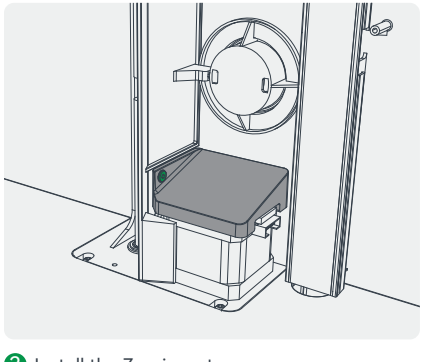


1 Remove the two screws from the screw rod bracket;

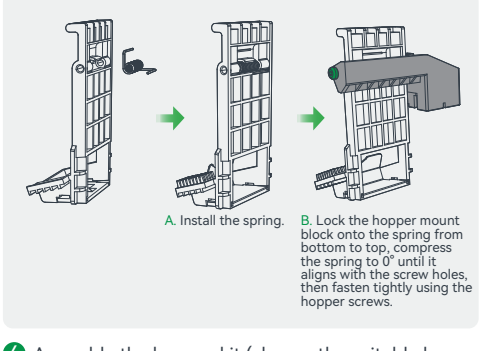




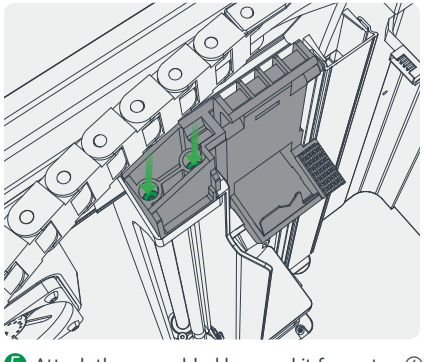
2 Install the lead screw covers as shown in the above image and align them with the slots for fixing (please select the appropriate lead screw cover; A is suitable for K1 & K1C & K1 SE, B is suitable for K1 Max);



3 Install the Z-axis motor cover;



4 Assemble the hopper kit (choose the suitable hopper mount block: A for K1&K1C&K1 SE, B for K1 Max);

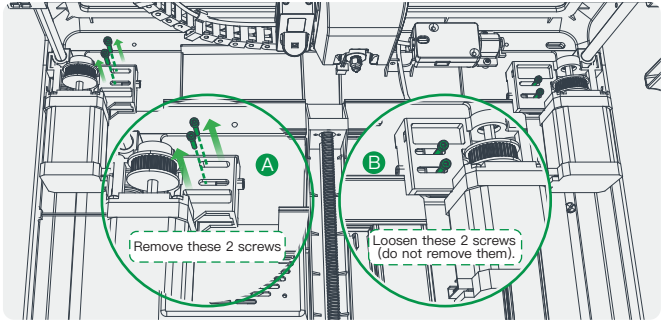


5 Attach the assembled hopper kit from step ④ to the leadscrew mount block (as shown in the diagram), and secure it with the hopper mount block screws. Make sure to align and lock it into the slot.

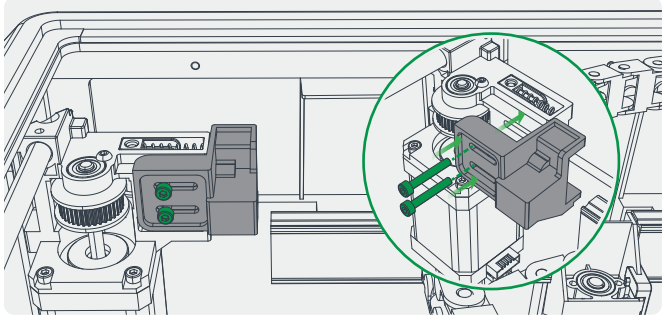
2. Assembly Procedure

*** K1 Max**

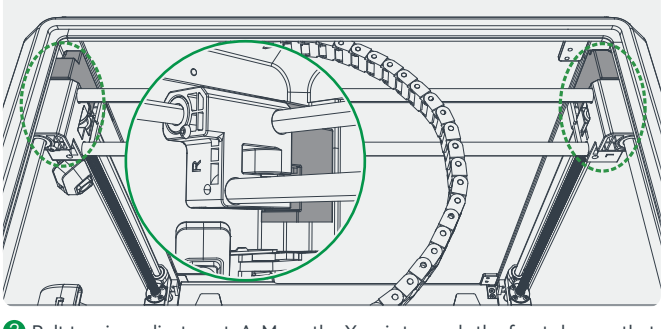
2.6 (K1 Max) Install the cutter block and adjust the belt tension



