

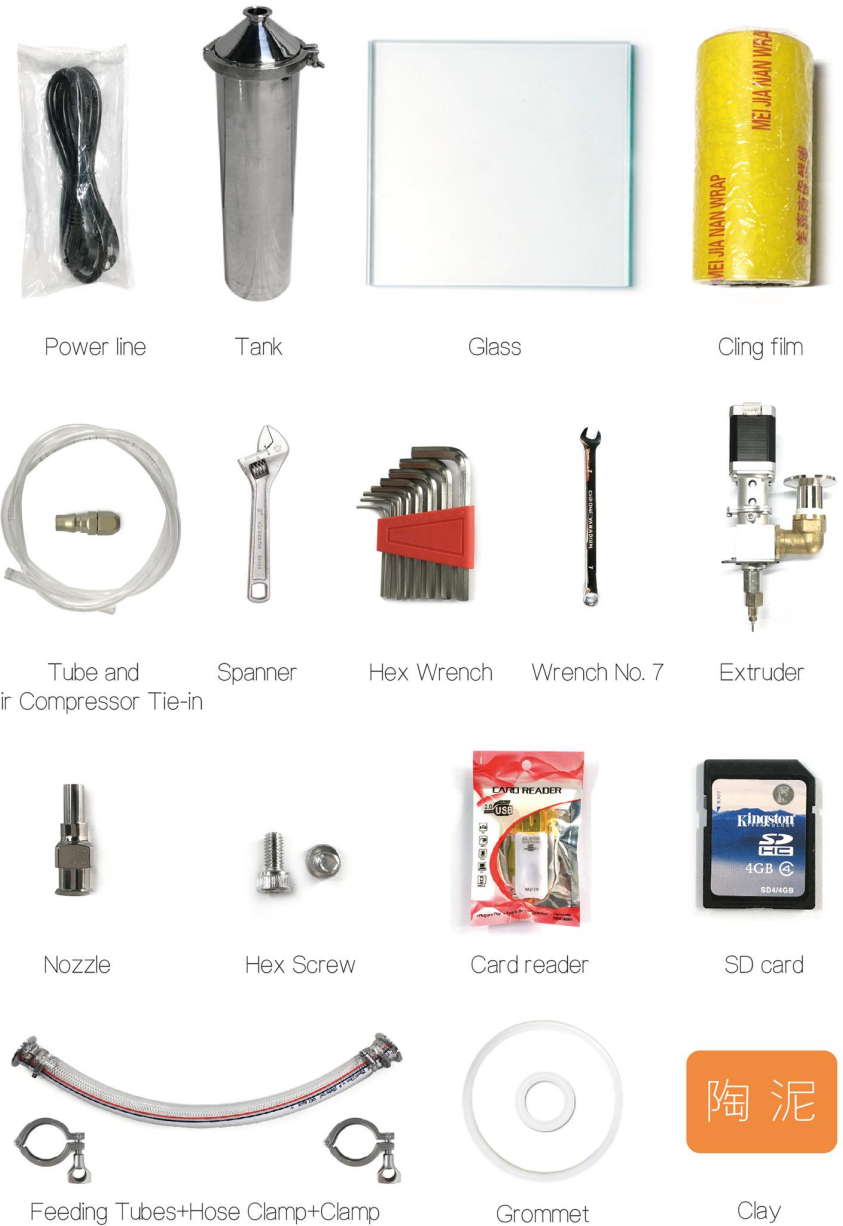
CERAMIC 3D PRINTER



INSTRUCTIONS

< LARGE EQUIPMENT - GENERAL VERSION >

◆ 产品及配件	02
Products and accessories	
◆ 设备安装说明	04
Equipment installation instructions	
◆ 装泥说明	07
Mud loading instructions	
◆ 设备操作说明	13
Equipment operation instructions	
◆ 打印过程中更换耗材方法	20
How to replace consumables during printing	
◆ 断电续打	24
Resume print	
◆ 设备维护	25
Maintenance	
◆ 常见问题及解决方法	27
Common problems and solutions	





(P-1)

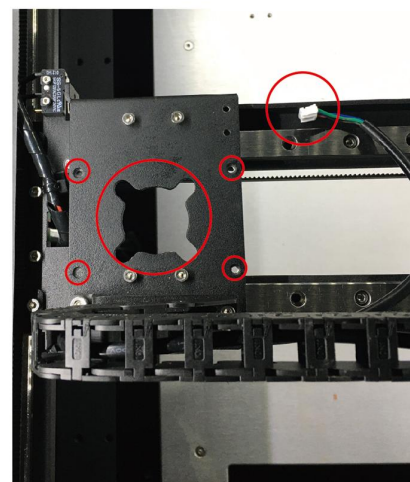
1、 Check the appearance of the equipment for any damage. Please use a 3mm hex wrench to remove the built-in handle and reinstall it on the outside. (Fig. P-1)



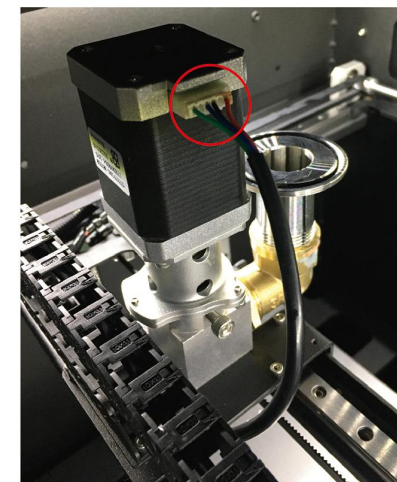
(P-2)

2、 Use (Figure P-2) parts and tools to install the extruder assembly.

