

**Fume Hood
FH(C) Series
Maintenance Manual**

Version 2019.09

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1. Equipment failure and repair



Statement: Please let professional personnel operate the following maintenance and inspection to avoid accidents caused by improper operation.

Fault 1: The device is not powered on

The device is not powered on means that the rocker switch is turned on after the device is powered on, and the device has no response (the buzzer does not sound, the display does not light up, and the keys do not respond).

The processing methods and steps when dealing with such failures are as follows:

1.1 Determine whether the power supply of the equipment has electricity and whether it is consistent with the electrical parameters required for normal operation of the equipment. Use a multimeter to determine if the power cord is broken or damaged.

1.2 The live wire of the power input port of the equipment is equipped with a fuse. After confirming that there is no problem with the above items, confirm whether the fuse is fused, and the fuse is on the top of the right side plate of the fume hood. If the fuse is blown, please replace the fuse with the corresponding label calibrated specification.



The position of the fume hood socket fuse is in the position shown in the figure

Figure 1

1.3 After confirming that there is no problem with the above items, try a multimeter to detect the input voltage of the transformer (the voltage value should be the supply voltage of the device) and the output voltage (refer to Figure 2). First, use the multimeter to test whether there is voltage on the two input AC powers of the transformer. This voltage is the grid voltage. Test the output voltage of the transformer again: Use a multimeter to test that the voltage between the two wires at CN6 is between 12V and 14V. This indicates that the voltage output is correct. If there is no voltage in the test, the transformer is broken. Please replace the transformer.