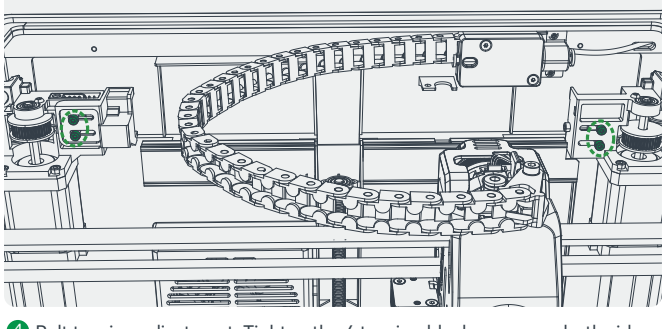
1 A. Remove the 2 screws on the left belt tension block (keep them for later use);
B. Loosen the 2 screws on the right belt tension block (note: do not remove them);



2 From the upgrade package, select the cutter block compatible with the K1 series and install it as shown. Secure it with the screws you just removed (Cutter Block A fits K1, K1C, and K1 SE; B fits K1 Max);



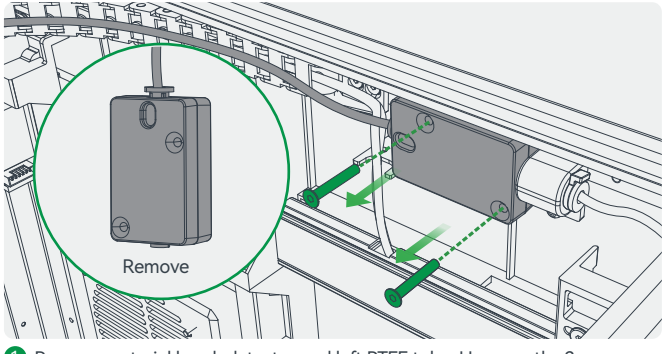
3 Belt tension adjustment: A. Move the X-axis towards the front door so that both ends of the X-axis align with the fixed home position;



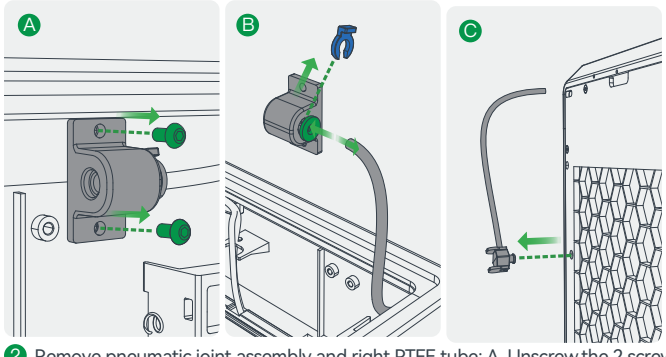
4 Belt tension adjustment: Tighten the 4 tension block screws on both sides of the belt.

2. Assembly Procedure

2.7 (K1 Max) Remove the filament break detection system and old PTFE tube

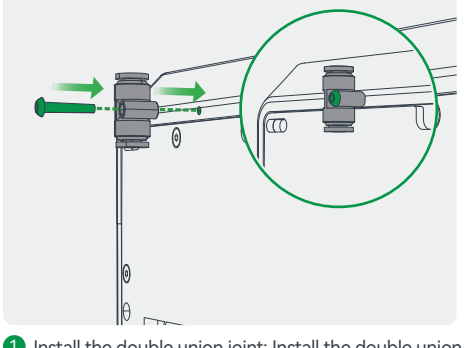


1 Remove material break detector and left PTFE tube: Unscrew the 2 screws on the break detector as shown in the diagram, and remove the break detector along with the PTFE tube;

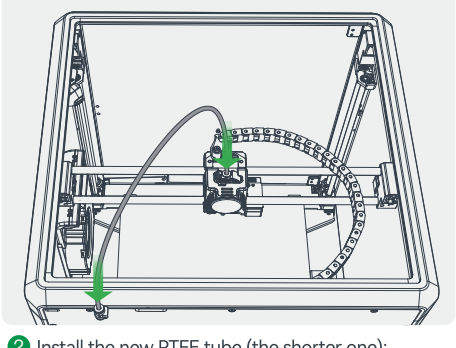


2 Remove pneumatic joint assembly and right PTFE tube: A. Unscrew the 2 screws on the break detector component as shown in the diagram; B. Remove the blue clip, press the pneumatic joint, and remove the pneumatic joint assembly; C. Remove the clamp securing the PTFE tube on the backplate and remove the PTFE tube.

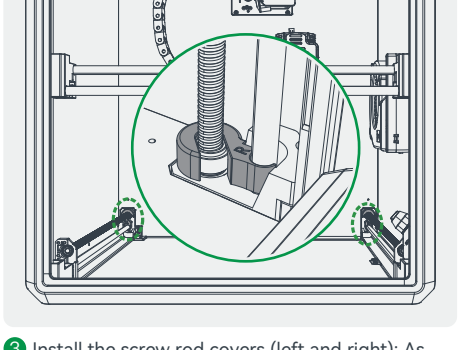
2.8 (K1 Max) Install the Y-connector, new PTFE tube, and lead screw shield (left and right)



1 Install the double union joint: Install the double union joint at the position shown in the diagram, and fix it with the machine screw (the longer one);