- ① Place the extruder into the fixed plate on the equipment slide. (Fig. P-3)
- ② Tighten and secure with screws, and insert the wires. (Fig. P-4)



(P-3)



(P-4)

3. Install the material bucket.(Fig. P-5)



(P-5)

① Tank filled clay ;



a、 Press the piston into the bottom of the tank ;

b、 Rub the clay into blocks and put them into the tank ;

c、 Press the clay into place by hand and repeat this step until the bucket is full ;

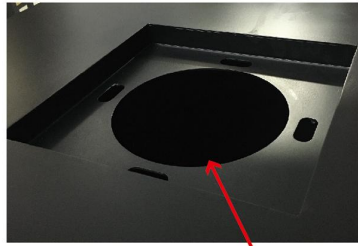


d、 Clean the barrel mouth and place a large washer on it ;

e、 Put on the material cover ;

f、 Finally, lock the cover tightly with a large clamp.

- ② Invert the bucket filled with mud and place it in the hole of the material rack.(Fig. P-6)
- ③ Insert the air pipe of the material rack into the air inlet of the material tank.(Fig. P-7)
Final effect.(Fig. P-8)



(P-6)



(P-7)

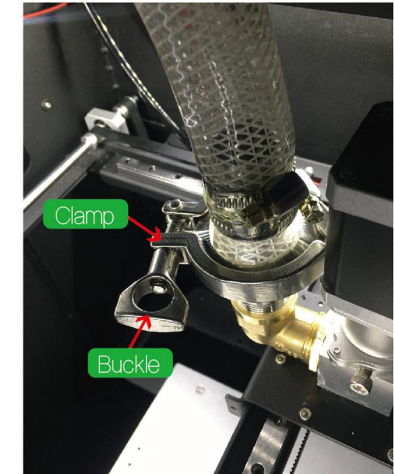


(P-8)

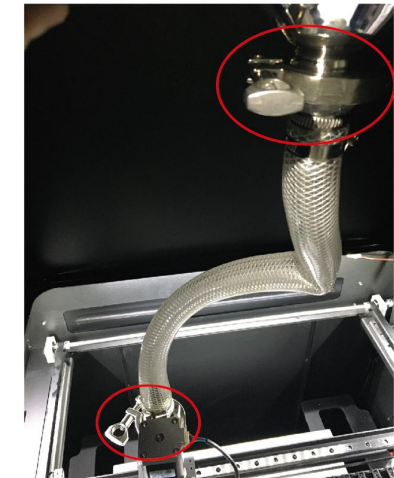
- ④ Open the material rack door and use the feed pipe to connect the mud outlet of the material cover with the feed inlet of the extruder component.(Fig. P-11) ;
- ③ Place small washers on each connection port, lock them with small clamps, and finally use a No. 7 wrench to insert the buckle and tighten them tightly.(Fig. P-9 P-10)



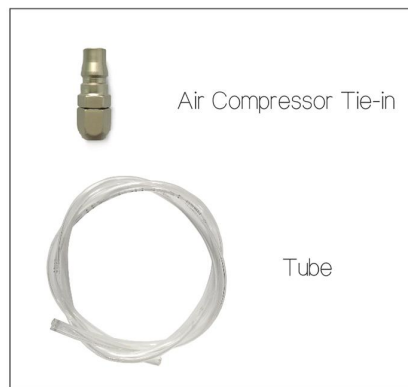
(P-9)



(P-10)



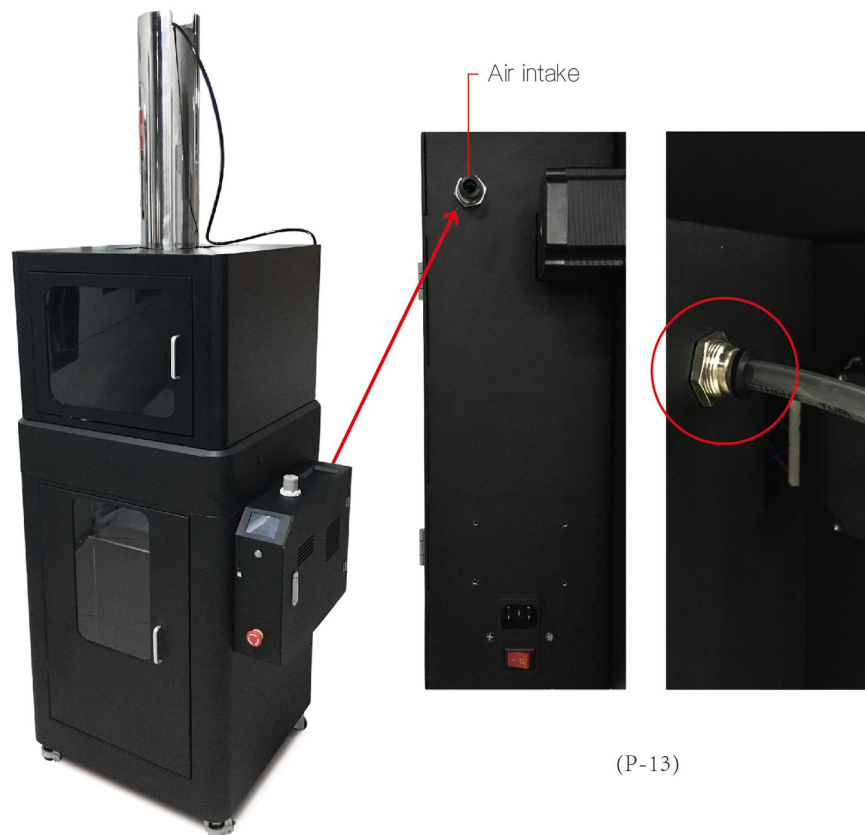
(P-11)



