

User Manual



Please read operating manual before installation and operation.

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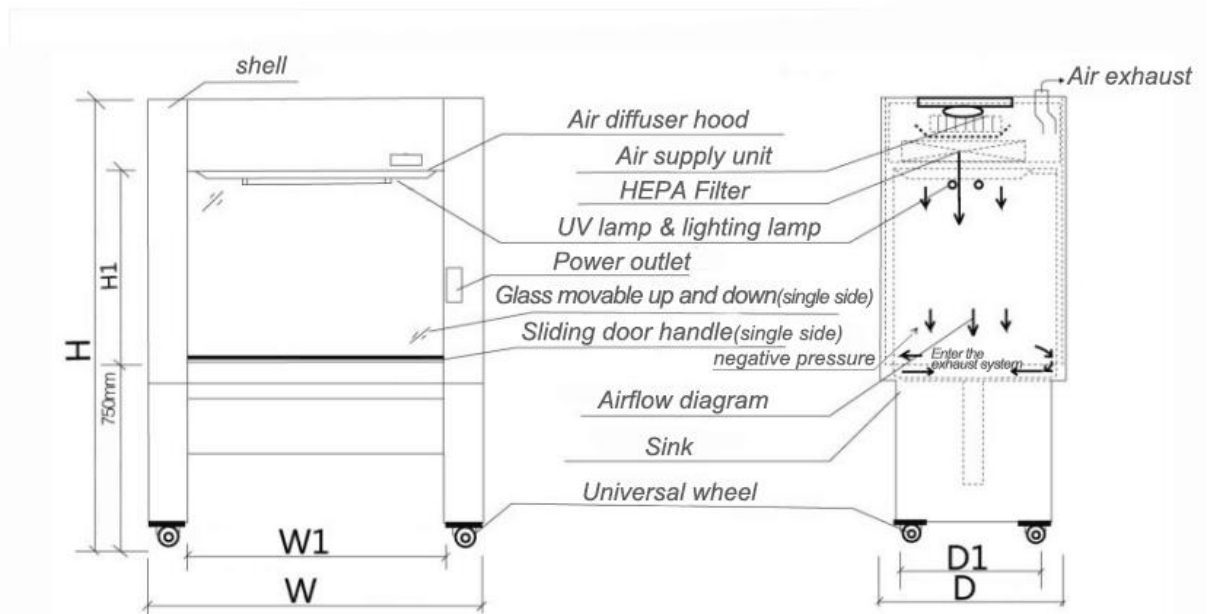
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BIOLOGICAL SAFETY CABINET USER MANUAL

1.Product features and uses

1. Air curtain isolation design prevents internal and external cross-contamination, 30% of the air flow is discharged outside and 70% of the internal circulation, negative pressure vertical laminar flow, no need to install pipes.
2. The glass door can be moved up and down, can be positioned arbitrarily, is easy to operate, and can be completely closed for sterilization, and the positioning height limit alarm prompts.
3. The power output socket in the work area, equipped with a waterproof socket and a sewage interface provide great convenience for the operator.
- 4 A special filter is installed at the exhaust air to control emission pollution.
5. The working environment is made of high-quality 304 stainless steel, which is smooth, seamless, and has no dead ends. It can be easily and thoroughly disinfected and can prevent the erosion of corrosive agents and disinfectants.
6. It adopts LED panel control.UV lamp can be timed.
7. The tilt angle of 10° is in line with the design concept of the human body.