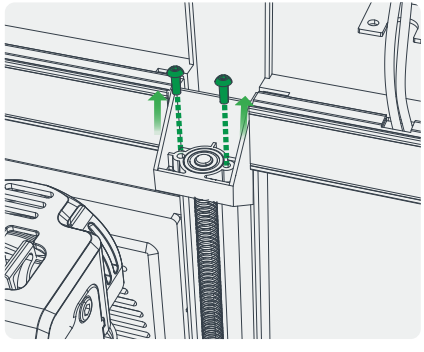
2 Install the new PTFE tube (the shorter one);



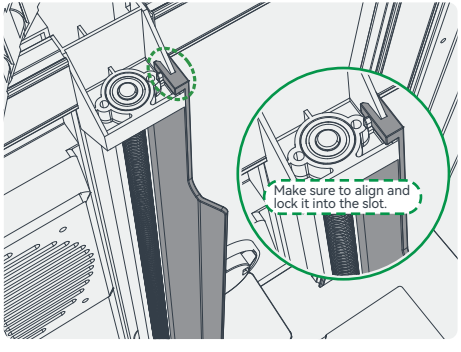
3 Install the screw rod covers (left and right): As shown in the diagram, install the screw rod covers (left and right) on the screw rod towards the front door.

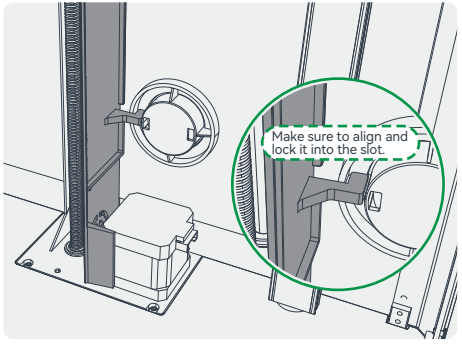
2. Assembly Procedure

2.9 (K1 Max) Install the lead screw shield, Z-axis motor cover, and hopper assembly

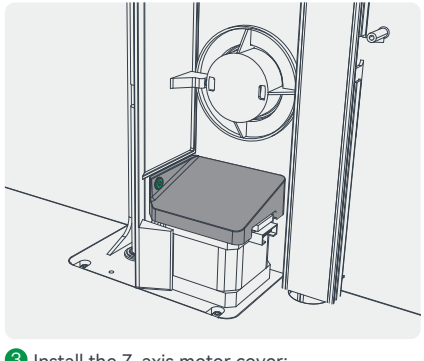


1 Remove the two screws from the screw rod bracket;

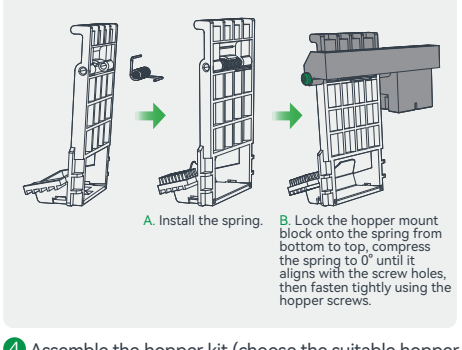




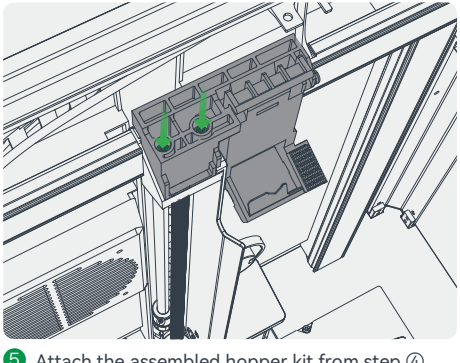
2 Install the lead screw covers as shown in the above image and align them with the slots for fixing (please select the appropriate lead screw cover; A is suitable for K1 & K1C & K1 SE, B is suitable for K1 Max);



3 Install the Z-axis motor cover;



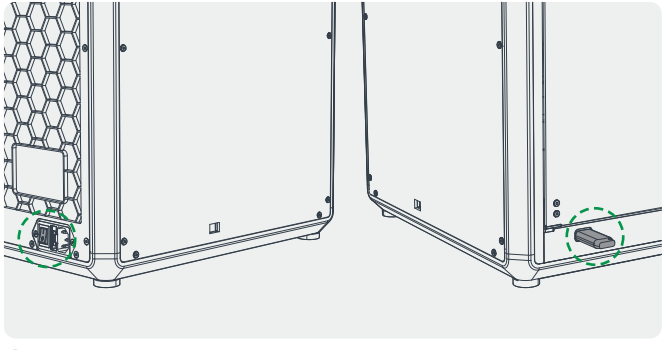
4 Assemble the hopper kit (choose the suitable hopper mount block: A for K1&K1C&K1 SE, B for K1 Max);



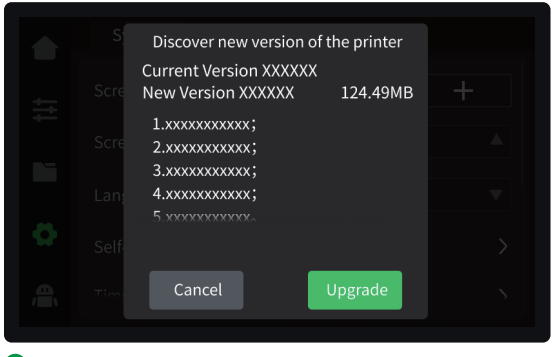
5 Attach the assembled hopper kit from step ④ to the leadscrew mount block (as shown in the diagram), and secure it with the hopper mount block screws. Make sure to align and lock it into the slot.