(P-12)

4. Connect the air pressure. (Fig. P-12)
Operate while the air compressor is not running.

① Insert one end of the air hose connector into the air compressor and the other end into the right air inlet of the equipment. (Fig. P-13)



(P-13)



(P-14)

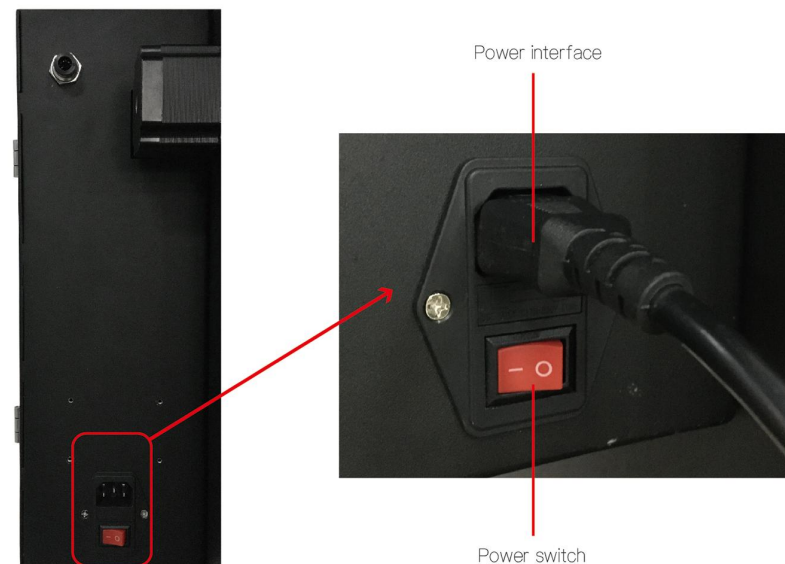


(P-15)

5. Connect to the power supply. (Fig. P-14)

① Insert the power cord into the power interface behind the power distribution cabinet on the right side of the machine.(Fig. P-16)

② Turn on the power switch after inserting the wire.Final effect. (Fig. P-15)



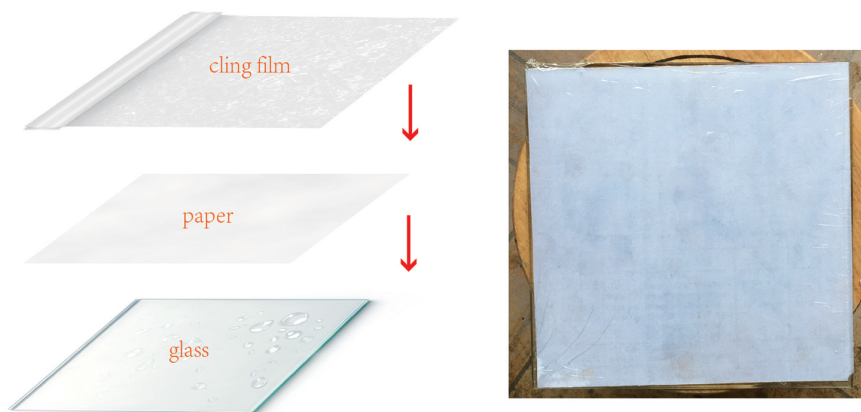
(P-16)



(P-17)

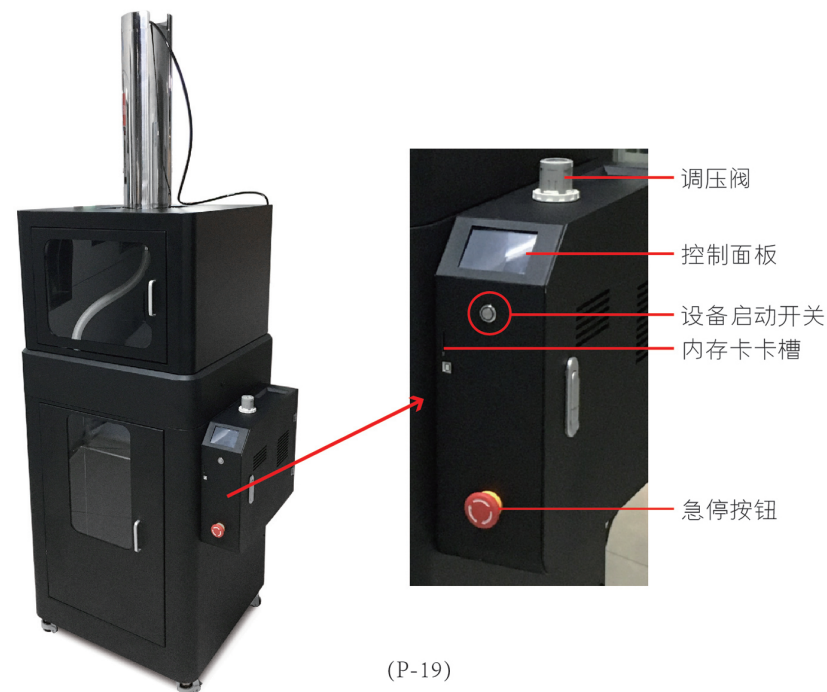
6、Print glass processing. (Fig. P-17)

- ①First, lay the glass flat on the table and sprinkle a small amount of water;
- ②Lay the paper flat on the glass;
- ③Finally, attach a layer of cling film and flatten it, making sure that the size of the paper and cling film does not exceed that of the glass.(Fig. P-18)



(P-18)