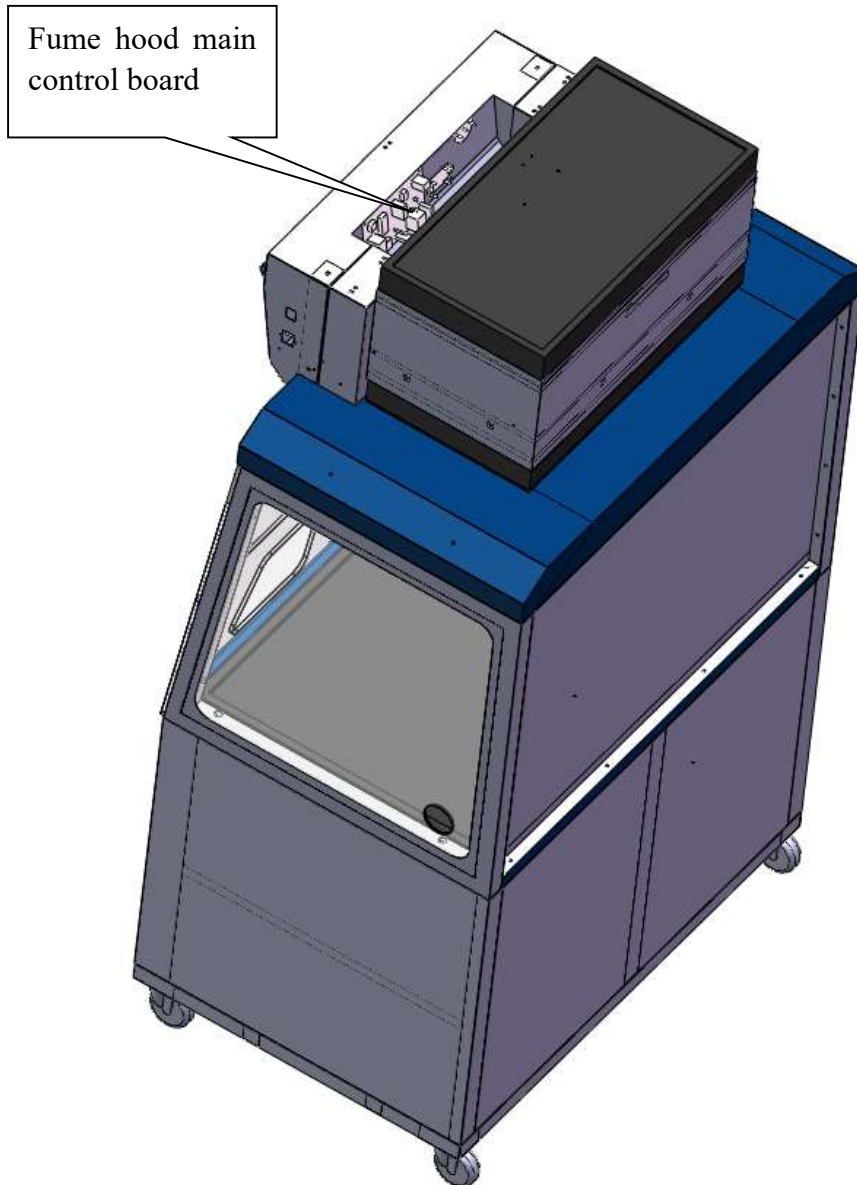


Figure 2

1.4 After confirming that there is no problem with the above items, confirm whether the flat wires of CN7 in Figure 3 and CN1 in Figure 4 are in good contact; and then confirm whether the flat wires of CN8 in Figure 3 and CN2 in Figure 4 are in good contact.

1.5 After confirming that there is no problem with the above items, please replace the new control board.

Fault 2: The touch screen does not light up or the keys do not respond (the buzzer sounds normally after power on)

The touch screen does not light up or the buttons do not respond (the alarm is normal when the device is turned on) means that the alarm touch screen does not light up or the touch screen is on but the touch buttons do not respond after the device is powered on.

The processing methods and steps when dealing with such failures are as follows:

2.1 Confirm whether the touch screen is damaged. If it is damaged, replace it with a new 5-inch touch screen.

2.2 Confirm whether the cable connecting the display board and the control board is in poor contact.

2.3 After confirming that there is no problem with the above items, please replace the new control board.

Fault 3: The buzzer does not sound (turn on alarm)

Refer to Fault 2 for the processing methods and steps when dealing with this type of fault.

Fault 4: The program is disordered or the display is incomplete

Program confusion or incomplete display means that some data is not displayed or some pages are missing.

The processing methods and steps when dealing with such failures are as follows:

Interface engineering download:



The position where the red circle is shown in the north of the touch screen needs to be inserted into a card reader with interface engineering, as shown in the figure



When the ductless fume hood is powered off, insert the memory card, as shown in the figure



After insertion, the ductless fume hood is powered on, and the interface reads the downloaded interface frame by frame. When the screen stops until the main interface does not move, pull out the memory card at the back and finish.

Fault 5: No power to the socket

No power to the socket in the operation area means that the splash-proof socket in the operation area

has no power when the " Socket 

" button is activated.

The processing methods and steps when dealing with such failures are as follows:

5.1 After confirming that there is no problem with the above items, remove the splash-proof socket on the front side (as shown in Figure 7), press the socket button, and use a multimeter to measure the voltage of the connecting socket wire (the voltage value should be the supply voltage of the device) And judge whether there is any damage inside the socket. If the voltage of the connecting socket wire is normal and the splash-proof socket is damaged, replace the splash-proof socket.