BSC-1000IIA2 Schematic

2. Technical parameters

| specifications | | Model | BSC-700IIA2-EP |
|---------------------|---------------------------|-------|--|
| Cleanliness | | | Class 100@ $\geq 0.5\mu\text{m}$ (US Federal 209E) |
| Number of colonies | | | $\leq 0.5\text{pcs/dish}\cdot\text{hour}$ ($\Phi 90\text{mm}$ culture plate) |
| Wind speed | | | Average suction wind speed: $\geq 0.55\pm 0.025\text{m/s}$ Average descending wind speed: $\geq 0.3\pm 0.025\text{m/s}$ |
| Filtration Level | | | HEPA of borosilicate glass fiber material: $\geq 99.995\%$, @ $0.3\mu\text{m}$ |
| Noise | | | $\leq 65\text{dB(A)}$ |
| Illumination | | | $\geq 800\text{Lux}$ |
| Vibration half peak | | | $\leq 3\mu\text{m}$ |
| Power | | | AC 220V/50Hz |
| Power consumption | | | 800W |
| Weight | | | 210KG |
| Work area size | $W1\times D1\times H1$ mm | | $600\times 500\times 520$ |
| External size | $W\times D\times H$ mm | | $760\times 650\times 1230$ |

3. Structure features

The biological safety cabinet is composed of several major components such as a cabinet, a fan, a high-efficiency filter, and an operation switch. The cabinet body is made of high-quality cold-rolled plate material, the surface is sprayed with plastic treatment, and the working table is made of stainless steel. The purification unit adopts a fan system with adjustable air volume. By adjusting the working conditions of the fan, the average wind speed in the clean working area can be kept within the rated range, and the service life of the high-efficiency filter can be effectively extended.

4. Working principle

The air in the working area is drawn into the static pressure box by the fan through the air return ports on both sides of the front and back of the table, part of it is filtered by the exhaust filter and then discharged through the top exhaust valve, and the other part is filtered by the air supply high efficiency filter and blown out from the air outlet surface , Form a clean air flow. The clean airflow flows through the work area at a certain cross-sectional wind speed, thereby forming a highly clean working environment.

6. Installation and usage

The location of the biological safety cabinet should be in a clean working room (preferably placed in a primary clean room with a level of 100,000 or 300,000), plug in the power source, and turn it on according to the function shown on the control panel. The working area and shell of the biological safety cabinet should be carefully cleaned before starting up to remove dust on the surface. Normal operation and use can be carried out ten minutes after starting up.

7. Maintenance

1. Generally, when the working voltage of the fan is adjusted to the highest

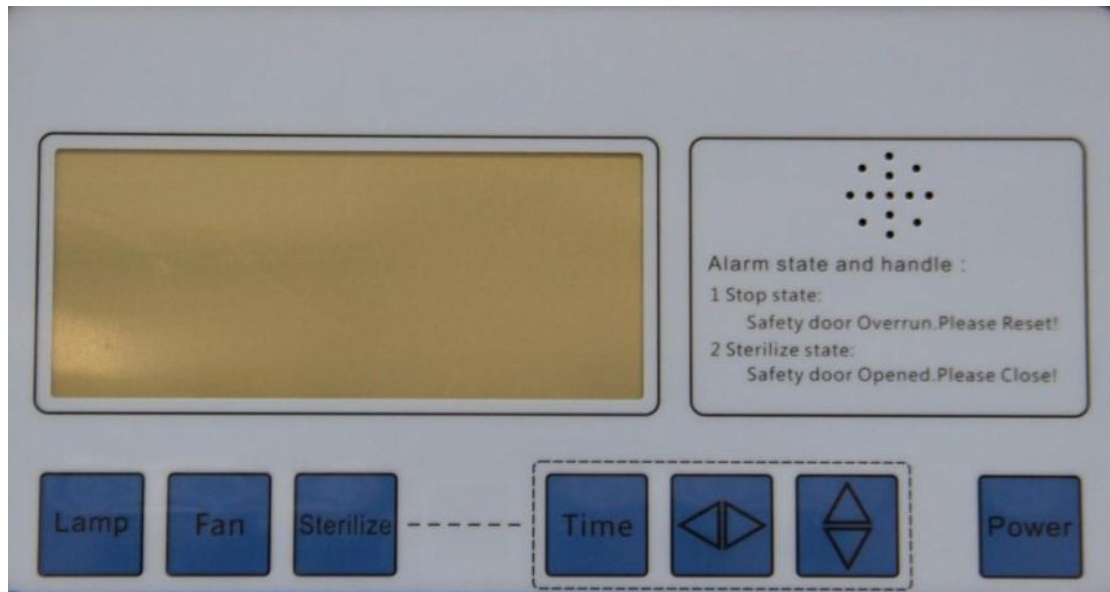
point after use, when the ideal wind speed is still not reached, it means that the high efficiency filter has too much dust (the filter hole on the filter material has been basically blocked, and it needs to be updated in time), generally The service life of the high-efficiency air filter is 18 months.