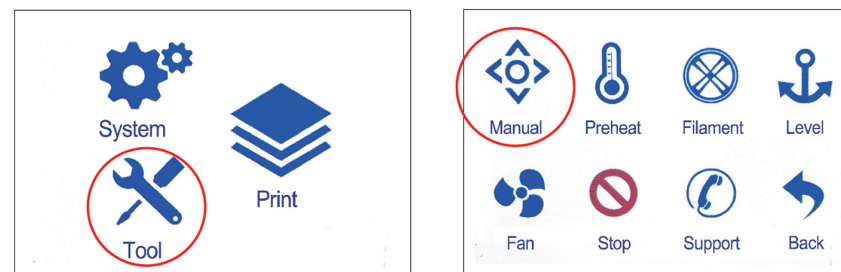
- 1、 Power on - The circular start button on the right side distribution cabinet on the front of the device.(Fig. P-19)



(P-19)

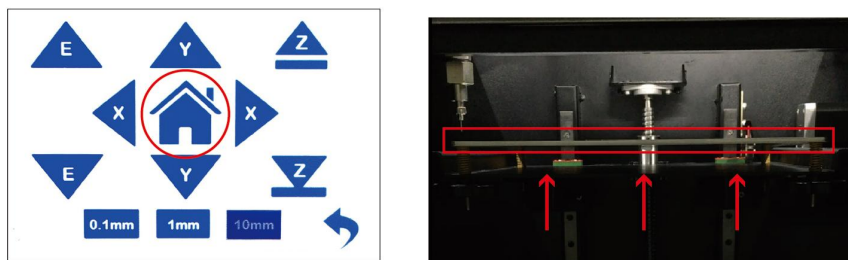
- 2、 Adjust the printing platform.

- ①Click on the [Tools] - [Manual] icon in the control panel. (Fig. P-20)



(P-20)

②Click on the [House] icon to bring the printing platform back to its origin.(Fig. P-21)

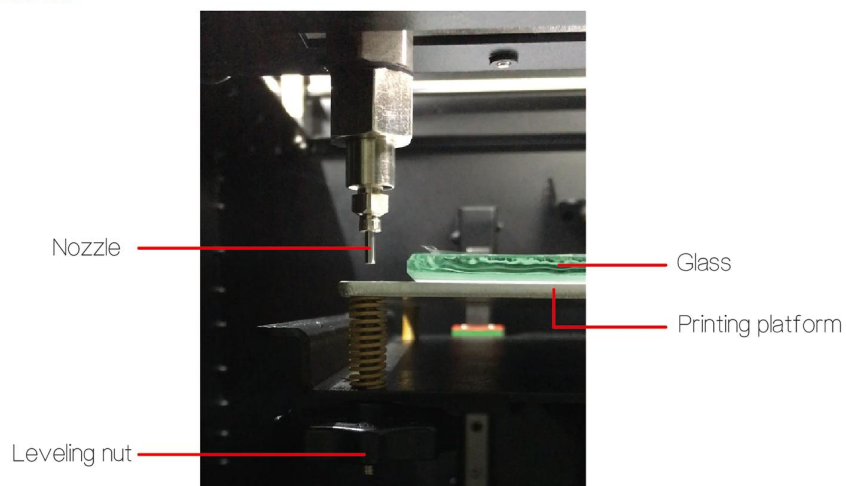


(P-21)

③After the platform returns to its original position, place the processed glass inside. (Fig. P-22)

*Due to bumps during transportation, the platform may experience displacement, causing it to be too close to the nozzle after returning to its original position, resulting in the inability to place the glass. If this situation occurs, please adjust the platform in the following way:

- a. Rotate the leveling nut below the platform counterclockwise to lower the platform.(Fig. P-22)
- b. Four leveling nuts need to be adjusted to lower the platform position, so that the glass can be inserted.

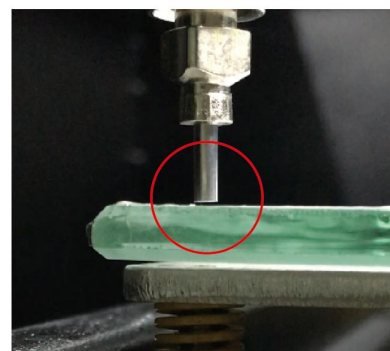


(Clockwise rotation - platform up)
(Counterclockwise rotation - platform descent)

(P-22)

④Fine tune the distance between the glass and the nozzle.(Fig. P-23)

- a. After inserting the glass, use the leveling nut (Fig. P-22) under the platform to adjust the distance between the nozzle and the glass.
- b. It is recommended to reserve a distance of about 1-2 A4 paper thicknesses.(Fig. P-24)

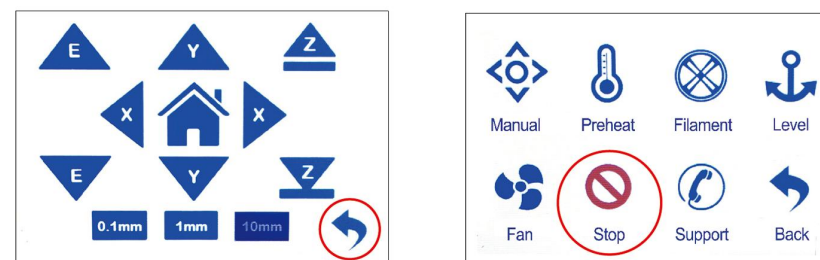


(P-23)



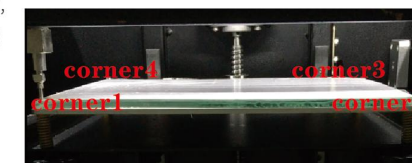
(P-24)

c. After completion, click on the [Back] icon in the bottom right corner of the control panel, and then click on the [Stop] icon. (Fig. P-25)