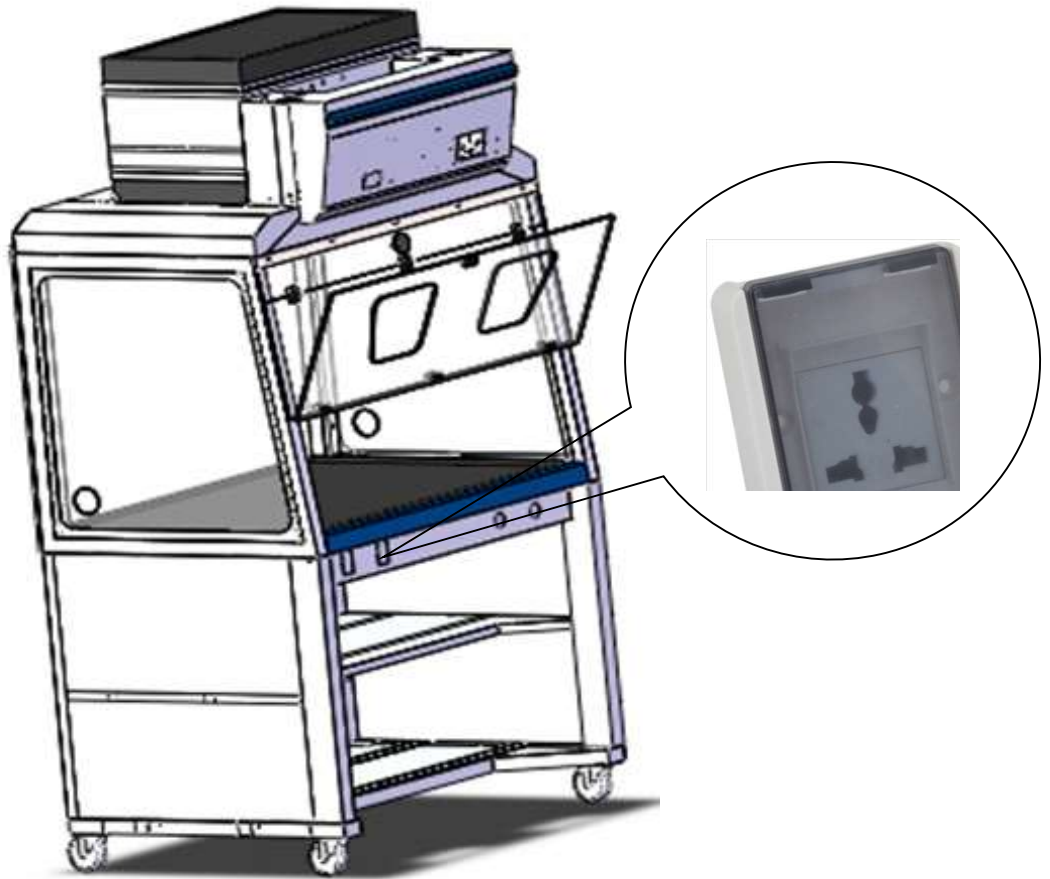





Figure 7

5.2 After confirming that there is no problem with the above items, use a multimeter to check whether the socket line is disconnected, if it is disconnected, reconnect it, and connect the socket line to CN3 of the main control board (Figure 3)(Note: The above check whether the wire is open, please operate under the power off state of the equipment)



5.3 If there is no problem with the above, the device is powered on, press the "  " and "  " buttons in turn, use the multimeter to check whether the red wire of CN3 on the main control board and the blue wire of the power supply tail are powered on (the voltage value should be the power supply of the device) Voltage), if the control board or display board is damaged if it is not powered on, please replace with a new set of circuit boards.

Fault 6: The light does not turn on

The light does not turn on means that the light does not turn on when the "  " button is activated.

The processing methods and steps when dealing with such failures are as follows:

6.1 Confirm whether the lamp tube is damaged, observe whether the lamp tube turns black, if it turns black, the lighting tube is damaged, replace the lighting tube with the same specification.

6.2 If there is no problem as above, power on the equipment, press the "  " and "  " buttons in turn, use a multimeter to detect the voltage of the green wire of the CN2 terminal block and the blue


wire of the rocker switch on the main control board (Figure 3)(The voltage value should be the power supply voltage of the equipment). If there is no voltage, the control board is damaged, replace it with a new one.

6.3 After there is no problem as above, sort out the connecting wires between the lighting lamp and the control board. Check whether the connection is loose, if it is loose, reconnect the loose wire.