2. When replacing the high-efficiency air filter, pay attention to the correctness of the model, specification and size (configured by the original manufacturer), follow the arrow wind direction device, and pay attention to the surrounding seal of the filter, and there is absolutely no leakage.

8. General faults, causes, and troubleshooting methods

| Faults | Reason | troubleshooting methods |
|---|---|---|
| The main power switch can not be closed, automatically trip | 1. The fan is stuck and the motor is blocked, or there is a short circuit in the circuit | 1. Adjust the position of the fan shaft, or replace the impeller and bearing, and check whether the circuit is in good condition. 2. Check the insulation resistance of the circuit and components to the shell point by point according to the wiring diagram, and repair the insulation failure. |
| Low wind speed | 1. The HEPA filter fails. | 1. Replace the HEPA filter |
| The fan does not work | 1. The contactor does not work. 2. The fuse core of the fan power supply has been blown. | 1. Check whether the contactor circuit is normal. 2. Replace the fuse. |
| Fluorescent light does not light up | 1. The lamp or relay is damaged. 2. The lamp power fuse has been blown. | 1. Replace the lamp or relay. 2. Replace the fuse. |

1. Control panel Instructions



1. Press the "Power" button, the meter is powered on and self-checking starts. At this time, the backlight is on and all displays are turned on; after 2 seconds, the self-checking ends and the meter enters the normal control state.

2. In the power-on state, short press the "Power" button to power off the meter and cut off all outputs at the same time.

3. Press the "lamp" button to turn on the light; (the light and the UV lamp cannot be turned on at the same time, so if the UV lamp is on, the instrument will control to turn off the UV lamp first, and then turn on the fluorescent lamp after one second).

4. Press the "fan" button to turn on the fan


5. Press the "Sterilize" button to turn on the UV lamp; (if the fluorescent lamp is turned on, the lamp will be turned off first, and then the UV lamp will be turned on after one second).


When the sterilization lamp is turned on, if the sterilization timing function is turned on, the sterilization timing function will be activated synchronously; when the sterilization timing is up, the meter will automatically turn off the sterilization lamp.

Note: The method of turning on the sterilization timing function is as follows:

A. Long press the "Sterilization" button for more than 3 seconds, the meter enters the

sterilization timing setting, and the last digit of the sterilization timing data flashes at this time. Release the button at this time.

B. Press the "" key to move the set digits cyclically; (when the set digits are valid, it will be displayed in flashing form).

Press the "" key to carry out the cyclical change of the current flashing digit value.

C. The middle two points are the "second" point, which flashes once every 1 second; the first two digits of the "second" point are the timing "hour" value, the two digits after the "second" point are the "minute" value, and the maximum setting value of the "minute" value is "59" points

D. When the setting is completed, short press the "Sterilization" button. If the setting value is greater than zero, the sterilization timing function is turned on, and if the setting value is equal to zero, the sterilization timing function is turned off.

6. Safety door detection: When the safety door "limit switch" on the control panel is pressed, the "status display" area of the instrument will change from the "normal" state to the "alarm" state, and the "alarm" font flashes. At the same time the buzzer sounds.

7. When the "limit switch" is restored, the alarm is released, the display returns to "normal", and the buzzer is turned off at the same time.

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