(P-25)

d. After clicking the [Emergency Stop] icon, follow the adjustment method in steps a and b above to manually push the extruder to the other three corners of the glass and adjust the distance between the glass and the nozzle in sequence. (Fig. P-26)

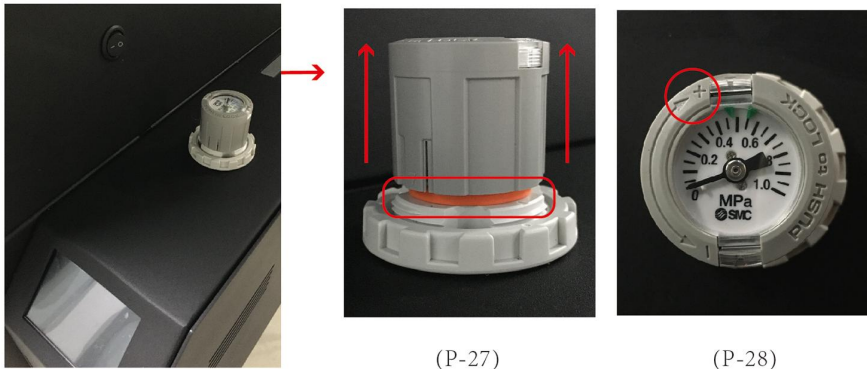


(P-26)

3. Check the mud discharge of the extruder.

①① Increase air pressure - Pull up the pressure regulating valve knob upwards until the orange part is exposed. (Fig. P-27)

②② After exposing the orange part, rotate the knob in the direction of **【+】** to increase the air pressure (Fig. P-28), and the general adjustment range is **【0.45-0.6MPa】**.

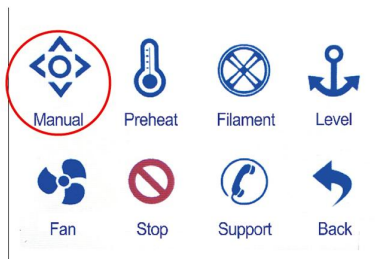


(P-27)

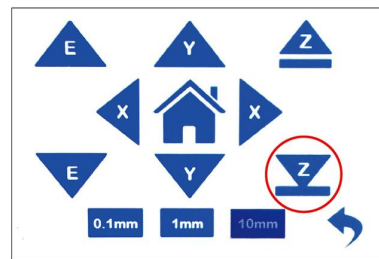
(P-28)

③ Click the [Manual] icon in the control panel. (Fig. P-29)

④ Then click on the downward **【Z】** icon to lower the platform to a certain height for easy observation of the mud situation. (Fig. P-30)

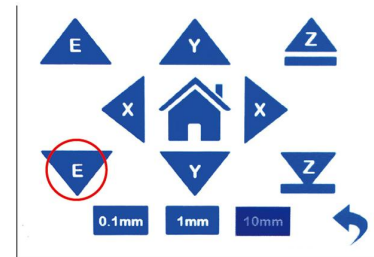


(P-29)

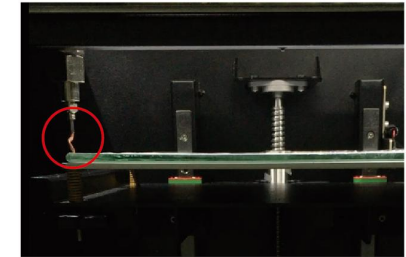


(P-30)

⑤ After the platform descends, click on the downward **【E】** icon (Fig. P-31) in the control panel. If it is the first time to use it, click a few more times to observe whether the nozzle emits mud smoothly. (Fig. P-32)

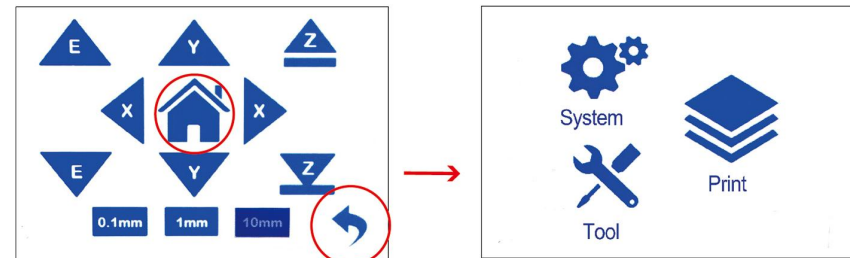


(P-31)



(P-32)

⑥ There is no problem with mud discharge. After removing the excluded mud, click on the [House] icon in the control panel to return the platform to its original position, and then continue to click on the [Back] icon to return to the main interface. (Fig. P-33)



(P-33)

*In case of inability to squeeze out mud or low mud output :

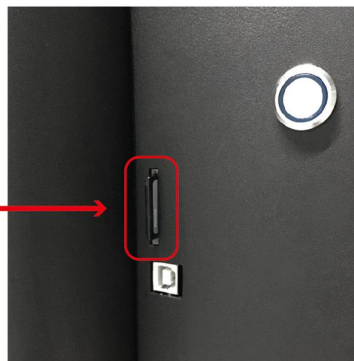
- a、 Attempt to increase air pressure (adjustment range not exceeding 0.6MPa) ;
- b、 Check if each air pipe connection is properly inserted to avoid air leakage ;
- c、 Check if there are any foreign objects blocking the inside of the extruder ;
- d、 Check if the mud used is too dry and replace it with a harder mud.

4. Insert and remove the SD card. (Some machines use USB drives.)

- ①The card slot is located on the power distribution cabinet on the right side of the machine. (Fig. P-34)
- ②Place the side with the chip facing upwards into the card slot and gently press inward. (Fig. P-35)
- ③When removing a memory card, first press the card inward and wait for it to pop out before removing it.