Fault 7: UV lamp does not turn on (optional)


When the UV lamp is off, it means that the UV lamp does not turn on when the "UV" button is activated. The processing methods and steps when dealing with such failures are as follows:

7.1 Confirm whether the lamp pins on both sides are in good contact with the lamp holder. Remove the lamp tube to confirm whether the filaments on both sides of the lamp tube are open.

7.2 After there is no problem as described above, power on the equipment, press the "  " and "UV" buttons in turn, use a multimeter to detect the voltage of the black wire of the CN3 terminal block and the blue wire of the rocker switch on the main control board (Figure 3) (both voltage values are It should be the power supply voltage of the equipment). If there is no voltage and the control board is damaged, replace it with a new one.


7.3 After there is no problem as above, sort out the connecting wires between the UV lamp and the control board. Check whether the connection is loose, if it is loose, reconnect the loose wire.

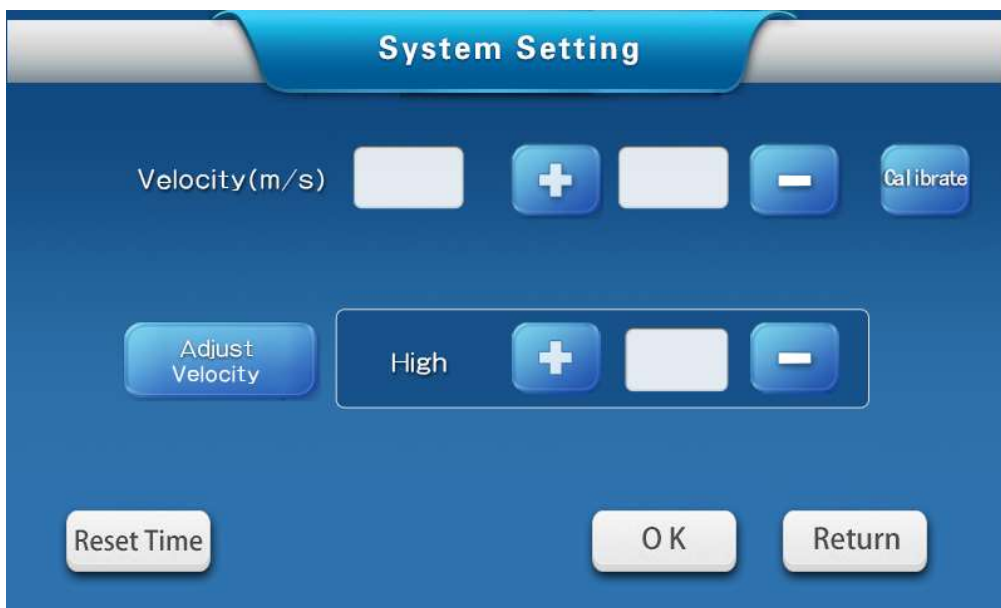
Fault 8: The fan works abnormally

Fan not working means that when the "  " button is activated, the fan does not start or the wind speed is too high or too low.

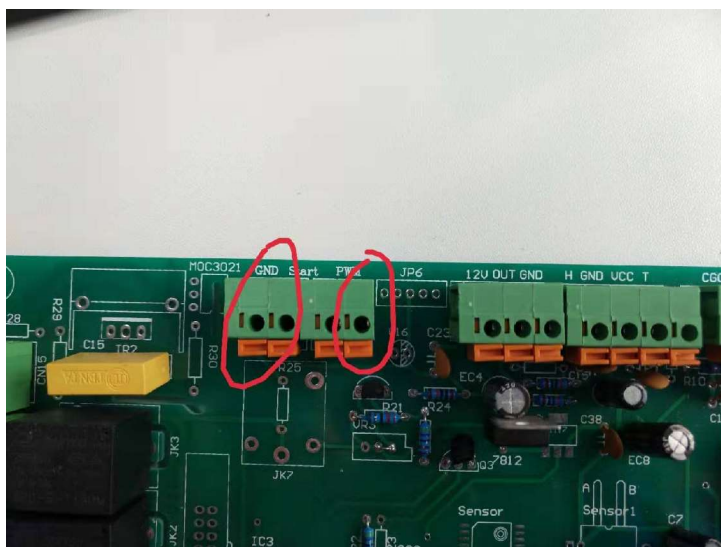
The processing methods and steps when dealing with such failures are as follows:

