



BIOLOGICAL SAFETY CABINET CLASS I

Cod. 5609511 - Model H-1

Cod. 5609510 - Model H-2

Instructions Manual

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INTRODUCTION

With the development of medical technology, people's recognition of microbiological protection keeps improving. Laboratory safety is taken into more and more account. Certainly it will become more comprehensive and standard. All these make more and more demand for laboratory equipments. Clinical laboratory of Medical institution and scientific laboratory will inevitably cause aerosol granule on laboratory operations. For example, in the course of blending, mixing, rubbing, mashing and centrifugation, aerosol will raise. Biological safety cabinets could defend and preserve the damage caused by the aerosol efficiently. Not only it can protect people but also the environment.

The Biological Safety cabinets can protect people by the negative pressure in the air access and protect environment by the HEPA filter in the exit. Compared with the biological safety cabinet, air segregation equipments do not have the air supply system. But it's more succinct and portable in structurally, you can put it on any position or laboratory furniture, so it could be operated easily and conveniently. Meanwhile, it can protect people and environment in the course of experimental practice.

We hope our products could help you with your work greatly.

Scope of Application

The Biological safety cabinet could apply to clinical or research laboratory. It can prevent aerosol contamination and protect people and environment from hazards.

Environmental Conditions:

Environmental temperature: 15~35℃

Relative humidity: $\leq 75\%$

Atmospheric pressure range: 70KPa~106KPa

Power supply: AC220V; 50Hz

Brief introduction of Function and Structure

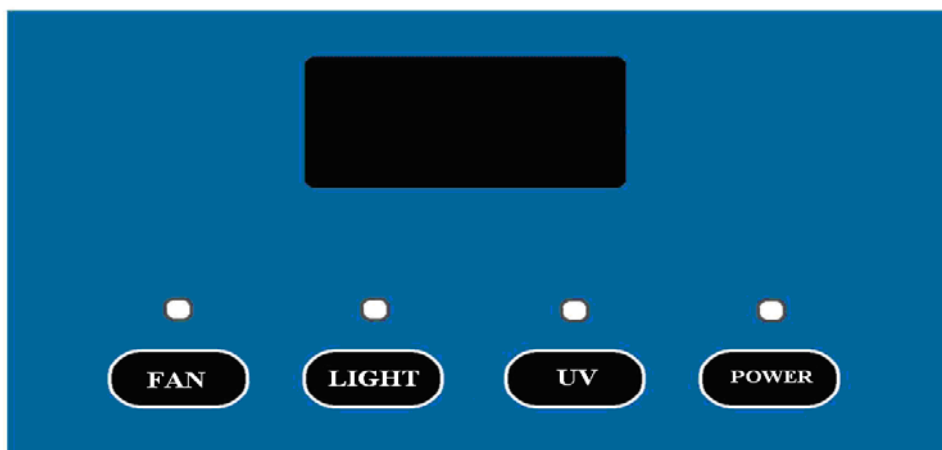
★ Air filter system

Air filter system is the main system to assure the function of the class I biological safety cabinet. It has three parts, the blower, filter and wind-hole.

The external air and aerosol caused in experiment enter the class I biological safety cabinet together, all the air will be filtered when it pass the filter system, finally the clean air is exhausted. The filter system use HEPA (High Efficiency Particulate air) filter to assure the air outlet can reach Class 100. Although air segregation equipment could protect people and environment from hazard, it couldn't ensure the sample from contamination.

★ Operation panel

There are four touching keys (power, light, sterilize, exhaust blower), wind pressure display unit and display lights for every function on the operation panel. (See diagram1)



Blower Light Sterilize Power

Diagram 1

★ Operation Area

All sides of operation area is made up of imported Acrylic Plate, The left, right side walls and back wall are integrated into one unit structure with features of beautiful, good light-penetrability and light weight. The front door can be opened freely to put in the bigger instruments. The whole structure is small and light for the convenience of movement on the work table. Operation table is made up of 304 stainless steel, so that it's very smooth to draw off and clean easily.

★UV Lamp

The function of the UV lamp is sterilization, it fixed on the top of the inside working zone, this assures the UV light could reach all the working zone

★ Lighting

The lighting resource is provided by energy saving fluorescent lamps to assure the lighting capacity is no less than **500Lux** and also easy to change.

Notes and Warnings

1. Read this manual completely before operation.
2. Please reserve this operation manual to refer.
3. We disclaim all responsibility for the damage caused by misuse or the cabinet structure unauthorized change,
4. The equipment should be avoid to put on the place nearby the door or window that personal movement frequently
5. The power sockets must have nice earthing.
6. Shut the power and pull out the plug before you change the UV lamp and the light.
7. The strength of left and right must symmetry when the glass door open and closed
8. Shut up the UV lamp before starting to work, do not view straight
9. The packed air segregation equipment should be stored at the place, where the temperature is less than 40°C ,relative humidity level less than 85%, drafty and without corrosive gas.

Operation

1. Location

After locate the equipment at the proper place, you should assure there is no strong disordered air flow at the inlet opening of the equipment, i.e. keep away from the vent, door and window.