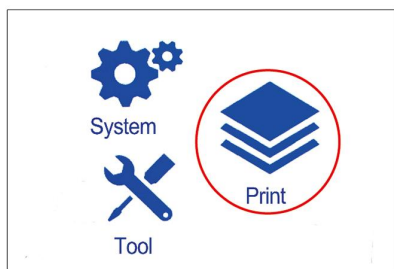
(P-34)



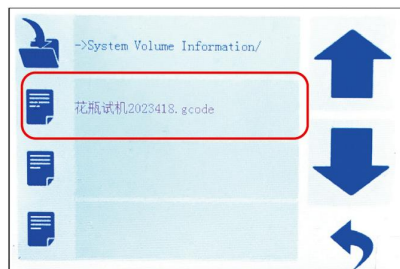
(P-35)

5. Printing.

- ①Click on the [Print] icon in the control panel. (Fig. P-36)
- ②Click on the model name that needs to be printed. (Fig. P-37)
(there is a printed model in SD)

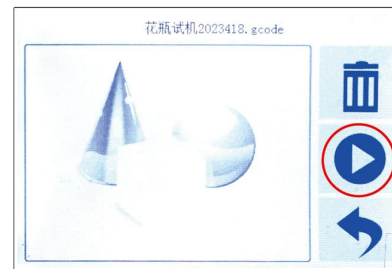


(P-36)



(P-37)

③Click on the second [Start] icon on the right to start printing. (Fig. P-38)

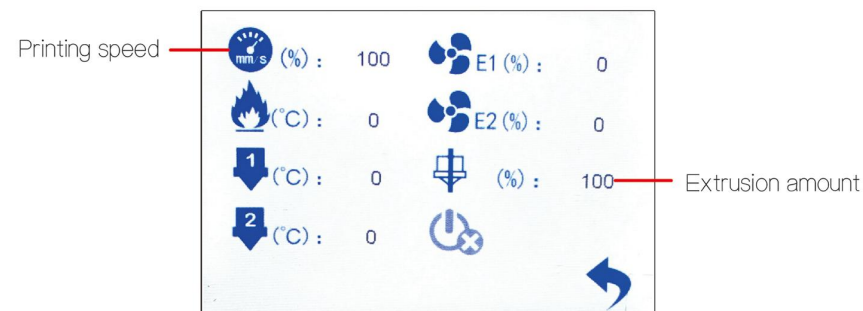


(P-38)



(P-39)

- ④You can adjust the printing parameters at any time by observing the printing situation. Click on the first 【 Settings 】 icon in the lower right corner of the control panel. (Fig. P-39)

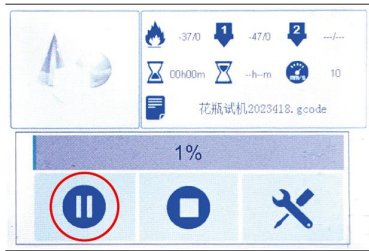


(P-40)

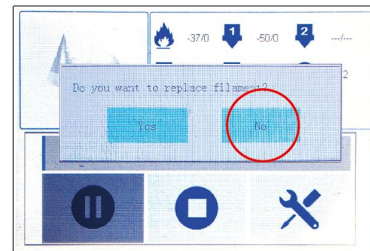
- ⑤Adjust the amount of mud and printing speed according to the printing situation. (Fig. P-40)

*The printing speed of models with excessive hanging angles should not be too fast.

1. Click on the first [Pause] icon in the bottom left of the control panel. (Fig. P-41)
2. Click [No] in the new pop-up window. (Fig. P-42)

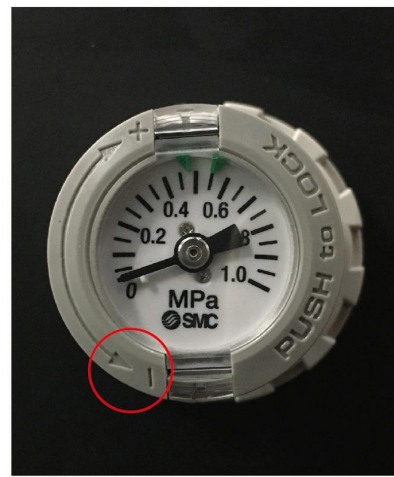
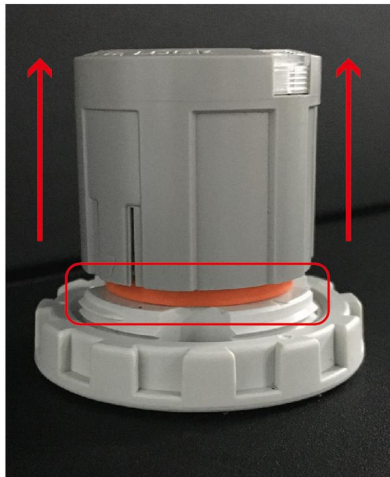


(P-41)



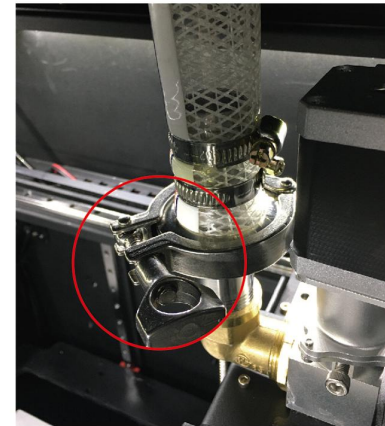
(P-42)

3. Pull up the pressure regulating valve knob, expose the orange part, and rotate according to the 【 - 】 direction on the knob to release pressure to 0 MPa. (Fig. P-43)