3. Firmware upgrade and nozzle coordinates setting

3.1 Firmware upgrade



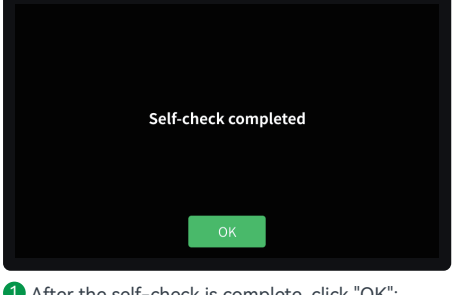
1 Turn on the device and insert the USB drive;



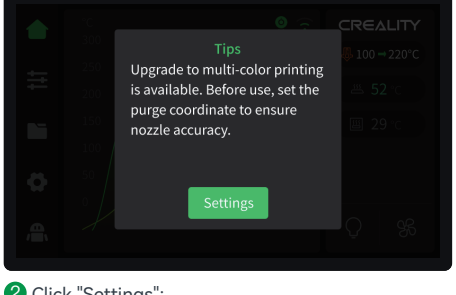
2 A firmware upgrade prompt will automatically appear on the screen. Follow the instructions to complete the firmware upgrade, and the machine will restart automatically. After restarting, it will enter the device self-check process.

3.2 Nozzle coordinates setting

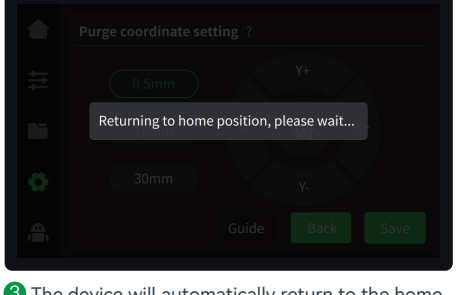
After the self-check is complete, a notification for nozzle dispensing location setup will automatically pop up. Please click "Set Up" and follow the instructions to complete the dispensing location setup.



1 After the self-check is complete, click "OK";

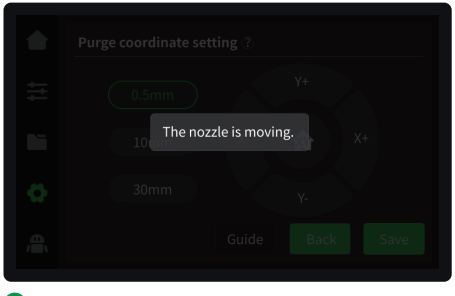


2 Click "Settings";

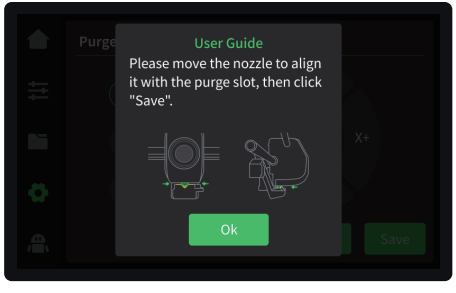


3 The device will automatically return to the home position;

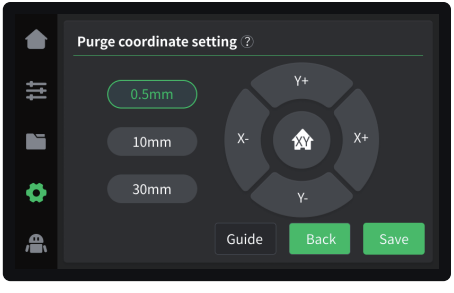
3. Firmware upgrade and nozzle coordinates setting



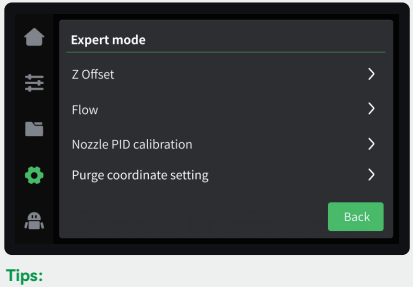
4 After returning to the home position, the nozzle will automatically move to the predetermined location (near the dispensing slot);