8.1 If the wind speed is too high or too low, click  to enter the background adjustment,

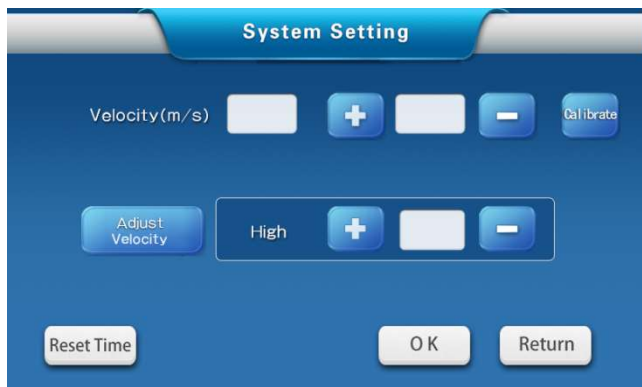
click the  button to adjust the fan gear, and save with the ok key, and return to the main page. Restart the cabinet and press the fan button. If the fan is still working abnormally, re-enter the system to check whether the gear has changed. If there is any change, the memory chip on the control board is damaged. Replace the memory chip again.



8.2 If the fan does not rotate, confirm whether the fan is powered, use a multimeter to measure whether the fan power cord is powered, if there is no power, the control board is damaged, replace the control board.



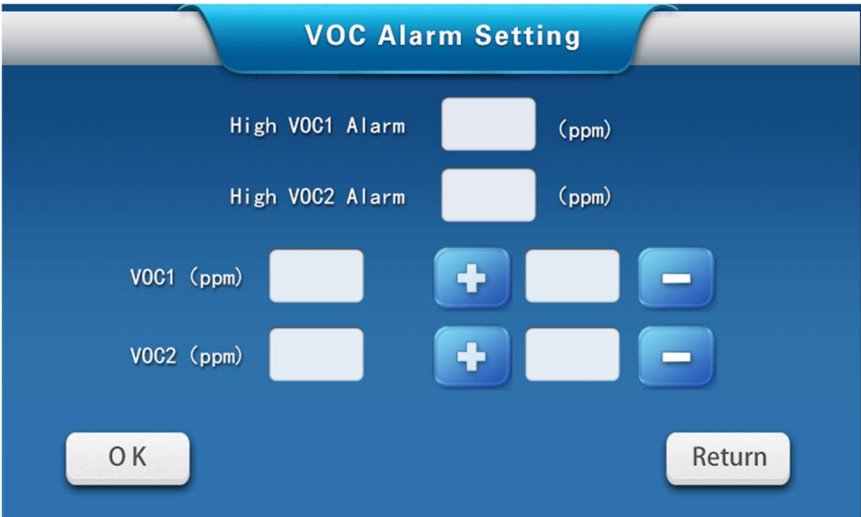
8.3 If there is no such problem, use a multimeter to switch to the DC power supply position, insert the black test lead into the left GND port, and the red test lead into the right PWM port to enter the fan speed control background interface.



As shown by the arrow in the figure, adjust the gear value of the fan and observe whether the voltage of the multimeter changes significantly. If there is a significant change, there is no problem with the PWM voltage output of the control board, and the signal line is poorly connected or disconnected. Reconnect the signal line, If the voltage does not change, the control board is damaged and the control board needs to be replaced. If there is no problem, the fan is damaged, replace the fan. (For the steps of replacing the fan, refer to the following method of replacing the fan).