(P-43)

4. Remove the clamp connecting the feed pipe and the extruder feed port. (Fig. P-44) , Remove the intake pipe above the tank. (Fig. P-45)



(P-44)



(P-45)

5. Remove the material tank together with the feed pipe. (Fig. P-46) , Remove the material cover (do not remove the feed pipe) (Fig. P-47)



(P-46)



(P-47)

6. Replace consumables.

① Install the removed material cover (including the feed pipe) directly onto the clay filled tank, place a gasket, and then lock it with a clamp. (Fig. P-48)

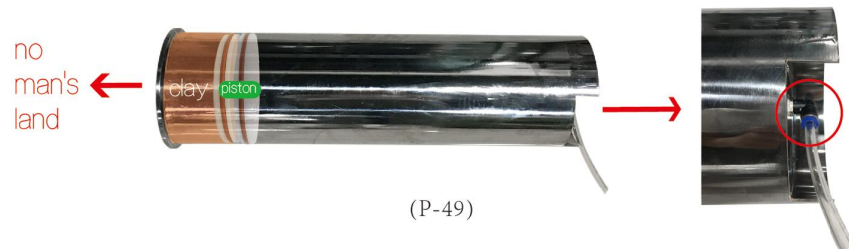


② Fill the raw material tank with clay for use.

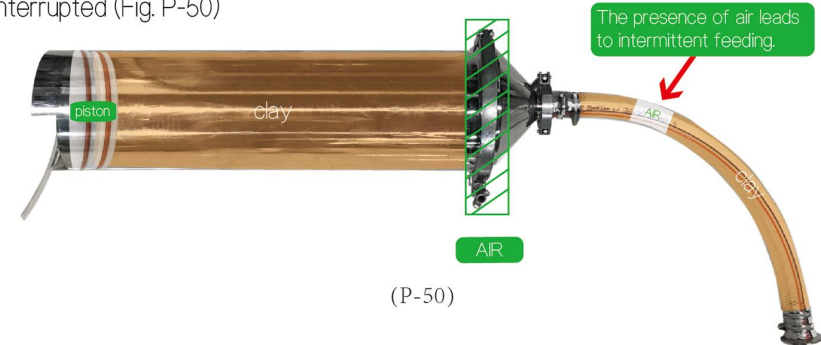
a. Place the material tank flat on the ground, insert a gas pipe (Fig. P-49) at the inlet end of the tank, slowly pressurize and inflate the tank, and discharge the remaining clay and piston. Due to the pressure difference between the inside and outside, there will be a "bang" sound when the piston is discharged, which is a normal situation;

*When operating, face the discharge port of the material tank towards the direction of no one to prevent the discharged material from being sprayed and injured due to excessive pressure.

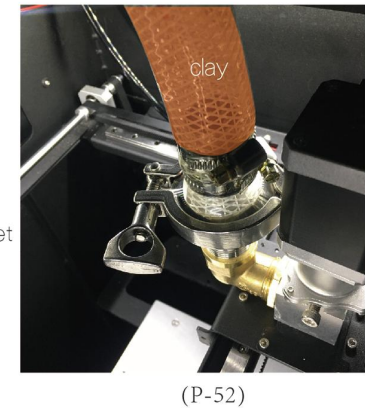
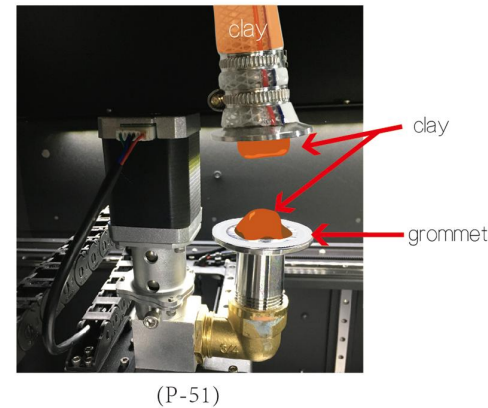
b. After discharging the remaining clay and piston, please refer to the clay loading method on page 7 and reinstall the clay.



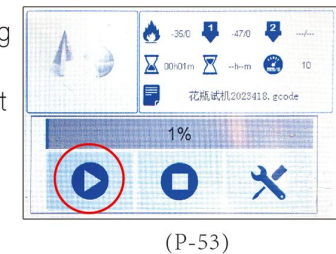
7. To prevent internal residual air from causing material interruption during the printing process, after the assembly of the material barrel is completed, insert a gas pipe and discharge a section of mud until the mud in the feeding pipe is not interrupted (Fig. P-50)



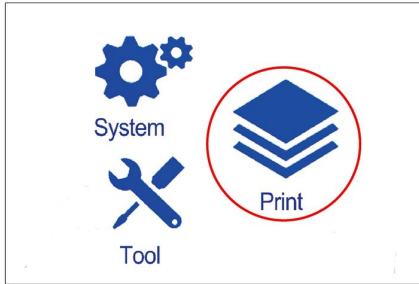
8. Then put the material barrel back into the material rack, and connect the other end of the material pipe to the feeding port of the extruder. Before connecting, you can manually fill some mud (Fig. P-51) to make the mud at both ends of the interface denser and reduce air. Lock the interface with the clamp. (Fig. P-52)



9. Finally, connect the gas pipe to the feeding bucket, increase the pressure through the pressure regulating valve, and click on the first [Start] icon in the control panel to continue printing from the previously paused location. (Fig. P-53)