5 Click "OK" to enter the nozzle axis adjustment interface;



6 Use this interface to move the nozzle until it is aligned with the dispensing slot, then click save.



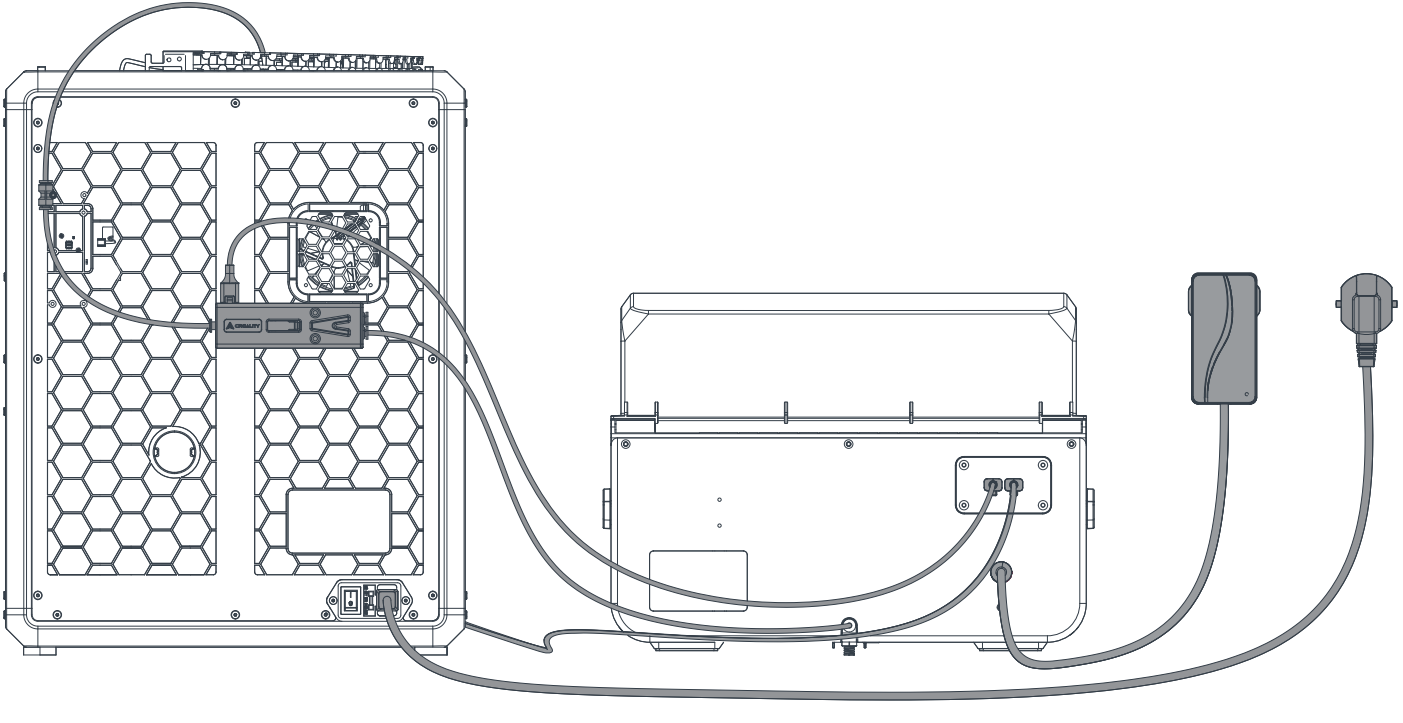
Tips:
If you need to adjust the nozzle dispensing coordinates in the future, you can use the "Expert Mode" in the settings interface.

The current interface is for reference only. Please refer to the latest software/firmware UI on the official website for updates.

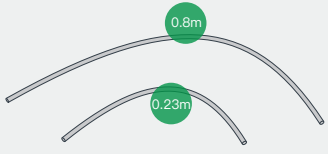
4. Connect CFS

*** K1 Series**

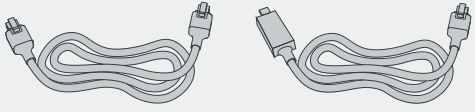
4.1 Steps for connecting CFS



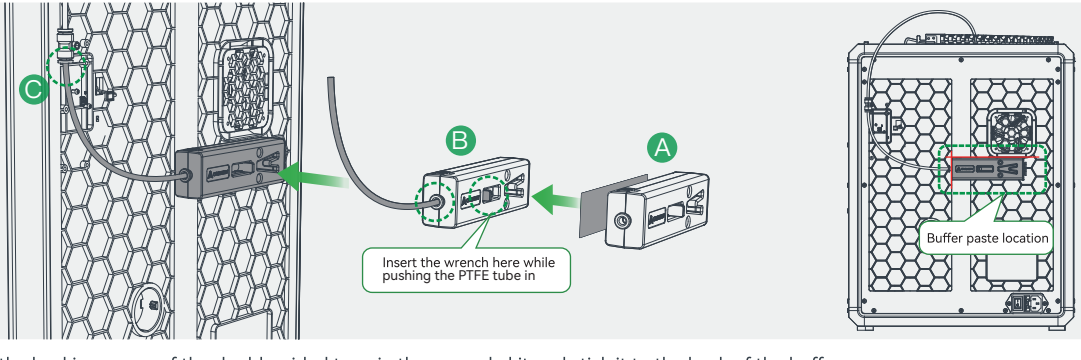
4. Connect CFS



- The longer Teflon tube (0.8m PTFE tube included in the upgrade kit) is used to connect the CFS five-way connector and the buffer;
  The shorter Teflon tube (0.23m PTFE tube included with the material cartridge) is used to connect the CFS buffer and the two-way connector.