Fault 9: VOC value is abnormal

If the VOC value is displayed abnormally or is 0, click to enter the background, and the display coefficient is displayed in the middle of the plus and minus signs in the background. If it is 0, the value is also 0. Generally adjust the value to 70. If the voc value is still abnormal after adjustment, use a more odorous gas There is not much change when approaching, check whether the wiring harness between the VOC sensor and the panel is loose, if it is loose, reinsert it, if there is still no change, the VOC sensor is damaged, replace the VOC sensor.



Fault 10: The face wind speed value is abnormal

Install a VOC sensor on the acrylic board in the middle of the upper part of the cabinet, blow air to the face wind speed sensor after power on, the touch screen shows a large change in the value and the

uninterrupted face wind speed sensor is normal, if there is no response, check the connection between the face wind speed sensor and the control board Whether it is loose, reinsert it if it is loose, if the normal face velocity sensor is damaged, replace the face velocity sensor.

Fault 11: The value of the temperature and humidity sensor is abnormal

The temperature and humidity sensor is located at the rear of the operation panel. You can remove the upper fixing part of the operation panel. Remove the temperature and humidity sensor inside the operation panel. Do not disconnect the wiring harness. Take a hot towel and place it on the side of the sensor. Observe whether the displayed value changes. If there is no change, the temperature and humidity sensor is damaged, replace with a new temperature and humidity sensor of the same specification.