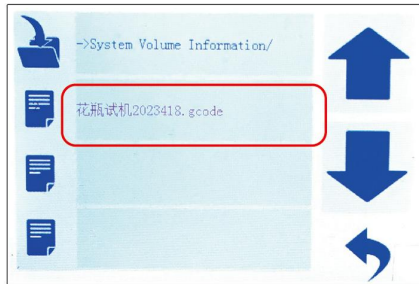


- 1、 If there is an unexpected power outage during printing, restart the device after the power is restored.
- 2、 Click on the [Print] icon in the control panel. (Fig. P-54)



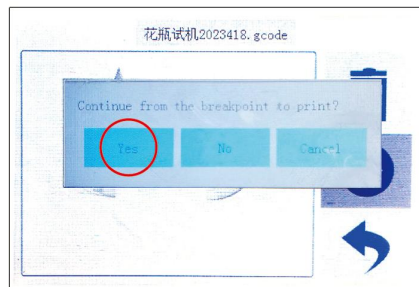
(P-54)

- 3、 Select the model that was being printed before the power outage. (Fig. P-55)



(P-55)

- 4、 在Select [Yes] in the new pop-up window to continue printing from the point of power outage interruption. (Fig. P-56)



(P-56)

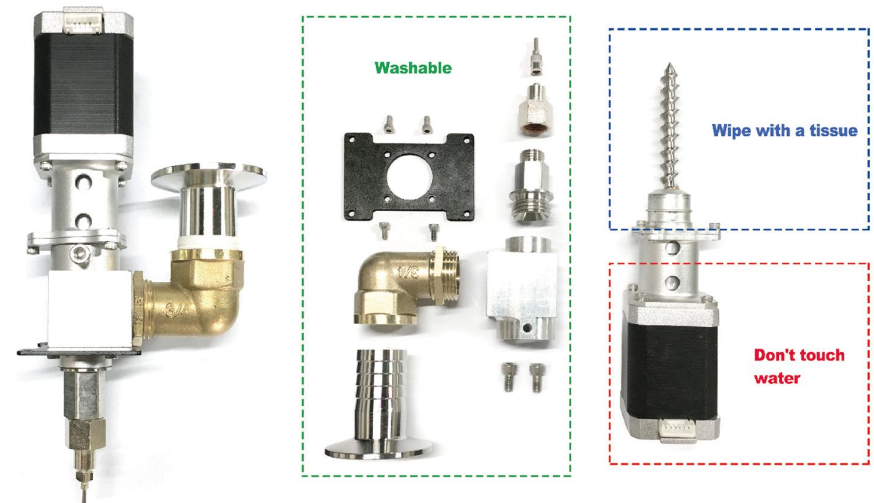
*If there is no printing for a long time in the later stage, the material barrel and extruder should be cleaned in a timely manner after the current printing work is completed.

1、 Storage and cleaning of material barrels.

- ①After printing is completed, cut off the power supply, release the pressure to 0mpa through the pressure regulating valve, unplug the air pipe, and then remove the material bucket from the material rack.
- ②If there is a lot of remaining mud, wrap the discharge port with cling film to prevent the mud from losing water and drying out. It can be used again next time.
- ③If there is less remaining mud, it is recommended to clean it directly.
 - a、 Remove the material cover and clean any remaining clay on it ;
 - b、 Insert the trachea into the air outlet of the material barrel, slowly pressurize, and discharge the remaining material and piston (do not face the outlet towards people) ;
 - c、 Remove the feed pipe, wrap and seal both ends of the pipe with cling film, and store it in a water tank. It can be used directly next time.

2、 Clean the extruder components.

- ①Pull out the motor connection wire and use a 2.5mm hex wrench to remove the extruder from the slide rail.
- ②Disassemble the extruder and clean the internal mud, taking care not to touch the motor part with water. (Fig. P-57)



(P-57)

3、 Other precautions.

- ① Do not place the device in a damp environment ;
- ② The equipment should be placed on a flat desktop for operation ;
- ③ After printing, the device power should be disconnected and the pressure should be relieved ;
- ④ Clean the equipment promptly and keep it clean after printing is completed ;
- ⑤ Unused mud should be sealed and stored for moisture retention ;
- ⑥ To avoid model deformation, do not touch the model, moving platform, glass etc. with your hands during printing or shortly after printing is completed ;
- ⑦ Regularly oil the slide rails and screw rods.



Q: Printing does not output material.

- A:**
- ① Check if there is any blockage inside the extruder ;
 - ② Increase air pressure (maximum not exceeding 0.6MPa) ;
 - ③ Increase the extrusion amount appropriately when printing ;
 - ④ Check if the trachea is properly inserted;
 - ⑤ Check the humidity of the mud to see if it is too hard.

Q: Mud appears intermittently during printing.

- A:**
- ① Check if the mud is kneaded evenly ;
 - ② Is there any residual air or bubbles inside the barrel ;
 - ③ Increase the extrusion amount appropriately when printing ;
 - ④ Suggest replacing the mud with a new one.

Q: When regulating the pressure valve, there is no change in the dial.

- A:**
- ① Check if the air compressor is working ;
 - ② Before adjusting, pull up the knob and expose the orange part before turning the knob to adjust the air pressure.

Q: The first layer height is too high during printing.

- A:**
- ① Perform leveling operation by clicking on the [Tool] - [Manual] icon in the control panel ;
 - ② Then click on the [House] icon in the control panel to bring the platform back to its origin ;
 - ③ After returning to the origin of the platform, click the [Back] icon on the control panel to go to the previous interface, and then click the [Stop] icon ;
 - ④ Push the extruder manually to the four corners corresponding to the glass on the platform, observe the distance between the nozzle and the glass, and adjust the [Leveling Nut] below the platform in order to raise or lower the platform. It is recommended to reserve a distance of about 1-2 A4 paper thicknesses.