# **Class I Biosafety Cabinet**

# **BYKG-III**

**Operation Manual** 

Biobase Biodustry (Shandong) Co., Ltd

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### INTRODUCTION

With the developing of medical technology, people' realization of microbiological protection keep 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. Air containment device could defend and preserve the damage caused by the aerosol efficiently. Not only it can protect people but also the environment.

Our company design and manufacture the air containment device. It 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 containment device 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 produce could bring maximal help for you.

# **Scope of Application**

Air containment device could apply to clinical laboratory and research laboratory. It could prevent aerosol contamination and protect people and environment from hazards.

Environmental Conditions Requirement:

Environmental temperature: 15~35 ℃

Relative humidity: ≤75%

Atmospheric pressure range: 70KPa~106KPa

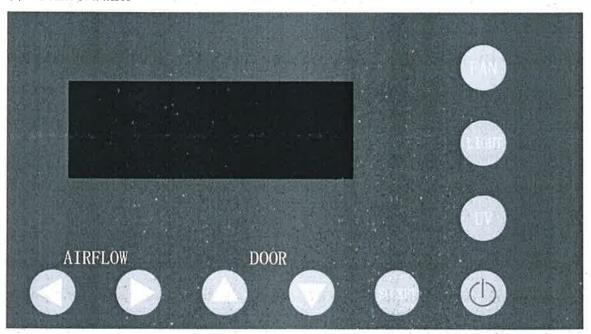
Power supply: AC220V $\pm$ 10% 50/60Hz; AC110V $\pm$ 10% 60Hz, have good ground wire

### Brief introduction of Function and Structure

### ★ Air filter system

Air filter system is the main part to assure the function of the air containment device. It includes blower, filter and wind-hole. The aerosol which caused in the experiment together with the room air is absorbed into the air containment device. The absorption air will be filtered when it pass the filter system, finally the clean air is exhausted. The filter system uses HEPA filter. Although air containment device could protect people and environment from hazard, it couldn't ensure to protect the sample from contamination, and it also couldn't completely exclude the cross contamination

### ★ Control Panel



- 2.) " is the power key, which could control the other functional keys. Press one time, the buzzer rings for one time, at the same time, the situation of the LCD display will change for one time, that is change from black to bright or bright to black. The system will also convert between standby mode and work mode.
- 3) "FAN" is the fan control button. When the front sash is at the bottom, press the button one time, the buzzer rings one time, while the situation of the display will not change, at the same time, the fan is not work; when the front sash is not at the bottom, press the button one time, the buzzer rings one time, the situation of the display will also change one time, that is to change from displaying the "FAN" and " " to not displaying. At the same time, fan will also convert between activated and stop.
- 4) "LIGHT" is the fluorescent lamp control button. Press one time, the buzzer rings one time, the fluorescent lamp will convert between bright and black. At the same time, LCD display will convert between displaying the "LIGHT" or not displaying.
- 5) "UV" is the UV lamp control button. When the front sash is at the bottom, press the button one time, the buzzer rings one time, the situation of the UV lamp will convert between bright and black, at the same time, LCD display will convert between displaying the "UV" or not displaying; when the front sash is not at the bottom, press the button one time, the buzzer rings one time, the LCD display will not display "UV", the UV lamp is black.
- 6) "SOCKET" is the control button of the sockets. Press the button one time, the buzzer rings one time, the situation of the "SOCKET" on the LCD display will change for one time, that is change from display to not display. At the same time, the system sockets will also convert between with electricity and no electricity.
- 7) " $\nabla$ " is the control button of the front sash for moving down. Press one time, the buzzer rings one time; hold on pressing this button, the front sash will move down continuingly; release the button, the front sash will stop moving down.

- 8) " $\triangle$ " is the control button of the front sash for moving up. Press one time, the buzzer rings one time; hold on pressing this button, the front sash will move up continuingly; release the button, the front sash will stop moving up.
- 9) ">" is the control button of the fan velocity for decreasing. When the fan is working, if "quantity is more than one, press one time, the air speed could decrease one gear, and at the same time, the buzzer rings one time, until you could see only one "\]".
- 10) " " is the control button of the fan velocity for increasing. When the fan is working, if " quantity is more than nine, press one time, the air speed could increase one gear, and at the same time, the buzzer rings one time, until you could see " " " " "."

### **Caution and Warnings**

Read this manual completely before operation.