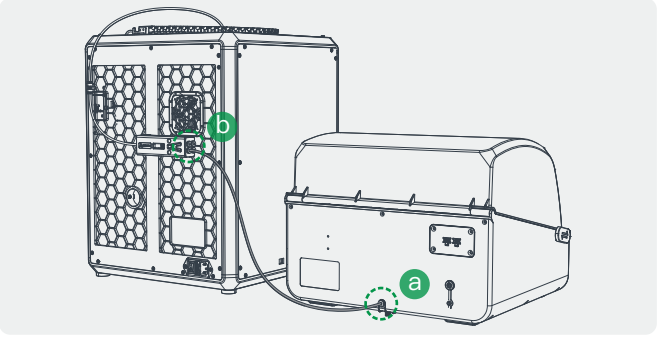


- The 485 communication cable (included with the material cartridge) connects the CFS and the buffer;
  The USB to 485 communication cable (included in the upgrade kit) connects the CFS and the printer.

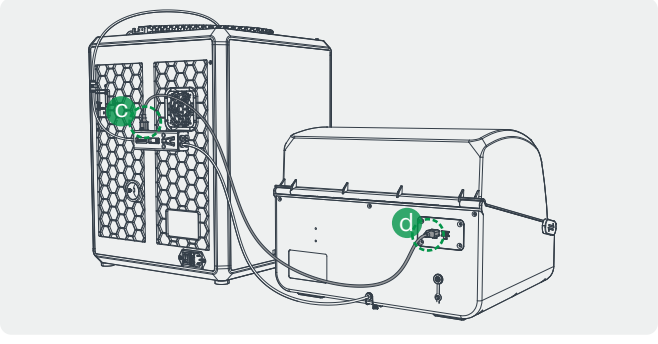


1. A. Tear off the backing paper of the double-sided tape in the upgrade kit and stick it to the back of the buffer;
   B. Then attach one end of the 0.23m PTFE tube included in the CFS to the buffer, then tear off the backing paper of the buffer's double-sided tape and stick it to the back of the machine. For the exact position, refer to the upper left image (note the direction of the buffer, do not reverse mount it);
   C. Finally, connect the other end of the Teflon tube to the two-way connector.

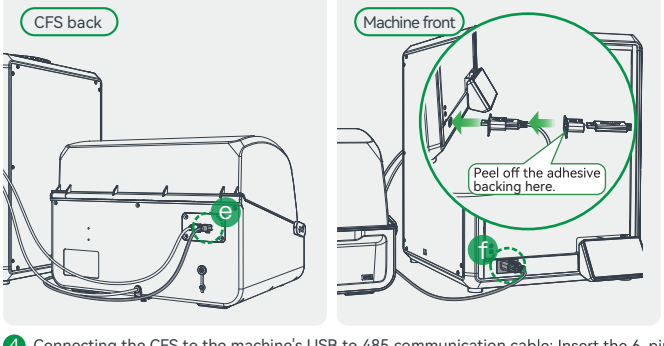
4. Connect CFS



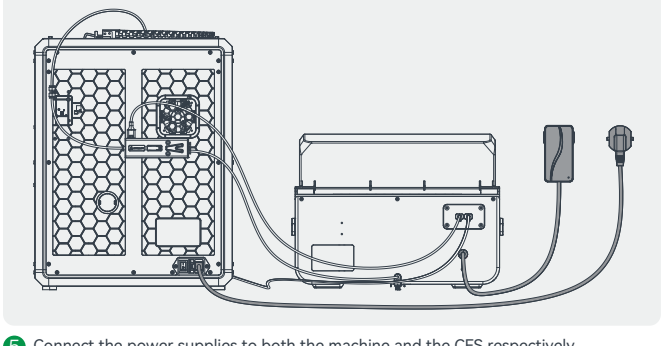
2 Connecting the CFS five-way fitting to the buffer: Insert one end of the 0.8m PTFE tube provided in the upgrade kit into the CFS material outlet (position a); the other end into the buffer (position b, insert into any one of the four holes);



3 Connecting the CFS to the buffer: Insert either end of the 485 communication cable provided with the CFS into position c on the buffer, and the other end into position d on the CFS (you can use either of the two 485 ports on the CFS);



4 Connecting the CFS to the machine's USB to 485 communication cable: Insert the 6-pin straight end, regardless of orientation, into position e on the CFS.
Peel the adhesive backing off the USB bracket, place it over the USB plug with the logo facing up, and then plug the USB plug into the interface on the front of the machine at position f;