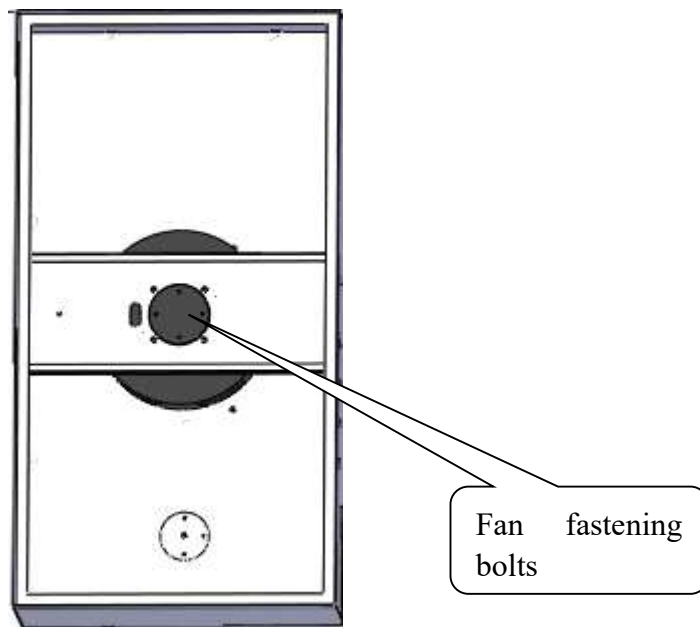
2. Replacement of fans and filters

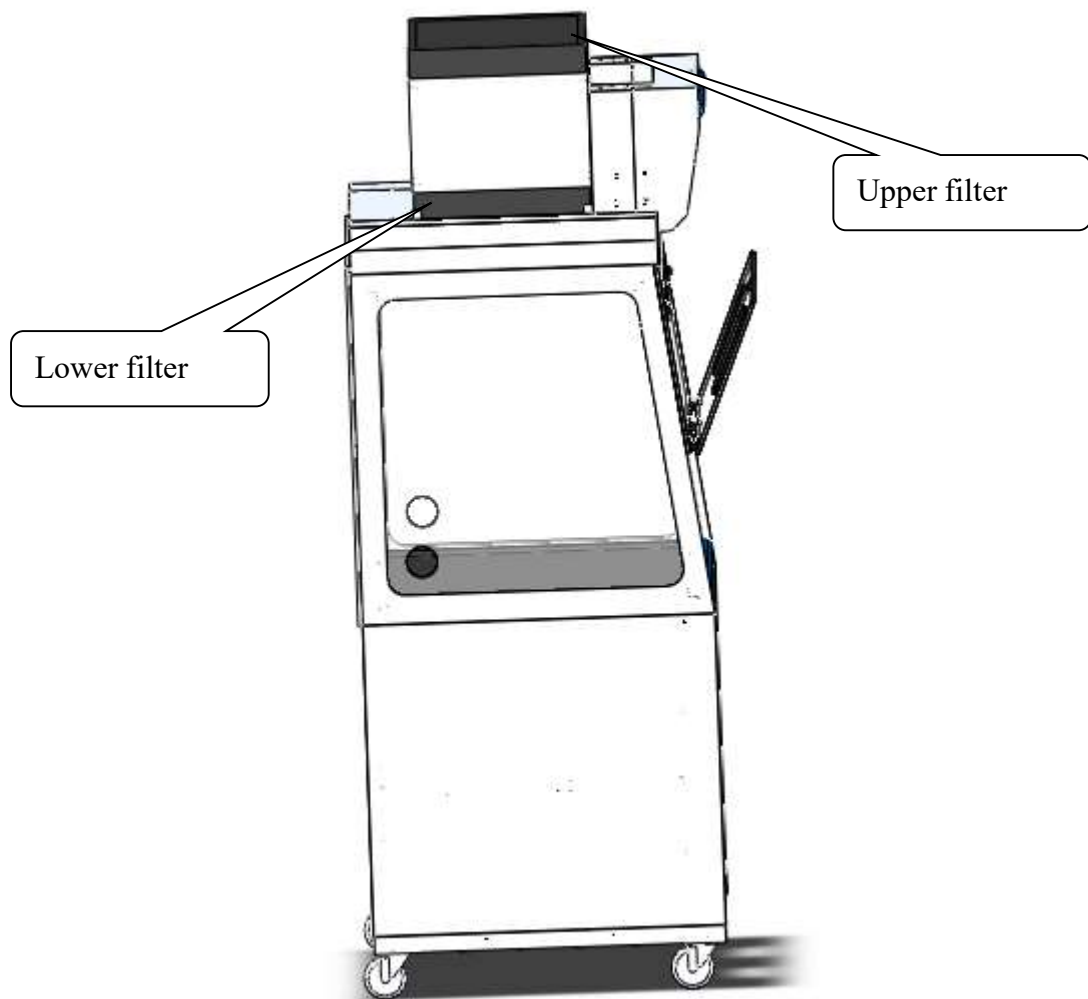
1. The method of replacing the fan is as follows:

1.1. Power off the cabinet, remove the upper filter of the fan, move the fan slightly to facilitate the removal of the control board circuit, disconnect the fan power line and signal line on the control board, and disconnect the VOC sensor and control board in the fan (It is recommended to take pictures and record the connection sequence of the wires before disconnecting the wires).

1.2. Remove the fan and place it gently on the ground. Use 10 wrenches to remove the fan fixing bolts, loosen the cable fixing head at the side plate position and pull out the wire harness. As shown below

1.3. Install the new fan according to the original position with 10 wrenches, pass the wire harness through the cable fixing head and tighten the cable fixing head.





1.4. Press the fan back to the top of the cabinet, pay attention to the fan down, restore the wire harness to the original, and place the removed filter on the top of the fan. Note that the arrow of the filter is upward;

2. The method of replacing the filter is as follows:

2.1. Place the cabinet in a place with a larger space.

2.2. Remove the upper filter of the fan and place it gently on the ground or desktop.

2.3. Remove the fan (follow the steps above) or shift the position of the fan. Remove the lower filter and place the original upper filter under the fan, paying attention to the arrow of the filter pointing upwards. Restore the fan to its original position.

2.4. Take the new filter and unpack it, and place the new filter on the upper part of the fan, paying attention to the arrow of the filter pointing upwards.