2. Please reserve this operation manual for reference.

We disclaim all responsibility for the damage caused by misuse or unauthorized changing the cabinet structure.

- 4. The equipment should be avoided to place nearby the door or window that personal movement frequently.
- 5. The power sockets must have good ground-wire.
- 6. Cut the power and pull out the plug before changing the UV lamp or the light.
- 7. The strength of left side and right side must symmetry when opening or closing the front glass door.
- 8. Do not work when the UV lamp turned on; Before turning off the UV lamp, do not view straight.
- 9. After packing, the air containment device should be stored at the place, where the temperature is less than 40 °C, the relative humidity is less than 85%, has good drafty and without corrosive gas.

### **Operating Techniques**

### 1. Installation

After placing the equipment on final position, break the four wheels by the bolt, and then adjusting the equipment to steadiness.

### 2. Preparation work before usage

Put one terminal of the power cord into cabinet power entrance, the other end plugs into an electrical outlet

### 3. Usage

Turn on the control button after wiring up, press the "POWER" key, the control plate will be on power, and then press the key of "FAN", after the blower working for five minutes, the equipment could work regularly.

### Maintenance and Repair

### 1. Cleanliness

In order to keep the cabinet clear, please clean it regularly (we suggest one week at least). 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 F5A  $\phi$ 5×20 mm on both of protector tube and power socket on the right side 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. Then the new fuse replaces the fuse in the protector tube.

### 4. Replace of UV lamp.

The lifetime of UV lamp equipped in the product is 1000 working hours. We suggest 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. Please open the glass door, remove the fixed bolt from both left and right of the equipment, then open the control panel and throw off jackets in the both ends of lamp holder, then spin the lamp off and replace the new lamp with the jackets, finally fix operation panel again.

# **Maintenance Service**

- 1. The maintenance service should be held responsible by technical person who receives trainings and gets admission by us.
- 2. Please inform our maintenance service department as soon as possible when the equipment is out, of order and the operator cannot remove the malfunction. Please do not maintain the equipment by yourself in order to make you and your equipment safe.
- 3. Please do not replace the filter or blower without our permission. If you need order the parts please contact with our technical support department and give 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**

♦ Air velocity

Inflow Velocity: > 0.30m/s

Noise: <60dB.

◆ External Dimension: 900 (L) X710 (W) X1250 (H) mm

• Power Supply:  $AC220\pm22V$ ;  $AC110\pm11V$ ;

Frequency: 50/60Hz

Output Power: 300W

◆ Average Lighting: ≥500lux

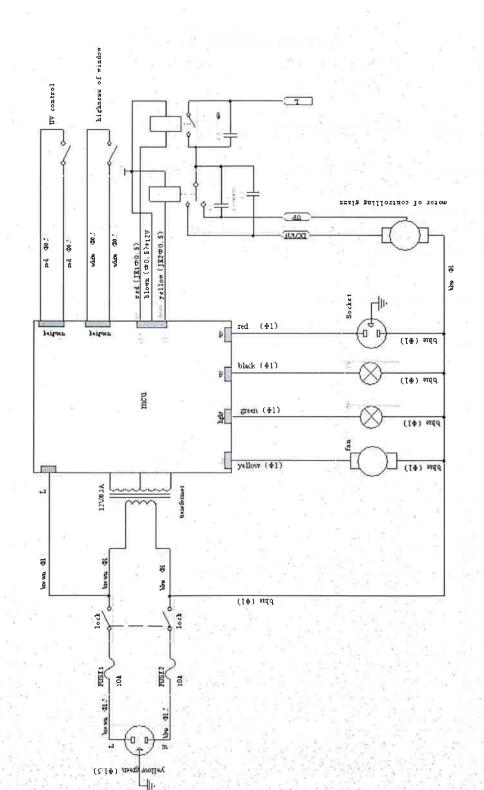
### Maintenance Guarantee

- 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.
- Providing the drawings of facility and partly required technical data to the maintenance unit and personal that trained and confirmed by our company.

# **Accessories List**

- 250V, 10A protector tube: 2 (allow to be replace by the customers according to replace manual)
- Power supply line: 1
- UV lamp: 2

# Wiring Diagram



# Label Illustration

1. Label of protector tube: 10A directive label of protector tube, located at the below of the protector tube

F5AL250V

- 2 name plate: on the panel which on the right side of the isolation device...
- 3. company logo: on the front of the isolation device.

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