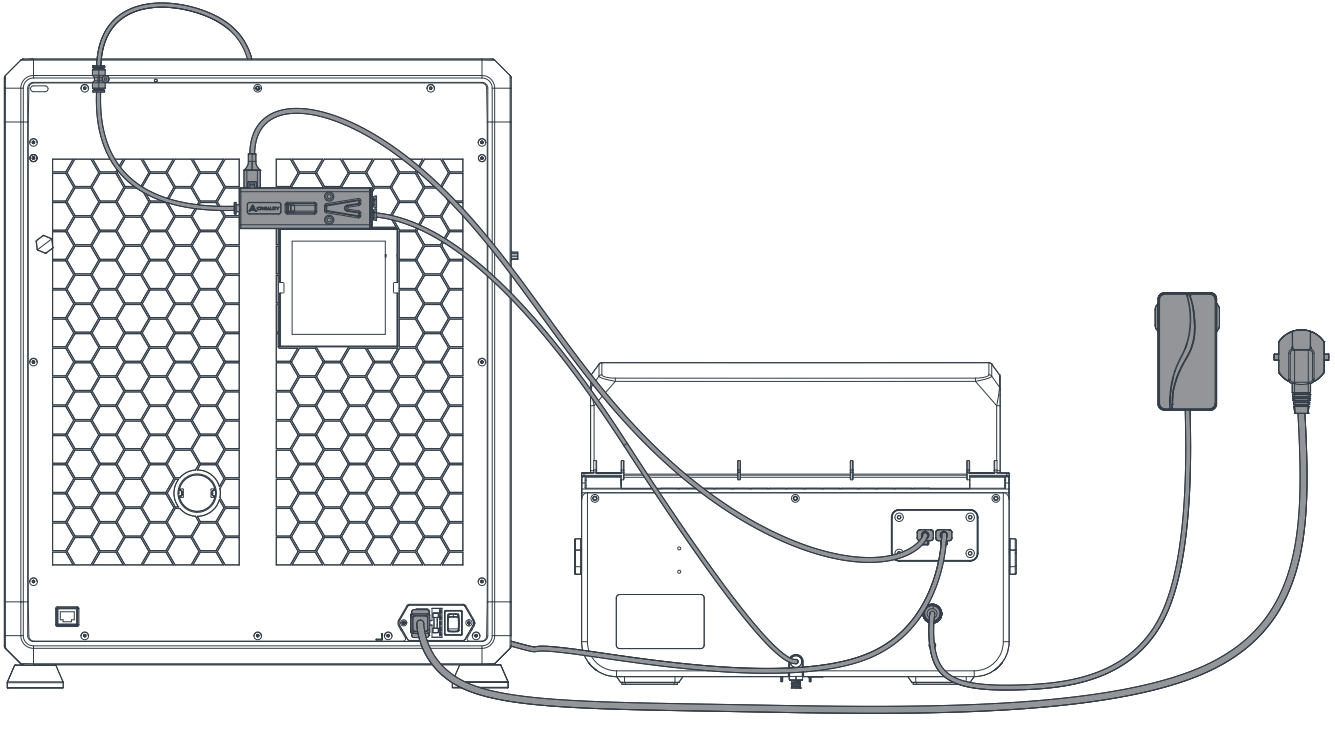


5 Connect the power supplies to both the machine and the CFS respectively.

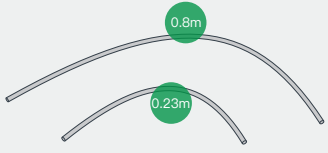
4. Connect CFS

*** K1 Max**

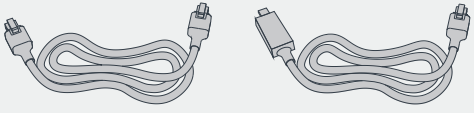
4.1 Steps for connecting CFS



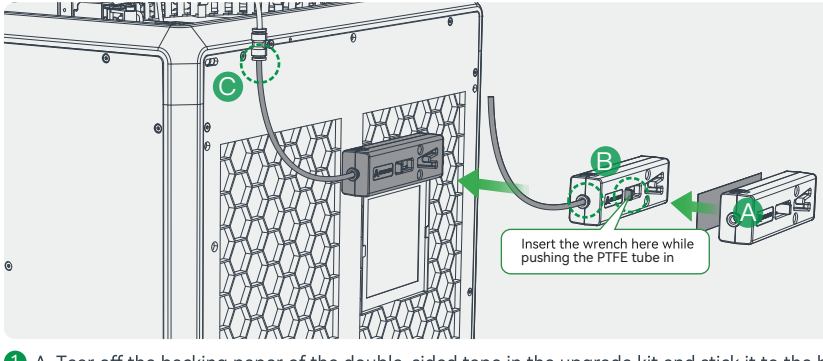
4. Connect CFS

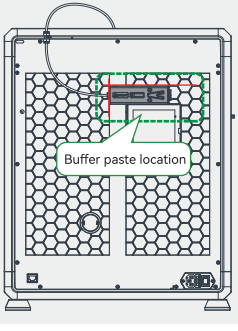


- The longer Teflon tube (0.8m PTFE tube included in the upgrade kit) is used to connect the CFS five-way connector and the buffer;
  The shorter Teflon tube (0.23m PTFE tube included with the material cartridge) is used to connect the CFS buffer and the two-way connector.