Preparation before use

Plug the attached machine wire into the power source socket, and the other end into the net electric resource socket

2. Switches/keys

Power key: total power of the equipment. The machine could work only if the operator presses the power key. Otherwise the machine will standby.

Lighting key: The key to the light. Each time you press the button, the operating condition will change, on or off.

Sterilization light: The key to the UV light, each time you press the button, the operating condition will change, on or off.

Blower key: control the working state of the blower. The working state will change along with the operate press the button each time

LED display range: Display the pressure difference between two ends of the filter

Indicating lamp: the lamp is on/off means the matched function is on working/off.

3. Usage

Connecting the power source, the digital tube will show the blind wire, it means the machine have electricity but in OFF condition. Then press the power key, the beeper will alarm for three times, at the same time, all of the display lights will shining for three times. The machine is on now, the digital tube display the pressure difference value and the power source light is on. Press the key of outlet blower, the blower starts, the corresponding pressure difference will display for two ends of the filter at the same time, and this pressure difference will increase along with the continues using of the machine. The segregation equipment will alarm if the differential pressure over 170Pa, if it happen in the process of operation, it will alarm every 10 minutes. All indicating lights will on when start the machine next time, and the display area will display “HLP”, the machine can’t work until our engineers change the filter. The daylight lamp can be open or off according to your needs. Please put testing instruments before usage, don’t open the glass door in the course of usage. Turn on the UV light and lasted for 30 minutes to sterilize after finishing the experiment and then power off. Pressing the key of power couldn’t cut off the electricity In the course of blower working unless the blower is closed. The

UV lamp, light and blower interlock: the key of sterilize will fail when light and blower or display working; the other keys will fail when the UV working.

Note: 1. use the machine after the flower running 5 minutes stably every time.

2. If the indication of “need to change the filter” appeared, it shows the filter has already been blocked and the machine can’t be start until our engineers change the new filters.

Maintenance

1. Cleanliness

In order to keep the cabinet clean, please clean it regularly (at least once a week suggested). Please clean the equipment by dry soft cloth with suds. Please do not put any chemical reagent on to operation panel and other labels in order to prevent the labels discolor.

2. Replace of filter

We suggest that filters should be replaced once a year or after working for about 1000 hours to make sure working capability of the equipment. Filter must be replaced when the alarm goes off. And if you need to order filters please contact us.

3. Replace of fuse

There is a fuse of F3A $\phi 5 \times 20$ mm on protector tube and power socket on the right side plate of the equipment. When fuse in the protector tube need to be replaced, please cut off the power supply first then pull out the pin and screw the seat of protector tube by screwdriver. After finish the change, pressing it back.

4. Replace of UV [lamp](#).

The lifetime of UV lamp equipped with machine is 1000 working hours. We suggests you test the intensity of ultraviolet radiation in order to reach good disinfection. You can use test card of ultraviolet intensity to make sure whether the UV lamp need to be replaced. When you replace the UV lamp, please cut

off the power, then spin the lamp and take off the lamp from the lamp holder.

5. Replace of lighting lamp

When lighting lamp needs to be replaced, please cut off the power first. Open the front glass door, twist off the old light and replace the new one.

Repair Service

1. The repair service should be only done by technical person who trained and got admission the distributor .
2. Please inform our maintenance service department as soon as possible when the equipment has problems and the operator cannot solve it. Please don't repair the equipment by yourself for your safety of you and your equipment.
3. Please do not replace the filter or blower without our permission. If you need order the parts please contact our technical support department and give us clear indication of the model.
4. The replaced waste filters should be disposed by the users in accordance with relevant rules of medical waste.

Technical Parameter

Model	H-1	H-2
External Size(W*D*H)	550*395*730mm	700*550*900mm
Internal Size(W*D*H)	540*385*440mm	680*540*500mm
HEPA Filter	99.999% efficiency at 0.3 μm	
Airflow Velocity	0.38-0.6m/s	
Noise	NSF 49≤61 dB/EN 12469≤58 dB	
Fluorescent Lamp	15W*1	18W*1
UV Lamp	15W*1	18W*1
	Emission of 253.7 nanometers for most efficient decontamination	
Power Consumption	150W	160W
Work Surface Height	No	
Caster	No	
Main Body Construction	PMMA	
Work Table	304 stainless steel	
Power Supply	AC220V±10%,50/60Hz;110V±10%,60Hz (on demand)	
Standard Accessory	Fluorescent lamp, UV lamp*2	
Gross Weight	40kg	60kg
Package Size(W*D*H)	755*600*950mm	1000*700*1200mm

Maintenance Guarantee

- Twelve months guarantee from the date of purchase.
- Any damage of instruments and facilities caused by the incorrectly operation of user will not be maintained freely with in the guarantee validity.
- We take the responsibility to maintain the cabinets over the guarantee date with expense.

Accessories:

- 250V, 2A protector tube: 2 (allow to be replace by the customers according to replace manual)
- Power supply line: 1