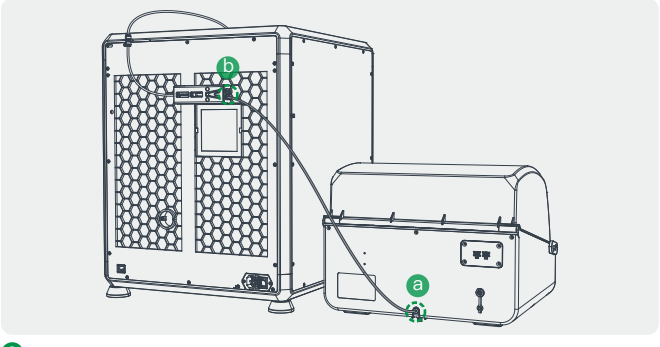
- The 485 communication cable (included with the material cartridge) connects the CFS and the buffer;
  The USB to 485 communication cable (included in the upgrade kit) connects the CFS and the printer.



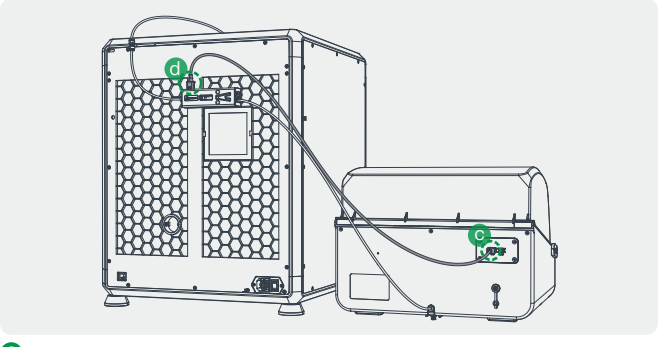


1. A. Tear off the backing paper of the double-sided tape in the upgrade kit and stick it to the back of the buffer;
   B. Then attach one end of the 0.23m PTFE tube included in the CFS to the buffer, then tear off the backing paper of the buffer's double-sided tape and stick it to the back of the machine. For the exact position, refer to the upper left image (note the direction of the buffer, do not reverse mount it);
   C. Finally, connect the other end of the Teflon tube to the two-way connector.

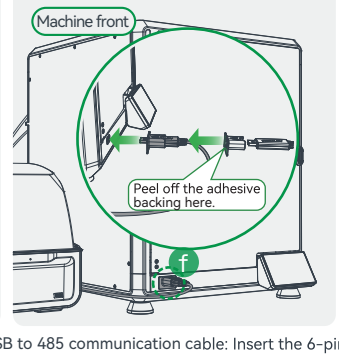
4. Connect CFS



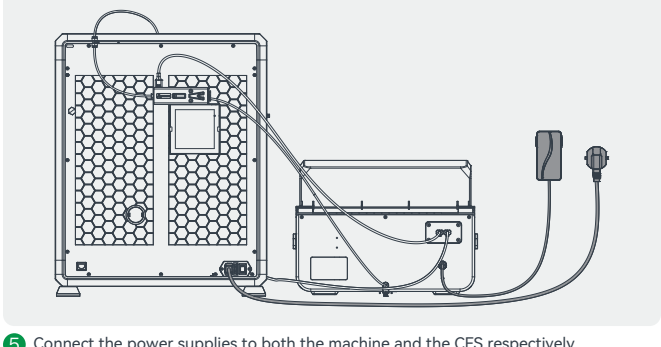
2 Connecting the CFS five-way fitting to the buffer: Insert one end of the 0.8m PTFE tube provided in the upgrade kit into the CFS material outlet (position a); the other end into the buffer (position b, insert into any one of the four holes);



3 Connecting the CFS to the buffer: Insert either end of the 485 communication cable provided with the CFS into position c on the buffer, and the other end into position d on the CFS (you can use either of the two 485 ports on the CFS);



4 Connecting the CFS to the machine's USB to 485 communication cable: Insert the 6-pin straight end, regardless of orientation, into position e on the CFS.
Peel the adhesive backing off the USB bracket, place it over the USB plug with the logo facing up, and then plug the USB plug into the interface on the front of the machine at position f;



5 Connect the power supplies to both the machine and the CFS respectively.

Due to the differences between different machine models, the actual objects and the images can differ. Please refer to the actual machine. The final explanation rights shall be reserved by Shenzhen Creality 3D Technology Co., Ltd.

SHENZHEN CREALITY 3D TECHNOLOGY CO., LTD.

18th Floor, JinXiuHongDu Building, Meilong Road, Xinniu Community,
Minzhi Street, Longhua District, Shenzhen City, China.
Official Website: www.creality.com
Tel: +86 755-8523 4565
E-mail: cs@creality.com